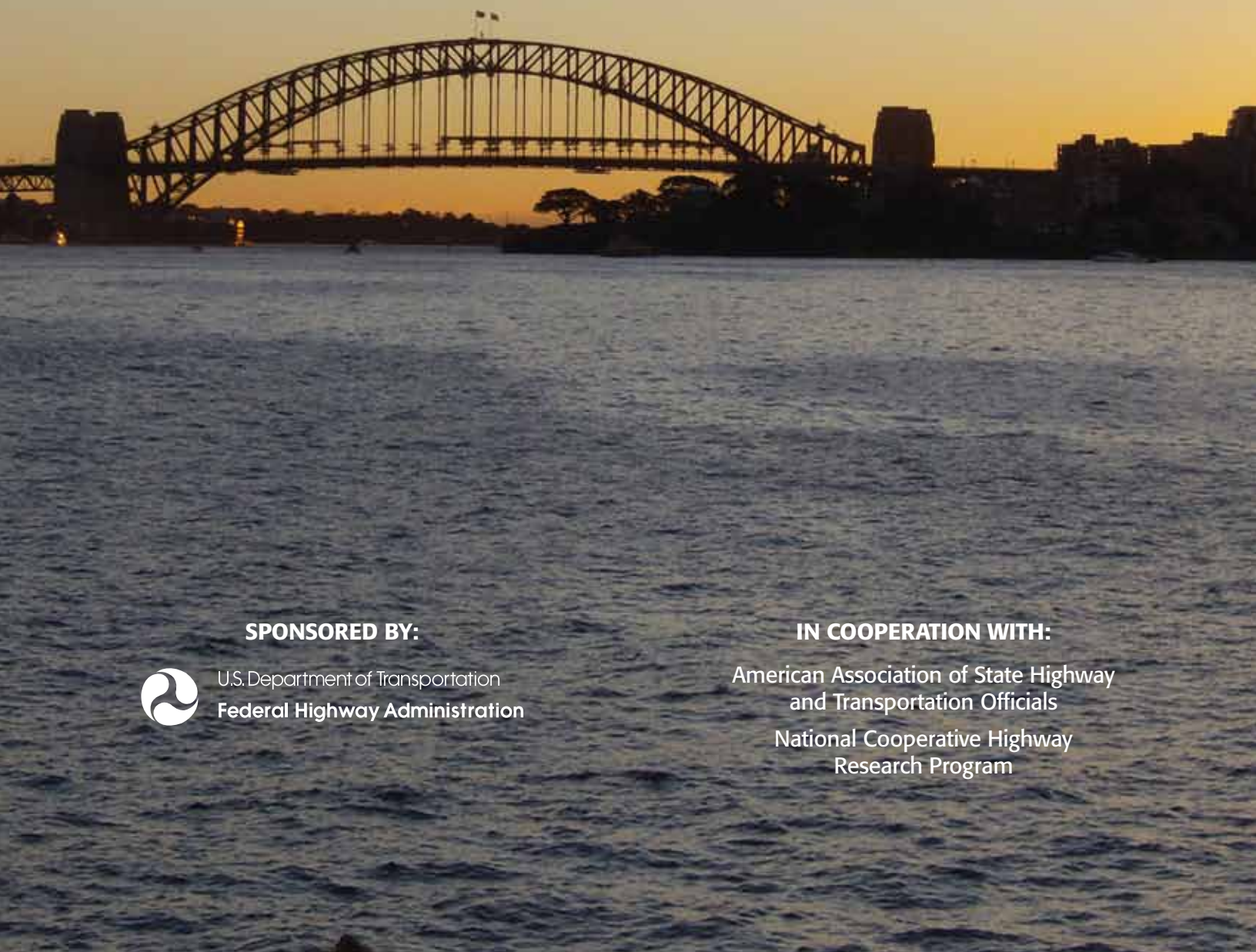




Policy Instruments for Managing European Union Road Safety Targets: Carrots, Sticks, or Sermons?

An Analysis and Suggestions for the United States



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16. Abstract <p>This report investigates the European Union policy on road safety targets and its strategies to achieve these targets. The purpose of the report is to provide the Federal Highway Administration and the American Association of State Highway and Transportation Officials with ideas to consider for use in the United States.</p> <p>The European Union uses three types of policy instruments to achieve road safety targets: regulation, economic instruments, and information. Important elements of the European Union approach are using a variety of policy instruments, building a broad network of road safety-related organizations, stimulating member states to take actions on their own, and steering on effect rather than implementation.</p>			
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Executive Summary

This report investigates European Union (EU) policy on road safety targets and the strategies used to achieve these targets. The outcome will be used to provide the Federal Highway Administration (FHWA) and the American Association of State Highway and Transportation Officials (AASHTO) with ideas to adopt these strategies in the United States.

FHWA and AASHTO desired a paper “that summarizes how the European Commission and its related transportation organizations have supported the setting of ambitious crash-reduction targets among its diverse 27 European members.”

The paper goes slightly beyond this. Because the road safety targets are set for the EU as a whole and are not binding for the individual member states, this paper also examines other policy instruments the EU uses to help member states implement the road safety policy.

The research questions answered in this report were as follows:

- ▶ Which policy instruments does the EU use to achieve its road safety targets?
- ▶ Are these policy instruments effective?
- ▶ How can these measures be translated into suggestions for the United States to set and achieve national road safety targets?

Three types of policy instruments are used in the EU to achieve the road safety targets. In policy instrument theories, these three types are called regulation, economic instruments, and information instruments, also referred to as sticks, carrots, and sermons. The EU uses a mix of these instruments.

Regarding regulation instruments, the EU has developed several directives on various road safety issues. Directives are EU legislation that does not have a direct effect in the member states, but that the member states are obliged to implement in their respective countries within a given

timeframe. In addition to official legislation, the EU also produces so-called “soft law” on road safety, which includes policy documents, action plans, policy targets, guidelines, etc., and is not binding for the member states. Some important documents are the 2001 White Paper on European Transport Policy, which provided an EU road safety target of halving the number of casualties between 2001 and 2010, followed by the 2003 Road Safety Action Programme. More recent is the 2010 Road Safety Action Programme with a similar target for 2020 and the 2011 White Paper on Transport, which has the ambition to reach zero fatalities in 2050.

Regarding economic instruments, the EU does finance many road safety research projects. A detailed account of the amounts spent on road safety research is not available, although it is indicated that the EU has spent €500 million on road safety research since 1994. Furthermore, the EU contributes to the funds of interest organizations.

Regarding information instruments, the EU provides information on road safety data and measures through databases such as CARE, Web sites such as the European Road Safety Observatory, and research projects. It also stimulates benchmarking between member states through various instruments.

Decisionmaking on Road Safety and Road Safety Targets

Proposals for directives and soft law such as the White Papers on Transport and the Road Safety Action Programmes are made by the Road Safety Unit of the European Commission. The proposals are discussed by the ministers of transport of the 27 member states in the Council of Ministers and in the High Level Group on Road Safety. The European Parliament (EP) must also approve the European Commission proposals. The EP often plays an encouraging role in road safety policy and sometimes takes parliamentary initiatives. Furthermore, interest groups such as the European Transport Safety Council and the Federation Internationale de l'Automobile, as well as the automotive industry, influence the decisionmaking. Nonetheless, interviews revealed an often long decision-making process and member states often seem to be

reluctant to accept EU policy on road safety. Therefore, road safety targets are not binding and there are few directives on road safety.

Achieving the Road Safety Target

Although the road safety target of 50 percent fewer road deaths in 2010 has not officially been met, an overall decrease of 43 percent in fatalities can be called a success for road safety in the European Union. Whether this decrease is the actual result of the EU road safety policy and the setting of road safety targets cannot be scientifically answered in this paper, although certain studies suggest that a connection is plausible.

Four Important Elements of the EU Approach

Four important elements of the EU approach on setting and achieving road safety targets were observed in the study. These four elements are as follows:

1. Use a variety of policy instruments.
2. Build a broad network of road safety-related organizations.
3. Do not underestimate the facilitating role.
4. Steer on effect, not on implementation.

1. Introduction

In the past 10 years, many U.S. State transportation agencies have implemented performance-based approaches for their highway safety policies. These approaches include setting firm targets for reducing crashes, evaluating best practices to achieve those targets, and continuously monitoring whether the road safety tactics were effective. Furthermore, the States have adopted a practice of benchmarking, which in this context can be defined as the comparison of best practices among the various States. Another recent development is the setting up of a system for the accurate and detailed registration of crash data to analyze the underlying causes of crashes and to facilitate the benchmarking process.

The Federal Highway Administration (FHWA) aims to improve highway safety by promoting the adoption of a performance-based highway safety approach by all U.S. States. The exact implementation of this plan is still to be decided on. In addition, the degree of liberty in adopting the firm road safety targets is still under consideration.

FHWA and the States—through their national association, the American Association of State Highway and Transportation Officials (AASHTO)—are investigating the possibility of cooperating on setting bold Federal road safety targets. In this, they aim to take into account the diversity of the U.S. States, which vary substantially in geography, population densities, traffic volumes, and urban and rural travel patterns. Considering these variations can prevent unreasonable or ineffective requirements being imposed on individual States. To support this process, FHWA and AASHTO would like to obtain a better understanding of the approach to road safety targets in the European Union (EU). In both the United States and the EU, a central authority promotes traffic safety while also respecting the autonomy of its member organizations. Therefore, EU experiences in the last 10 years could possibly yield suggestions for the United States.

The Dutch Institute for Road Safety Research (SWOV) was asked to provide an overview of the EU policy, implementation experiences, and achievements of the EU road safety targets. This overview, presented in this report, is based on a review of scientific literature, national and EU policy documents and legislation, and reports and Web sites from

nongovernmental organizations (NGO), private companies, and other road safety stakeholders. In addition, four interviews were conducted—two with officials of the European Commission, one with the managing director of a research institute, and one with the programme director of a European transport safety organization:

- ▶ Frederik Jansen of the European Commission, DG MOVE D.3 Road Safety & Dangerous Goods
- ▶ Carla Hess, until recently with the European Commission, DG MOVE D.3 Road Safety & Dangerous Goods
- ▶ Programme Director Graziella Jost of the European Transport Safety Council
- ▶ Managing Director Fred Wegman of SWOV

Information from these interviews has been used only when at least two interviewees shared the same vision or when facts could be confirmed or validated by other sources.

FHWA and AASHTO desired a paper “that summarizes how the European Commission and its related transportation organizations have supported the setting of ambitious crash-reduction targets among its diverse 27 European members.”⁽¹⁾

This paper covers a somewhat broader area for the following reason. In 2001, the EU set an ambitious road safety target: halving the number of victims by 2010.⁽²⁾ In 2010, the target for 2020 was set at another 50 percent reduction in the number of casualties.⁽³⁾ However, these targets are set for the EU as a whole and are by no means binding for the individual member states. The member states are not obliged to adopt the targets in their national road safety policies and they do not have to meet the target. This appears to make the EU targets a policy instrument with hardly any (at least formal) power. Therefore, it is interesting to examine which other policy instruments the EU uses. This report investigates policy instruments the EU uses to help member states implement the road safety policy and cooperate in reaching the target.

The research questions of this study are as follows:

1. Which policy instruments does the EU use to make member states comply with the road safety policy and with that, cooperate in achieving the road safety target?
2. Are these policy instruments effective?
3. How can these measures be translated into suggestions for the United States on setting and achieving national road safety targets?

The content of the report is as follows: Chapter 2 gives an overview of the theories on policy instruments and a short description of the EU organization and its policy instruments in general. Chapter 2 also provides a short list of relevant European organizations that focus on road safety. Chapter 3 outlines EU policy and legislation on road safety, including the EU road safety targets and their implementation. The various policy instruments introduced in Chapter 2 are discussed, with special attention on road safety. The chapter also provides information on whether the 2010 road safety targets were achieved. Chapter 4 summarizes and offers conclusions on the previously discussed information. A detailed insight into U.S. policy setting on road safety is needed to answer the third research question. Such an insight is not available at SWOV at present, so it was decided to describe four important elements in the EU approach in this final chapter.

2. Theories and Background

Policy Instruments: Carrots, Sticks, and Sermons

Governments in general, and the EU in particular, have several types of policy instruments at their disposal. Traditionally, three main types of policy instruments are distinguished in policy instrument theories: regulation instruments, economic policy instruments, and information instruments. These instruments are also called sticks, carrots, and sermons.⁽⁴⁾

For the first type of policy instrument, Bemelmans-Videc, Rist, and Vedung provide a practical definition of the concept of regulation when they state that regulations are “measures taken by governmental units to influence people by means of formulated rules and directives which mandate receivers to act in accordance with what is ordered in these rules and directives.”⁽⁴⁾ In contrast with common American definitions, which understand regulation as governmental intervention in general, the definition of Bemelmans-Videc, Rist, and Vedung stresses the authoritative relationship between the regulator and the intended subjects of the regulation.⁽⁴⁾ Examples of EU regulation are EU regulations (a specific type of regulation, explained in “Three Types of Legislation”) and directives. Furthermore, soft law, such as instructions, resolutions, guidelines, and codes of behavior, is generally categorized as a regulation policy instrument, although this type of policy instrument is not legally binding. Regulation instruments can involve fines, detention, or other punishments if the regulation is not observed.

The second type of policy instrument, the economic instrument, is described as instruments “involving the handing out or the taking away of material resources while the addressees are not obligated to take the measurements involved.”⁽⁴⁾ Subsidies and grants are examples of this type of instrument.

The third type of policy instrument, the information (or exhortation) instrument, appears to be growing in popularity in Western Europe. It is seen as a modern way of influencing people and an opportunity to discourage undesired behavior and to encourage desired behavior, mainly by providing understanding of the consequences of behavior. Bemelmans-Videc, Rist, and Vedung define these policy instruments as

“attempts at influencing people through the transfer of knowledge, the communication of reasoned argument, and persuasion.”⁽⁴⁾

The above classification calls for a remark on road safety targets, the main subject of this report. In the policy administration theory, targets and policy instruments are strictly divided, with targets meant for goal setting and instruments for goal reaching. However, research^(5,6) has shown that the fact that targets have been set can influence the number of road deaths. Therefore, targets can be regarded as goals as well as (regulation) policy instruments.

The choice of one or more of these three policy instruments is often based on four, sometimes competing, values that are used to evaluate public policy: effectiveness, efficiency, legality, and democracy.⁽⁴⁾ Furthermore, the choice of policy instruments is influenced by the specific policy context, such as the policy sector and the policy actors involved, but also by national characteristics such as the government arrangements, history, physical environment, and culture of a country.

In Chapter 3, the road safety policy of the EU, with emphasis on policy on road safety targets, is analyzed using these three types of measures. It investigates whether the EU uses carrots, sticks, or sermons as its policy instruments in setting and achieving the common road safety goals.

Decisionmaking Processes and Road Safety Regulation in the European Union

This section explains the overall decisionmaking procedure in the EU and distinguishes several types of specific EU regulation.

The foundation for EU policymaking on road safety lies in the 1992 Maastricht Treaty and is reconfirmed in the 2007 Lisbon Treaty.⁽⁷⁾ In general, the EU promotes free movement of people and goods within the EU to remove trade barriers between member states; road safety plays only a limited role. Therefore, it is obvious that the tasks of the EU related to road safety are somewhat restricted. Furthermore, the EU has to take into account the subsidiarity principle. Mastenbroek⁽⁸⁾

describes this principle as follows: “The subsidiarity principle of the EU . . . says that issues should be solved at the lowest possible governmental level. This principle, codified in the Treaty of Maastricht, is to be regarded as a political principle, expressing the concern of the Member States about the increasing activity of the EC and the loss of national sovereignty.”

Without going into detail, the decisionmaking process can be described as follows: Regulations of all kinds are usually prepared by the European Commission (EC), the executive body of the EU, which, in addition to proposing legislation, is also responsible for the implementation of EU decisions and for the general government of the EU. The commission consists of 27 commissioners, one per member state, although they represent the interests of the EU as a whole. Road safety is part of the portfolio of transport, which in 2011 was in the hands of the Estonian Siim Kallas. On the official level, road safety policy is prepared by the Road Safety Unit of the EC.

After the proposed legislation is submitted, it is discussed and approved or rejected by the Council of the European Union (also called the Council of Ministers) and the European Parliament. The decisionmaking usually takes two rounds of discussion, adaptation, and approval.

The Council of the European Union represents the governments of member states and consists of 27 national ministers. For each topic, the appropriate ministers of the 27 member states are called together. For road safety, the ministers of transport discuss proposals from the EC. On the official level, the High Level Group on Road Safety consists of directors of road safety of ministries of the member states. This High Level Group on Road Safety discusses and negotiates the content of the proposals of the EC twice a year, while formal approval is given by the Council of Ministers. The most recent communication from the council on road safety is the *Council Conclusions on Road Safety* in December 2010.⁽⁹⁾

The Council of the European Union should not be confused with two other organizations with similar names, the European Council and the Council of Europe. The European Council refers to the regular meetings of the heads of state or of government in the EU, discussing general EU policy. The Council of Europe is an international organization that promotes cooperation among all countries of Europe (not only EU) on topics such as legal standards, human rights, democratic development, the rule of law, and cultural

cooperation. The Council of Europe has no legislating powers. The most well-known body of the Council of Europe is the European Court of Human Rights, which enforces the European Convention on Human Rights.

The European Parliament (EP) is the parliamentary institution of the EU, which is directly elected by the citizens in the 27 member states. The EP consists of 736 members. Interviews reveal that the EP has a boosting and active role on the topic of road safety. Several times, the EP has taken initiatives on the topic of road safety. Two recent examples are the *Own Initiative Report on Road Safety*, an EP response to the EC *Policy Orientations*, and the *Own Initiative Report on the Future of Transport*, a proactive publication issued before the EC launched the White Paper on Transport.^(10,11) The EP has good connections with the EC and with research institutes, lobby organizations, and NGOs on road safety.

The interviews revealed that the decisionmaking processes in the EU in general and those on road safety in particular often take a long time (sometimes up to 10 years) and that member states are often reluctant to accept EU policy on road safety. Therefore, setting binding road safety targets has been politically unfeasible and developing obligatory road safety measures has often been impossible.

Three Types of Legislation

The EU distinguishes three types of legislation, in order of importance: regulations, directives, and soft law.

Regulations. Mastenbroek⁽⁸⁾ defines a regulation as follows: “A regulation is addressed to abstract categories of people. It is directly applicable within the Member States.” This is the highest form of legislation possible in the EU. It is not directed at specific categories of people, such as certain organizations or certain member states, but to the entire EU population. The member states do not have to take action on these regulations; they are directly applicable within every member state and for every single citizen of the EU. Hardly any road safety regulations exist in the EU.

Directives. Directives are defined as follows by Mastenbroek: “A directive is addressed to a definite number of member states and is binding as to the result it specifies, while leaving discretion in the form of methods and transposition.”⁽⁸⁾ This means that a directive prescribes the desired result to member states, but that they can use the form and methods of their choice to achieve the result. Directives can be regarded as being in line with the subsidiarity principle of

the EU. The desired result, however, can be described very accurately. In general, directives are used to harmonize legislation to remove trade barriers in the EU. Member states have the obligation to implement the directive in their national legislation in a reasonable timespan, specified as a deadline in the directive and mostly on the order of one-and-a-half years.⁽⁸⁾ The EC monitors this implementation and can ask the European Court of Justice to intervene with a fine or with the direct applicability of the directive in a certain member state (article 226 of the EC treaty).⁽¹²⁾ Furthermore, the EC publishes lists of countries that have not yet implemented directives. These lists have an accelerating effect on the transposition of directives.⁽¹³⁾

Soft law. In addition to legislation, soft law contains European policies on road safety and communicates them to the member states,⁽¹²⁾ especially on topics not covered in regulations or directives because of the subsidiarity principle. Soft law concerns legally nonbinding stipulations, which in practice, however, are often followed by member states. Often soft law takes the shape of action programs, instructions, policy goals or targets, conclusions, codes of behavior, resolutions, guidelines, announcements, or statements. The EC regularly publishes green books and white papers on several policy areas. Green books are documents to stimulate consultation and discussions on a particular topic. White papers are documents with proposals for community measures on a certain topic to solve existing problems. The EU launched a White Paper on Transport in 1992, 2001, and 2011.^(14, 15, 16) These white papers describe the development of the EU transport policy and discuss interventions to improve the opening up of the transport market to competition.

Organizations Involved in Developing Road Safety Policy in the EU

Several organizations inside and outside the EU influence the road safety policy of the EU and/or the implementation of this policy. Below, the most important organizations concerned with road safety in the EU are discussed. The Web sites of the organizations were used as the main sources of information.

To prepare the most recent European Road Safety Action Plan,⁽³⁾ the EU held a public consultation including thematic workshops, Internet consultation, and a stakeholder conference.⁽¹⁷⁾ Among the 550 respondents that cooperated were public authorities, NGOs, research institutes, and private companies. Important organizations the interviewees

mentioned explicitly are the European Transport Safety Council (ETSC), United Nations Economic Commission for Europe (UNECE), TISPOL Organisation (TISPOL), Alliance Internationale de Tourisme (AIT), European Road Transport Research Advisory Council (ERTRAC), Forum of European Road Safety Research Institutes (FERSI), Fédération Internationale de l'Automobile (FIA), the automotive industry, and consumer organizations. Furthermore, the media play an important role, according to the interviewees. The media can play an encouraging role in the adaptation of new road safety plans by the EC or the EP and in gaining public support for road safety measures. Also, media reports on road safety have been known to be the reason for members of Parliament in some member states and in the EP to ask questions about road safety.

AIT. The Alliance Internationale de Tourisme (www.aitgva.ch) is a nonprofit NGO that represents the interests of national automobile associations and touring clubs. It works closely with a number of international organizations, including the EU, in the fields of road safety, technical development and harmonization, customs matters, environmental protection, and consumer protection.

CEDR. The Conference of Road Directors of Europe (www.cedr.fr), not to be confused with the directors of road safety of the ministries of the member states in the High Level Group on Road Safety, is a nonprofit organization of directors general of the road divisions of the Ministries of Transport in a number of European countries. Members of CEDR are directors from Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovenia, Sweden, Switzerland, Spain, and the United Kingdom. They aim at improving European cooperation in the road and road transport sector and facilitate the exchange of experience and information. Their members develop and finance research programs.

ECR. Euro Contrôle Route (www.euro-contrôle-route.eu) is a group of European transport inspection services working together to enhance the quality of enforcement to improve road safety and compliance with road transport legislation and to promote fair competition. ECR's members are Austria, Belgium, Bulgaria, France, Germany, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Poland, Romania, Spain, and the United Kingdom. ECR organizes common check weeks dealing with a specific theme, traineeships for inspectors, and information exchange and stimulates common and harmonized interpretation of road

transport regulations and involvement in different EU projects.

ERTRAC. The European Road Transport Research Advisory Council (www.ertrac.org) provides strategic visions and research agendas on road transport research. The group expects this to stimulate investments in road transport research and contribute to the coordination among the European, national, regional public, and private research and development activities on road transport. Within the EU, it promotes European commitment to research. ERTRAC has more than 50 members, including transport industry groups, European associations, EU member states, local authorities, and EC. ERTRAC has a separate working group for road safety.

ETSC. The European Transport Safety Council (www.etsc.be) is an independent nonprofit organization providing expert advice on transport safety matters to the EC, the EP, and member states. Members are organizations with transport safety interests, in particular research institutes in European countries. ETSC disseminates international scientific research and best practices through scientific reports, factsheets, newsletters, conferences, and proposals for directives.

FERSI. The Forum of European Road Safety Research Institutes (www.fersi.org) encourages collaboration among European road safety research institutes. In its own words, it provides “support to the EC, national and inter-governmental bodies, in defining road safety research needs and solutions.” A large number of the road safety research institutes in the EU are members of FERSI.

FIA. The Fédération Internationale de l'Automobile (www.fia.com) is a nonprofit association of 227 national motoring and sporting organizations from 132 countries on five continents. FIA Region I is responsible for Africa, Europe, and the Middle East. It represents the European member club interests toward the EU, such as road safety, consumer protection, environmental protection, and the promotion of sustainable motoring.

OECD. The Organisation for Economic Co-operation and Development (www.oecd.org) promotes policies that will improve the economic and social well-being of people around the world by providing governments a setting in which to discuss and develop economic and social policy. It does so using instruments such as monitoring of member countries, peer reviews, agreements, standards and recommendations, and authoritative reports. Not only European countries (Austria, Belgium, Czech Republic, Denmark,

Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom) are members of the OECD, but also other advanced and emerging countries, such as Australia, Canada, Chile, Israel, Japan, Korea, New Zealand, and the United States. Recent influential reports on road safety, for example, are *Safety on Roads*,⁽¹⁸⁾ which identifies best practices on road safety programs in OECD countries, and *Towards Zero*,⁽¹⁹⁾ which reviews road safety performance in OECD countries over the last 30 years and proposes approaches to improve road safety in the short and longer term. The report stresses the need to develop long-term, ambitious targets on road safety, using the Safe System approach, an integrated approach to reducing fatal and serious injury crashes, to achieve them.

PRI. La Prévention Routière Internationale (www.lapri.org) is an international road safety NGO with more than 55 members in more than 45 countries. PRI has a consultative status with, among others, the European Conference of Ministers of Transport. The goal of the organization is a zero tolerance policy for road victims, and it stresses road safety as a shared responsibility of all citizens. Its main activities are knowledge transfer through conferences, traineeships, and courses; consultancy activities; and lobbying.

TISPOL. The TISPOL Organisation (www.tispol.org) was established by the traffic police forces of Europe to improve road safety and law enforcement on the roads of Europe. Its main priority is to reduce the number of people killed and seriously injured on Europe's roads. It tries to achieve this by exchanging good practices, organizing and coordinating pan-European enforcement operations and campaigns, initiating and supporting research on road safety, and disseminating the results.

UNECE. The United Nations Economic Commission for Europe (www.unece.org) is one of five regional commissions of the United Nations. It promotes pan-European economic integration. UNECE consists of 56 countries in the EU; non-EU Western and Eastern Europe, South-East Europe, and Commonwealth of Independent States; and North America. UNECE covers various sectors, such as economic cooperation and integration, energy, environment, housing and land management, gender, population, statistics, timber, trade, and transport. It analyzes, advises, and assists governments, but it also sets norms, standards, and conventions to facilitate international cooperation. The Working Party on Road Safety aims at harmonizing traffic regulations, for example, through

the 1949 Geneva Convention on Road Traffic and the 1968 Vienna Conventions on Road Traffic and on Road Signs and Signals. It also distributes best practices. The interviews revealed that, within the EU, its recommendations, especially those on vehicle safety topics, are regarded as very important and are generally followed.

3. EU Policy and Legislation on Road Safety

This chapter outlines the EU policy and legislation on road safety. The relevance of the three types of policy instruments introduced in Chapter 2 is discussed for road safety.

Concerning the regulation instrument, soft law and directives are discussed. As a part of the soft law, the EU road safety targets and their implementation, included in the White Paper on Transport of 2001 and the European Road Safety Action Programme of 2010, are mentioned. Regarding the information instrument, research funding and distribution are discussed as well as benchmarking between member states. With regard to the economic instrument, EU subsidies are discussed. Not all policy instruments are binding for the EU member states. The table below provides an overview of the three types of policy instruments, the degree to which they are binding, and road safety examples.

Table 1. Overview of road safety policy instruments in the EU.

Policy instrument	Binding?	Example
Regulation: soft law	No	White Papers on Transport, Road Safety Action Programmes
Regulation: directives	Yes	Seatbelt use (2005), blindspot mirrors (2007)
Information: research funding	No	EU-funded projects on a broad range of road safety topics
Information: distribution	Sometimes	CARE, ERSO, best practices
Information: benchmarking	Sometimes	European Road Safety Charter, PIN reports
Economic: subsidies	No	EuroNCAP

Sticks: Regulation

Soft Law

As mentioned in the previous chapter, soft law consists of nonbinding stipulations, such as policy documents and action programs. Below, the various policy documents such as the White Papers on Transport and the Road Safety Action

Programmes are discussed. The 2001 road safety target is given in the 2001 White Paper on Transport, and the 2010 road safety target is published in the 2010 Road Safety Action Programme.

Over the years, the EU has developed several publications on road safety that can be classified as soft law. In 2001, the second white paper, *European Transport Policy for 2010: Time to Decide*, set guidelines for road safety policy.⁽¹⁵⁾ The first EU White Paper on Transport was published in 1992⁽¹⁴⁾ and was aimed at opening up the transport market. Overall, its objectives were achieved. The second white paper had different objectives. It aimed at handling problems such as unequal growth in the different modes of transport; congestion on road, rail, and air routes; and harmful effects of transport on the environment and public health, including road crashes. The white paper proposed a target of halving the number of casualties from road crashes by 2010. However, it also stressed the fact that member states are reluctant to follow EU policies on road safety. Therefore, the EC emphasized the exchange of good practices until 2005.

In 2003, the European Road Safety Action Programme entitled *Halving the Number of Road Crash Victims in the European Union by 2010: A Shared Responsibility*⁽²⁾ was published. The paper described the number of crashes and injuries in the EU and their direct and indirect costs and drew the conclusion that “the situation is still unacceptable.” It also mentioned that, despite the existing road safety targets, member states are reluctant to develop road safety measures at the community level. The paper sketched an outline of the responsibilities of all actors involved in road safety and proposed the development of a European Road Safety Charter. The various possible policy instruments available to the EU were described, such as legislation (under article 71 of the EC treaty), financial means, the establishment and dissemination of best practices, the collection and analysis of data on crashes, research, fiscal incentives, and safety requirements in public service contracts. Not all policy instruments were used at the time of writing, and the commission proposed to examine the extension of their use. The EC also named several main areas of action, such as road behavior, vehicle safety, road infrastructure, safe

transport of goods and passengers, emergency care for road casualties, and crash data collection. Several more detailed measures were proposed, although the proposals for actual realization and implementation were often vague.

In 2010, the EU issued an update of the European Road Safety Action Programme entitled *Towards a European Road Safety Area: Policy Orientations on Road Safety 2011–2020*.⁽³⁾ The paper presents a governance framework and road safety targets for the period between 2010 and 2020. It stresses that actions to achieve these targets should be taken at the most appropriate level, meaning that actions are not only required from the EU, but also from member states, regional and local bodies, and civil society. The target for road safety is to halve the overall number of road deaths in the EU by 2020 compared to 2010. This target is not mandatory for member states; they are “encouraged to contribute.” In addition, general measures are not imposed on member states, but they should “concentrate on their efforts in areas where their performance is lowest.” No target has been set for severely injured road casualties. During the decisionmaking process, ETSC and other road safety stakeholders repeatedly advocated the continuation of the EU road safety targets.^(20, 21, 22) The EC mentions a number of strategic objectives, for example, improving education and training of road users, increasing enforcement of road rules, developing safer road infrastructure and safer vehicles, promoting the use of modern technology, protecting vulnerable road users, and improving emergency and post-injury services. Few concrete actions are mentioned, but several intentions for new projects are described. The emphasis is not so much on developing new directives and other forms of EU law, but on the enforcement of existing EU laws, structuring the cooperation between member states and the EC, new research, and the distribution of best practices and crash data. The Council of the European Union has endorsed the most important points from the action program and has even increased the ambition level of the targets by aiming at the long-term Vision Zero.⁽⁹⁾

The 2011 update of the EU White Paper on Transport⁽¹⁶⁾ elaborates on the same issues as the previous white paper, but is supplemented with issues such as the consequences of the decrease of traditional energy sources for transport. The EC presents a number of objectives in its vision of a competitive and sustainable transport system. In addition to objectives on environmental issues, shifts in modes of transport, improving transport networks, and developing transport information management systems, it launches

two new objectives on road safety: a midterm objective and a long-term objective. The EC aims at moving close to zero fatalities in road transport by 2050 and halving the number of road casualties by 2020. Its ambition is to be a world leader in transport safety in all modes of transport. Concrete actions mentioned are in line with the Road Safety Action Programme 2010, for instance, harmonizing road safety technology, developing a strategy on road injuries and emergency services, and training and educating road users, with a focus on vulnerable road users in particular.

The interviews indicate that the EU road safety targets are an important instrument for member states to keep road safety on the national agenda. This is especially (but not only) applicable for the relatively new member states in Middle and Eastern Europe. The interviewees stated that new member states take special pride in keeping up with the EU target to show their commitment to the EU. However, not only new member states found the EU road safety targets inspiring. France, Portugal, and Spain also included national road safety targets in their road safety plans based on the EU targets and took measures to achieve the EU targets.^(23, 24, 25) Jacques Chirac even declared road safety one of his top priorities in his Bastille speech in 2002 at the beginning of his second term as president of France.⁽²⁶⁾ However, not all member states have adapted their policy plans to the EU road safety targets. For example, the Netherlands has not included these targets in its national road safety policy plan, but has opted for its own, less ambitious target.⁽²⁷⁾

In addition to these policy documents, the EC has published some recommendations on more specific road safety topics, such as recommendations on consistent enforcement of laws against speeding, drinking and driving, and driving without a seatbelt.⁽²⁸⁾ Furthermore, the EC published recommendations on the maximum permitted blood alcohol content for drivers of motorized vehicles.⁽²⁹⁾

Directives

In the past decade, the EU adopted several directives on road safety.⁽³⁰⁾ A directive describes the desired result to the member states. The member states must implement the directive within a given timeframe, but can choose their own form and method. The following are some important directives:

2002: The EU launches a directive to regulate the driving time of professional drivers in cross-border transport.⁽³¹⁾

Maximum driving hours and mandatory breaks are determined.

2003: The EU harmonizes the frequency of medical checks and the periodic training for professional drivers.⁽³²⁾

2004: A directive is published to set minimum safety requirements for tunnels, including regulations on preventing and handling tunnel incidents.⁽³³⁾

2005: The EU regulates the mandatory use of seatbelts in all vehicles for drivers and for passenger in all seats fitted with them.⁽³⁴⁾

2006: The EU harmonizes moped permits and minimum age requirements for mopeds.⁽³⁵⁾

2007: A directive makes the retrofitting of old trucks with blindspot mirrors compulsory.⁽³⁶⁾

2008: The EU harmonizes the safety management of the roads belonging to the Trans-European Networks, prescribing instruments such as safety audits at the design stage and regular safety inspections of the network.⁽³⁷⁾ Furthermore, a directive is launched on making daytime running lights compulsory for all new cars and small delivery vans in the EU in 2011 and for trucks and buses by mid-2012.⁽³⁸⁾

2010: The EU makes inspection at regular intervals compulsory for all vehicles and trailers to ensure that they are in roadworthy condition and meet the safety standards.^(39, 40)

Sermons: Information Policy Instruments

A very important and often-used EU policy instrument to improve road safety in the individual member states is the creation and dissemination of information. The information policy instrument has multiple objectives. The first objective is to provide new knowledge on road safety. The second goal is to make existing knowledge of individual member states available to other member states by creating Web sites with information for professionals, such as the European Road Safety Observatory (ERSO), and by publishing best practices. This way, member states can learn from each other, and road safety professionals on all organizational levels of the member states can get acquainted with each other. By publishing mortality rates every year, as well as other benchmark data (see below), the third goal is to inspire less performing countries to improve their performance to the level of the best performing countries.

Research Funding: Generating New Knowledge

In the last 10 to 20 years, the EU has funded a vast number of research projects, including studies on behavior, enforcement, education, vehicles, and infrastructure. The ERSO Web site presents topics such as accidentology, driving under the influence, fitness to drive, policy assessment and tools, road and tunnel infrastructure, rules and enforcement, training, education and campaigns, and vehicle technology such as active and passive safety, periodic technical inspection, and vehicle emissions. Furthermore, two recent papers provide an overview of recent road safety research.^(41, 42) Because funding is divided among various departments of the EC and statistics on funding for road safety research are not registered separately, it is not possible to give an overview of the amount of money spent on road safety research in the EU. One of the previously mentioned papers gives a not very detailed figure of a total of € €500 million since 1994.⁽⁴²⁾

Information Distribution: Unlocking Existing Knowledge

Two important initiatives in information distribution are the CARE database (Community database on Accidents on the Roads in Europe) and the ERSO Web site. Furthermore, the EU regularly publishes best-practice reports on road safety policy in general or on specific road safety topics.

CARE. The CARE database is an EC database with detailed data on individual road crashes resulting in death or injury. CARE is used to identify and quantify road safety problems in Europe, to evaluate road safety measures, and to facilitate information exchange on road safety. The database was set up by the European Council in 1993. Participation in data collection and data sharing is compulsory for all EU members. (See http://ec.europa.eu/transport/road_safety/specialist/statistics/care_reports_graphics/index_en.htm.)

ERSO. The European Road Safety Observatory is an EU-financed Web site with a vast amount of European road safety data, knowledge, and links. The Web site provides information for citizens as well as road safety professionals and provides professionals with the opportunity to join in the information gathering. It provides overviews of road safety directives, road safety research projects, and developments in road safety crash statistics. (See http://ec.europa.eu/transport/road_safety/specialist/index_en.htm.)

Best practices. Several EU research projects are aimed at formulating best practices on road safety policy in general or on specific topics. The objective of these best practices is to inspire less performing member states to adopt road safety strategies that have proved to be effective in other countries. Some recent examples are the SUPREME handbook,⁽⁴³⁾ which provides a summary of best practices in road safety measures in general, and the ROSA handbook,⁽⁴⁴⁾ which provides best practices on the safety of powered-two-wheelers. The RIPCORD handbook⁽⁴⁴⁾ on best practices on black spot (crash-prone roadway sections) management and safety analysis of road networks is another example of a best-practice handbook.

Benchmarking: Inspiring Countries

The EU uses several tools to enable member states to compare their achievements in road safety to those of other member states. Interviews revealed that benchmarking is a powerful tool in achieving the EU road safety targets. The interviewees indicated that the EP as well as national Parliaments use the benchmarking instruments to formulate questions on road safety. In particular, new member states use benchmarking to draw attention to the topic in their own national governments. In addition to the CARE database are other benchmarking instruments listed below:

Road Safety Quick Indicator. Since 1988, the Road Safety Quick Indicator has provided recent trends on basic road crash indicators, such as the number of injury crashes, road fatalities, and injuries. The tool is based on provisional data and has been established to help decision-makers compare their national situation with that in other member states. Every month the provisional data are compared with the provisional data of that same month in the previous year.

Statistical pocketbook. Every year, the EC also publishes a statistical pocketbook, which covers the most recent and important annual energy- and transport-related statistics in Europe. It includes figures on the EU, the 27 member states, EU candidate countries, as well as Iceland, Norway, and Switzerland. On road safety, not only road fatalities are mentioned, but also country rankings, fatalities per user and vehicle type, and crash rates. In addition, Eurostat, the statistical office of the EU, provides similar types of data on its Web site.

Annual leaflet. The EC publishes an annual leaflet called *Road Safety, How is Your Country Doing?* with a short

overview of the road safety performances of all member states and the EU as a whole. Just like the previously mentioned publications, it makes comparisons between member states possible to encourage them to improve their performance.

European Road Safety Charter. The European Road Safety Charter is a European participatory road safety platform whose members include enterprises, associations, research institutes, public authorities, and civil society. The members commit themselves to carrying out concrete actions and share their results to improve road safety in their daily environment. Members have made commitments to actions in user behavior, vehicle safety, infrastructure, professional transport, and accidentology. The charter has more than 2,000 member organizations.

PIN reports and PIN awards. Not belonging to the official EU policy tools but nevertheless an influential benchmarking instrument are ETSC's Road Safety Performance Index (PIN) reports and awards. The PIN compares the road safety performances of member states. The yearly PIN reports were first published in 2006. The index measures several areas of road safety, including road user behavior, infrastructure, and vehicles, as well as general road safety policymaking. Thirty countries and their research organizations participate in the PIN project. In addition to developing annual reports, ETSC yearly gives the PIN Award to a high-level policymaker responsible for the best performing country's road safety policy.⁽⁴⁶⁾

Carrots: Economic Policy Instruments

The funding of research projects, discussed above as being an information policy instrument, can also be an economic policy instrument.

Besides subsidizing these research projects and information dissemination projects, the EU financially supports a number of interest organizations on road safety. One that has not yet been discussed is the European New Car Assessment Programme (EuroNCAP). This program assesses popular new car models in crash tests to evaluate the protection they offer for drivers, passengers, and pedestrians.⁽⁴³⁾ EuroNCAP was originally developed by the British Transport Research Laboratory for the Ministry of Transport, following the New Car Assessment Program created by the U.S. National Highway Traffic Safety Administration. Nowadays, several countries, transport and traffic safety organizations, insurance companies, and consumer organizations have joined EuroN-

CAP. The EC is an observing member on EuroNCAP's board. EuroNCAP is independent of the automotive industry.

The economic policy instrument is also used in granting funds for new infrastructure to member states, through, for example, the Cohesion Fund and the European Regional Development Fund (ERDF). To use these funds, member states have to follow communitarian legislation, among which are the directives on infrastructure safety.⁽⁴²⁾

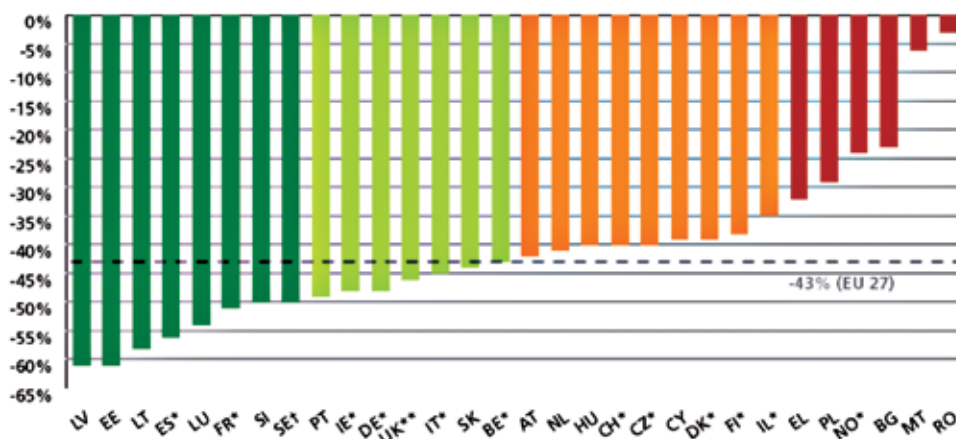
Achieving the Road Safety Target: Which Policy Instruments Helped?

Did the EU achieve its road safety target and, if so, did its policy contribute to this? The road safety target as formulated in the 2001 White Paper on Transport⁽¹⁵⁾ was to halve the number of road crash casualties in the EU between 2001 and 2010. Figure 1 presents the change in road deaths between 2001 and 2010 for the individual EU member states and for the EU as a whole.

Figure 1 shows a 43 percent decrease in the number of people killed in road crashes between 2001 and 2010 in the EU as a whole. Although the road safety target has not officially been met, the decrease is so large that it can be considered a success for road safety in the EU.

Is this success due to the EU policy on road safety in general and on setting the target in particular? This question cannot be scientifically answered in this short research report. A thorough analysis of policy and policy effects is required to formulate a scientifically sound conclusion to this question.

Recently, Allsop, Sze, and Wong investigated the effect of setting road safety targets on road safety performances.⁽⁵⁾ Their research shows a positive association between setting a quantified road safety target and road safety fatality reduction within 3 years. Bosetti et al.⁽⁴⁸⁾ evaluated the EU Road Safety Action Programme 2003 using mostly qualitative methods and concluded that the impact of the program varied strongly per evaluated measure. Stakeholders in their study valued the impact of the measures as medium to high. Thus, it can be concluded from this study and from the crash figures that it is at least plausible that the EU road safety policy has to some extent contributed to achieving the road safety target. As a matter of fact, some European countries have taken up the challenge to meet the road safety target and strongly promote the target in their own country. For example, France, Portugal, and Spain, as well as new member states like the Baltic States, have put road safety high on the national agenda and achieved major reductions.



*Provisional estimates were used for 2010 because final figures for 2010 were not yet available.

**UK 2010: ETSC estimate for the United Kingdom based on EC CARE Quick Indicator.

†Sweden 2010: the definition of road deaths has changed and suicides are now excluded. The time series was adjusted so that figures for previous years exclude suicides as well.

Figure 1. Percentage change in road deaths between 2001 and 2010.⁽⁴⁷⁾

Despite the lack of scientifically sound research on the success factors of the setting and achieving of the EU road safety targets, a general picture arises from the interviews and the literature review. Three conditions may have been helpful in achieving the EU road safety target. First, the EU has a coherent mix of policy instruments at its disposal, such as legislation, soft law, economic stimuli, and information gathering, sharing, and comparing. Second, the existence of a solid official and administrative structure within the EU to develop and discuss road safety issues as well as the extended network of NGOs is a firm basis for EU road safety policy and for support in the individual member states. Last, creating a sense of urgency to develop road safety policy and to meet the road safety target appears to be important for prompting member states to take road safety measures to achieve the EU target. The EU tries to create such a sense of urgency through a policy of financing, informing, stimulating, and, to some extent, regulating road safety measures. A strong leader within the EU or in individual member states who indicates road safety is an important issue, as was the case in France, can have a positive influence on the agenda setting of road safety.

4. Summary and Conclusions

This report investigates the EU policy on road safety targets and its strategies to achieve these targets to provide FHWA and AASHTO with ideas to adopt these strategies in the United States.

FHWA and AASHTO desired a paper “that summarizes how the European Commission and its related transportation organizations have supported the setting of ambitious crash-reduction targets among its diverse 27 European members.”⁽¹⁾

The paper stretches somewhat beyond this question. Because the road safety targets are set for the EU as a whole and are not binding for the individual member states, this paper also examines other policy instruments the EU uses to help member states implement the road safety policy.

The research questions answered in this report are as follows:

1. Which policy instruments does the EU use to achieve its road safety targets?
2. Are these policy instruments effective?
3. How can these measures be translated into suggestions for the United States to set and achieve national road safety targets?

This chapter summarizes the policy instruments used in the EU, the decisionmaking on road safety in the EU, and the achievements in reaching the EU road safety targets. As mentioned in Chapter 3, the second research question, whether the EU policy instruments have been effective, cannot be answered because of a lack of scientifically sound research on this topic. To answer the third research question, how to translate EU policy on road safety targets into possible suggestions for the United States, insight into the U.S. policy setting on road safety is needed. Chapter 1 mentioned that such insight is not available at SWOV at present. Therefore, the choice was made to describe four important elements of the EU approach in this chapter.

EU Policy Instruments

Three types of policy instruments are used in the EU to achieve the road safety targets. In policy instrument theories, these three types are called regulation, economic instruments, and information instruments, also indicated as sticks, carrots, and sermons. The EU uses a mix of these instruments.

Regarding regulation instruments, the EU has developed several directives on various road safety issues. Directives are EU legislation that does not have a direct effect in the member states, but that the member states are obliged to implement in their respective countries within a given timeframe. Many of these directives are directed at measures concerning professional drivers, vehicles, or trans-European roads. The topic choice is inspired by the principle of the single EU market (the road safety measures enable fair competition), but is at the same time limited by the subsidiarity principle, which calls for solving issues at the lowest level possible.

In addition to official legislation, the EU also produces soft law on road safety, such as policy documents, action plans, policy targets, and guidelines, which is not binding for the member states. Some important documents are the White Paper on European Transport Policy,⁽¹⁵⁾ which set an EU road safety target of halving the number of casualties between 2001 and 2010, followed by the 2003 Road Safety Action Programme.⁽²⁾ More recent are the 2010 Road Safety Action Programme⁽³⁾ with a similar target for 2020 and the 2011 White Paper on Transport,⁽¹⁶⁾ which strives for zero fatalities in 2050.

It may be concluded that the EU does not use economic instruments to a large extent, although it does finance many research projects that focus entirely or partly on road safety. An indication of the amount of funds spent on road safety research is not available. Furthermore, the EU contributes to the funds of EuroNCAP and stipulates conditions for the use of EU development funds such as the Cohesion Fund and the ERDF.

The EU has introduced a large number of measures in the

information instrument category. Not only does the EU provide information on road safety data and measures through databases such as CARE and Web sites such as ERSO, it also stimulates benchmarking between member states through the Road Safety Quick Indicator, statistical pocketbooks, leaflets, Eurostat, and the European Road Safety Charter. In addition, the ETSC developed the Road Safety Performance Index to compare member states on several road safety indicators. Also, the research projects financed by the EU produce a large amount of information that is distributed to the member states. Within the EU, the information instrument can be seen as the most important policy instrument to stimulate road safety policies in general and the road safety targets in particular.

Decisionmaking on Road Safety and Road Safety Targets

Proposals for directives and soft law, such as the White Papers on Transport and the Road Safety Action Programmes, are made by the Road Safety Unit of the EC and discussed by the ministers of the 27 member states in the Council of Ministers and in the High Level Group on Road Safety. Also, the EP has to approve the EC proposals. The EP often plays an encouraging role in road safety policy and sometimes takes parliamentary initiatives. Furthermore, interest groups such as ETSC and PRI influence the decisionmaking. For the last Road Safety Action Programme, an extensive stakeholder consultation was held among the public, public authorities, NGOs, research institutes, and private companies. In addition to the target in the Road Safety Action Programme 2010, the Council of Ministers has increased the ambition level of the target by setting the objective at zero fatalities. Despite this, however, interviews revealed an often long decisionmaking process, and member states often appear to be reluctant to accept EU actions on road safety. Therefore, road safety targets are not binding and there are few directives on road safety.

Achieving the Road Safety Target

Although the road safety target of 50 percent fewer road deaths has not officially been met, an overall decrease of 43 percent can be called a success for road safety in the EU. Whether this decrease is the actual result of the EU road safety policy and the setting of road safety targets cannot be scientifically answered in this paper, although some studies⁽⁴⁷⁾ suggest that a connection is plausible.

Conclusion: Possible Lessons for the United States in the EU Approach

The study discussed in this paper indicated that the EU approach to setting and achieving road safety targets includes four important elements. These elements may also be applicable in the United States, although circumstances in the United States, such as the political situation, administration, and geography, are different from those in Europe.⁽⁴⁹⁾ The four elements are discussed below.

1. Use a variety of policy instruments.

The first point worth noting on EU policy on road safety targets is that the EU does not restrict itself to one type of policy instrument, but uses a mix of types. It has developed financial instruments as well as information instruments and has used regulation to create a sense of urgency and to stimulate member states to develop measures to achieve the road safety target. Using a variety of policy types not only limits the risk that the chosen strategy type will not work, the various types of policy instruments are also likely to have a cumulative effect.

2. Build a broad network of road safety related organizations.

Over the years, an extensive network of NGOs, research institutes, business companies, and governance organizations has been built in the EU. Each organization promotes road safety from its own interests and contributes to the EU road safety policy by taking measures and raising funds within its own circle of influence. For instance, in addition to national governments, NGOs, businesses, and individual citizens have contributed to the stakeholder consultation for the EU Road Safety Action Programme 2011. The influence and pressure of many different organizations help keep road safety targets on the agenda of both the EU and the individual states.

3. Do not underestimate the facilitating role.

A large part of the EU policy on setting and achieving the road safety target is devoted to the facilitating role of the EU in stimulating member states to take actions of their own. The facilitating role is illustrated in knowledge-generating activities such as financing research projects and in distributing knowledge through Web sites and publications, but also in facilitating a mild form of competition through benchmarking and creating a sense of urgency through agenda setting. In general, the EU uses a bottom-up

approach in its facilitating role. It stimulates researchers and policymakers of individual member states to meet, share knowledge and ambitions, and translate this information to their own situation when back in their own countries.

4. Steer on effect, not on implementation.

By using the directive instrument and soft law rather than direct legislation that works in the member states without transposition, the EU tends to steer on effect rather than on implementation. While the goals and effects of the measure are clear to all, it allows the member states to fill in their own implementation details. This decreases resistance to measures and increases support. However, to achieve the desired effect, it is necessary to set conditions for the implementation. The most important is the timing of the implementation: member states should not delay the implementation. Setting a clear term for implementation and formulating workable consequences if the implementation fails helps member states make implementation a priority. In the EU, consequences of not implementing directives in time are a direct applicability of the directive in the member state and ultimately a sanction.

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