

*Integrating Environment in
Transport Policies*

– a survey in EU Member States

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REPORT

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Integrating Environment in Transport Policies

– a survey in EU Member States

Preface

A sustainable transport system is one of the greatest challenges in the pursuit of a sustainable development. A wide range of environmental problems has to be solved in ways that are compatible with social and economic goals.

The transport sector has already taken a lot of measures to lessen the burden on the environment. In order to achieve an environmentally sustainable transport system more action is needed. The integration of environmental concerns into policies and decision making has to be extended and deepened.

In a joint report in 1996, eleven Swedish stakeholders within the field of transport and environment defined an environmentally sustainable transport system (EST) in terms of a number of goals (see *Towards an Environmentally Sustainable Transport System*, SEPA report No. 4682). The stakeholders assumed that the goals could be reached within 25-30 years. The Swedish EST-project was not alone in stressing the importance of international co-operation. The network, which consists of the Swedish National Road Administration, the Swedish National Rail Administration, the Swedish Civil Aviation Administration, the National Maritime Administration, the Swedish Institute for Transport and Communications Analysis, the Swedish Transport and Communication Research Board and the Swedish Environmental Protection Agency has therefore joined in a new project entitled 'Euro-EST'.

The objective of 'Euro-EST' is to promote a co-ordinated and integrated environmental work in the transport sector with a view of achieving an environmentally sustainable transport system in Europe.

The following report provides an overview of existing and planned integration strategies in EU Member States, looking at approaches, mechanisms and institutional set ups which contributes to integration in concrete terms.

The report has been prepared by Olivia Bina and Jenny Vingoe at Environmental Resources Management, London. The authors are responsible for the content and the conclusions in the report.

SWEDISH ENVIRONMENTAL PROTECTION AGENCY

Stockholm, May 2000

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Executive Summary

The Aim of the Study

The principal aim of the study is to produce a survey of *how* European Union (EU) Member States have integrated, or are planning to integrate, environmental considerations in their national transport policies. The report focuses on the strengths and weaknesses of approaches in the formulation of strategies, of the selection and function of integration objectives, and of the mechanisms and institutional set-ups which are contributing to the implementation of integration. The study is intended to contribute to the Swedish Euro-EST project and to the integration process at the EU-level with information on what lessons can be learned from experience to date, and how to progress further on integration.

This project comes at a time when policy makers and practitioners in the field of transport and the environment are increasingly looking to exchange information on different experience and ways of meeting the challenge of environmental integration in the transport sector.

The Research Method

The gathering of information on existing and planned integrated transport strategies was carried out essentially through telephone interviews with representatives of Ministries of the Environment and/or Ministries of Transport, supported by literature review. Member State representatives of 13 countries were asked to discuss and provide detailed information on a common set of environmental integration questions. This country-by-country overview is presented in *Annex A* and a comparative analysis across all countries formed the basis of the main report (*Section 2*). On the basis of the country overviews, a series of case studies from 9 countries (including Norway) were selected. Case studies highlighted very different aspects of environmental integration, covering national and regional approaches, instruments and implementation mechanisms which can be considered good practice. *Section 2* incorporates the main findings from the case studies.

An Overview of Trends

The Type of Strategies and Approaches to Integration

The country overview revealed that most EU countries have engaged in some form of environmental integration, but that the range of approaches and the degree of integration at the highest policy levels vary significantly across Europe.

In order to facilitate the comparison of the different levels of progress towards integration in the various countries, the study proposed four broad “*types of integration strategy*”:

- A) an integrated transport strategy;
- B) an environmental section contained in a wider transport strategy;
- C) a transport section contained in a wider sustainability strategy; and
- D) other - a range of specific actions and documents which also deal with environment and transport.

It appears that most Member States have adopted or planned to adopt more than one of these “*types*”, but that only seven Member States have adopted or plan to adopt a fully integrated transport strategy. Interestingly, some regional authorities have adopted integration strategies ahead of their national counterpart.

The *main themes* which have been commonly considered in the process of integration are:

- transport demand management -including modal split;
- modal shift and transport behaviour patterns;
- transport demand reduction; and
- addressing CO₂ emissions.

Issues which are rising (or coming back) at the top of the integration agenda include:

- health and environmental impacts of transport;
- the role of technology in reducing transport’s environmental impacts;
- the link between transport and land-use; and
- transport and quality of life issues.

Key Issues

Multi-modality and the need to reduce *transport demand* were amongst the most critical issues for integration strategies. The country overviews reveal that, to date, very few Member States have either adopted a multi-modal approach to transport planning or put in place objectives for the reduction of transport demand. Although changes in *transport behaviour patterns* remain high on the

agenda of many countries, some are now looking for alternative approaches since there is a recognition that it is extremely difficult to influence people's preferences to use their own cars.

In terms of the Member States' approaches to the formulation of integration strategies in the widest sense, *institutional integration* is seen as a very important dimension. The definition of such strategies has often required the creation or strengthening of formal or informal links between the transport and environment ministries, often requiring the provision of additional resources (funding and expertise). It is also increasingly evident that positive results can be expected when there is a clear and transparent *distribution of responsibilities* amongst administrations and when *specific measures* for implementation have been identified.

Consultation, within public administrations and with wider stakeholders, is also becoming a common feature throughout Europe. The increased involvement of the wider public and key stakeholders in environmental policy making is considered a very positive step forward and, potentially, an important driving force for sustainability. It is also seen as *an excellent process* to build a sense of ownership of the strategy and secure the support of many different institutions involved in its delivery. Good consultation can be complex, time consuming and require careful direction with substantial cost implications.

Greater *co-ordination between land-use, transport planning and economic policy* is another key element of environmental integration. Several countries have addressed this issue, particularly in connection with local and urban dimensions.

The Role of Objectives and Targets

The Member States overview revealed a general agreement in principle that objectives supported by quantified targets provide a measurable and tangible means of defining, assessing and illustrating progress with integration. They help to define what is required of the transport sector.

Most countries appear to have adopted at least a *mixture* of generic objectives and some specific targets. However, targets are being adopted very slowly among Member States, and mainly in relation to selected issues such as air pollution. Interestingly, some of the countries which have been using targets for several years are now reviewing this policy. They are reducing the number of targets and are focusing on more "flexible" objectives.

The difficulties faced with the quantification of objectives are not the only reason for this trend. Effort is shifting towards the clearer definition of responsibilities and specific implementation measures, in an attempt to meet the increasing need for *flexibility* to ensure that objectives remain challenging and continue to act as a driving force for change. There is also an increasing

tendency to set broad objectives at national level and much more quantified targets at regional or local level.

The development of objectives and targets is based on a variety of principles and sources. International sources such as the Kyoto Protocol, and European and national legislation and policy remain fundamental starting points. However, the role of consultation processes and their results, and the desire to use the procedure for setting objectives as a moment of learning and institutional integration, have become increasingly important drivers.

In several cases the objectives are set by the Ministry responsible for Transport, in *co-operation* with the Ministry of Environment. They are based on a combination of technical knowledge and environmental goals, and they sometimes aim to *balance* what is technically possible with ideal environmental and socio-economic goals.

Approaches to Implementation of Integration Strategies

Integration strategies are implemented through a variety of mechanisms which are often similar to those used during the strategy's definition phase. Member States have adopted a wide range of solutions, often reflecting the more or less advanced stage of environmental integration in their country.

At the institutional level, the setting up of some form of an "*Integration unit*" with expertise and responsibility for integration in the transport and/or environment ministry, is increasingly common. Some countries have promoted *secondment* of staff, others have created independent bodies for integrated transport, or used inter-ministerial *working groups* to address specific transport and environment issues.

At the more concrete and practical level of implementation, mechanisms often used include the setting of *simplified, common tariffs* for public transport, the *involvement of transport providers* at the planning stage and the use of *Environmental Management Systems* at national (inter-modal and modal level), regional, local and transport provider levels. Furthermore, some Member States have given considerable attention to the *local level* and the need to reorganise *funding* for multi-modal local mobility plans in order to facilitate the implementation on the ground.

Conclusions

The study therefore confirms that most European Member States have started to engage in environmental integration in the transport sector, and highlights the very significant differences between countries, in terms of approaches to integration and the mechanisms they have developed to achieve the overall goal of integration. The findings suggest that a lot can be learnt from such wide

differences, both in terms of what appears to have been successful and in terms of approaches which have been rejected as inefficient or too difficult to achieve.

The level of *collaboration between environment and transport administrations* is being strengthened in all Member States. The degree of importance of such collaboration is directly related to the level of *vertical and horizontal fragmentation* of institutions and responsibilities related to the achievement of the integration objectives. The promotion of widespread *awareness and understanding* and the progress in effective *consultation processes* (internal and external to the administration) are crucial.

In terms of objectives, although most Member States have identified some *environmental integration objectives*, and have expressed support for the need to continue to use and improve their definition and effectiveness, the advantages of setting targets are being questioned in a number of countries. There seems to be increasing emphasis on the need for objectives and targets to be flexible, realistic, and challenging to ensure constant improvement.

The interviews revealed that the more common obstacles to the formulation and implementation of integration strategies and measures were:

- Lack of institutional integration;
- Different competencies between national, regional and local levels;
- Budget restrictions and difficulty in accessing financial resources for multi-modal initiatives;
- Life style approaches favouring and marketing private car and air transport; and
- Lobbying by representatives of unsustainable transport modes.

1 Introduction

1.1 The aim of the study

The principal aim of the study was to produce a survey of *how* EU Member States have integrated, or are planning to integrate, environmental considerations in their national transport policies. This document therefore focuses on the processes and mechanisms put in place to formulate and implement environmental integration strategies, rather than the detail of each strategy.

The report provides an overview of existing and planned integration strategies in EU Member States, looking at approaches, mechanisms and institutional set-ups which contribute to integration in concrete terms. It is intended to contribute to the Swedish Euro-EST project and to the integration process at the EU-level with information on what lessons can be learned from experience to date, and how to progress further.

The study is based on a large number of interviews with representatives of fourteen countries (see *Annex C*). We would like to thank the interviewees for the time they have dedicated to the project and for their support.

1.2 Methodology

The study was structured according to three main tasks:

- *Task 1:* To provide an overview of existing and planned transport strategies which integrate environmental concerns;
- *Task 2:* To analyse how integration strategies are developed; and
- *Task 3:* To define good practice through selected case studies.

Tasks 1 and 2

Task 1 was the essential first step to review of what is happening and what is being planned in terms of environmental integration in the transport sector for each Member State. This was carried out mainly through interviews with representatives of Ministries of the Environment and/or Ministries of Transport (see *Annex B* for details), who were asked to discuss and provide detailed information on a common set of questions, outlined in *Table 1.1*. Of the EU 15 only Greece and Luxembourg were unable to provide any information within the time scale of this project.

The interview questions were discussed and agreed with the Swedish Environmental Protection Agency at the start of the project, in order to provide a clear direction for the overview and later analysis of the collected information. This task also built on previous work:

- the Swedish EPA report of the Euro-EST project ‘Environmental Goals for Sustainable Transport in Europe’; and
- the results of the questionnaire from Working Group 1 of the European Commission Expert Group on Transport and Environment.

Table 1.1 Questions for the overview of current and planned strategies for environmental integration in transport

Broad aspect	Detailed question
<i>The strategy or strategies: general</i>	<ol style="list-style-type: none"> 1. Type of strategy (current or planned) - describe 2. Type of strategy: <ul style="list-style-type: none"> • a specific document which outlines an integrated transport strategy; • a section on environmental considerations within a wider transport sector strategy; • a transport section within a wider sustainable development strategy; or • other e.g. a range of different actions which address specific transport and environment issues? 3. Is the strategy national or regional (including planned strategies)?
<i>Approaches</i>	<ol style="list-style-type: none"> 1. How are integration strategies developed? <ul style="list-style-type: none"> • Key institutional processes for developing integration strategies • Driving forces for integration • Role of methodological tools 3. Other (including future plans)?

Broad aspect	Detailed question
<i>Objectives</i>	<ol style="list-style-type: none"> 1. Do the strategies include objectives? 2. How are these objectives expressed (generic statements or quantified goals)? 3. Are there general statements regarding policy directions which could be interpreted as targets? 4. What are the principles used for developing these objectives and targets? 5. What is the role of environmental objectives and targets in the strategies or in the decision making process? For example, do they define environmentally sustainable transport, or do they provide a measure of progress towards long term environmental goals? 6. Arguments for and against the use of objectives 7. Arguments relating to cost-effectiveness of this approach 8. Other? E.g. alternative approaches proposed and planned by Member States
<i>Implementation</i>	<ol style="list-style-type: none"> 1. Are there any organisational or institutional arrangements to facilitate the implementation and enforcement of strategies? Give details of structure, nature of bodies involved etc. (current and planned) 2. What kind of collaborations exist between public sector bodies (current and planned)? 3. Is there an attempt to involve private transport providers (current and planned)? 4. Other, including obstacles?
<i>Success and effectiveness</i>	<ol style="list-style-type: none"> 1. What kind of measures and approaches have been most successful? 2. How is this success measured?

The information gathered through the country overviews is presented in *Annex A* and analysis of this material is presented in *Section 2* of the main report.

Task 3

On the basis of the country overviews ERM selected a series of case studies from around Europe. These highlighted very different aspects of environmental integration, including national and regional approaches, instruments and implementation mechanisms developed by various Member States.

For each case study, telephone interviews with key contacts, and -where available- relevant literature, were used to gather information on some of the most interesting initiatives. The case studies are presented in *Annex B* of the main report.

Feedback from the interviewees

All material and information collected and processed by ERM was sent to the relevant interviewee(s) for review and comment. ERM has taken into account all the comments and additional information which were offered within the time set for responses.

1.3 Some Key Definitions

1.3.1 Environmental Integration Strategy for Transport

Before starting work on the first task of this project, it was essential to establish a clear definition of what is meant by an “*environmental integration strategy for the transport sector*“ in this report.

The EC Expert Group on transport and Environment has described the concept of integration in relation to transport as:

“..... environmental issues are taken into account on an equal basis to other concerns such as economic and social aspects. All stakeholders would include the relevant environmental aspects in the framework of their responsibilities and these would be reflected in their actions”

“[integration] *must lead to concrete actions by the authorities responsible for transport, and ultimately, by all actors having an influence on the design and the use of the transport system*”. (1)

Table 1.2 Elements of Environmental Integration in the Transport sector

Category*	Detailed element
<i>(and sub-category)</i>	
Institutional Integration	<ul style="list-style-type: none"> • greater co-ordination between land-use and transport planning, and economic policy; • greater co-ordination and synergy's between transport planning and Local Agenda 21 initiatives; • increased responsibility for the promotion of sustainable development at sectoral level (e.g. Transport Ministry);
Market Integration	<ul style="list-style-type: none"> • greater cost responsibility for all modes (environmentally related charges, etc.); • differential taxation of vehicles and fuels to encourage the use of environmentally-friendly alternatives;
Management Integration <i>relating to environmental consequences of transport</i>	<ul style="list-style-type: none"> • greater use of environmental and sustainability objectives and targets; • increased application of environmental impact assessment procedures at the strategic (policy, plan and programme) and project levels; • schemes which encourage environmental classification systems and environmentally sustainable procurement; • support for research, development and modelling;

(1) Joint Expert Group on Transport and Environment (1999) Integrating the environmental dimension. A strategy for the transport sector. A Status Report.

Category*	Detailed element
<i>(and sub-category)</i>	
<i>relating to transport supply and access to transport</i>	<ul style="list-style-type: none"> • increasingly stringent environmental requirements for all transport modes; • enhanced access and provision of environmentally-friendly public transport systems; • creation of the conditions for greater co-ordination and interoperability between modes of transport; • maximising the environmental potential of information technology in relation to transport; • improved quality (reliability and transparency) of traffic forecasts; • increasing use of renewable energy;
<i>relating to transport demand</i>	<ul style="list-style-type: none"> • awareness-raising and information distribution to encourage environmentally-friendly conduct;
<i>relating to efficiency</i>	<ul style="list-style-type: none"> • improvement of transport network efficiency relating to traffic flow (eg addressing traffic bottlenecks) and modal interchanges (bus/rail stations)
Monitoring/Reporting Integration	<ul style="list-style-type: none"> • increased monitoring of the environmental implications of decisions; • use objectives, targets and indicators to report on progress and effective integration.

* = These broad categories are identical to those developed by the EEA for wider integration criteria, in the context of its work on monitoring progress towards integration (1999)

The Swedish EST-project has made a first attempt at defining what is meant by “concrete actions”, whilst at the European level, the European Environment Agency (EEA) has launched a set of integration criteria (see *Section 2.5*) to help define progress towards integration in key economic sectors. This study has examined both the EST and EEA approaches and has focused on the elements in *Table 1.2*.

Thus, by “integration strategy” this study refers both to the general concept of integration as described by the EC Expert Group, and to the specific set of elements listed in *Table 1.2*.

In addition, we present here the recent definition of sustainable transport by the same Joint Expert Group at the European Commission:

- *“allows the basic access needs and development of individuals, companies and societies to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between generations;*
- *is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy, and regional development;*
- *limits emission and waste within the planet’s ability to absorb them, uses renewable resources at or below their rates of regeneration, and, uses non-renewable substitutes and minimises the use of land and the production of noise”.*

1.3.2 Objectives, targets and Indicators

Given the importance of objectives and targets in the context of this study, it is also essential to adopt a clear definition for these words. The remaining sections of this report will therefore refer to:

- **Objectives:** as a broadly defined aim or goal, setting out medium or long-term desired results of a policy or strategy; this can be accompanied by a number of more detailed and quantified “targets”;
- **Targets:** as a quantified and measurable value to be achieved within a given timeframe, usually set as a step towards the achievement of a longer term policy objective.

Finally, it is worth mentioning the increasing role of transport and environment **indicators** as instruments to measure and evaluate progress towards integration. By “indicator” the report refers to a value which provides information and describes the state of the environment and related transport sector phenomena. Indicators are relevant to policy, analytically sound and measurable.

Of particular relevance here is the work done at European level on the Transport and Environment Reporting Mechanism (TERM):

“designed to help EU and Member States to monitor progress with their transport integration strategies, and to identify changes in the key leverage points for policy intervention (such as investments, economic instruments, spatial planning and infrastructure supply)”. (1) See also Box 1.1 below.

(1) EEA (1999) Are we moving in the right direction? Indicators on transport and environment integration in the EU. Final Draft 1 December 1999.

Box 1.1 *The European Transport and Environment Reporting Mechanism*

TERM' is a proposed reporting mechanism on transport and environment and has been developed by the European Commission (DGXI, DGVII, Environment Agency (EEA), Eurostat) in collaboration with the Member States. Under TERM, annual indicator-based reports will be produced as a tool to assist policy makers assess the effectiveness of strategies to integrate environmental and sectoral policies. The indicators proposed can help in the assessment of policy-level strategies and initiatives.

The TERM concept was instigated by the Joint Transport Environment Council, set up by the UK Presidency in 1998. The EEA was invited to prepare a background document describing a possible mechanism for reporting on transport and environment issues. Work to date includes:

- development of a preliminary set of approximately 30 indicators, grouped around the following categories: environmental consequences, land use and access to basic services, transport demand and intensity, transport supply, price signals, and the efficient use of transport;
- development of a conceptual basis for analysis, based on the EEA's DPSIR framework (Driving force, Pressure, State, Impact, Response), and identification of the key questions relevant to policy makers;
- cooperation with other international organisations doing similar work on transport indicators/data collection and preliminary consultations with Member States;
- feasibility study into data availability and indicator developments at the Member State level and the development of an action plan to take TERM forward;
- review of transport and environment related targets at the EU, Member State and international levels and an analysis of the links between these targets and the TERM indicator set;

A 'Zero Version' of TERM was published by the EEA towards the end of 1999 and an evaluation of its usefulness and policy relevance is being carried out. The aim is to continually develop and improve the TERM indicator set and data reliability and comparability between Member States over time. Annual reports will be accompanied by a detailed statistical compendium published by Eurostat, and may also include focus reports on particular issues of interest e.g. freight and the environment, health and the environment.

1.4 Structure of the Report

The remainder of this document is according to the following layout:

- *Section 2 Transport and Environmental Integration - An Overview of Trends.*
This is based on the work of Tasks 1 to 3.
- *Section 3 Main Findings and Issues for Further Consideration*
This provides an overview of the results illustrated in Section 2 and the Annexes.

Three annexes provide supporting information:

- *Annex A Country Overviews*
- *Annex B Case Studies*
- *Annex C Contact Names by Country.*

2 Transport and Environmental Integration - an overview of trends

This section summarises the findings of the country reviews and the case studies undertaken during Tasks 2 and 3 according to the key integration headings:

- type of policies;
- approaches to integration - how strategies are developed;
- objectives - the role, strengths and weaknesses emerging from recent experience in objective setting; and
- implementation for which many of the lessons also emerge from the process of developing the strategy and objectives.

2.1 The type of strategies developed to date or in the pipeline

2.1.1 Four broad types of “strategy”

The review of what is happening in terms of environmental integration in most EU Member States has resulted, not surprisingly, in an extremely varied picture.

Table 1.2 presented the proposed elements of an integration strategy. Interviewees were asked to complete a similar table and to explain which “type of strategy” they felt would best reflect the state of environmental integration in their country, on the basis of four broad options:

- A. a specific document which outlines an integrated transport strategy;
- B. a section on environmental considerations within a wider transport sector strategy;
- C. a transport section within a wider sustainable development strategy; or

D. other - e.g. a range of different actions which address specific transport and environment issues?

The results of this are presented in *Table 2.1* This shows that most countries have a mixture of policy documents and initiatives covering at least two types of “strategies”. Category A, the integrated transport strategy is usually the most recent type of initiative, and has often developed on the back of less less comprehensive attempts at integration (particularly transport sections in sustainability strategies or more ad hoc actions (Type D). These types of initiatives have also been the basis for a more multi-modal approach and important in raising the awareness of the need to address transport’s impacts on the environment.

Table 2.1 Overview of key aspects of integration in each country

Country	Type of strategy: A, B, C or D [p=planned]				Strategy (A, B or C) have National (N) and or regional (R) dimensions [p=planned]		Use of objectives (O) and targets (T)		Lead Institution in DEVELOPING the “strategy” (if any): e.g. Min. of Transport, Min. of Environment, EPA etc.
	A	B	C	D	National	Regional	Objectives	Targets	
1. Austria	A			D	N		O	T?	Ministry of Transport
2. Belgium	pA		C	D		pR	O		Flanders: Department of Environment and Infrastructure
3. Denmark		B			N		O	T	Ministry of Transport
4. France		pB	C	D	pN	R	O	T	Ministry of Transport
5. Finland	A	pB	C	D	N	R perspectives	O	T	Ministry of Transport and Communications
6. Germany	pA		C		N		O		Federal Ministry of Transport and an inter-ministerial working group
7. Italy		pB	C	D	pN	pR	O	T?	Ministry of Transport
8. Ireland			C		N	R	O		Department of Environment and Local Government
9. Netherlands	A +p		C +p		N		O	T	Ministry of Traffic and Water Management
10. Portugal				D					<i>information not available</i>
11. Spain		pB		D	pN	pR	O	T?	Environment Ministry
12. Sweden	A		C	D	N		O	T	Ministry of Industry, Employment and Communications (transport)
13. UK	A		C	D	N	pR	O	T	Department of the Environment, Transport and the Regions

Note: the “T?” indicates that we were not able to clarify to what extent targets were being used and/or planned.

Indeed, even though relatively few countries appeared to have an established transport policy record, let alone one which clearly integrates the environment into the sector, most Member States showed clear signs of an increasing reference to the environmental implications of transport. For example, many policy documents and actions seem to address air pollution, noise pollution, fuels policy and energy consumption of transport at national, regional and local levels (e.g. France, Spain and Portugal). As in Denmark these documents will typically include a large number of broad transport measures aimed at the promotion of sustainable transport systems and mobility patterns.

Denmark:

- influencing the volume of traffic and transport tasks as well as the distribution of transport means;
- promoting alternatives to car transport;
- curbing environmental problems;
- setting new priorities for traffic investments; and
- upgrading traffic planning and research.

National or Regional Strategies?

Most integrated strategies (category A) and transport plans (category B) are national and quite general but generally set the framework and overall direction for more concrete regional and local plans for sustainable transport systems and the priorities for action (e.g. United Kingdom and Italy see section 2.2).

2.1.2 Integration and Multi-modality

The European Commission's Joint Expert Group on Transport and the Environment argues that: "*a more balanced distribution of traffic between the different modes of transport, is a necessary condition for long term sustainability. Interoperability and interconnectivity - between modes and between national networks - need further strengthening*". (1) The common and well established political and administrative procedures which favour "mode by mode" planning have made

(1) Joint Expert Group on Transport and Environment (1999) Integrating the environmental dimension. A strategy for the transport sector. A Status Report.

such modal split and interoperability a difficult, if not impossible, task. At least until very recently.

The country overviews have revealed that very few countries have adopted a multi-modal approach to transport planning and some are still at the stage of deciding whether this is necessary or indeed desirable. Others still, are currently reviewing their policy and strategic planning approaches to transport with an aim to introduce or strengthen multi-modality.

Sweden: Strategies are developed both at a general transport level (the 1998 Swedish Transport Policy for Sustainable Development), and at modal level (e.g. the Strategy for the Swedish Road Administration currently being reviewed to take account of the 1998 general strategy).

Few countries have actually defined modal split objectives or targets (see also *Section 2.3*, and *Annex A* on The Netherlands and Sweden). Denmark has set a general objective to decrease the share of private car travel, and has a national target to divert 4% of travel by car to bicycles and walking (see *Annex B*). But in general, Member States do not have a clear, quantified target for this aspect of transport policy. This may well be due to the fact that it is very difficult to actually achieve modal shift, as has been shown, for example, by the Dutch experience.

In terms of planning, the historical separation of responsibilities for different modes of transport in individual ministries or departments has certainly contributed to and perpetuated the single-mode culture in many countries. This type of institutional “barrier” to integration is being addressed in a number of ways, including the development of new “horizontal” bodies with an advisory role, or the increasing use of working groups etc. (see *Sections 2.2* and *2.4*).

France: The Ministry of Transport is divided up into modal sections (e.g. railway, roads, canals) and most policy decisions are decided at this level rather than at the inter-modal level. Currently, there is a realisation that a change in priority and approach to transport is needed e.g. less priority on road building.

2.1.3 Tackling Increasing Transport Demand

Introduction

Over the last decade the implications of increasing transport demand for health, the environment and overall quality of life have been discussed and often considered the main threat to sustainable transport systems in the future. Increasing traffic has often been the underlying cause for the failure of technical measures (applied to means of transport and fuels) to significantly reduce environmental impacts, for example in terms of air quality.

As a result, the Conclusions of the 1998 joint Transport/Environment Council stated that the current trends of transport are not sustainable, particularly for road and aviation. The Commission Joint Expert Group on Transport and the Environment recognised that transport demand has increased constantly over the recent decades and an important task would be:

*“to find policy instruments that **reduce transport demand** without unduly affecting economic prosperity and equity”. (1)*

Strategies and approaches intended to integrate the environment in transport policies and plans will have to address this fundamental driving force and related pressures on the environment and natural resources.

The EU overview

The overview showed wide differences in the way demand management is being considered and the degree of emphasis given to the need to reduce such demand. This is likely to reflect the variety of transport systems and levels of traffic in the 15 Member States.

Only a few countries - the Netherlands and Denmark - have formally recognised the need to limit demand for transport and established this as a policy objective over the last few years. Some countries (such as Portugal) are at a much earlier stage of transport demand evolution: recent rises in living standards have enabled large numbers of Portuguese citizens to consider buying a car for the first time. This has led to a significant expectation among the public that they will be able to use private cars as the main means of

(1) Joint Expert Group on Transport and Environment (1999) Integrating the environmental dimension. A strategy for the transport sector. A Status Report.

transport rather than continue to use public transport. While recognising people's aspirations the Ministry also recognises that there is a need to raise awareness and understanding among the public of the need to contain and manage the future growth of private transportation.

In general, however, the overview suggests that the likelihood of national objectives or targets being set for demand management is quite low. During the 1990s, very few countries had the explicit aim to reduce transport demand.

Even Denmark, which identified such a need in the mid-90s is now accepting that transport policy initiatives to reduce car travel have a low chance of succeeding. The following box highlights the current debate around the impact of traffic growth on CO₂ emission targets.

Denmark - There has been discussion in Denmark recently over the objectives for the transport sector for reduction of CO₂ emissions. It has emerged that on current projections, the objective of reducing emissions to 1988 levels by 2005 will not be achieved, principally due to the growth in traffic levels. Carbon dioxide emissions from transport continue to rise. Work has been undertaken at government level investigating options either for implementing tougher measures to limit growth in traffic or for a relaxing of the policy target.

Debate has centred around the rationale for the split of CO₂ reduction targets between the different sectors, and whether the allocation for transport is justified. The argument has been put forward that the power sector should make larger reductions than currently, although the Ministry of Finance has advised that the marginal costs of reducing CO₂ emissions from the transport sector are lower than the marginal costs for other sectors. However, it is argued that it is difficult to compare across sectors, for example in putting a value on the time spent travelling by individuals or on their transport preferences.

It is thought likely that in the very near future the Danish government will announce less stringent CO₂ emissions from the transport sector, which represents a departure from the primary policy objective for the last 10 years, and a recognition of the likely failure to achieve that objective. However, there have been successes in other sectors: the power generation and household sectors have successfully decoupled levels of CO₂ emissions from economic growth and energy consumption. In future, the Danish government is expected to rely more on developments in vehicle technology to achieve the goal of stabilising CO₂ emissions rather than demand management alone.

However, traffic reduction does appear to be the focus of many local or urban related transport plans, but even this area is not without problems.

Copenhagen - In 1993 the City Council decided that "*a traffic and environment plan is to be drawn up with a view to harmonising transport needs with the city's environmental capacity*". In response to such decision the main objective of the 1997 Traffic and Environment Plan for Copenhagen (TEPC) is "*to secure a well functioning transport system to serve the city with substantially less effect on the environment than at present. This means that the overall level of road traffic in the municipality must not rise, whilst opportunities for increased traffic activity must be provided by more public transport and increased use of cycles*".

The TEPC in conjunction with other local policy has been successful in addressing the transport related problems in Copenhagen. The road infrastructure network is no larger than it was in 1970. Traffic volume (recorded as kilometres driven

per year) has fallen to 10% below the 1970 level. This is reflected in the modal split of traffic in the city: 30% of home to work trips in summer are by bicycle, 37% by public transport and only 30% by private car.

However, the socio-economic situation of Copenhagen is now changing. The national government is funding major infrastructure works, cultural institutions and other amenities in the city. The construction of a fixed link between Copenhagen (DK) and Malmoe (SW) seems to be the first of a series of initiatives which will result in the creation of a new, much larger, region. The fast economic development which is expected to follow, will expose Copenhagen to the kind of development and transport-environment problems faced by other municipalities in Europe. In particular, it will make it difficult to maintain unaltered the original objectives of TEPC.

Norway - Environmental Cities Project 1993-2000. The project is a national

initiative by the Norwegian Ministry of Environment (MoE) involving five medium sized cities. In the city of *Kristiansand* the objective for traffic control was initially translated in a reduction of the growth of traffic. Such target was reached for the first years of the project when the traffic growth rate was in the order of 1%pa, but soon this became unrealistic as traffic growth rate rose to 5%pa in 1995. The city continued to pursue the objective of modal shift from private to public transport although it became apparent that the achieved 30% increase in public bus passengers (mainly due to fare reductions and improved service) did not produce a 30% decrease in the needs for private transport.

The issue of through traffic

Areas affected by increasing through traffic may fear that transport demand reduction objectives and measures will harm the economic development of the area. For example, in Italy, the region of Emilia Romagna has taken a very clear stance against setting objectives or targets for a reduction of traffic. Despite forecasts suggesting considerable increase in the demand for mobility for both passenger and freight, the Regional Government chose not to seek measures to restrict traffic increase on the basis that it would be detrimental for the economic development of the region (*Annex B5*). In Denmark legislation allowing areas of cities to be designated as “environmental zones” is in the process of being adopted. Within these zones municipalities can implement any restriction which they choose, including banning vehicles over a certain age.

Influencing individual's choices

Raising awareness and understanding of environmental issues and persuading individuals to change their personal behaviour is perhaps one of the greatest challenges in the context of reducing and managing mobility. Especially in terms of changing preferences from private to public means of transport. The case studies in this area illustrate that it is necessary to act on two complementary fronts: promote and provide better public services; and discourage people from driving private cars.

2.2 Approaches to integration - How are the strategies developed?

This section summarises the lessons from the country studies and case studies on effective development of integration strategies under the following headings:

- integration and consultation;
- feed back and learning from the process;
- co-ordinating land use and transport planning;
- establishing clear roles and responsibilities; and
- using integration tools such as SEA.

2.2.1 Institutional integration and consultation

Institutional Integration

The issue of “Institutional Integration” is one of the four main categories of environmental integration shown in *Table 1.2, Section 1.3* above. It’s relevance spans the entire spectrum of activities relating to the formulation and implementation of integration strategies.

This study has found that the definition of strategies for environmental integration in the transport sector has often required the creation or strengthening of linkages between the transport and environment ministries. This can happen either through formal or informal set-ups, by providing specific resources (funding and expertise), or by setting up a number of working groups to discuss specific issues as illustrated below.

Flanders: Co-ordination of transport policy is managed by the mobility cell, a dedicated staff administration in the Department of Environment and Infrastructure. The Mobility Cell appears to act as the driving force for integrating environmental considerations into transport strategy and is currently developing a Sustainable Mobility Plan. There is a good level of collaboration between the mobility cell and the environment department. Representatives of the environmental administration, the land use administration, the road administration, the waterways administration, public transport companies and the mobility cell meet every two months to discuss the Mobility Plan and other issues.

The Netherlands: Working groups involve representatives from all ministries, regional and local authorities who have an interest or an important role in relation to the issue being addressed. The working group prepares a document which is presented to a committee within the Ministry of Transport that is responsible for production of the transport plan. This committee can request further discussion on specific issues if required. In addition, intensive inter-departmental co-ordination is common during the writing of long-term plans such as the Transport Plan.

The need for inter-ministerial co-ordination or collaboration is evident across all Member States, but there appears to have been variable success in achieving effective co-ordination. On the positive side, even in countries where historically transport decision-making took place essentially at modal level and mainly at regional level, such as France, extensive consultation is now taking place between the environment and transport ministries in relation to new strategic policy documents. Whilst in Germany, for example, although designated sections of all departments of the Federal Ministry of Transport are responsible for integration of environmental issues, the involvement of the Environment Ministry does not appear to be as strong as in other Member States.

Consultation

Consultation within the public administration and with other stakeholders earlier in the process of developing strategies is also becoming a common feature throughout Europe.

Consultation processes vary widely in terms of time, resources, number and variety of stakeholders consulted. However, most authorities appear to start with the circulation of discussion papers or draft policy documents (see for e.g. France's '*Chemin de Service des Transport Collectives*', UK's *Transport: The Way Forward*, Belgium's *Federal Sustainable Development Strategy*, Ireland's *Dublin*

transport Initiative, The Netherlands' National Transport Plans, and Sweden's Swedish Transport Policy for Sustainable Development). There is wide agreement that, at national and regional level, the development of new integrated transport strategies needs to involve:

- the public - including NGOs and the private sector;
- other ministries;
- local government;
- representatives of different transport modes.

Increased involvement of the wider public and key stakeholders is likely to be a positive forward step and a key part of the process of moving towards sustainability. Early consultation is also an excellent means of building a sense of ownership for the resulting strategy and secure the support of many different institutions involved in its delivery. This is recognised in the following Italian and Swedish examples.

Italy: Emilia Romagna Regional Government - In order to reach a wide level of consensus with other stakeholders, the regional Department for Mobility (DfM) adopted various mechanisms:

- meeting with relevant stakeholders;
- working relationship with Department of Land Use and Environment;
- consensus documents.

In addition to its working relations with the Department of Land Use and Environment, prior to the publication of the plan, the DfM held more than 50 meetings with stakeholders such as industry associations, Unions, Chamber of Commerce and environmental NGOs.

The regional administration of Emilia-Romagna sought to achieve maximum consensus on the new Regional Transport Plan. To this end the administration pioneered a consensus building mechanism unique amongst other Italian regional administrations. After the publication of guidelines, and before finalising the plan, the DfM held public meetings in every provincial authority in the region. The purpose of the meetings was to present the draft plan and to receive comments and feedback in order to achieve agreement between different actors in relation to the objectives and measures set out in the plan. The general public was also invited and allowed to comment. At the end of these meetings officials from the region,

province and municipalities signed a “consensus document” summarising the level to which consensus had been achieved and stating the areas where agreement was not reached. This formed the basis of the final draft of the plan before publication and legal adoption by the regional government. The DfM felt that such consensus building mechanisms have the additional benefit of empowering local authorities and facilitating future implementation of the plan (see also the case study in *Annex B5*).

Sweden - A comprehensive initiative over a four year period

The current strategy process started in 1994 with the establishment of a Parliamentary Committee, the Governmental Commission on Transport and Communications, representing all parliamentary political groups. In 1997 the Committee proposed a programme for a sustainable transport system in Sweden ‘Heading for a new transport policy’. This proposal was subject to extensive consultation with industry organisations, NGOs and local authorities. The document was sent for comment to 200-250 organisations, seminars were held and the issue raised in the general media. The proposal formed the basis for the national strategy which was adopted as a Government bill in 1998 in a relatively unchanged form.

The Committee’s findings on environmentally sustainable transport were largely based on the work from the Swedish EST project (MaTs project). The project was established to reach agreement on how to achieve an environmentally sustainable transport system within 25-30 years, i.e. by 2020. The project was organised around three central issues:

- what is meant by an environmentally sustainable transport system?
- what might an environmentally sustainable transport system look like?
- how can an environmentally sustainable transport system be brought about?

The partners in the MaTs project were a voluntary collaboration of government and transport sector groups, all partners acting on an equal basis rather than one party holding overall responsibility. This approach for joint responsibility provided a means to ensure agreement on the final outcome of the project and, by involving all partners equally, to create a sense of joint ownership and responsibility. The multi modal approach also increased the possibility of finding cost effective packages of measures and effective packages of policy action programmes.

The project was led by an executive group consisting of a director-general for each partner. This group determined the focus of the project and financing for larger initiatives and overall resourcing. The Secretariat was provided by the transport section of the Swedish EPA. The work was undertaken through a number of joint initiatives involving all partners, and also as separate initiatives conducted by one or more participants. A steering group was responsible for co-ordination of joint initiatives. Joint initiatives included the following:

- goal formulation

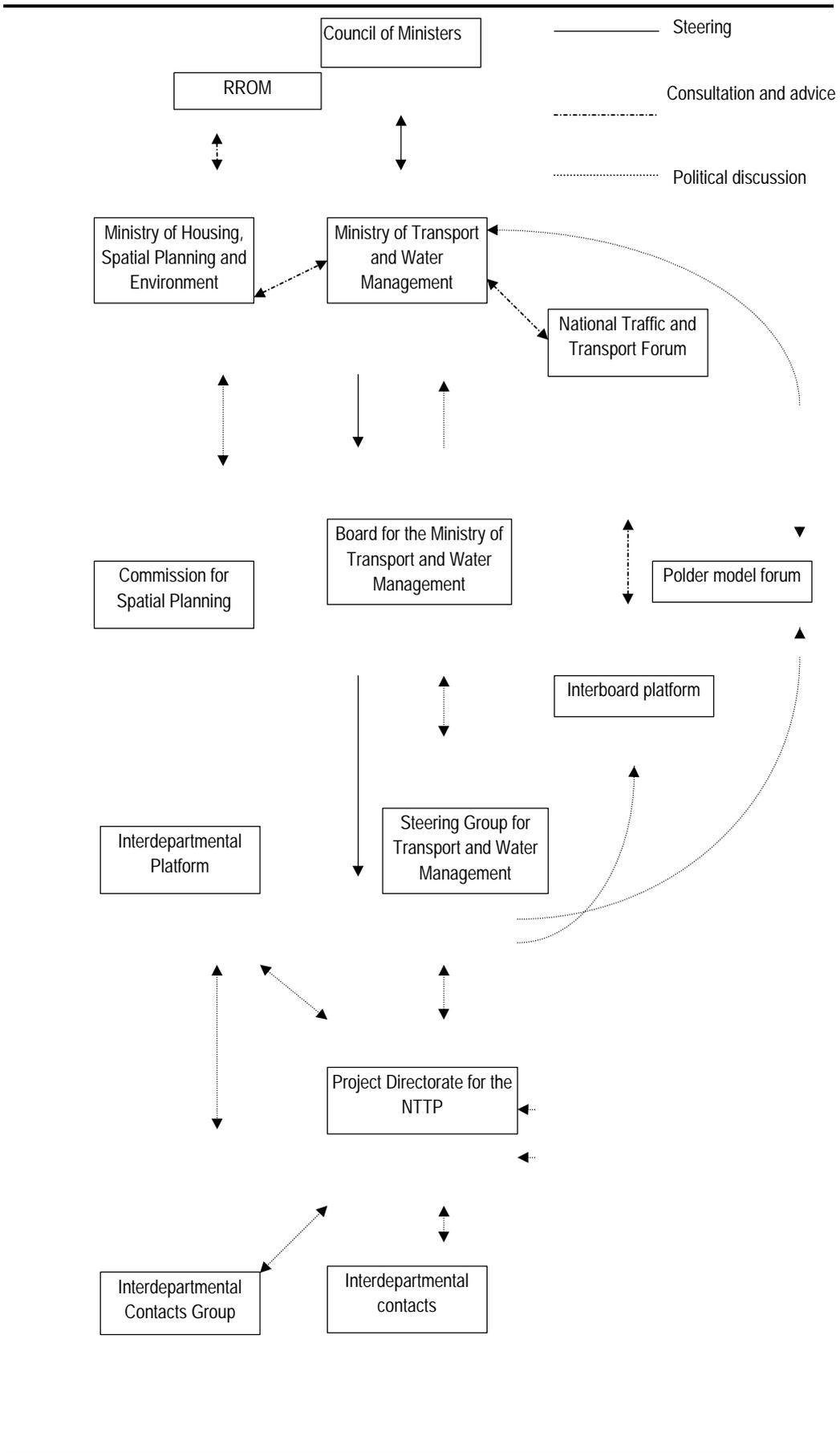
- Scenario studies
- analysis of measures
- analysis of policy instruments.

The network of government bodies and groups involved in the development of The Netherlands' forthcoming integrated National Transport and Traffic Plan (NTTP) offers an interesting example of a highly complex process. *Figure 2.2* illustrates the three different roles for stakeholders involvement:

- part of a steering role;
- consultation and advice;
- taking part in the political discussion.

As this figure shows, the number of government bodies involved in the process is quite large. Such consultation can be a complex and time consuming, requiring careful direction and with substantial cost implications. Nonetheless, the Ministry of Transport feels that the added value justifies the undertaking. The focus on participatory involvement at an early stage has created a framework of views, opinions and consensus, which will focus further development of the NTTP on the most important issues. As a result effective involvement of stakeholders at a later stage can be limited to a consultative approach.

Figure 2.1 Network of organisations involved in the development of the Dutch National Traffic and Transport Plan



2.2.2 Learning from Experience

An important aspect of effective national strategy development may be the 'Learning experience'. For example in Finland great emphasis is placed on collaboration and learning in order to underpin widespread awareness and a system of responsibility for implementation, from the national to the local level, including business parties. Integration requires that the environment is incorporated into day-to-day decision making and activities of all Ministry of Transport and Communications (MoTC) staff. Therefore, all staff must understand the environmental impacts of their work. The sustainable development strategy and the EMS approach support this 'learning experience'.

Finland: Collaboration and Learning from Experience in the Ministry of Transport

- learning is encouraged through discussion of targets and action plans with other Ministries and agencies;
- implementation of the EMS includes a discussion with every unit to ensure they are aware/understand how their work affects the environment;
- annual measures proposed under the programme are adopted by the MoTC as their performance targets. If these targets are not met, they are asked why and ways to improve the situation are discussed.

2.2.3 Co-ordinating transport and land-use planning

Greater co-ordination between land-use, transport planning and economic policy is one of the key elements of environmental integration and particularly of “Institutional Integration” as defined in *Table 1.2 (Section 1.3 above)*.

Several countries have addressed this issue, in a more or less structured way. Certainly most Member States appear to recognise its importance. Particularly in connection with local and urban dimensions. The United Kingdom appears to have designed an approach which is amongst the most promising new initiatives. The UK approach is described below (and in detail in *Annex B*).

The UK Government’s White Paper on Integrated Transport (1998)

This recognised that a vital element of transport policy is integration with land-use planning at national, regional and local levels. Subsequently, all regional planning bodies in the UK were asked to prepare a Regional Transport Strategy (RTS) to form an integral part of revised Regional Planning Guidance (RPG). So far, the Regional Transport Strategy for the Yorkshire and Humberside area is the most fully developed policy.

In general, the UK Government facilitates the process of integration by providing detailed guidance on the transport content of RPG via the *Planning and Policy Guidelines 11: Regional Planning*. This requires the inclusion of several

transport/environment elements in the RPG including guidance on increasing transport choice and better integration of bus and rail.

The Yorkshire and Humberside draft RPG, produced by the Regional Assembly, incorporates sustainable development, employment, land, housing, **transport**, cultural, natural and environmental resources. The Regional Transport Strategy (RTS) forms an integral part of the new RPG and its inclusion is a major step forward in addressing the need for consistency between land use and transport policies.

NATIONAL GOVERNMENT WHITE PAPER ON INTEGRATED TRANSPORT



PLANNING AND POLICY GUIDELINES (PPGs)

produced by National Government for regional and local bodies



REGIONAL PLANNING GUIDANCE (Spatial Strategy)

REGIONAL ECONOMIC STRATEGY

containing **REGIONAL TRANSPORT STRATEGY (RTS)**



DEVELOPMENT PLANS



LOCAL PLANS

Its policy statement is: “*An integrated transport strategy for the region which will provide guidance on how best to achieve a balance between accessibility, safety, economic development and the environment within a framework of sustainable development*”. The RTS vision is: “*The strategy will promote a Regional Transport System which stimulates economic growth and improved quality of life for all residents, in a sustainable and socially inclusive manner*” (see Annex B.11).

Policies within the RTS are aimed at reducing the demand for travel and encouraging greater use of more sustainable modes of transport. Short and medium term policies are aimed at managing traffic growth via improved public transport provision, parking controls and local charges. Longer term policies are locational and due to existing infrastructure will take 20-30 years to significantly affect demand. Additional policies are aimed at changing expectations, attitudes and behaviour through campaigns such as Travelwise.

Uniquely, Yorkshire and Humberside sought to harmonise the preparation of their RPG with that of their regional economic strategy, being prepared by another government body (the Regional Development Agency). This has been achieved via the use of consistent objectives and synchronised timescales during preparation, culminating in a joint launch for consultation and submission to Ministers. In addition, a joint independent sustainability appraisal of both strategies has been undertaken and interim findings incorporated during strategy development.

The overview has clearly shown that transport and land-use coordination are also extremely relevant in terms of “Management Integration” in the area of transport supply and access to transport.

2.2.4 Setting clear responsibilities

Under the broad definition of environmental integration elements in *Table 1.2 (Section 1.3)* the “increased responsibility for the promotion of sustainable development at sectoral levels” is highlighted as a further element of the “Institutional Integration” category. This includes both objective setting and implementation.

Responsibility for setting objectives

An important aspect of responsibility, which links with the next section on objectives, is the mechanisms which are in place to allow the definition of transport integration objectives and targets at various administrative levels (national, regional and local). The situation varies radically between Member

States and relates partly to the issue of fragmentation of power and partly to a trend towards subsidiarity and the appropriate level at which meaningful targets can be set.

Increasingly, regional and local authorities are producing transport plans which, depending on existing frameworks and linkages between administrative levels, will be either fully connected and related to the national plans/strategies, or less so, as is the case of some municipalities in Denmark. There is a need for clear guidance, but also of procedural and legal instruments which can promote such linkages and “vertical” integration. To this end, a new approach is being applied in Italy where the Transport General Plan (due in April 2000) will be implemented via negotiation procedure with regional authority using two main tools: Programmed Institutional Agreements and Sector Framework Agreements. This negotiation will ensure that the operational programmes at regional level take into consideration the guidelines and objectives of the plan.

Responsibilities for integration and implementation

It is increasingly evident that a clear and transparent distribution of responsibilities for integration and implementation of sustainable measures can be a powerful and effective tool. Finland provides an important example of this approach.

Finland: The transport Ministry has taken responsibility for managing the environmental impacts of transport. This, although it may sound obvious, has not been the case in several Member States where, lack of clarity in terms of where ultimate responsibility lies, can be a substantial impediment to the progress of integration. The 1999 programme for Sustainable Development sets out detailed sharing of responsibility for implementation between the different units of the MoTC, offices and institution of the administrative sector, business enterprises and companies and other Ministries including local administrations. The respective parties are then expected to address in their own EMSs (see the case study in *Annex B3*) their responsibilities and how these can be translated into practice.

2.2.5 Strategic Environmental Assessment

Strategic Environmental Assessment (SEA) of transport policies, plans and programmes can make an important contribution towards addressing the environmental consequences of transport. In *Table 1.2 (Section 1.3 above)* it is described as an element of “Management Integration”.

During the interviews several Member States - such as Spain - mentioned progress in the testing and adoption of SEA as a process and tool which can contribute towards further integration of the environment into the planning of sustainable transport (e.g. France, Spain, Sweden and The Netherlands). This is an important result considering that there is still no official SEA Directive (a Common Position on the Commission’s proposed text was agreed in December 1999). The replies and the examples offered would suggest that many countries have started using some form of SEA in the transport sector and that actually some national or regional legislation requiring SEA already exists.

Spain: Despite the absence of legal requirements, the interest in SEA has increased.

SEA of transport plans and programmes is being introduced by different Spanish administrations. The main efforts are focused on the development of methodologies for SEA, including its application to some pilot studies.

- The Ministry of the Environment has developed a SEA methodology for linear infrastructures (roads, rail, etc.) and used it for a pilot assessment of a Regional Roads Plan (Comunidad de Madrid).
- The Ministry of Public Works has recently launched a study including, among other subjects, the development of methodological tools for SEA of National Roads Plans and Programmes.
- Some Regions have included SEA of transport plans and programmes in their own legislation on Environmental Assessment (i.e. Andalucía, Castilla-León,...) and applied it in a limited number of cases.

2.3 Objectives: role, strengths and weaknesses

This section presents the findings of the country overviews and case studies according to the following heading:

- approaches to objective setting;
- types of objectives - whether quantified or qualified - and the major trends;
- target setting.

2.3.1 Introduction - The Role of Objectives in Integrated Transport Strategies

In *Table 1.2 (Section 1.3)* objectives are referred to in connection with “Management Integration” and “Monitoring/Reporting”. The Member State overview revealed a general agreement that objectives and targets provide a measurable and tangible means of assessing and illustrating progress with integration. Objectives and targets help to provide a clear definition of what is required of the transport sector, in terms of what the sector needs to achieve, justifying actions and measures and, in the case of targets, a means of measuring progress towards this goal. In countries which are essentially new to the process of environmental integration they can help to facilitate and focus such process (e.g. Italy).

Sweden: Objectives and targets provide direction for decision makers in terms of “*what do we want to achieve*” and a measure of progress towards that goal. Long term objectives define what must be achieved and provide a basis for operative plans and strategies. Intermediate quantified targets provide a basis for planning, implementing and following up concrete measures. They provide a justification for selecting measures and for the allocation of resources to support the resultant actions.

The Netherlands - The Ministry of Transport believes that the use of targets provides clear benefits for policy makers in terms of integrating environmental concerns into transport sector decision making. At a most basic level, setting environmental objectives and targets for the sector has created an explicit requirement to improve environmental performance and therefore acts as a driving force for environmental action. By setting a quantified target the commitment and the eventual aim is clearly expressed

and communicated, and provides a measurable and tangible means of assessing progress in the interim period. The new approach also provides policy makers with a degree of flexibility in decision making by setting an effective limit within which to select from a range of available measures. The process can therefore be more responsive in the long term.

Some country strategies also showed that objectives and targets can be formulated in order to have far reaching influence over a number of players and stakeholders which goes well beyond guiding the actions of government bodies. For example, in Finland and Denmark policy makers report that objectives and targets are ultimately useful in affecting consumer behaviour.

Objectives and targets may also be used as the benchmark for assessment of progress towards integration.

Relationship to Integration Strategies

It is also clear from the overview that objectives are being set independently of whether a country has already adopted a transport strategy or not. Thus for example, France does not have a standalone integrated transport strategy (see *Section 0*) but objectives and targets addressing key environmental impacts of transport are set in numerous policy documents at national, regional and local level. On the other hand, the United Kingdom, despite having an integrated transport strategy, includes only a few of its targets in that specific document and uses -like France - a number of more specific policy documents to address key environmental impacts which also interest the transport sector. For example detailed targets for air quality are spelled out in the UK National Air Quality Strategy and CO₂ targets in the Climate Strategy.

2.3.2 The process of setting objectives

The Member State's overview revealed a wide range of approaches and principles for the identification and setting of objectives which can be grouped under the following headings:

- adopting international targets;
- focusing on 'what' we what to achieve;

- balancing environmental, social and economic objectives;
- focusing on regional dimensions;
- cost effectiveness assessments.

From international sources to public consultation

European legislation on air quality and noise standards, together with international agreements such as the Kyoto protocol have been an important driving force behind the definition of objectives and targets. With respect to the reduction in CO₂ emissions and the Kyoto Protocol, the interviews showed that several countries are placing increasing emphasis on the need to reduce transport's share of these emissions. For example, the Danish 1990 *Transport Action Plan* refers to the call for "stabilisation of *total* CO₂ emissions at 1988 level by the year 2005", and was followed, in 1996, by the *Action Plan for Reduction of CO₂ Emissions of the Transport Sector* which included an additional objective specific to freight transport.

However, in general, many Member States have still to translate overall CO₂ emissions targets into transport specific ones.

There is some evidence showing that the use of international and national commitments and standards is being accompanied increasingly by reference to the results of evaluations, monitoring and consultation processes (e.g. France, Belgium, Denmark, Finland). However, the experience of countries like Italy - where the use of objectives and targets at strategic and policy levels is relatively new - the reference to international agreements and national legislation remains the focal point for those areas where targets are being proposed.

Finland: The 1994 Action Programme set objectives which were based on international commitments and national environmental regulations transposed into sectoral targets and measures. Objectives set within the 1999 Guidelines are based on the :

- *Finnish Government Programme for Sustainable Development;*
- *Guidelines for Transport Operations until 2020* (which contained 4 key elements: economic, social/equity, environment and safety);
- results from annual monitoring and analysis of the 1994 programme;

and

- discussions/consultation.

Italy: Objectives at strategic and policy levels

- CO2 national reduction targets agreed in Kyoto 1997;
- Renewal of fleets with the introduction of new technology;
- modal shift targets decided at inter-ministerial level in 1998.

In practice, some objectives are quantified with the use of models to simulate the effect of policies on the relative variables of the state of the environment. For example, the modal shift objectives have been developed with the use of model to predicts the effect of different scenarios on CO2 emission and other environmental parameters. Other quantitative objectives are introduced by laws such as the DPR on Sustainable Mobility which set targets on renewal of public fleets of 30% by 2003.

*Focus on “**What** do we want to achieve?”*

The Swedish experience offers an example of a clear and focused approach on environmentally sustainable transport. In setting objectives, the aim has been to establish “*what*” needs to be done to reduce the impact of the sector to below critical levels, rather than “*how*” or “*when*” to do it. This approach avoids the need to discuss the economic possibilities or social consequences when setting initial objectives. The long range goals are based on present knowledge of what man and nature can tolerate and therefore express environmental sustainability. Since this knowledge and understanding can change, these goals are subject to review and further development. Intermediate goals are then set to indicate suitable steps towards these long term goals. These form the basis for planning and implementing concrete measures. Each intermediate goal is subject to impact assessment studies. This provides information to decide which measure should be implemented and whether the goal can be achieved. Intermediate goals are also subject to review.

Nonetheless, for some areas, the current level of knowledge and understanding is insufficient to set quantified targets. The goals for health risk related to urban air pollution are analogous with the traffic safety ‘zero vision’ i.e. ‘zero risk levels for health affected by traffic measures’. For landscape the goals are based

at present on the precautionary principle but this area needs further development.

Box 2.1 Objectives in the Swedish Transport Policy for Sustainable Development

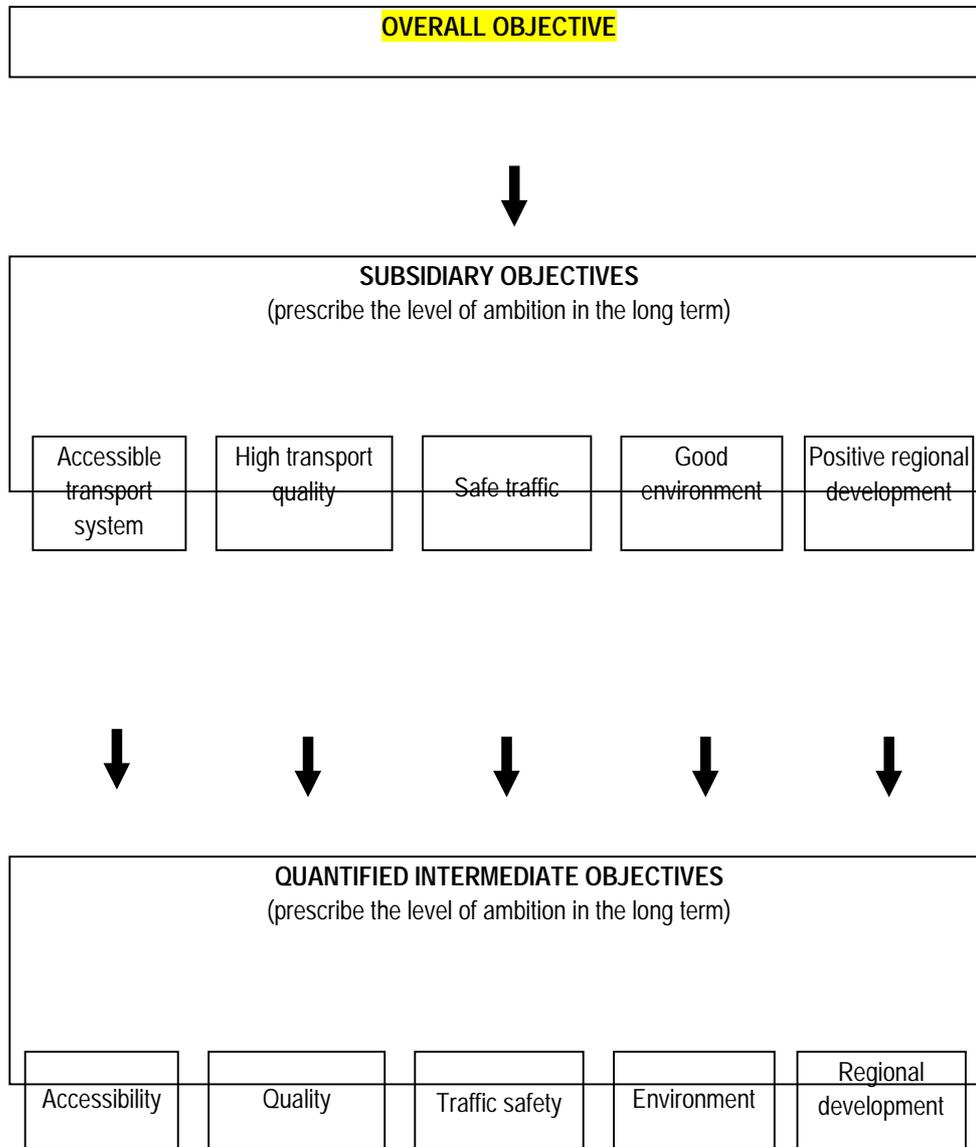
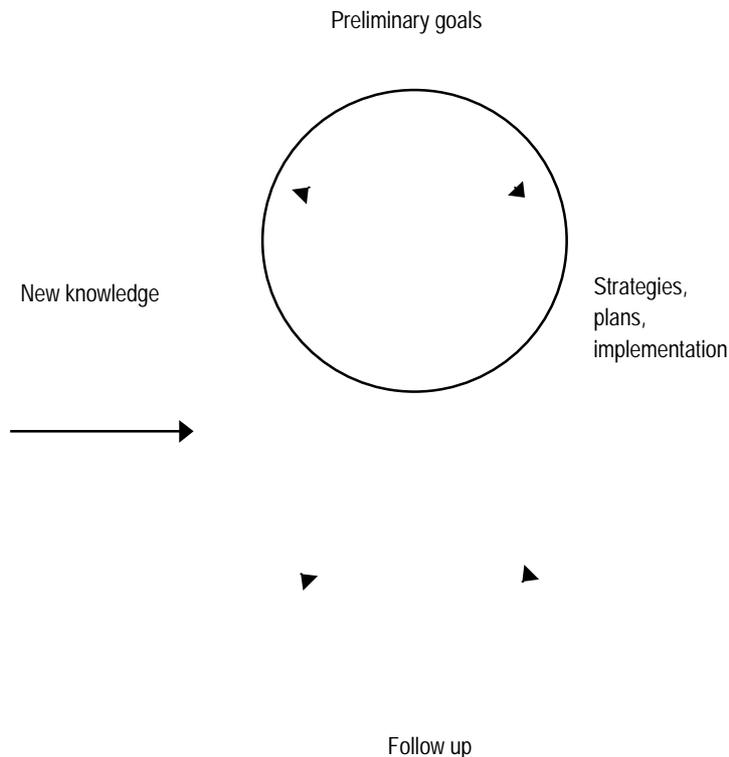


Figure 2.2 *Developing intermediate targets*



In Denmark the Traffic and Environment Plan for Copenhagen (1997) is centred on a number of objectives and targets, and these are partly defined on a similar basis to the Swedish approach. An analysis of transport needs is followed by the definition of environmental capacity and of actions which can influence the needs. Environmental capacity is defined according to different parameters for traffic and health, energy consumption and emission of CO₂, NO_x and HC, local air pollution, road traffic noise, traffic safety, the barrier effect and the visual environment. For each environmental parameter the plan determines objectives and means to achieve them.

Balancing environment, social and economic issues

In several cases the objectives are set by the Ministry responsible for Transport, in co-operation with the Ministry of Environment. They are based on a combination of technical knowledge and environmental goals, balancing what is technically possible and what ideally would be the desired goal. When referring to sustainable transport systems, this “balancing act” is taken a step

further in order to combine environment, social and economic concerns (see for example *Annex B - Sections B1, B4 and B5*).

Denmark: The Danish have made a particular effort in ensuring that all economic, social and environmental issues are considered equally important when setting transport policy objectives (see *Annex B1*). The aim is to reach a decision which, in addition to protecting the environment, should ensure the operation of an efficient, fast and reliable transport service. This balanced approach to the setting of objectives, is also considered important when deciding which tools should be used for achieving integration within the transport sector, and other sectors. However, in practice there is no guarantee that the final decision will give equal weight to all three dimensions.

Taking the regional dimension into account

Member States vary in the way they take into consideration the regional dimension when setting objectives at national levels. However, detailed consideration of regional and local characteristics and needs will generally take place in the context of more detailed national plans or programmes for action, and in modal plans (e.g. Sweden, France, Finland). In practice, the regional and local dimensions are more commonly taken into account in the transport strategies for large urban areas.

Cost-effectiveness

It is perhaps too early for most Member States to have a clear position on whether objectives and targets are a cost-effective way of promoting integration. Nonetheless, at least two countries have expressed contradictory opinions which are worth mentioning here.

Interestingly, in The Netherlands, one of the leading countries in the use of objectives, cost effectiveness is not a primary consideration when setting environmental targets. It can play a role when there is a national cross sectoral target and it is necessary to set targets at the sectoral level. In this case the cost effectiveness of measures in one sector will be compared to another (e.g. CO₂ reduction under Kyoto target). The key question will be: *is transport the sector which can contribute most cost-effectively to reaching the objective or target?*

A different approach is taken in the United Kingdom, where it is argued that targets should not be set if they are likely to be prohibitive in terms of cost. Thus, for example, further investigation of measures to address congestion and traffic related problems will include a comprehensive analysis of the economic welfare costs and benefits of alternative policy packages.

2.3.3 Types of Objectives: Qualitative or Quantitative?

The review showed that most countries have adopted a combination of general objectives and some specific targets. Selected examples are presented below. A more detailed overview can be found in *Annexes A* and *B*. Two distinct trends are discernible. Countries who are relatively new to integrated transport - such as Italy and Belgium - are increasingly moving towards quantified targets at the national or regional level. Countries with a longer track record in this area appear to be moving away from quantified objectives, at least at the national level.

Italy - Italy's forthcoming Transport General Plan includes **generic** environmental objectives relating to:

- air quality and noise standards with particular regard to highly populated areas and along the major transport routes;
- the relationship between infrastructure network and ecological network which aims to protect biodiversity and minimise space consumption and the barrier effect;
- evaluation of the cost of different options in order to meet the CO₂ reduction targets set in Kyoto.

Belgium - The Federal Sustainable Development Strategy sets **generic objectives** including the following:

- Encouraging sustainable mobility for all:
 - ⇒ making mobility accessible for everyone, both financially and physically (e.g. for people with reduced mobility such as older, handicapped or ill people); and
 - ⇒ reducing motorised traffic, particularly over shorter distances, at peak times and in city centres, accompanied by sufficient provision of alternative transport modes.
- Respecting health and the environment:
 - ⇒ reducing the number and severity of transport accidents;
 - ⇒ reducing the noise and pollution resulting from traffic; and
 - ⇒ slowing down consumption and making better use of the energy consumed by transport.
- Respecting the urban environment/urban life:
 - ⇒ protecting the urban environment by protecting and regaining public spaces;
 - ⇒ reorganising freight traffic to reduce pollution; and
 - ⇒ developing town planning and land use planning which brings together housing, work and public transport.

Although they are not stated objectives the Federal strategy also calls for

reduction of the noise and pollution resulting from traffic and reduction of the number and severity of accidents.

Belgium: The planned Mobility Plan for the Flanders region proposes generic objectives including:

- guaranteeing accessibility;
- making it possible to make trips (ie creating alternative mobility means for those without cars); and
- diminishing damage to the environment.

Denmark - Objectives vary from qualitative statements such as to reduce the barrier effect of distributors streets or to reduce the number of people exposed to damaging effects of traffic, to very quantified targets such as to reduce the NO₂ concentration to 135 µg/m³ in roads containing housing by 2010 or as maximum of 55 dB(A) in residential and leisure areas. The majority of objectives are quantified and they include *long-term and intermediate time frames*.

The Netherlands - The Second Transport Plan Structure Scheme for Transport (SVV II) which has now been replaced by the Third strategy, included broad non-quantified objectives for each policy area supported by **quantified target** scenarios. Examples of policy objectives and target scenarios in SVV II include:

<i>Policy area (objective)</i>	<i>Target scenario</i>
Cutting air pollution	emissions of NO _x and unburned hydrocarbons by road vehicles will be 20% lower in 1995 and 75% lower in 2010 than in 1986
Cutting the use of fossil fuels and emissions of CO ₂	consumption of fossil fuels and emissions of CO ₂ by road vehicles in 1995 will be held at 1989-90 levels. By 2000 the levels will have fallen to those of 1986, and by 2010 consumption and emission will be lower than in 1986.
Cutting noise nuisance	the total area exposed to noise levels in excess of 50 dB (A) as a result of through traffic will not be greater than in 1986 the number of homes whose external walls are exposed to noise levels in excess of 55 dB(A) as a result of local traffic will be 5% lower by 1995, and 50% lower in 2010, than in 1986.

United Kingdom - The Yorkshire and Humberside regional government is proposing regional transport objectives (see also *Annex B.11*). These are very broad aims expressed in terms of more specific objectives and related performance measures, to guide and assess action. A possible list of core measurable objectives stated within the draft Regional Transport Strategy is as follows:

<i>Regional Objective</i>	<i>Performance Measurement</i>
<ul style="list-style-type: none"> To reduce the rate of growth in road traffic 	⇒ Road traffic
<ul style="list-style-type: none"> To maintain and improve the quality of service provided by strategic road and rail links within the region 	⇒ Speed and reliability of road and rail links

<ul style="list-style-type: none"> • To achieve a transfer of freight traffic from road to rail and water 	⇒ Modal split of freight traffic
<ul style="list-style-type: none"> • To increase the accessibility of rural areas by public transport 	⇒ Number and frequency of services in rural areas
<ul style="list-style-type: none"> • To contribute to the achievement of air quality standards through a reduction in road traffic emissions 	⇒ Air quality
<ul style="list-style-type: none"> • To reduce the number of deaths and serious injuries on the roads 	⇒ Casualties
<ul style="list-style-type: none"> • To contribute to a reduction in greenhouse gas emissions. 	⇒ CO ₂ emissions

Signposts to More Sustainable Transport Patterns

The examples above show that amongst the objectives which are not quantified, the tendency is to formulate a series of objectives which point towards the achievement of more sustainable trends. In many cases, objectives are simply a *description* of what sustainable mobility could be like and, as illustrated by the Travel Management Policy for Copenhagen these could be interpreted as targets. This is of course a useful starting point, however, limiting efforts to this type of definition can reduce the influence which is normally expected of environmental objectives.

Recognising the Value of More Open Objectives

In The Netherlands, Finland, and the UK there appears to be move away from increasingly detailed and quantified objectives at the national level, towards more flexible, qualitatively targets in national framework strategies and a more specific approach at local level.

The issue of national versus local target setting is recognised as a crucial one for several countries. The United Kingdom, for example, now expects many detailed targets for public transport and similar issues to be set at the regional and local level, rather than at the national level (cf its 1998 national strategy). The UK Commission for Integrated Transport has concluded that a single end of year target on road traffic or resultant congestion levels or centrally led programme would not be the best tool to deal with congestion related

problems. The view that it may be inappropriate for some objectives to be set at national level is shared by other countries such as France and Norway. But perhaps the most striking example of change from targets to more generic objectives is that of The Netherlands.

A number of important reasons lie behind this new trend and they are worth mentioning for the future work of all Governments involved in the definition of integration objectives.

- limited opportunities for quantified targets at the national as opposed to the local level;
- single, year end national targets may either obscure local differences and the scope for action or limit the incentives for going further at the local level (e.g. in terms of traffic reduction or congestion management);
- there is a greater tendency to set quantified objectives without reference to the availability or effectiveness of implementation measures;
- targets might be set too narrowly therefore lacking a sufficiently broad and comprehensive view that encompasses all actors, actions and impacts
- end of year targets do not necessarily provide policy makers with the disaggregated feedback they need for ongoing monitoring and assessment of progress;
- objectives need to change over time, and this is particularly the case where local consultation is involved in objective setting;
- resources may be better focused (as reported in Finland) on co-ordination, agreeing responsibilities, developing timed action plans etc.

Finland - The Finnish second integrated transport strategy presents a comprehensive range of 6 overall objectives supported by 22 more specific ones. This includes fewer quantitative targets and more common objectives than the first programme, in order to provide a basis for further definition of priorities and future policy development at other levels. The overall objectives from Environmental Guidelines for the Transport Sector (1999) are:

- Reducing greenhouse gas emissions

- Taking environmental impacts into account in developing transport systems
- Preventing pollution
- Reducing emissions produced by traffic
- Reducing exposure to noise
- Promoting ecological sustainability

United Kingdom: Commission for Integrated Transport.

The newly created Commission for integrated transport (CfIT) has considered the need for a national road traffic target by looking at the impact of a range of measures outlined in the White Paper to determine whether such a target has a role to play. CfIT recognised⁽¹⁾ that a single national target for traffic could have the following limitations:

- its level and significance in differing parts of the country will vary immensely, and a national target would mask almost all of this reality;
- the value of offering a range of options, as opposed to pursuing a single national figure
- most of the tools in the White Paper will be agreed on and implemented at the local level in line with the new principles of local autonomy;
- a single year end target would be of little help to policy makers in tracking progress during the interim period;
- the greatest potential for tackling congestion is where the problems are most severe, and a national target, inevitably an average could hold back achievements beyond that level in those areas.

CfIT suggest addressing these concerns through development of a series of benchmark profiles for traffic levels in different areas. These would consist of a specified indicative level for each year, or every few years over the next 10 years, against which to measure progress and to inform traffic reduction policy at the local level where it would be most effective. The development of national benchmarks derived from these local profiles could facilitate further progress.

⁽¹⁾ (Source: National Road Traffic Targets: Advice by the Commission for Integrated Transport. Commission for Integrated Transport. November 1999).

Norway - Environmental Cities Project 1993-2000. The project is a national initiative by the Norwegian Ministry of Environment (MoE) covering several areas of urban policy making and is not limited to transport integration issues. However in defining the scheme's aims, transport policy was considered of

particular importance due to its *relevance* to citizens and because of its *strategic and political* role.

For each of the five cities involved, objectives are expressed as broad qualitative goals are not quantified. Local administrations were free to set targets if appropriate. Some cities have tried to quantify their objectives but these have changed during the period of the project, partly as a result of inputs from the local political level.

It has been argued by some of the co-ordinators of the project at local level that a quantification of the objectives by the MoE would have proved very difficult and not particularly meaningful. Each of the five cities has different sizes, mobility patterns and transport issues, and in addition, there are some difficulties in measuring (and therefore quantify) the variables that underlie the schemes' objectives (e.g. data on walking and bicycle trips).

Netherlands third TPPPlan (draft) will represent a change in the approach to setting targets. The second Traffic and Transport Structure Scheme (SVV II) specified a range of challenging targets, many of which have not been met due to a lack of effective measures. Many targets have been met, largely through the introduction of low emissions technologies. However, targets requiring a change in transport use behaviour e.g. modal shift, have not, and it is not clear at present how this can be improved.

The main problem has been identified as a lack of co-ordination between aims and the means of achieving them, in other words targets were set without ensuring that appropriate and effective measures were available to provide the means or necessary driving forces to change transport behaviour or reduce transport impact.

The key problems can be summarised as follows:

- There has been insufficient improvement in the quality of the environment.
- Growth in traffic volume has exceeded expectations; the creation of new infrastructure proceeded more slowly than planned; congestion has increased.
- Pricing policy can be effective, but has not yet really taken off; this is partly due to limitations imposed by border effects (such as policy on duties).
- The introduction of market forces in public and taxi transport looks encouraging for the future, but public transport is not attractive enough to

bring about a shift away from car use on its own.

- Parking policies can be effective locally, but also have limitations.
- Road safety has improved, but traffic accidents figures are still too high both in terms of deaths, injuries and financial costs.
- The introduction of new administrative structures (the transport region) has not been realised, but the conditions for improvement in administrative co-operation have been realised through the Verdi accord and the Traffic and Transport Planning Act.

The approach adopted for the new transport plan is to base targets on a programme of available measures. Targets are therefore set at realistic levels. It also provides a way of translating environmental aspirations into effective political obligations that take account of economic and social objectives. Cost effectiveness also takes a greater role, in particular for considering modal targets. Where targets cannot be set at a realistic level, no quantified target will be set in relation to the broad objective.

The third National Transport and Traffic Plan will not include a target for reduction of traffic volume. This has been a difficult target to meet and it is now felt that the transport plan should focus on the traffic related environmental problems rather than a reduction of traffic itself. At present there are no effective measures to reduce the current growth in traffic volume and therefore it is not possible to set a realistic target. In addition, it is necessary to improve the environmental performance of other modes of transport to achieve an overall improvement of environmental quality. All targets within the proposed Plan are set according to an assessment of what can be achieved with the current range of available measures.

The new Plan will include fewer targets which will focus on the role of technology in addressing environmental and quality of life problems that result from vehicles use.

2.4 Implementation

This section presents the wide range of findings of the country overview and case studies according to the following headings:

- Integration units;
- Integration of public transport services
- Environmental Management Systems; and
- Objectives and evaluations.

2.4.1 “Integration units” within the Environment and Transport ministries or other government institutions

Towards the convergence of different cultures

“Institutional Integration”, as referred to in Table 1.2, is a key to all types of environmental integration at both the policy formulation and implementation stage. Institutional integration generally requires co-ordination between different line agencies, between national -regional- local agencies, and the involvement of wider stakeholder groups such as the general public and private sector.

Most Member States interviewed have established divisions (or similar) which have the expertise and responsibility to follow closely the environmental and transport dimensions in the Ministry of Transport and the Ministry of Environment, respectively.

The secondment of staff, under different arrangements and levels of formality, is also being practised (e.g. Finland), with the advantage that it reduces the need for formal training to raise awareness. Whilst in Ireland a Green Network of Senior Officials and Task Managers has the role to promote the achievement of the National Sustainable Development Strategy’s objectives within all Government Departments, including transport. Another ad hoc system was set up recently in the United Kingdom.

The UK's Commission for Integrated Transport: The CfIT is an independent body established as a direct result of the White Paper to provide independent advice to the Government on the implementation of integrated transport policy, to monitor developments in transport, environment, health and other sectors to review progress towards objectives. It will:

- review and monitor progress towards objectives and targets
- continue the debate on transport policy
- foster consensus among transport providers
- identify and disseminate examples of best practice from home and abroad.

In some countries such as Spain and Portugal the need to change the culture of different government departments as an initial step in the integration process is widely recognised.

Portugal: Environmental Audit Unit The ministry responsible for transport MEPAT has recently created an Environmental Audit Unit that reports directly to the Minister. The Minister of Transport holds the view that an effective way to achieve better environmental integration is to position environmental expertise close to Ministry staff, and that this can be delivered by a small staff in an advisory role, with a remit to look at new ways of dealing with environmental questions. The Auditoria Ambiental (Environmental Audit Unit) was therefore created in October 1997 to reinforce and promote the integration of environmental considerations into transport provision.

The work of the Environmental Audit Unit - to advise, monitor, co-operate with and keep the Ministry up to date on technical, economic, scientific and legal developments - is carried out via informal procedures and processes. The unit has no legal status, and no formally defined policy or consultative role within the planning or implementation of transport policy and projects. Its influence derives from the personal political backing of the Minister, and its strength comes from the advisory nature of its role. The fact that it has no administrative or regulatory powers is seen as a positive attribute for its advisory role.

Countries with smaller populations or less bureaucratic cultures in their institutions have definite advantages in this area. Ensuring collaboration and close ties between ministries with fewer individuals is often easier. It should also be remembered that strategies and/or the range of different actions which address the need for integration will often include measures which are the responsibility of other ministries, notably the ministries responsible for industry, finance/taxation and public works. For example in most countries

fiscal instruments - such as fuel taxes which may be key to reducing air pollution - are the responsibility of the Ministry of the Finance. This makes the need for co-ordination much more important and at the same time complex.

Inter-ministerial working groups

Often, Member States refer to such groups when specific transport and environment issues are to be discussed. However, the approach taken varies from a formal and permanent set up to a more flexible solution which is called upon and defined *ad hoc* (e.g. Denmark).

Committees, working groups and common research programmes, as well as informal regular contacts, are all being used to strengthen co-operation and integration.

Improving communication with the public as well as within the administrations

Public awareness and acceptance (if not support) of environmentally-friendly transport measures is a key factor in the long term success of such initiatives. Public opinion is also a critical factor for strengthening the political will to carry forward environmental policy objectives to implementation stage. Examples at national, but particularly at regional and local levels, show increasing efforts to involve representative groups and the wider public where possible (e.g. Danish and Italian case studies).

The growing focus on and public interest in the health implications of traffic, especially in urban areas is an important element in raising awareness and involving the public in objective setting. Raising public awareness on the link between traffic, congestion and severe health effects, is more likely to be effective in changing behaviour patterns than providing information on CO₂ or ozone emissions, for example. The World Health Organisation's *Protocol on Transport, Environment and Health* provides an important contribution to raise awareness on health related issues and helps to involve Health Ministries in the debate, improving their co-operation with transport and environment administrations at home.

<p>Denmark: There is a great potential in Denmark to use the links between environment and health in order to influence individuals' behaviour, particularly with respect to travel habits and expectations. There is much public concern about local air quality in urban areas, in particular pollution from particulates. The message about the health effects of</p>

particulates is clear and has a strong impact when conveyed in terms of excess deaths from pollution-related causes, and this is thought to be a more effective message in raising awareness and changing behaviour than information about rising CO₂ levels. This has the potential to deliver win-win-win outcomes, through improved local air quality, reduced health impacts and also lower CO₂ emissions. For example, as a result of increased awareness of local health effects, it is easier for municipalities to implement restrictions on car use in designated environmental zones.

2.4.2 Greater co-ordination and integration of public transport services

The review highlighted the widespread effort which is taking place to ensure greater co-ordination and integration of public services, especially, but not only, in relation to urban and peripheral travel patterns.

Strengthened and improved planning / collaboration and co-ordination between regional administrations, urban authorities and public transport providers

There is a general realisation that to progress towards sustainable transport it is necessary to take an integrated planning approach which necessarily involves a much stronger co-ordination between a range of key players. In particular, the involvement of regional, urban authorities and transport providers is crucial to the success of more sustainable solutions for transport infrastructure and general mobility (e.g. Belgium, Finland, The United Kingdom and Spain).

Some countries establish sustainability plans for transport and mobility which provide the basis and guidance for all future developments such as new infrastructure contracts.

A common theme appears to be the setting of simplified, common tariffs for public transport. Here the obvious relevance to environmental integration is given by the overall objective of increasing the efficiency and effectiveness of public transport.

The Finnish use of Environmental Management Systems (EMS), mentioned in detail in the next *Section*, offers one of the few examples of systematic collaboration on integration: the Transport Ministry encourages private transport providers to develop their own EMSs to ensure implementation of national strategy objectives. The Ministry provides a framework for the EMS of

transport providers, as well as negotiating agreements on energy consumption and other forms of co-operation.

Sweden: The central transport authorities work in close collaboration with local communes (local authorities) to promote integrated transport and often a formal agreement is signed on certain actions. In particular, the local authorities have a lot of control over land use planning and can overrule transport planning decisions.

The Swedish EPA has developed a system of agreements with transport authorities to establish joint actions in areas of mutual interest. The majority of sectoral transport authorities now have these working agreements. Public transport is co-ordinated at the regional level. A new body has been established to take over this role.

Belgium: Co-operation Contract between the Flemish Region, De Lijn, the Brussels Region and the Brussels public Transport Company (MIVB-STIB) - A contract has been agreed between the Brussels and the Flemish Regions. The aim is to set the same tariffs for public transport throughout the Brussels Region and to develop a Regional Express Net to facilitate access to the city centre for inhabitants at the edge of the city.

Even in Denmark and Sweden, where collaboration has been greatest with the private sector, few formal agreements have been signed. The focus of work has been on those who are already aware of the need to take action and are willing to make changes in their operations and behaviour but would not necessarily take that action on their own. But even where there is no specific institutional or formal co-operation framework, Member States still initiate pilot projects and research initiatives which involve private transport providers (e.g. Austria).

Denmark - an investigation will be conducted in co-operation with municipal organisations and the transport sector (public and private) to review and adjust existing legislation on bus transport services and public passenger transport. Private sector representatives also take part in the issue specific working groups.

Sweden - Two specific projects have been implemented to co-operate with and encourage the private sector in relation to integrated transport:

- working with the private sector e.g. Swedish forestry sector to assist them with reducing the environmental impacts of their transport use and to increase their efficiency; and
- to provide eco driving education in association with the Driving Teachers Association. This is aimed at private transport providers to teach them how to drive in a more efficient manner.

Local autonomy and funding

In the United Kingdom implementation of the White Paper is the responsibility of the DETR, although much of the focus is at the local level in line with the new principles of local autonomy. This will be achieved primarily through the development of Local Transport Plans by the Local Authorities. These will set out their proposals for delivering integrated transport over a five year period, including future investment plans and packages to meet local transport needs. Public participation and liaison with neighbouring authorities on cross boundary issues will be fundamental to the plans.

The Government has issued a Transport Bill setting out the legal framework for specific measures and responsibilities. This is still being considered by Parliament. The Secretary of State has also announced a ten year investment plan to support implementation of the measures outlined in the White Paper.

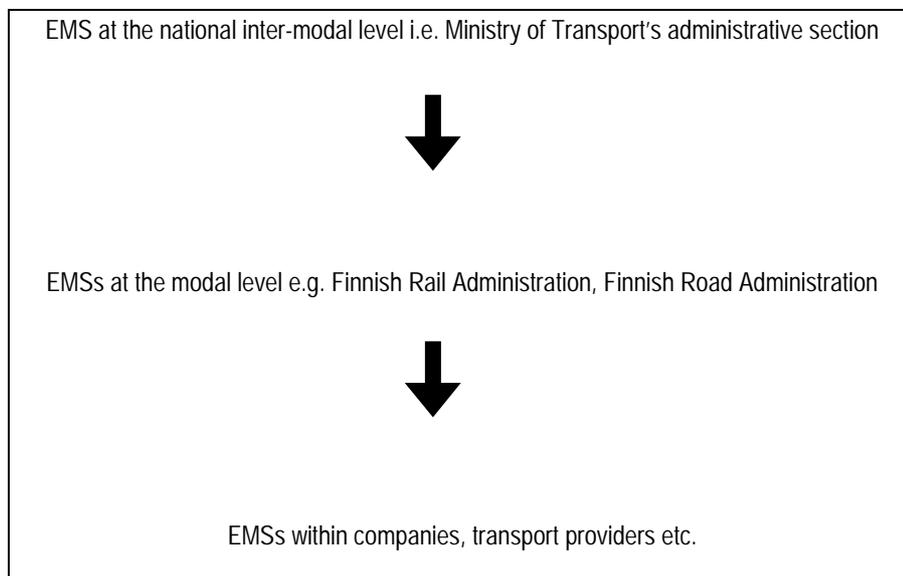
In Italy too there has been a radical change in transport financing. In connection with the forthcoming Transport General Plan the Italian Ministry of Transport (MoT) introduced a new law which would enable funding mechanisms to move away from single project and single mode focus, in favour of a more strategic approach. During the last TGP, budget laws were directly linking expenditure to particular transport needs of urban areas and to one particular infrastructure. Therefore the financing was available only for the construction of underground lines or ring roads, for example. The new legislation proposed by MoT creates so called Urban Mobility Plans (UMP) which link the financing needs of urban areas to their mobility needs rather than one or more types of transport infrastructure. This new implementation mechanism simultaneously allows a more flexible and integrated approach. It also allows each single municipality to properly evaluate their transport needs against their environmental concerns (including the grid of objectives proposed

by the TGP) instead of deciding to build a particular infrastructure because of it can attract funding.

2.4.3 Environmental Management Systems as an implementation tool

The Finnish Ministry of Transport and Communications (MoTC) uses environmental management systems (EMS) to implement its integrated transport strategy at all levels. In Finland, the MoTC is a front-runner in its use of EMS as an implementation tool for integration. No other Ministry in Finland has adopted EMAS or used EMS across the whole Ministry, although EMS has been used by specific Agencies (see also the case study in *Annex B3*).

The Finnish integrated transport strategy is implemented through a three tier environmental management system from the national inter-modal level through to companies and transport providers (see Figure below). The EMSs link environmental issues to planning, development, implementation and follow-up action in the field of transport. This is a unique and reportedly successful approach which was not found in any other EU member state.



The Finnish 1999 “*Environmental Guidelines for the Transport Sector*” form the handbook within the management system and thus provide a guiding

framework for the establishment of significant aspects, objectives and targets within the EMAS. These are decided following discussions between different stakeholders such as the Ministry of the Environment and civil servants within the MoTC. For example, the targets and measures relating to air quality, water quality and biodiversity were discussed with the civil servants working on these issues in the Ministry of the Environment.

The targets are reviewed each time a new policy document is issued (after 4-5 years). However, in addition, measures needed to implement the program are specified on an annual basis and are adopted by the MoTC and its administrative section as yearly performance targets. In this way, both policy documents and the EMS are used to ensure continuous improvement.

2.4.4 Objectives and evaluations

The wide support for objectives and targets has been discussed in *Section 2.3*. At the implementation phase, these, together with indicators are often playing an important role in terms of directing investment and more programmatic and project-related decisions. However, it is also clear that the extent with which reference is made to objectives and targets still varies significantly across the EU, mainly as a result of the planning culture which may or may not be accustomed (or even in favour) to using objectives.

The recent experience in Dublin (Dublin Transportation Initiative) where environmental objectives have been used as assessment criteria, is an example of recent change in approach:

Dublin - The Vision Statement at the basis of the DTI and its objectives, defined in consultation with interest groups, also formed the framework for development of possible transport strategies. Public Agencies in the study area were asked to define all possible transport schemes and plans, and these were organised into eight themes:

1. Do minimum - implementing only a limited number of already agreed road schemes.
2. Restraint - reducing car use through road pricing, parking restrictions.
3. Making better use of existing assets - low cost schemes to increase usage of roads and public transport.
4. Incremental road development - focusing on road infrastructure development in key areas.
5. Extended road development - a more widespread package of road investment.
6. An environmental package - focusing on pedestrian, cycle and related measures at the expense of motorised modes.
7. Enhanced public transport investment - bus corridors, light railway etc.
8. Extended public transport investment - a more widespread package.

Each theme was subjected to a multi-criteria analysis, assessing each against the 24 objectives/criteria established from the vision statement and presenting their likely impacts in tabular format. The table below presents the findings of the analysis for each theme against the three environmental objectives/criteria:

Criteria	Theme							
	1	2	3	4	5	6	7	8
Reduce direct environmental effects from transport	○	●	●	●	●	-	●	●
Help foster sustainable development	○	●	●	●	●	●	●	●
Conserve and enhance physical and cultural heritage	○	●	-			●	-	-

Legend:

- | | | | |
|---|--------------------------|---|--------------------------|
| ● | Strong positive impact | ○ | Strong negative impact |
| ● | Positive impact | ○ | Negative impact |
| ● | Slightly positive impact | ○ | slightly negative impact |
| - | Neutral impact | | |

3 Main Findings and Issues for Further Consideration

3.1 Introduction

In general, most interviewees stressed the fact that environmental integration is still very much a new area of work. For this reason they welcomed the initiative of the Swedish EPA to review what is being done through this project. Good practice as well as an indication of difficult issues is expected to make a helpful contribution to further integration in the transport sector.

The study has revealed that most European Member States have started to engage in environmental integration in the transport sector. However, the range of approaches and the degree of integration at the highest strategic levels vary significantly across Europe. A few countries have over ten years experience in the integration of environmental considerations in transport plans and policies, whilst others have just started looking at the need to include expert staff within the transport ministry to improve awareness and understanding of transport's environmental implications.

Institutional and administrative structures, together with very different cultural backgrounds and economic growth patterns, have a major influence on the level of progress towards environmental integration in transport strategies, as described in *Section 2*.

The findings of this overview suggest that a lot can be learnt from the different Member States approaches to integration, both in terms of what appears to have been successful and in terms of what has resulted in limited efficiency or too difficult to achieve. Countries which are relatively new to the process of integration (such as Italy and Spain), can benefit from the lessons learned in The Netherlands or Finland, for example.

The diversity in terms of existing transport systems and traffic trends, and the institutional and cultural background in the EU15 clearly points to the need for *ad hoc* approaches to integration. The development of a single integrated strategy document will not necessarily be the answer in all countries and the various initiatives outlined in *Annex A* and *B* provide an overview of the type of responses to the "integration challenge" which are being developed.

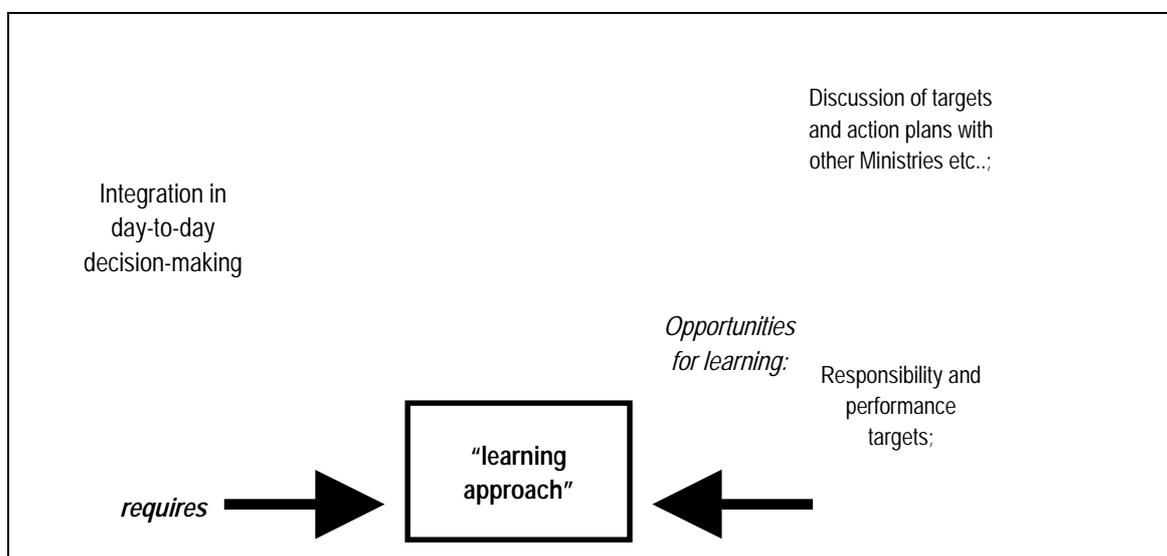
3.2 Strengths and Weaknesses of Current Approaches

3.2.1 Approaches to planning and implementation of environmental integration

The *four broad categories of integration strategies*, defined in Sections 1 and 2, should be considered as a broad brush attempt at distinguishing what is happening in the various countries. There are significant differences between each Member State for example, in terms of individual transport modes plans versus transport sector plans, and between single comprehensive national strategies and substantial regional plans which use the former as a general framework and guidance document.

This review has found that in terms of full integrated transport strategies, five Member States have adopted first or even second generation plans (Austria, Finland, The Netherlands, Sweden and the United Kingdom). Most other Member States have adopted or are in the process of developing transport sector strategies which include a comprehensive section on environmental considerations (Denmark, France, Spain and Italy).

The *main themes* which have been commonly considered in the process of integration are: transport demand management -including modal split, modal shift and transport behaviour patterns-, transport demand reduction, addressing CO₂ emissions. Issues which are rising (or coming back) at the top of the integration agenda include: health and environmental impacts of transport, the role of technology in reducing transport's environmental impacts, the link between transport and land-use, and transport and quality of life issues.



To ensure an understanding of transport's environmental impacts

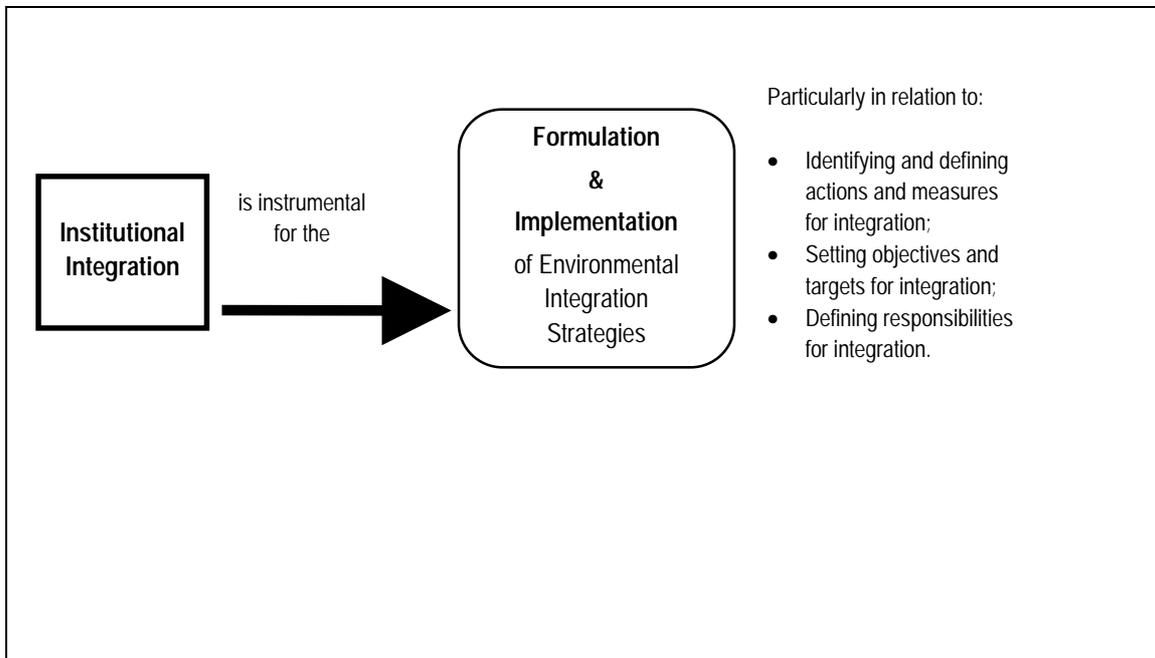
Use of Environmental Management Systems;

Consultation and collaboration, including secondment to different administrations.

Promoting widespread *awareness and understanding* of the complex interactions and impacts of transport on the environment and natural resources is a crucial step for integration. This is being addressed in a variety of ways by the Member States. The Finnish focus on “learning” has proved particularly effective and may offer interesting lessons for other countries.

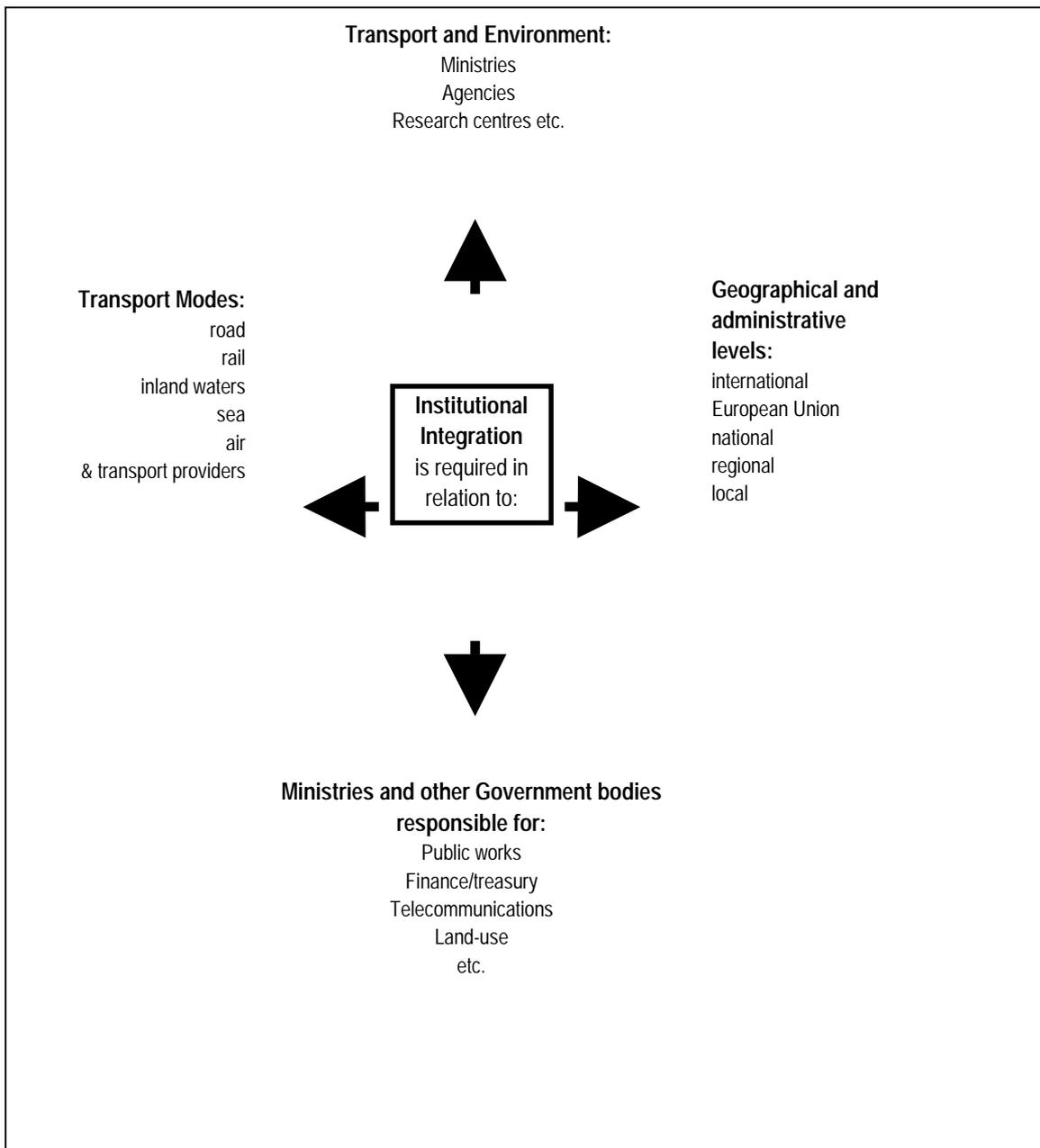
A wide range of “*mechanisms*” for integration, as described in *Table 1.2 (Section 1.3)* are being adopted across Europe. The ones which have been quoted as particularly successful to date include: greater collaboration and consultation, the use of environmental management systems, the definition of clear responsibilities as well as objectives and targets, and the application of strategic environmental assessment to policies, plans and programmes.

Collaboration between environment and transport administrations is improving everywhere, although again there is a huge difference in the level of co-operation when comparing countries which have just started such processes and others which have effectively changed the institutional set up, for example to allow exchanges between staff.



Consultation between ministries (e.g. environment, finance, public works, health), local government, the public, NGOs, and the private sector - both at

national and regional levels -, has been another increasingly common feature during both the planning and implementation stages of environmental integration. Together with greater collaboration, this is seen as a fundamental factor in exchanging information, raising awareness, improving efficiency and, most importantly, increasing the institutions ability to meet environmental targets for transport. This last point relates to the fact that in many cases, transport administrations do not control all the areas of work and the tools which are necessary for them to function effectively and address their sectoral targets.



The *vertical and horizontal fragmentation* of responsibilities is such that far reaching objectives such as reduction in emissions to air cannot be controlled and reached single-handedly. The ability to define economic tools as well as collaboration with other key sectors (e.g. energy or land-use) is an essential factor in the delivery of an integrated transport strategy.

Key issues such as transport planning and financing at the regional and local levels, together with infrastructure planning for noise reduction, water

protection and protection of natural and cultural heritage, are often dealt with by the regional or communal governments. Several countries are finding this a significant challenge to successful integration, including the fact that it makes it difficult to agree and set objectives and targets.

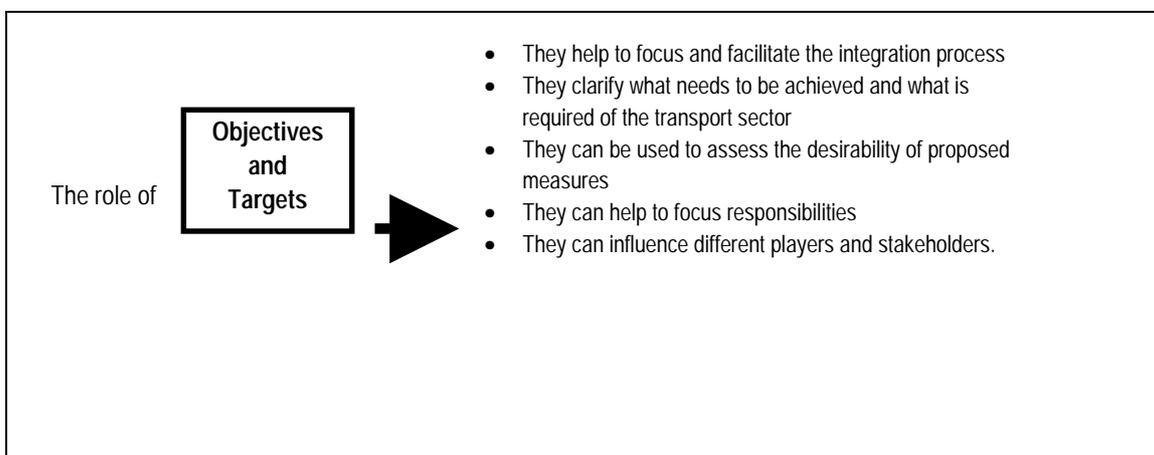
A crucial element of implementation has been the progress towards closer links and the slow convergence of cultures between transport and environment administrations discussed above. Again, the results vary significantly across Europe and much can be learned from countries which have now tested a variety of approaches.

The review also highlighted the widespread effort which is taking place to ensure greater co-ordination and integration of transport public services, especially - but not only - in relation to urban and peripheral travel patterns.

3.2.2 The role of objectives and targets

The Joint Expert Group on Transport and Environment states that “Integration needs to be guided by a set of objectives and targets that specify the direction of change and in most cases the amount of changes needed”.

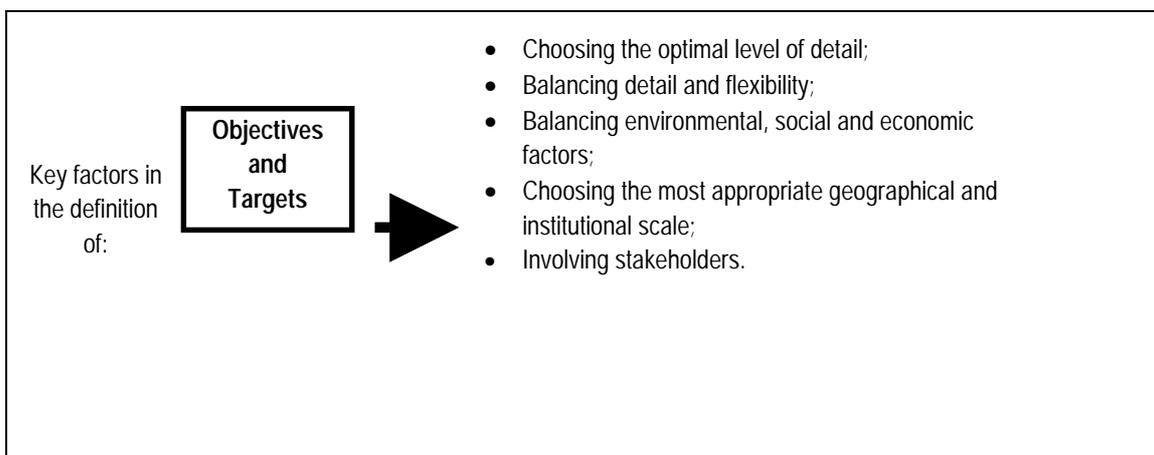
Most Member States have identified some environmental integration objectives for the transport sector, and have expressed support for the need to continue to use and improve their definition and effectiveness. However, the level of quantification, and the actual importance of those objectives in the practical implementation of transport plans still varies.



Flexibility is likely to be increasingly the characteristic of environmental and sustainability objectives and targets being included in transport strategies. Countries like The Netherlands, Denmark and Sweden, which have used targets for several years now, are finding it necessary to adopt a more flexible and iterative approach to the setting, monitoring and updating of objectives and targets. This was particularly evident in relation to targets for *transport demand* and *CO₂ emission reduction* set during the first part of the 1990s, which turned out to be difficult or impossible to achieve. Indeed, the overview suggests that the likelihood of national objectives or targets being set for transport demand reduction remains low.

Flexibility is also recognised as a need in relation to ensuring that objectives and targets remain *challenging* and act as a *driving force* for constant improvement. This is also in line with some new initiatives, such as the forthcoming transport general Plan for Italy.

Changes in *transport behaviour patterns* was an important part of the strategy to achieve mobility reduction and management objectives. This will remain high on the agenda of many countries, however, Denmark and The Netherlands are now looking for alternative approaches to meet some of these objectives since there is a recognition that it is extremely difficult to influence people's choice to use their car. It is possible that - bearing in mind cultural and contextual differences - Member States which are starting to tackle this issue can benefit from the experience of such countries.



Several Member States are currently addressing crucial issues for the definition of objectives, such as the optimal degree of detail and quantification, the most appropriate geographical and institutional scale within which to define them, the best way to balance environment, social and economic needs, and the role of stakeholders in helping to focus and define objectives. An important finding of the review was that countries which have had objectives and quantified targets for longer periods are now starting to move away from strict quantification of broad aims and objectives. Instead, increasing attention is being given to the role and effectiveness of clearly defined responsibilities and measures.

3.3 Success and Effectiveness - Initial Findings

3.3.1 Early days

Integration of the environment and pursuit of more sustainable transport strategies, or similar measures, are still relatively new initiatives in many national and regional administrations of the 15 EU Member States. It has therefore been very difficult to obtain evidence of success and effectiveness in promoting sustainability and reducing the environmental impact of the transport sector.

Nonetheless, the interviews revealed that, albeit in varying degrees, most Member States were building in greater consultation with a wide range of stakeholders, greater use of objectives and stronger collaboration between transport and environment administrations. In Italy, for example, the new approach to the drafting of the Transport General Plan, entailing broad consultation with officials from the Ministry of Environment in discussions on all the themes, was a key success feature of the new plan.

3.3.2 Using Indicators and Reporting Mechanisms

The potential role of indicators as an important monitoring tool has been considered by a number of Member States. In France for example, indicators are used for the transport sector, however at present these are not comprehensively linked to objectives. Work is ongoing to develop the indicator set which can help towards monitoring progress.

A few Member States have started to refer to the Transport and Environment Reporting Mechanism (TERM) for the European Union (see *Section 1*) as a

starting point for considering indicators of progress and performance. Germany is now developing a set of indicators for transport which will include environmental dimensions. Other examples were found in Finland, The Netherlands, Sweden, where effectiveness monitoring are based on indicators as well as more qualitative assessment.

Finland - Monitoring is undertaken annually. Key staff are interviewed and progress reported against a set of environmental indicators developed by the MoTC. This set will be expanded following the development of TERM. The annual monitoring results will be published on the Ministry's website, and more detailed reports will be published every 2-3 years.

The environmental performance of the MoTC will be monitored by external verifiers. The first report to the Finnish National Commission on Sustainable Development on the progress made towards sustainable development targets will be issued in summer 2001, and will be followed by an external assessment. Environmental assessment of all policies (not just transport) is undertaken by researchers from the Research Centre of Finland which is not associated with a particular Ministry.

The Netherlands - The most successful measures are viewed as the EU led initiatives, for example the introduction of the catalytic converter and the auto oil programme. National measures that have had an impact are modal shift policy (although more progress is required), stimulation of public transport, decree on noise and the transaction programme (working with the goods transport sector to improve efficiency and use of non-road transport).

According to the Ministry of Transport, it is difficult to say what is effective since it is not clear what effective actually means in terms of environmental integration in the transport sector. Although targets may have been reached in some areas, are the resultant reductions in environmental impact more important than other impacts i.e. are some environmental issues more important than others?

A *Policy Effect Assessment* is conducted annually. For the Ministry of Transport, this includes a quantified assessment of the environmental impact of transport policy including emissions monitoring etc.

Similarly, in **Sweden**, the transport administrations report annually on progress towards environmental objectives (for e.g. the National Road Administration uses a set of indicators agreed with the Swedish EPA, and which may be linked in the future to the TERM set).

3.3.3 Examples of measures and approaches which have been most successful

Awareness

In Denmark, the public's high level of awareness of the environmental issues related to transport is considered an important sign of the success of the 1990s policy. This has facilitated the introduction and success of transport measures and has increased the public's willingness to change its transport behaviour. This is partly due to the recognised strength and high level of activity of the Ministry of Environment. Nonetheless, the difficult issue of demand reduction and its link to CO₂ emissions remains unsolved and the Government is currently considering reducing its CO₂ emission reduction target for transport - a departure from the primary policy objective of the last 10 years.

Sweden recognises that information and education have been very important in creating win-win situations.

Economic incentives

Economic incentives, regulations and market forces have been identified as the most successful measures in Sweden. Austria has pointed to other measures including:

- mobility management
- public transport improvement
- promoting biking and pedestrianisation
- emission standards.

Environmental Management Systems

In Finland the use of environmental management systems to implement environmental policy objectives in transport activities has proved to be highly effective. Key success factors include close co-operation and dialogue between the Ministry of Environment, MoTC, modal agencies and private transport providers. In addition, the adoption of integrated transport policy measures as *performance targets* provides a direct incentive for each employee to meet policy objectives, facilitated by the availability of support and assistance from both within the MoTC and Ministry of Environment.

In urban areas

Spain suggests that the majority of successful examples are to be found in relation to urban transport initiatives. Several cities have succeeded in transferring a significant part of transport demand to public transport, especially since citizens can buy a monthly ticket for all transport modes in big cities.

3.3.4 Some obstacles and issues for further consideration

The interviews revealed that the more common obstacles to the formulation and implementation of integration strategies and measures were:

- Lack of institutional integration;
- Different competencies between national, regional and local levels;
- Life style approaches favouring and marketing car and plane transport;
- Budget restrictions and difficulty in accessing financial resources for multi-modal initiatives;
- Lobbying by representatives of unsustainable transport modes.

In summary, the main issues which appear to need further consideration include:

- the mechanisms and procedures which can reduce the obstacles and inefficiencies due to the lack of institutional integration;
- the provision of resources for integration: expertise/skills and funding;
- the issues which are most effectively dealt with through the definition of targets or generic objectives;
- the most appropriate geographical scale at which objectives and targets should be set;
- the balance between setting targets and defining clear responsibilities and measures;
- the best ways to address increasing transport demand; and
- the need for an EU lead on a number of trans-national issues, such as air transport charging, the regulation of shipping and petrol pricing.

Finally, given that environmental integration is still a relatively new issue for many countries and institutions, it seems appropriate to emphasise the potential role of a “learning approach”, and of international collaboration and discussion on good practice.

REPORT 5083

Integrating Environment in Transport Policies

– a survey in EU Member States

the amsterdam treaty and the request from the Cardiff summit in June 1998 have made integration of environmental considerations into all policy areas a concern for the European Union.

This report gives a comprehensive overview of the different integration approaches used so far in national transport policies, country-by-country and by nine case studies. It shows that most EU Member States have started to integrate environmental considerations in their national transport policies. The report highlights, among other things, the use of objectives and targets and the use of environmental management systems in the integration strategies.

The work was carried out by ERM in London on behalf of the Swedish Euro-EST project. The Swedish Euro-EST project is a joint project involving national transport and environment authorities and has the objective of promoting a sustainable transport system in Europe.

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