

Investigating road safety management processes in Europe

Heikki Jähi^a, Nicole Muhlrad^a, Ilona Buttler^b, Victoria Gitelman^c, Charlotte Bax^d, Emmanuelle Dupont^e, Gabriele Giustiniani^f, Klaus Machata^g, Heike Martensen^e, Eleonora Papadimitriou^h, Luca Persia^f, Rachel Talbotⁱ, Gilles Vallet^a, George Yannis^h

^a Ifsttar, France, ^b Motor Transport Institute, Poland, ^c Technion, Israel, ^d SWOV, the Netherlands, ^e IBSR, Belgium, ^g KfV, Austria, ^f CTL, Italy, ^h NTUA, Greece, ⁱ Loughborough University, UK

Introduction

The research presented here is a component of the DaCoTA European project, aimed at identifying the needs for data and technical tools for knowledge-based road safety policies and providing support accordingly. With the underlying assumption that effective and efficient road safety action requires a sound road safety management system, the research aims at describing and comparing road safety management processes and organization at the national level and at identifying key elements of “good practice”. The research is still going on and final results will be available by the end of 2012.

Methodology

A new investigation methodology was designed, based on an extensive review of literature and on previous research carried out by DaCoTA WP1 team members [e.g. Bliss & Breen, 2009; OECD, 2008; Muhlrad, 2009].

As a consistent information gathering system supporting both quantitative and qualitative analyses was needed, a closed questionnaire offering also opportunities for explanations and comments was designed, to be filled by country “experts” in road safety management (either active participants in road safety policy-making or scientific experts providing support to policy-makers).

To support questionnaire design, a preliminary “investigation model” was drawn. The model describes the components of road safety management systems and hypotheses of “good practice” conditions are formulated for each of them.

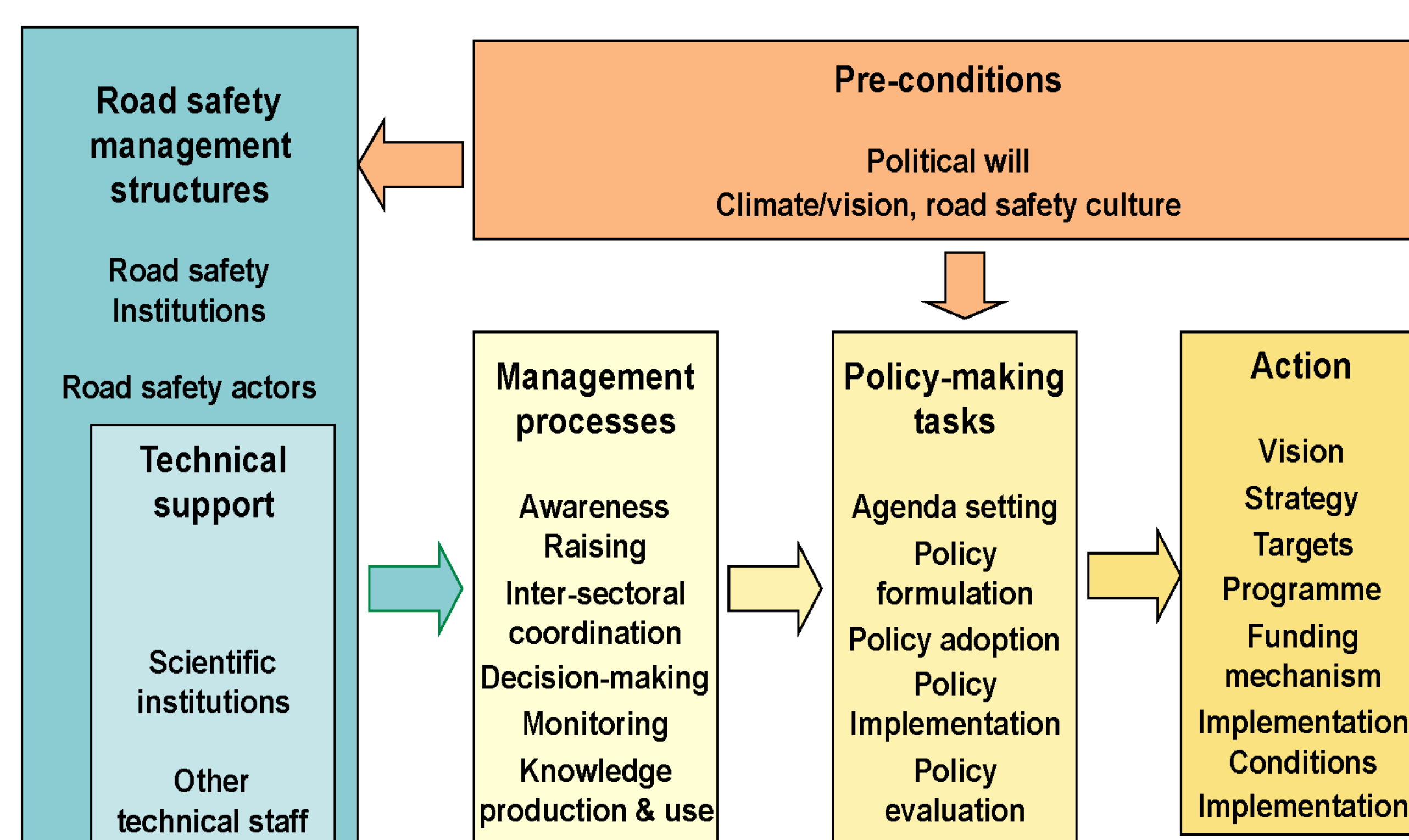
1. Description of road safety management systems

Policy-making tasks have been defined, using existing management models [e.g. Dunn, W.N., 1981] whose application to road safety was supported by previous field observations and experience. The tasks follow the successive steps necessary to obtain the desired outputs in terms of structural and corrective road safety action (from strategy to field interventions). Policy-making is iterative as each phase of action sets the ground for the following one.

The key transversal management processes necessary to the performance of the policy-making tasks have further been identified on the assumption that policy-making should be based on existing knowledge, involve a large variety of actors and stakeholders, and take into account their constraints.

The purpose of road safety management is to support the key transversal processes and enable the policy-making tasks to be performed, so that the desired outputs are obtained. The requirements for road safety management organization have been formulated in terms of actors involved, working structures, support and resources.

Finally, it was assessed that effective road safety management systems could not be set up without strong political will and a level of awareness of road safety issues in the society. A process to strengthen these pre-conditions may be needed.



Road safety management systems

From: Muhlrad, N, Gitelman V, Buttler I. (Ed) (2011)

Road safety management investigation model and questionnaire, Deliverable 1.2 of the EC FP7 project DaCoTA

2. “Good practice” hypotheses

Ultimately, “good practice” in road safety management is defined as ensuring that:

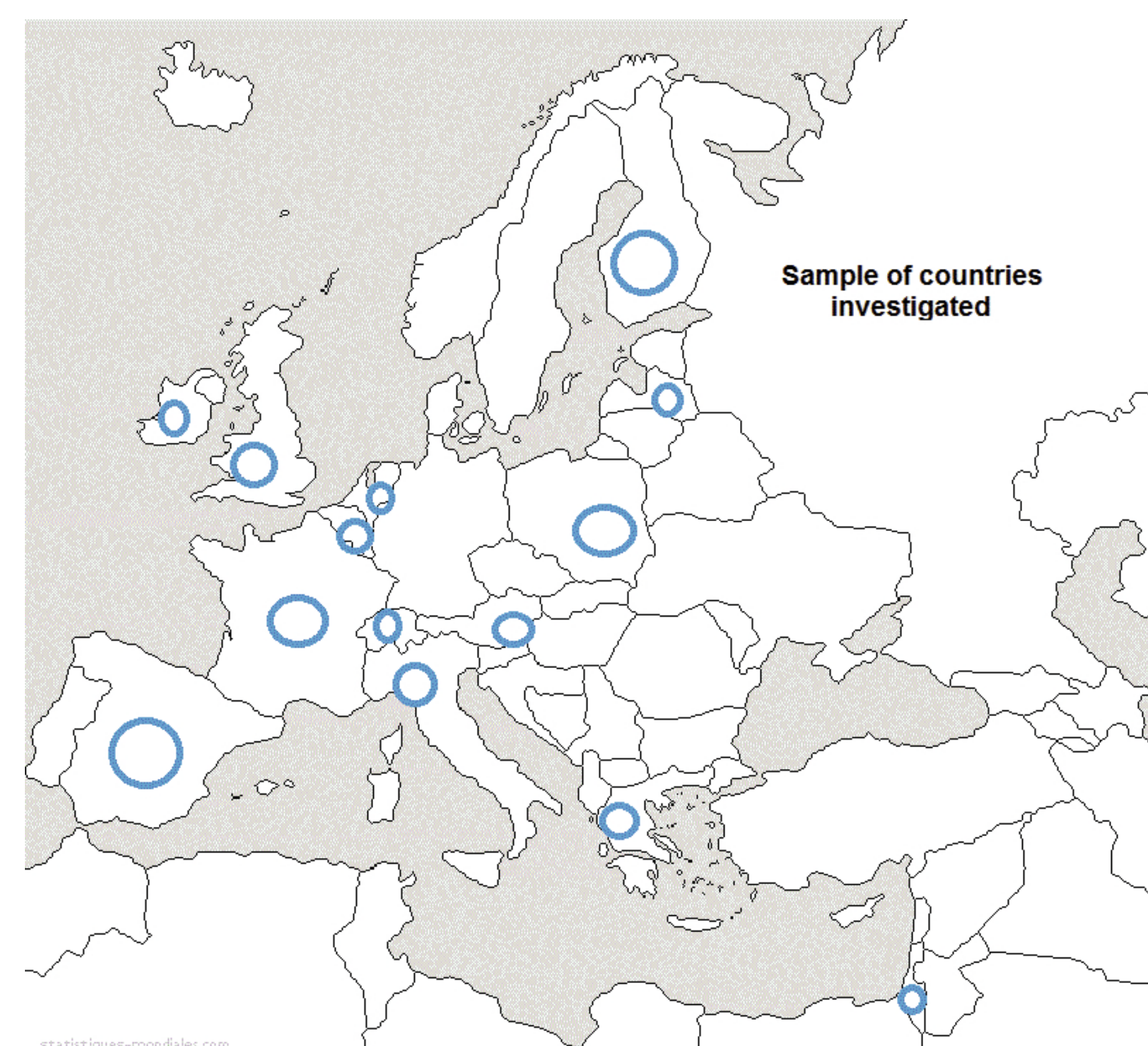
- the expected road safety outputs are obtained and are as efficient in reducing road crashes and injuries as we can make them, given current road safety knowledge,
- the effort is sustainable so that long term “visions” or goals can be aimed at, beyond the limited decrease of road traffic injuries that can be obtained over a few years.

The essential hypothesis is that it is “good practice” to follow the model described in the figure above. However, there is no unique way to build a road safety management system as institutional building and management processes take roots into countries’ own social and political environment and history. “Good practice” criteria have thus been developed for each component of the road safety management system (pre-conditions, institutions, processes, tasks, types of outputs) and used to formulate the survey questionnaire. One of the objectives of the data analysis to be performed is to validate at least some of these criteria.

Without getting into details, some key elements of “good practice” can be summarized as follows:

- institutional organization: ensures that inter-sectoral coordination is effective for all tasks of policy-making (formulation, decision, implementation); is established through adequate legislation tools empowering the actors involved and guaranteeing sustainable resources;
- actors’ involvement: consultation of stakeholders’ is formally integrated into road safety management; sustainable multi-disciplinary scientific teams are available to produce road safety knowledge et tight links are established between them and the policy-makers; capacity building is planned (training of key actors, resource allocation);
- policy-making tasks: road safety interventions are defined on a knowledge basis, planned and programmed inter-sectorally in the medium and long term; policy adoption includes distribution of tasks between actors and adequate resource allocation; implementation is monitored and reported to the high level decision-making institutions; programmes and interventions are systematically evaluated.

Further details on the investigation model and the development of the survey questionnaire can be found in [Muhlrad, N, Gitelman V, Buttler I. (Ed) (2011) Road safety management investigation model and questionnaire, Deliverable 1.2 of the EC FP7 project DaCoTA], available on the DaCoTA website.



Application

A first round of data collection was performed at the end of 2011 using the questionnaire developed by the DaCoTA-WP1 team. For practical reasons of time, limited resources and the language problem, only a sample of countries of the European region could be investigated; care was taken to include large and small countries, with good and not so good road safety records. Country experts involved in policy-making or scientific support were identified and interviewed. In total, twenty-five questionnaires were filled in for fourteen countries and included in a specifically-designed data storage facility.

Quantitative multi-variate analyses and qualitative analyses are under way. Complementary data collections involving additional countries may have to be performed to consolidate the findings. Methodological descriptions and detailed results will be available on the DaCoTA website by November 2012.

Perspectives

This research is to be considered as a first step towards a larger scale effort of documenting road safety management systems in European and other countries and keeping the information updated. Using the first data collection as a test of “good practice” criteria as well as a test of the survey methodology, the DaCoTA-WP1 team plans to prepare an improved set of methodological tools (simplified questionnaire focussing on key components and “good practice” criteria, instructions for use and glossary of terms, data storage facility, data analysis methods) which will make it easier to take on board a larger number of countries.