International Workshop - 7 July 2000

#### DEVELOPMENT OF A STRATEGIC PLAN FOR THE IMPROVEMENT OF ROAD SAFETY IN GREECE

Research Project carried out for the Ministry of National Economy Scientific Coordinator: Prof. George Kanellaidis

George YANNIS, Lecturer



Department of Transportation Planning and Engineering National Technical University of Athens

# **Project Objectives**

• to develop a strategic plan for the improvement of road safety in Greece,

the implementation of which could lead to a decrease in the number of persons killed in road accidents of:

- 20% up to 2005 and - 40% up to 2015.
- to support the procedure, which incorporates specific road safety actions in the 3rd EU Community Cohesion Fund.

## Methodology



### **The Methodology Tools**

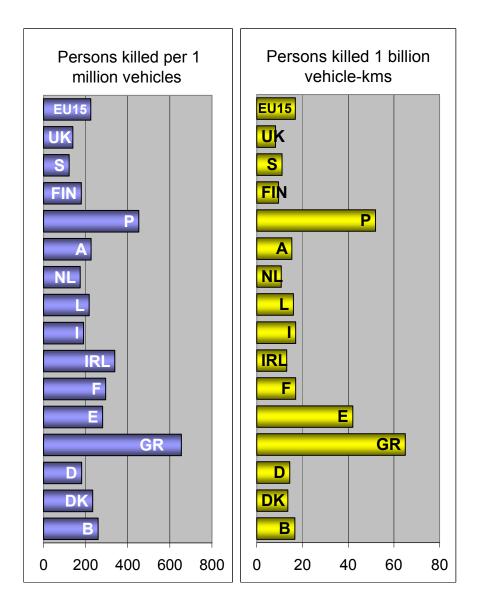
- Literature review national & international studies
- Use of adequate data bases with accident and traffic data
- Use of existing national and international experience
- National and international workshops with experts
- Forums with all the parties concerned feedback from the competent administrations
- A compact research team

#### Work Package 1.

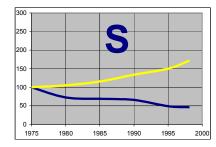
## **Overview of international experience**

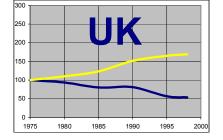
- 1.1. Road safety level at the European countries
- 1.2. European drivers' behaviour
- 1.3. Successful road safety measures world-wide
- 1.4. National Road Safety Policies world-wide
- 1.5. European Road Safety Policy

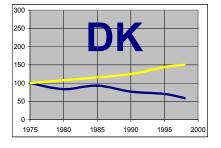
# **Road Fatality Indices in the EU countries - 1996**

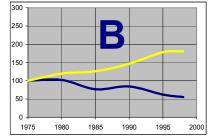


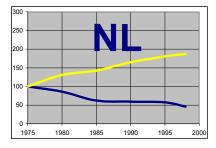
#### Trends of fatalities and vehicle fleet in the EU countries

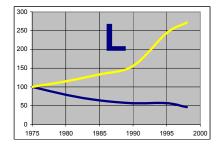


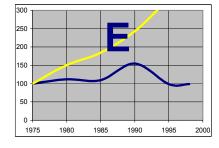


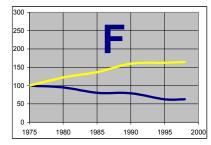








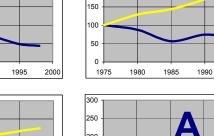


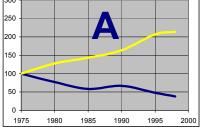


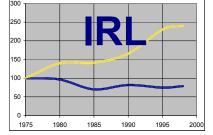


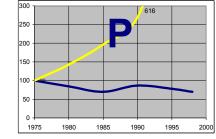
300 ·

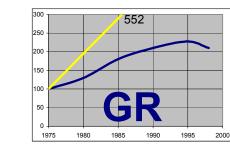
200 -











- 6 -

### Attitudes and behaviour of European Drivers (SARTRE survey, 1997)

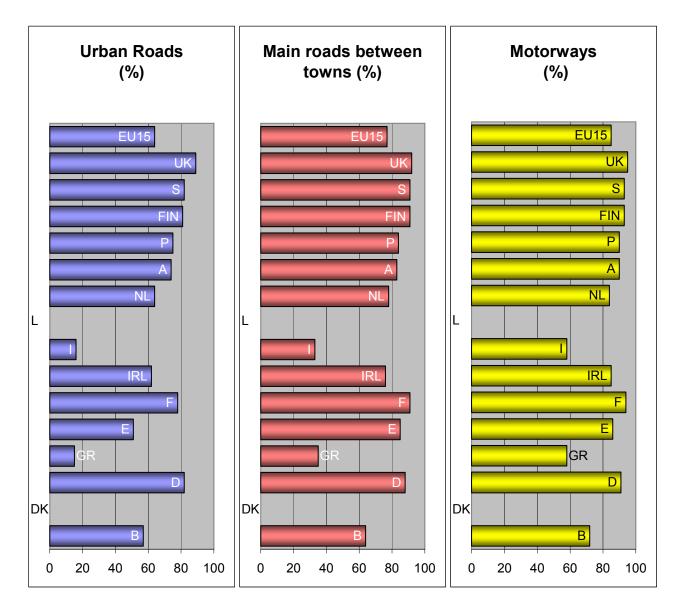
European Drivers are very sensible on road safety Most important topics of concern refer to:

- Speed excess
- Drinking and driving
- Seat belt use
- Enforcement

In several cases, the attitude of Greek drivers is less safer than the equivalent attitude of the Western Europeans.

# Declared use of seat belt in the EU countries

(SARTRE survey, 1997)



- 8 -

# **Road Safety Measures in the EU countries**

- Information campaigns education
- Law provisions
- Enforcement intensification, alternative penalties
- Improvement of the infrastructure
- Measures for the vulnerable road users
- Development of strategy and program implementation
- Vehicle control and special measures for vehicles
- Monitoring of the road safety level
- Specific actions on seat belt use, speed excess, drink&drive

# **National Road Safety Strategic Plans**

		Title	Period	Target	Defining elements					
	Country			Reduce the number of persons killed by at least:	(A) Road	(B1) Users	(B2) Vehicles	(C) Enforceme nt	(D) Post-crash treatment	(E) Organizing Financing
	UK	Next Steps	1987 - 2000	33% (of average 81-85) by 2000						
1.		Tomorrow's Roads - Safer for everyone	2000 - 2010	40% (of average 94-98) by 2010	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$
	Sweden	Action Programme	1995 - 2000	50% (of average 89-93) by 2010				$\checkmark$	$\checkmark$	$\checkmark$
2.		Vision Zero	1997 - 2007	25% (of average 96) by 2000 50% (of average 96) by 2007	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
		Special Plan	2000 - 2007	50% (of average 96) by 2007		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
3.	Ireland	The Road to Safety	1998 - 2002	20% (of 97 level) by 2002	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$
4.	Austria *	Programme 2002	2002 - 2011	25% (of 86 level) by 2000 50% (of 86 level) by 2005	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$
5.	Netherlands	Long-range programme for road safety	1996 - 2000	25% (of 86 level) by 2000 50% (of 86 level) by 2010	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$
6.	Portugal	The 2000 Safety Plan	2000 - 2005	EU average by 2005						
7.	Finland	Road Safety Strategy	1997 - 2000	50% (of 89 level) by 2000 65% (of 89 level) by 2005	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
8.	EU(15)	5 Years Action Plan	1997 - 2001	16% (of 97 level) by 2000 40% (of 97 level) by 2010	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$

9.	Norway	National Transport Plan	2002 - 2011	30% (of 99 level) by 2012	Is currently being prepared					
10.	USA	AASHTO StrategicHighway Safety Plan	1997 - 2004	15% (of 97 level) by 2004	$\checkmark$	$\checkmark$	$\checkmark$			
11.	Australia	National Road safety Strategy	1992 - 1996	60% (of 89 level) by 2001	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
		Draft Strategy 2000	2000 - 2010	50% (of 99 level) by 2010	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	
12.	New Zealand	National Road safety Plan	1995 - 2000	40% (of 99 level) by 2001				$\checkmark$	$\checkmark$	

#### Work Package 2.

#### **Identification of current situation in Greece**

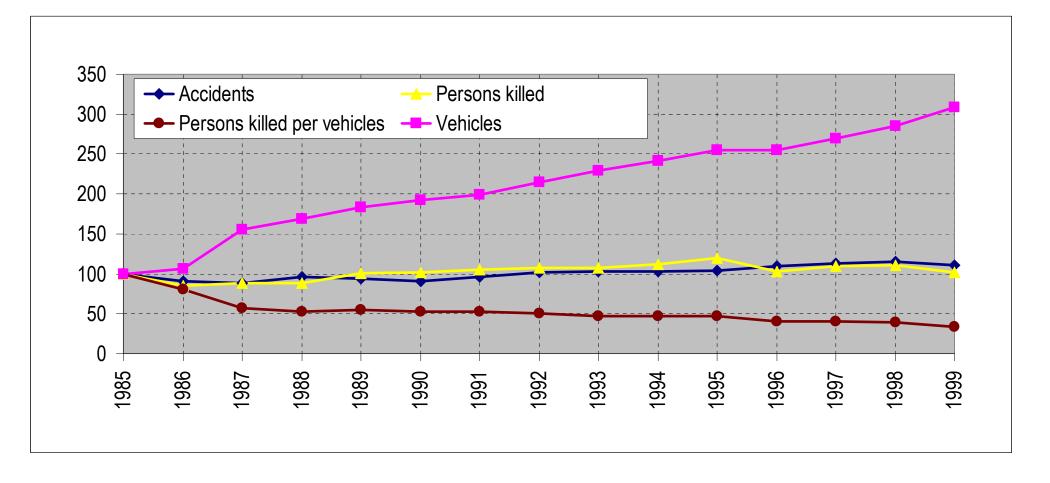
2.1. Analysis of accident factors in Greece

2.2. Drivers' opinion and behaviour in Greece

2.3. Road safety measures in Greece

2.4. Institutional framework

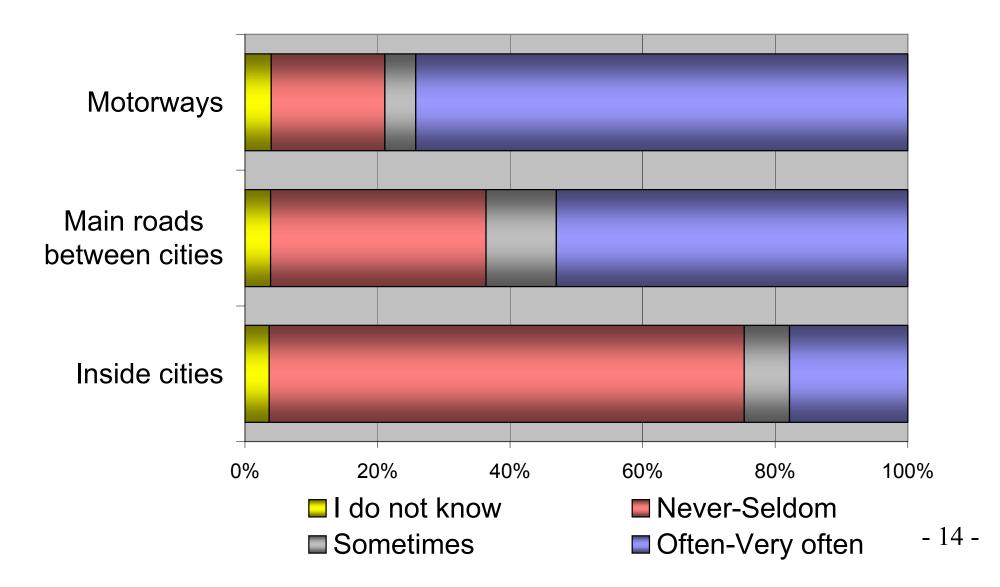
## **Trends of basic figures in Greece**



# Accident severity by road type in Greece (1985-1993)

Road Type	Inside built-up areas	Outside built-up areas	Total		
National	10	14	13		
Rural	7	9	9		
Local	4	12	4		
Total	4	11	6		

### How often do you use the seat belt? (SARTRE survey 1997, Greece)



# **Road safety policy in Greece**

- Identification and interventions in Black Spots (1985)
- Compulsory use of helmets (1986)
- Compulsory installation and use of seat belts (1987)
- Compulsory vehicle technical control (1990)
- Building up motorways (1991)
- Update of the Road Code (1993, 1999)
- Introduction of alcotest (1994)
- Information campaigns
- Coordinated enforcement (1999)
- New training examination system for drivers (1999)

# **Drawbacks of Road Safety Policy in Greece**

- Lack of systematic and continuous implementation of the measures, resulting in short lifetime of these measures and insufficient coordination between competent bodies, limiting thus the efficiency of the measures.
- Lack of systematic monitoring of road safety level and corresponding evaluation of the effectiveness of the measures.
- Lack of systematic and continuous enforcement of road safety measures followed by quantified monitoring of their effectiveness.
- Drawbacks in road network and insufficient maintenance.
- Lack of an effective road safety training and education system as well as a reliable vehicles technical control system.

#### Work Package 3.

### Development of the road safety strategic plan

3.1. Elaboration of an actions' framework

- 3.2. Targets of the strategic plan
- 3.3. Integrated road safety policy
- 3.4. Specific road safety measures

# The four main directions / programmes of the Greek Road Safety Strategic Plan

#### The safe road enviroment

- Black Spot treatment
- Improvement of signing
- Improvement of artificial lighting
- Use of skid-resistant surface treatment
- Implementation of road safety audits
- Elaboration and adoption of standards
- Establishment of the coordination and monitoring structure

#### Safety of the user and the safe vehicle

- Support to the driver training and examination system
- Modernisation of the vehicle technical inspection centres
- Programmes of the traffic education mainly at schools
- Targeted information campaigns
- Research for the analysis of accident causes
- Incentives for the improvement of passive safety equipment
- Establishment of the coordination and monitoring structure

#### Efficient enforcement for road safety

- Advanced and conventional equipment for traffic control
- Infringement recording equipment
- Integrated enforcement programme
- Improvement of the immediate intervention system
- Improvement of accident data recording system

#### Efficient post crash treatment

- Appropriate equipment of the emergency services
- Development of emergency plans and local coordination centers
- Improvement of injuries emergency treatment at the hospitals

# **Implementation of the Strategic Plan**

by the four main State, road safety related, Authorities (Ministries), each of them exclusively responsible for each main direction / programme.

# **Overall planning and implementation coordination**

of the road safety Strategic Plan belongs to an Authority with a coordination profile.

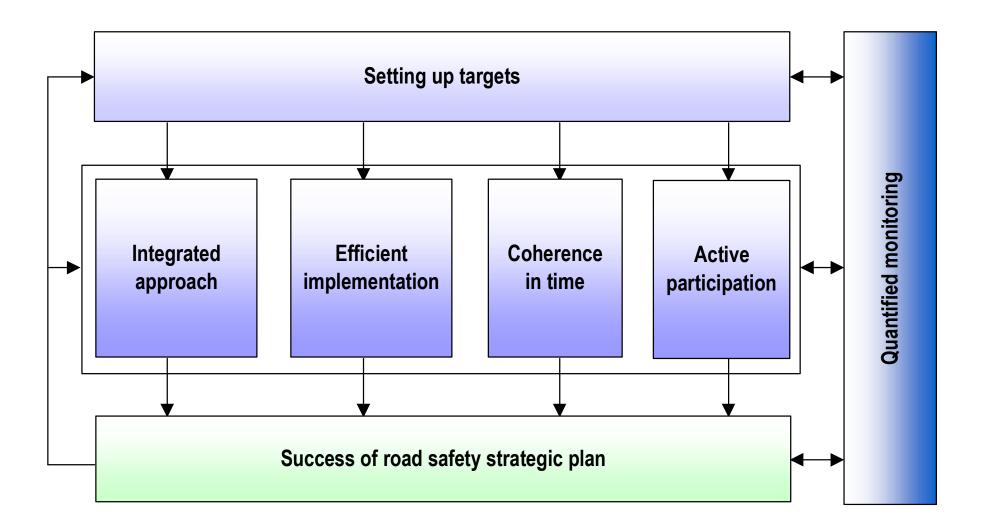
Annual process of implementation monitoring and budget allocation.

#### Work Package 4.

# Proposal for the implementation of the strategic plan

- 4.1. Institutional, organisational and operational framework.
- 4.2. Promoting the strategic plan.
- 4.3. Step-by-step implementation and priorities.
- 4.4. Quantitative monitoring.

# Main principles for successful implementation



#### The necessary implementations actions (in collaboration with the Interministry Committee)

- Establishement of the National Authority for the Coordinaton of the Strategic Plan at Inter-Ministry level, endowed with the necessary competences and budget
- Establishment of a decentralised system for the execution of the National Road Safety Strategic Plan
- Establishment of an advanced information system for the monitoring and evaluation of the road safety level and the progress of the strategic plan

### Implementation time schedule

	2000	2001	2002	2003	2004	2005	2006
ACTIONS OF THE PLAN	1 2 3 4 5 6 7 8 9 # ;	# # 1 2 3 4 5 6 7 8 9 # # #	± 1 2 3 4 5 6 7 8 9 # # #	1 2 3 4 5 6 7 8 9 # # #	1 2 3 4 5 6 7 8 9 # # #	ŧ 1 2 3 4 5 6 7 8 9 # # # 1 2	2 3 4 5 6 7 8 9 # # #
YEAR PROGRAMME PREPARATION							
YEAR PROGRAMME IMPLEMENTATION							
YEAR PROGRAMME EVALUATION							
5 YEARS STRATEGIC PLAN							