SUMMA

Sustainable Mobility, policy Measures and Assessment

Funding: European (5th RTD Framework Programme)
Duration: Sep 2002 - Jul 2005
Status: Complete with results

Background & policy context:

There is an increasing demand for transport and mobility in our society. At the same time there is a desire for cleaner environment and nature preservation and concern for the welfare of future generations. Policymakers have to accommodate these conflicting emotions by balancing the positive and negative impacts of transport. SUMMA helps policymakers to do so by giving support in developing more efficient and effective transport policies that fulfil the need for mobility while reducing transport’s adverse impacts to more acceptable levels.

Objectives:

The SUMMA project is designed to support policymakers by providing them with a consistent framework for making trade-offs, where appropriate, among the economic, environmental and social components of sustainability. SUMMA will provide an assessment of policy options for promoting sustainable transport and mobility. To achieve this, SUMMA will:

1. Define and operationalise sustainable mobility and transport, develop an appropriate system, and define a set of indicators for monitoring the environmental, economic and social dimensions of sustainable transport and mobility;
2. Assess the scale and scope of the problems of sustainability in the transport sector;
3. Assess policy measures in the White Paper on transport policy, as well as other policy measures, that are to be found in the literature, that can be used to promote sustainable transport and mobility at the national, regional, and city levels.

Methodology:

In order to fulfill its objectives SUMMA adopted a two-step approach. The first step was to analyse the problem and to develop a conceptual design for monitoring and modelling sustainable transport and mobility, without fully taking into account the feasibility of its implementation. In the second step, the conceptual design was implemented, given the limitations of data and information, as fully as possible and then used to assess the contribution of several policies to promoting and realizing sustainable transport.

The project is divided into 6 sections:

1. Given that the term sustainability has many different aspects, the aim of this section is to review these different aspects and distil what is relevant for sustainable transport. Also nine European-wide research projects on sustainable transport and mobility were selected and reviewed.
2. In this section a theoretical framework and a structured approach was set up for the project. For policymakers to determine whether or not their current policies or changes in policy would lead toward sustainability, they would need to know what aspects of world need to be sustained, and how to measure these aspects. Then, if some of these aspects are determined to be not sustainable, the policymakers need to decide what policy measures to apply to influence these aspects in a positive direction. Operationalising this process requires a theoretical framework and...
In this part of the project the outcomes of interest and the selected indicators are described. The outcome indicators are needed to monitor or describe changes in the outcomes of interests. The main criterion used in identifying the indicators has been their importance, relevance and completeness in measuring and monitoring the outcomes of interest. Availability of data or methods to calculate these indicators was not taken as a decisive factor, although it certainly has had an impact on the selection.

In this part of the project a model was set up. A model is required to represent the transport system. Ideally, the model to represent the transport system would be able to model all policy measures and provide the outcomes of interest with sufficient detail and accuracy. Additionally the model should cover the whole of Europe and be a useful and practical tool for policy makers to support their decision-making.

One goal is a generalized, non-quantitat

Related Projects:
EXTRA
SAMI
PROSPECTS
EXPEDITE
TRENDS
UNITE
MC-ICAM
TRENEN
TREMOVE

Parent Programmes:
FP5-GROWTH KA2 - Sustainable Mobility and Intermodality

Institute type: Public institution
Institute name: European Commission, Directorate-General for Energy and Transport (DG TREN)
Funding type: Public (EU)

Partners:
- RAND Europe, NL
- Transport & Mobility Leuven, NL
- Econcept AG, CH
- Synergo, Planning and Project Management, CH
- SUDOP PRAHA a.s., CZ
- Kessel & Partner, D
- IER - University of Stuttgart, D
- Gaia Group, FI

Organisation: RAND Europe
Address: Newtonweg 1
Zipcode: 2333 CP
City: Leiden
Contact country: Netherlands
Telephone: +31 71 5245151
Fax Number: +31 71 5245191

Key Results:
SUMMA was designed to create a tool for helping policymakers. This tool is now available in the form of the FSM (Fast Simple Model). There is, however, room for improving the FSM. Nevertheless, in creating the FSM many valuable lessons relevant for both researchers studying sustainable transport and mobility and policymakers responsible for promoting sustainable transport were learned. To start it
should be noted that the concept of sustainability, however defined, is an inherently political issue. It is very difficult, if not impossible, to define sustainability in a way that is acceptable to everyone. The reason for this lack of consensus about what constitutes sustainability is that depending on the definition, there are different sets of winners and losers. Given this, it becomes even more important to deepen our understanding of the facts underlying the various aspects of sustainability so as to facilitate the making of trade-offs and reaching a compromise.

Project related conclusions:

- The modelling tool developed in SUMMA is a powerful, easy to use tool that allows its users to quickly estimate and present the impacts of policy measures on a whole range of outcome indicators. This tool combines demand generation and policy assessment capabilities in one tool allowing users to:
  - (1) select a policy,
  - (2) estimate the effect of the policy on a variety of outcome indicators, and
  - (3) study the results. The utility and added value of such a tool for both policymakers and analysts is evident.
- The FSM uses a large amount of disaggregate and aggregate data from all over Europe.
  Unfortunately, the quality and availability of data is not the same for all the countries. From some countries, predominantly the original EU15 most of the required information was available. For the new member states a lot of the data is not available or missing. In many cases where data was not available, by making assumptions about similarities with other countries a reasonable estimate could be made. These assumptions, however, remain assumptions and cannot substitute for real data.
- Despite the uncertainty in the SUMMA estimates, it is believed that FSM is a good model for the purpose for which it was developed, namely to compare and choose policies by comparing their impacts on a range of outcome indicators. Thus, as long as the FSM is not used for estimating the absolute level of an impact of a given policy

Policy implications

An important area where much additional research is needed is in the area of social equity and social cohesion.

A lot of additional research is still needed in order to understand these issues and to devise policy measures for addressing them. Given that sustainability has multiple dimensions, it is important for policy makers to consider all the dimensions in an integrated manner rather than individually. Therefore, policy measures should be dealt with in an integrated manner for understanding their combined effects. When sustainable mobility and transport are discussed, the need for holistic and systemic approach is evident. There is a strong demand to better understand cause-effect relations in the transport system and policy making, for example severe efforts on reducing road traffic may lead to increase in air traffic.

Furthermore, reaching sustainable transport requires not only technical measures but also great attention to decoupling and changes in the behaviour of individuals. Also given these multiple dimensions, it is unlikely that any single policy measure can by itself help attain a sustainable transport system. Thus, policy makers should try to develop policy packages (sets of policy measures) to address the different dimensions of sustainability. The responsibility of a policy decision rests with the policy-maker and can never be overruled by a decision support method. Therefore, in the projects policy makers were recommended to use various models and tools. Scenario building and systems modeling tools and other integrated approaches require considerable efforts compared to conventional incremental policy-making, which has proved to be conflict laden and not particularly effective. This is so partly because they often have a too short time perspective. In a longer time perspective the gains of specific measures will be more visible. Integration of measures should also be supplemented with integration of different sectoral policies. Special attention should be paid on linking transport policies with other policy areas in society. Transport has both large positive and negative impacts. Thus, policymakers are faced with the conundrum of simultaneously stimulating the positive effects and mitigating the negative effects.

Documents:
- SUMMA Final Report.pdf (Final report)

STRIA Roadmaps: Smart mobility and services
Transport mode: Multimodal transport
Transport sectors: Passenger transport, Freight transport
Geo-spatial type: Other