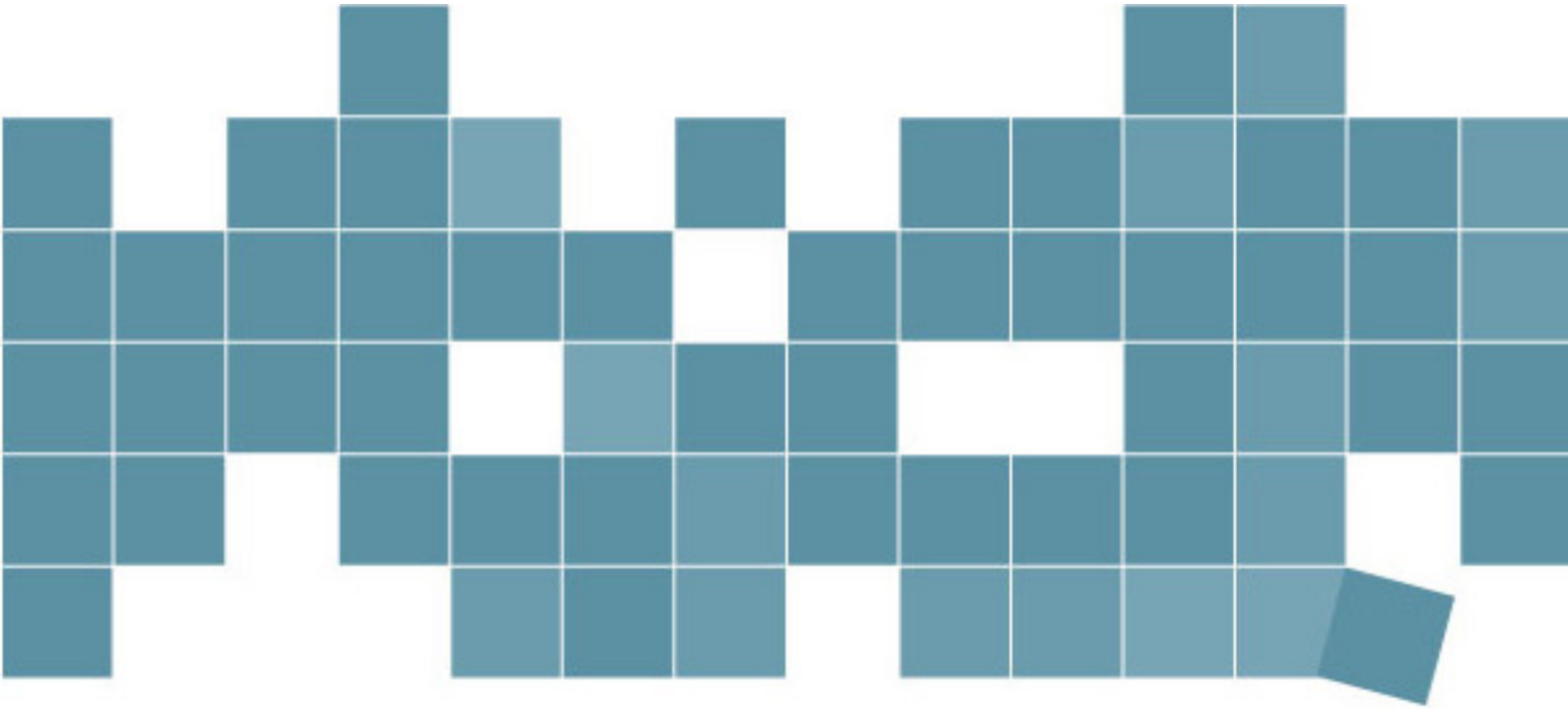
SIKA PM

2009:7

Evaluation of the implementation of the EU transport policy



Commission report

SIKA

Preface

In the report *Starting points for European transport policy after 2010* (SIKA Report 2009:1) an analysis was made on currently suggested actions under European transport policy. The report also presents some policy suggestions for the coming period beyond 2010.

Trivector Traffic was commissioned by SIKA to make a survey on the situation in a number of member countries. The main results from the survey has been integrated in the main report from SIKA.

Trivectors commission was reported in two separate PM. The first one, written in Swedish language, was published at its full length as SIKA PM 2009:6. The current PM is the full version of Trivector's second commission report, adding the analysis of Lithuania, Slovenia and The Netherlands to the list of member states previously covered.

The analysis has been made by MSc. Jesper Nordlund, PhD. Annika Nilsson and D. Eng. Christer Ljungberg, all at Trivector Traffic.

Östersund in October 2009

Brita Saxton
Director-General

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1. Introduction

1.1 Background and aim

The Swedish government wished before their chairmanship of the EU in 2009 to build up a basis for Swedish actions in the work with EU transport policy from 2010 and beyond. On commission from SIKA, Trivector Traffic has been appointed to complement previous Trivector report 2008:93[2] concerning the implementation of EU transport policy in European Union member states.

In this memo, the implementation of the 12 policies of the White paper on the European transport policy (COM 2001/370 final), the Mid-term review of White Paper (COM 2006/314 final), the Greening Transport Package (COM 2008/433 final) and the Green paper on urban mobility (COM 2007/551 final) in three member states is analyzed.

1.2 The assignment

On commission from SIKA, Trivector Traffic in 2008 made an analysis on the implementation of EU transport policy in the member countries (report 2008:93), which served as a basis for a further governmental assignment. This memo aims to complement the previous analysis with three additional member countries. The three chosen member countries are Lithuania, Slovenia and the Netherlands.

1.3 Method

The analysis is based on three documents; White paper “European transport policy for 2010: time to decide” (COM 2001/370 final), the midterm-review “Keep Europe Moving” (COM 2008/314 final) and the Greening transport package (COM 2008/433 final). Also, the Green paper “Towards a new culture for urban mobility” (COM 2007/551 final) has been studied. Spokespersons on the domestic Ministries of Transport have been interviewed for comments on the assessed implementation and comments on the country’s view of these documents. The “Annex II Member states policies review”[3] (called “ASSESS-study”) has been one of the main sources.

[2] Trivector Traffic AB, Report 2008:93 Åtgärdsanalys av EU:s transportpolitik

[3] Annex II of the final report for ‘Assessment of the contribution of the TEN and other transport policy

The White paper “European transport for 2010: time to decide” is divided into four parts (or Action priorities), of which three is handled in this memo. Each part consists of a various number of policies. In chapter 2.1.2, 2.2.2 and 2.3.2 the implementation of those policies is the matter of discussion. The division in parts and policies is listed below;

- Part one: Shifting the balance between modes of transport
  1) Improving quality in the road transport sector
  2) Revitalizing the railways
  3) Controlling growth in air transport
  4) Promoting transport by sea and inland waterway
  5) Turning intermodality into reality
- Part two: Eliminating bottlenecks
  6) Building the Trans-European transport network
- Part three: Placing users at the heart of transport policy
  7) Improving road safety
  8) Adopting a policy on effective charging for transport
  9) Recognizing the rights and obligations of users
  10) Developing high-quality urban transport
  11) Putting research and technology at the service of clean, efficient transport

measures to the mid-term implementation of the White Paper on the European Transport Policy for 2010’, European Commission, 2005.

2. Inventory of chosen countries

In this chapter an inventory of measures which either have been or are planned to be implemented in the member countries will be presented. This inventory is based on a study of three documents; White paper “European transport for 2010: time to decide”, “Keep Europe Moving: a transport policy for sustainable mobility” and “Greening Transport Package”. The Green paper “Towards a new culture for urban mobility” has also been studied in some extent. The previous Trivector report (2008:93) included seven EU countries. However, only one of those countries represents Eastern Europe (Poland). This memo constitutes a complement to the previous report, why this memo has been focusing on following three countries:

- Lithuania (member since 2004, the only Baltic country studied)
- Slovenia (member since 2004, the only former Yugoslavian country with EU membership)
- The Netherlands (one of the origin member states in the European Coal and Steel Community (ECSC) and the densest populated country in this Trivector study)

2.1 Lithuania

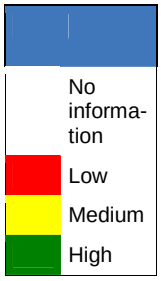
Lithuania has been a member in the European Union since 2004 and is the only Baltic country that has been studied by Trivector. Lithuania has got a total population of approximately 3.4 million inhabitants. The country was chosen because of the lack of Eastern European countries in the previous report. A better geographical diversity of studied countries will hopefully give a more accurate result.

2.1.1 Summary

A lot has been done concerning road safety in Lithuania. A prominent decrease in the number of road fatalities has been accomplished the previous year. Also the quality in the road transport sector has been increased and the implementation of the TEN-T priority project Rail Baltica is on schedule. The Eurovignette directive has been implemented in the domestic legislation.

Table 2.1 Implementation of the White papers 12 policy's, ASSESS-study for 2005, ASSESS-study prediction for 2010 and an assessment from Trivector (2009)

WP		ASSESS 2005	ASSESS 2010	Trivector 2009
1	Raise quality in the road transport sector			
2	Vitalise the railway sector			
3	Combine growth of air traffic with high environmental requirements			
4	Promote transport at sea and on inland waterways			
5	Promote intermodality			
6	Realise the trans-European transport network			
7	Increase road safety			
8	Formulate an efficient pricing policy			
9	Travellers' rights and obligations			
10	Develop urban traffic			
11	New technology and alternative fuels			
12	Control the effects of globalisation			



In 2005 Lithuania adopted "Long-term Strategy (until 2025) of Lithuanian Transport System Development" which is the main transport policy document. Work is ongoing with a new "Long-term Strategy (until 2030) of Lithuanian Transport System Development" which, according to a spokesperson on the Ministry of Transport and Communications, among other things will reflect the proposals from the Greening Transport Package.

2.1.2 Implementation of policies and measures from White paper

ACTION PRIORITY 1: Shifting the balance between modes of transport

Concerning part one in the White paper "Shifting the balance between modes of transport", following reflections can be made regarding Lithuania's recent development. During the period 2000 – 2005 no motorways were built and the total length of the railway network decreased by 7 %.

Table 2.2 Length per means of transportation in Lithuania. Source: EC, Energy and transport in figures 2007.

		2000	2005
Road	Total length of motorways (km)	417	417
Railway	Total length (km)	1 905	1 771
Inland waterways	Length in use (km)	380	425

During the period 2002 – 2006, haulage by train has increased by 32 % in Lithuania, whilst haulage on road has increased even more; 69 % during the same period. The modal split for haulage transported on road has increased by 12 % during these years and the modal split for haulage transported on railway has decreased by 1 %.

Table 2.3 Distribution of haulage by vehicle in Lithuania. Source: EC, Energy and transport in figures 2007.

	2002		2006	
	Tonkm, billions	%	Tonkm, billions	%
Road	10.7	42%	18.1	54%
Railway	9.8	39%	12.9	38%
Inland waterways	-	0%	-	0%
Pipeline	4.7	19%	2.7	8%
Sum	25.2	100%	33.7	100%

When it comes to person trips, the car is the means of transportation that has gained the most during this period; 52 % compared to 23 % for buses and coaches. Person-trips on railways have decreased by approximately 20 %. The modal split for passenger cars has increased by 3 %, meanwhile the modal splits for buses and coaches and railways have decreased, respectively, by 2 % and 1 %.

Table 2.4 Distribution of person trips by means of transportation in Lithuania. Source: EC, Energy and transport in figures 2007.

	2002		2006	
	Pkm, millions	%	Pkm, millions	%
Passenger Cars	26.0	88%	39.5	91%
Buses and Coaches	3.0	10%	3.7	8%
Tram and Metro	-	-	-	-
Railways	0.5	2%	0.4	1%
Sum	29.5	100%	43.6	100%

The recent increase in road transport is reflected in the emissions increase of CO_2; since year 2000, the CO_2 emissions from transport including international bunkers has gained with 43 %.

Table 2.5 CO_2 emissions from transport, including international bunkers. Source: EC, Energy and transport in figures 2007.

	1990	2000	2006	Change 1990-2006
CO_2, million tons	6.4	3.5	5.0	-28%

1. Improving quality in the road transport sector

According to the ASSESS-study the implementation of this policy was on track in 2005. All in all Lithuania has got a good road infrastructure with a total road network of 45.000 km.

The "Long-term Strategy (until 2025) of Lithuanian Transport System Development" acknowledges that modernisation and development of the road infrastructure is highly prioritized for implementation. Among other objectives regarding modernisation and development of road infrastructure, integration of the Lithuanian road transport network into the EU road transport network in means of legal regulation and technology and the creation of an environmental-friendly road transport system can be mentioned as examples in how Lithuania aims to provide for this policy.

2. Revitalizing the railways

The ASSESS-study makes clear that the policy implementation "revitalizing the railways" was lacking behind until 2005. Serious track deterioration is predicted due to the combination of dirty ballast and cessation of track renewal and maintenance.

The main goal for Lithuania is to construct a railway with standard European gauge from the Polish border to Kaunas and a freight handling centre in Kaunas, which aims to connect Lithuania with Central and Western Europe by a direct railway link. The freight handling centre is necessary to develop combined transport in the country.

As shown in Table 2.4 the train as a means of transportation has lost market shares. Both person-trips by train and haulage transported on railway have lost 1 % each of the market share. In spite this, haulage transported on railway has increased during the same period by 32 % (Table 2.3) whilst person-trips by train have decreased between 2002 to 2006 with 20 % (Table 2.4).

Despite (or because of) the railway's weak role, Lithuania consider modernization and development of the railway system as a major task in their long-term development strategy and measures are planned to be implemented until 2006, 2013 and 2025. Among other measures, two measures are said to be achieved until 2006;

- upgrade of the railway between Vilnius-Kaunas making march speed of 160 kph for passenger trains and 120 kph for freight trains possible
- completion of the harmonisation of the country's technical regulation on construction with international and EU standards

Local means have been established for reducing vibration of the rolling stock and new locos have been purchased.

3. Controlling growth in air transport

According to the ASSESS-study, the aircraft fleet is being renovated and airports modernized, and the scheduled networks are being expanded every year. New equipment in the control centres guarantees the safety of aircrafts in Lithuanian air space. Even so the implementation remains on a low level.

4. Promoting transport by sea and inland waterway

The harbour of Klaipėda is the main harbour in Lithuania and is competing for East-West cargo with harbours in St Petersburg, Riga and Tallinn. Although it has some advantages as being ice free the whole year and connected to good hinterland roads, but it needs investment in its current infrastructure to be able to compete in the future.

In their long-term development strategy, it is said that an investment programme of Klaipėda Seaport is to be implemented by 2006 as well as to reconstruct existing quays and construct new quays (about 1 km). According to a spokesperson on the Ministry of Transport and Communications the Klaipėda Seaport has been improved as a logistic centre. Modernization and development of inland waterways is also mentioned as a main objective in the development strategy and the policy implementation is doing well.

5. Turning intermodality into reality

The Lithuanian government recently formulated a priority which serves to achieve the goal to prepare for the integration of Lithuanian transport system with the combined European transportation system regarding chains of logistics. The government should both ensure proper coordination of the main infrastructure networks and secure the rules and requirements of the market and minimal standards of transportation.

The long-term development strategy points out development of an intermodal transport system as a main direction for the national transport policy. However, it states that neither organisation for promotion of intermodal transports is established, nor a mechanism for organisation, coordination or development of intermodal services of passenger transport. The long-term development strategy discusses the necessity of intermodal transports and in which way this should be implemented, still the implementation is assessed lacking behind.

ACTION PRIORITY 2: Eliminating bottlenecks

6. Building the Trans- European transport network

Lithuania is involved in TEN-T Priority Project Nº 27 named Rail Baltica axis, which reaches from Helsinki to Warzaw, via Tallinn, Tartu, Riga and Kaunas. Its total length is 1,142 km of which 135 km are completed. In Lithuania, the work is ongoing with the main part of the section but the work with the section south of Kaunas will begin between 2010 and 2013.

The section between Riga and Kaunas is designed for speeds at 120 kph, but because of line capacity problems the operational speed will not reach the designed speed limit.

The completion of the whole route of Rail Baltica is estimated to be carried out 2020. The original agreement was that the line will have an average operation speed at 120 kph by 2013. Even though Lithuania is doing well with their part of the project, the project may be delayed because of Poland’s wishes to modify the section between Bialystock and Suwatki.

ACTION PRIORITY 3: Placing users at the heart of transport policy

7. Improving road safety

Improving road safety is concerned as one of the most important matters for Lithuanian transport policy, although road fatalities have increased with 18 % during 2000 – 2006. In June 2002 the Lithuanian government approved a new State Road Safety Programme which aimed to reduce the number of road fatalities, protect the health and property of road users, improving traffic conditions and reduce the vehicles negative impact on the environment. Lithuania had 2006 most fatalities per million inhabitants of all the European Union member states.

Table 2.6 Road fatalities in Lithuania. Source: EC, Energy and transport in figures 2007.

	2000	2006	Change	Per 10 billion pkm 2006	Per million inhabitants 2006
Road Fatalities	641	759	18 %	191	224

According to statistics from the European Traffic Police Network (TISPOL)[4] the number of fatalities in Lithuania significantly decreased between 2007 and 2008; from 739 to 498 fatalities which is a reduction with 33 %. From year 2000 until 2007 the number of road fatalities was approximately 700 - 750 each year. Until further notice, the policy has to be considered as implemented. However, the statistics for 2009 and 2010 will reveal if the radical decrease was a coincidence or not.

8. Adopting a policy on effective charging for transport

Lithuania used road pricing for trucks only until 1st of June 2005. The revenues were invested to develop and reconstruct the roads. This Road fund had to be closed because of preparations for a new tax reform. The Eurovignette directive has been implemented in Lithuania, which is a user charge for special vehicles (in this case lorries and buses). When users have paid the vignette they are allowed to use roads of the highest category in Lithuania.

9. Recognizing the rights and obligations of users

Each member state should have established an enforcement body to 17 February 2005. Lithuania has nominated the Civil Aviation Administration as enforcement body to deal with rights and obligations of flight passengers, why the policy implementation is assessed being on schedule.

10. Developing high-quality urban transport

The main modes for public transport in Vilnius and Kaunas are buses and trolley-buses. Vilnius has got plans to build two modern tram lines. The local government which has the responsibility for provision and operation of urban transport often lacks resources to establish new systems. In most towns there are private transport companies who run minibuses on routes where the public transportation are non-existent.

[4] https://www.tispol.org/node/3980

In the “Development Strategy of the Lithuanian Transport System until 2025” some objectives are pointed out with particular importance for individual transportation. Among others these are;

- To motivate people to use public transport to prevent further growth of flows of cars and traffic volumes
- To raise the level of Lithuanian urban public transport services to the level of services in developed Member States (regarding accessibility, quality, duration, etc.)
- To improve the network of routes of public transport (regarding services provided in the territory) for the satisfaction of the passengers’ needs

Trivector agrees with the ASSESS-study’s prediction until 2010, i.e. the policy implementation is assessed being on schedule.

11. Putting research and technology at the service of clean, efficient transport

The lack of interest of large business in scientific development and limited possibilities for small and medium-sized business to invest in creation of science-intensive products and modern technologies has brought about a small contribution of the business sector in financing the scientific research. Trivector doesn’t have any objections to the ASSESS-study’s prediction until 2010, why the policy implementation is assessed being on schedule.

2.1.3 Comments on the ASSESS-study

According to a spokesperson on the Ministry of Transport and Communications, the ASSESS-study, regarding both what had been done until 2005 and what was predicted until 2010, is more or less correct. He refers to their long-term development strategy which was adopted directly after the assessment study in 2005. It handles some of those measures which the previous document didn’t and which are objectives of the White paper. As concerning the prediction until 2010, he points out that Lithuania has done a lot to avoid traffic congestions by building by-passes, mitigate road safety problems, revitalise the railway sector and improve the quality of road transport sector.

2.1.4 Greening Transport Package

Lithuania has implemented the Eurovignette directive, which provides a framework for levying of special vehicles, in this case lorries and buses. Noise pollution from railway freight is considered by implementation of local means for reducing vibration of the rolling stock. A special re-motorisation programme has been introduced in the railway sector and new vehicles have been purchased. Also, the government has initiated a study on external costs of transport impact in urbanised areas. Lithuania is positive to the Greening Transport Package and will reflect the proposals from the Greening Transport Package in their long-term strategy for the Lithuanian transport sector (2030).

2.1.5 Green paper: Towards a new culture for urban mobility

In Lithuania, the urban transport regulation is under the competence of municipalities. The Ministry of Transport and Communications is looking for stronger inclusions of measures proposed in the Green paper.

2.1.6 Conclusions

Generally, Lithuania is doing well implementing the 12 policies of the White paper. The TEN-T priority project Rail Baltica is on schedule and the work is ongoing between Kaunas and Riga. However, the cross border section between Lithuania and Poland is a key section on which work has not started yet. Road safety has been improved, the number of road fatalities decreased by 33 % from 2007 to 2008. Though it might be to early to predict a trend as the number of road fatalities has been approximately 700 – 750 each year during the period 2000 to 2007.

When it comes to means of transportation, Lithuania has got a great deal of passenger car traffic; 91 % in 2006. This can be compared with the average for the EU27 of 80 % the same year. The passenger car traffic's market share has increased by 3 % since 2002 until 2006. During the same period, haulage on road has increased significantly more than haulage on railway.

According to the Ministry of Transport and Communications, the most important issues are considered development of the TEN-T network (thus the Rail Baltica-axis), improving road safety and the promotion of environmentally friendly transports. The "Long-term Strategy (until 2025) of Lithuanian Transport System Development" emphasizes the importance of developing an intermodal transport system. Without improvements on this objective, the market shares of the passenger car will further increase at the expense of public transport. This may cause an increase in CO_2 emissions, increase traffic congestions in cities and lead to other negative impacts on the environment.

Lithuania has implemented the Eurovignette directive in their national legislation and a levy is taken on lorries and buses. A re-motorization programme has been introduced for railway transport and new vehicles have been purchased, which is in line with the objective reducing noise pollution from rail freight. The Lithuanian government has also initiated a study on external costs of transport impact in urbanised areas, though further investigation is needed on this subject.

2.2 Slovenia

Slovenia has just like Lithuania been a member in the European Union since 2004. Slovenia is the only former Yugoslavian country studied in Trivector's analysis and the only former Yugoslavian country with EU membership. The country has got 2 million inhabitants and is both by population and area the smallest of the studied countries.

2.2.1 Summary

The quality in the road transport sector has been improved. Motorways will be completed and bottlenecks will be avoided, which aims to ensure better linkage within the country as well as to neighbour countries and bring better traffic fluidity and safety to the transport network. The road safety has been increased, but still Slovenia is at the bottom on the road safety list among European countries. A free flow electronic toll charge according to the Eurovignette directive has been implemented in Slovenia.

Table 2.7 Implementation of the White papers 12 policy's, ASSESS-study for 2005, ASSESS-study prediction for 2010 and an assessment from Trivector (2009)

WP		ASSESS 2005	ASSESS 2010	Trivector 2009
1	Raise quality in the road transport sector	Medium	High	High
2	Vitalise the railway sector	Low	Medium	Medium
3	Combine growth of air traffic with high environmental requirements	Low	Medium	Medium
4	Promote transport at sea and on inland waterways	Medium	High	High
5	Promote intermodality	Low	Medium	Low
6	Realise the trans-European transport network	Medium	High	High
7	Increase road safety	Low	Medium	Medium
8	Formulate an efficient pricing policy	Low	Low	Medium
9	Travellers' rights and obligations	Low	Medium	Low
10	Develop urban traffic	Low	Medium	Medium
11	New technology and alternative fuels	Low	Medium	Medium
12	Control the effects of globalisation			

No information
Low
Medium
High

2.2.2 Implementation of policies and measures from White paper

ACTION PRIORITY 1: Shifting the balance between modes of transport

Between 2000 – 2005 142 kilometres of motorway was built in Slovenia, which is equivalent to an increase by 33 %. During the same period 27 kilometres of railway was constructed, which is equivalent to 2 % of Slovenia's total railway network.

Table 2.8 Length per means of transportation in Slovenia. Source: EC, Energy and transport in figures 2007.

		2000	2005
Road	Total length of motorways (km)	427	569
Railway	Total length (km)	1 201	1 228
Inland waterways	Length in use (km)	-	-

During the period 2002 to 2006 the haulage on road transports in Slovenia has increased by 83 % while rail haulage in comparison almost has remained the same, with only an increase by 9 %. The modal split for haulage transported on road increased by 10 % during 2002-2006, compared to the market shares of haulage transported on railway which decreased by 10 %.

Table 2.9 Distribution of haulage by vehicle in Slovenia. Source: EC, Energy and transport in figures 2007.

	2002		2006	
	Tonkm, billions	%	Tonkm, billions	%
Road	6.6	68%	12.1	78%
Railway	3.1	32%	3.4	22%
Inland waterways	-	0%	-	0%
Pipeline	-	0%	-	0%
Sum	9.7	100%	15.5	100%

The car is the dominate means of individual transportation. In 2006 cars constituted 93 % of all person trips in person kilometres in Slovenia. Since 2002, person kilometres by car have increased by 8 % while person-kilometres by buses and coaches have decreased by 18 % and person kilometres on railways has increased by 14 %. The modal splits have slightly changed during this period; the passenger cars market share has increased by 1 % while the market share of buses and coaches has decreased by 1 %. This indicates in some way that Slovenia has had some problems with shifting the balance between modes of transport.

Table 2.10 Distribution of person trips by means of transportation in Slovenia. Source: EC, Energy and transport in figures 2007.

	2002		2006	
	Pkm, millions	%	Pkm, millions	%
Passenger Cars	21.3	92%	23.0	93%
Buses and Coaches	1.1	5%	0.9	4%
Tram and Metro	-	-	-	-
Railways	0.7	3%	0.8	3%
Sum	23.1	100%	24.7	100%

CO_2 emissions from transport, including international bunkers, have also increased to 2006; since 1990 by 71 % and since 2000 by 26 %.

Table 2.11 CO_2 emissions from transport, including international bunkers. Source: EC, Energy and transport in figures 2007.

	1990	2000	2006	Change 1990-2006
CO_2, million tons	2.8	3.8	4.8	71%

1. Improving quality in the road transport sector

The legislative framework in Slovenia which serves to improve quality in the road transport sector consists of a number of legal regulations such as “Transport of Dangerous Goods Act”. The EU regulations have also been adapted to the domestic legislation. Slovenia has not yet implemented legislation on the technical field regarding speed limitation devices, technical roadside inspections of commercial vehicles, etc.

Noise reduction is expected to be reduced by introducing financial levies on new vehicles depending on their noise emission characteristics.

The “Operational programme of environmental and transport infrastructure development for the period 2007-2013” (later called National Development Plan) says that the motorway network will be completed (meaning construction of five motorway sections), bottlenecks will be avoided, better traffic fluidity and safety will be ensured; those together will ensure a good traffic linkage within Slovenia as well as with the European region.

The number of road fatalities has decreased significantly the latest years (see policy no. 7 *Improving road safety*) which indicates that the safety on roads has increased. It is Trivector’s opinion that Slovenia is doing well on this objective.

2. Revitalizing the railways

A few years ago Slovenia adopted different legislations concerning railway transport. In 1999 the basic act directing the restructuring of railways was adopted. A year later the Railway Transport Safety Act was adopted, which for example regulates railway infrastructure, railway rolling stock and rules of the operation control and safety systems. In 2002 they implemented a legislation concerning technical railway safety matters. At the same time the Rail Agency was established.

The Slovenian operator of railway transport Slovene Railways (SZ) is upgrading its vehicles with totally 33 new vehicles, among them 3 Pendelino trains between Maribor and Ljubljana. The railway infrastructure has been developed according to the National Programme of Railway Infrastructure Development.

As shown in Table 2.9 the haulage distributed on railway has increased, though it has decreased proportional to haulage distributed on road. The person-trips on railway has increased by 14 % (Table 2.10), however the market share is quite low, only 3 % of all person-trips.

A spokesperson on the Ministry of Transport declares that Slovenia still needs to undertake a lot of modernization of the railway system. Development and modernization of the railways is seemed as one of the key factors for developing an intermodal transport system. However, Trivector consider the implementation of this policy as on schedule.

3. Controlling growth in air transport

Efforts are done to reduce air traffics harmful effects, such as air pollution and noise. Measures are among others ensuring steady traffic flow, providing for regular monitoring of the composition of exhaust gases, introduction of financial disincentives for environmentally unsound vehicles and less suitable fuels, etc. All this is done according to the national transport policy.

The national transport policy also reveals planned activities in air transport infrastructure, such as construction of a new centre for navigation and control of air traffic, development of the control tower of Ljubljana airport and the control towers on three other airports. Renovation and enlargement of passenger terminals according to the Schengen requirements concerning external EU borders is also planned, just as enlargement and modernization of freight terminals for transport of dangerous goods and an upgrade of connecting motorways. On this policy implementation, Slovenia is assessed being on schedule.

4. Promoting transport by sea and inland waterway

It is in Trivector’s opinion that Slovenia is doing well implementing this policy. The National Development Plan declares that the main issue regarding this policy is to improve transport conditions in the ports and at sea. The plan is focusing on development of the maritime infrastructure in the port of Koper, development of a new modern passenger terminal, ensuring minimum pollution and safety at sea and monitoring and management of traffic by the harbour board.

The plan expresses that the only way to achieve an increase of trans-shipment from 6 to 7 million tonnes during the period 2007-2013 is to construct a new operative shore with a minimum total length of 1,800 metres. Among other planned activities a few can be mentioned regarding port of Koper; construction of a new multimodal terminal, construction of a direct link to the central railway station, appropriate motorway links and construction of a new ferry terminal for international passenger transport.

5. Turning intermodality into reality

The Slovenian transport policy declares that intermodality will be achieved by encouraging combined transports at all levels. The TEN-T priority project Nº 6[5] could result in more combined cargos.

As shown in Table 2.10 person trips by public transport has decreased somewhat during the last years. Due to the lack of coordination between different modes of public transport, the share of public transport is expected to decrease in the near future as well. The lack of connection between different transport services and transport infrastructures is also described as a weakness in the National Development Plan. The railway network needs to be undertaken a great deal of modernization and development, as it is recognized as a key factor for development of an intermodal transport system. All in all, the policy implementation is lacking behind.

ACTION PRIORITY 2: Eliminating bottlenecks

6. Building the Trans- European transport network

Slovenia is involved in the TEN-T priority project Nº 6; a railway axis from Lyon to the Ukrainian border through the Slovenian cities of Koper, Divača and Ljubljana. Apart from Slovenia, also Italy, Hungary and France are involved countries of this project. Italy has not yet decided alignment of their section which makes assessment of the whole route difficult. The section Trieste – Divača is one of the key sections for the whole project, as it is a cross border section. The section is still in an early phase, but Slovenia has already started construction work on their part why the policy implementation is regarded on time. The whole priority project is estimated to be completed in 2025.

Other TEN-T projects involving Slovenia is a railway between Maribor and Graz and a motorway between Ljubljana and Budapest. The railway is existing but needs an improvement. The motorway is existing apart from a 30 km section which has to be built.

Slovenia is situated in a crossroad of two major European transport corridors (from Venezia to Graz and Vienna, and from Zagreb to Salzburg and München) and constantly increasing transit will be one of the main challenges for Slovenia to handle for the next decade.

ACTION PRIORITY 3: Placing users at the heart of transport policy

7. Improving road safety

In June 2000 amendments were implemented to the road safety act and regarding weight and dimension of vehicles. Road construction and technical development of vehicles has increased the road safety, but road safety in Slovenia is poor compared to other European countries. Each year 38,000 traffic accidents occur in Slovenia. Between the years 2000 and 2006 road fatalities have decreased with 16 %, as shown in Table 2.12.

[5] Railway axis 'Lyon-Trieste-Divača/Koper-Divača-Ljubljana-Budapest-Ukrainian border'

Table 2.12 Road fatalities in Slovenia. Source: EC, Energy and transport in figures 2007.

	2000	2006	Change	Per 10 billion pkm 2006	Per million inhabitants 2006
Road Fatalities	313	262	-16%	113	131

The number of fatalities has been reduced even more by 2008, according to statistics from TISPOL. By 2008, the number of road fatalities was 214, which is a further reduction with 18 % since 2006.

In 2002 Slovenia adopted the National Road Safety Programme (NRSP) and in 2005 the country implemented the New Road Safety Act. The New Road Safety Act concerns among other things non tolerance to blood alcohol levels, increase of number of penal points and higher authorities for municipal policemen. Even so, there's still a lot that has to be done regarding road safety in Slovenia, but the policy implementation is assessed being on schedule.

8. Adopting a policy on effective charging for transport

A fee for using the transport infrastructure will be charged on the basis of transportation performed, including external costs. Today there exists a fix charge for using infrastructure. Uniform tickets, combined with a national timetable and uniform information system, is expected to increase the number of passengers using public transport.

In January 2007 two pilot projects of free flow electronic toll charging started, which results will serve as a basis for decision on if free flow electronic toll charging shall be used on two motorway sections. In 2008 the free flow electronic toll charging was implemented at all motorways and expressways in Slovenia, according to the Eurovignette directive. Using an ABC system electronic tag makes it possible to pass a toll station at reduced speed (which means 40 kph at fast lanes and 5 kph at combined lanes). The directive concerns trucks and lorries with more than three axles and with a maximum weight exceeding 3.5 tonnes. As the Eurovignette directive has been implemented, the policy implementation has to be considered as on schedule.

9. Recognizing the rights and obligations of users

In the "General conditions for public transport" exists no specific measures to handle compensation of air passengers, extending protection for other transport modes or intermodality. Rights and obligations of public transport passengers are not mentioned in the national transport policy documents and the policy implementation is considered lacking behind.

10. Developing high-quality urban transport

Focus has been on developing public transport in the National Development Plan 2001 – 2006. In 2007 the "Operational Programme of Environmental and Transport Infrastructure Development for the Period 2007-2013" was adopted which aims to improve the reliability of the transport system, improve the economic efficiency, improve the transport safety, further development of transport services and building awareness of users of transport services. Among other goals in the document, a few can be mentioned regarding this policy:

- “expanding the scope and the quality of public passenger road and railway transport”
- “ensuring reliable, safe, cost competitive and environment friendly freight and passenger transport”
- “ensuring the necessary transport infrastructure for land, sea and air transport that will follow the principles of sustainable and balanced regional development”
- “improvement of transport safety and protection”
- “efficient use of energy, clean environment”

Slovenia also has plans on developing infrastructure for walking and cycling. In combination with a charge on vehicles in city centres and their aims on developing urban transport, the traffic volume in cities is expected to be reduced.

Development of a high-quality urban transport is recognized by the Ministry of Transport as a big challenge, combined with the regulation of traffic in the cities. Trivector’s opinion is that the policy implementation is on schedule.

11. Putting research and technology at the service of clean, efficient transport

The policy implementation is considered being on schedule. The Slovenian transport policy elucidates, regarding measures to control traffic flow, the importance of elaboration of transport studies, implementation of measures to restrict road freight and cooperation in the transport services market. The ASSESS-study points out that transport management will be improved when modern communication systems are developed, which reduce the demand for journeys.

2.2.3 Comments on the ASSESS-study

A spokesperson on the Ministry of Transport points out that road safety has been significantly improved during the latest years, which the ASSESS-study also has foreseen. He also declares that the cohesion between science and transport policy challenges has been strengthened because of some recent implemented actions. Excise duties on fuel have been raised with positive results on many objectives. ‘Slovenia’, he says, ‘is no longer the country in Europe with the cheapest fuel’. In 2009 the tolls for trucks has risen significantly. However, he believes that the predictions done for 2010 are hard to criticise or comment, mainly because of problems with the baseline assessment.

Furthermore, he identifies establishment of a balance between the regulation of transport growth and the impacts of transport on the environment as one of the main issues to deal with for all Member States. This necessitates a change in behaviour patterns. Another important issue identified is the development of new technologies that will enable a significant reduction of the dependence of fossil fuels.

2.2.4 Greening Transport Package

Slovenia supported the efforts of the European Commission in its plans to reduce the negative effects of transport on the environment and human beings,

i.e. the “Greening Transport Package”. Although, Slovenia is trying to reach compromise solutions which will take into account the circumstances and interests of the specific country. The country has implemented the Eurovignette directive which makes it possible to charge heavy trucks and lorries, in line with the polluter pays principle (PPP).

2.2.5 Green paper: Towards a new culture for urban mobility

Slovenia welcomed the Green paper on urban mobility as a basis for an action programme. The country has initiated work with finding the best opportunities for regulation of urban transport in line with the principles of sustainable development. Slovenia recognize urban transport problems as a matter which must be addressed by the cities themselves, but the cities alone cannot manage to regulate all the essential factors of traffic within the city. Progress is expected from measures, which soon will be adopted, based on the Green paper.

2.2.6 Conclusions

Trivector consider that Slovenia has got a positive view of the European transport policy documents and that the country aims to deal with many of the policies of the White paper. Many issues are considered by the Ministry of Transport as of great importance for all Member States to handle.

The Slovenian part of the TEN-T priority project No. 6 is on schedule. The quality in the road transport sector has been improved and will be further improved. According to Trivector’s assessment, those two policies of the White paper, No. 1 and No. 6, are the two policies which Slovenia has been most successful implementing followed by policy No. 4 “Promoting transport by sea and inland waterway”. Compared to the referred assessment until 2010, two policies has been less implemented than assessed; policy No. 5 “Turning intermodality into reality” and No. 9 “Recognizing the rights and obligations of users”. The lack of intermodality is noticed in the “Operational programme of environmental and transport infrastructure development for the period 2007-2013” as a weakness of the transport network and is feared to contribute to a further decrease of the public transports market share. Rights and obligations of users are not mentioned in the national transport policy document.

The Eurovignette directive has been implemented in Slovenia and a free flow electronic toll charging system is used on all motorways and expressways.

Road safety has increased and since 2000 until 2008 the number of road fatalities has decreased from 313 fatalities to 214 fatalities; a decrease with 32 %. Still, quite many road fatalities occur per 10 billion pkm and per million inhabitants compared to other European countries.

The car is the dominate means of individual transportation. In 2006 cars constituted 93 % of all person trips in person kilometres in Slovenia. Since 2002 person kilometres by car has increased by 8 % while person kilometres by buses and coaches has decreased by 18 % and trips on railways has increased by 14 %. This indicates in some way that Slovenia has had some problems with shifting the balance between modes of transportation. Slovenia needs to promote intermodality, making it possible and interesting for people to use public transport in a greater extent. The railway needs modernization and different modes

of public transport need to be coordinated with each other. Otherwise the passenger car will continue to increase its market share on the expense of public transport, which will have negative impact on the environment and surroundings.

One of the main issues to deal with for Slovenia as well as other Member States, according to a spokesperson on the Slovenian Ministry of Transport, is the establishment of a link between the regulation of transport growth and the impacts of transport on the environment and human beings. This necessitates a change in behaviour patterns. Also, the development of new technologies that will enable a significant reduction of the dependence of fossil fuels, is stated as a main issue for all Member States by the Slovenian Ministry of Transport. In addition to previous stated issues, the Ministry of Transport declares the Slovenia needs to deal with modernization of the railway network, constantly increasing transit demand, development of a high quality urban transport system combined with regulation of traffic in the cities.

2.3 The Netherlands

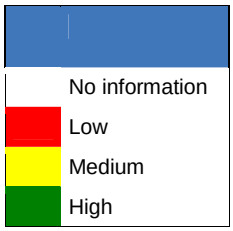
The Netherlands is one of the origin member countries of the European Coal and Steel Community (ECSC) which was founded in 1951, which later on led to the foundation of the European Union. The country has approximately 16.5 million inhabitants and it is the densest populated country of all the countries studied in this Trivector analysis.

2.3.1 Summary

The Netherlands has done a lot on many objectives. The importance of the harbours for the Dutch economy, with the Rotterdam Rhine-Meuse delta as the main port, can not be neglected. Half of all the goods arriving to the Netherlands are distributed by sea, and 31 % of all the haulage is distributed on inland waterways. The development of an urban transport system has also reached far; light rail has been, and is planned to be, implemented in many areas, security and access to public transport has been improved due to among other things the implementation of the public transport chip card, etc.

Table 2.13 Implementation of the White papers 12 policy's, ASSESS-study for 2005, ASSESS-study prediction for 2010 and an assessment from Trivector (2009)

WP		ASSESS 2005	ASSESS 2010	Trivector 2009
1	Raise quality in the road transport sector			
2	Vitalise the railway sector			
3	Combine growth of air traffic with high environmental requirements			
4	Promote transport at sea and on inland waterways			
5	Promote intermodality			
6	Realise the trans-European transport network			
7	Increase road safety			
8	Formulate an efficient pricing policy			
9	Travellers' rights and obligations			
10	Develop urban traffic			
11	New technology and alternative fuels			
12	Control the effects of globalisation			



2.3.2 Implementation of policies and measures from White paper

ACTION PRIORITY 1: Shifting the balance between modes of transport

Between the years 2000 – 2005 the road network of motorways has increased by 77 km, while the railway network has increased by 9 km. Most remarkable is that inland waterways has increased by 1 549 km, which is equivalent to 31 %.

Table 2.14 Length per means of transportation in the Netherlands. Source: EC, Energy and transport in figures 2007.

		2000	2005
Road	Total length of motorways (km)	2 265	2 342
Railway	Total length (km)	2 802	2 811
Inland waterways	Length in use (km)	5 046	6 595

The haulage is mainly distributed on roads, 61 %, but the increase in market share of haulage distributed on roads since 2002 was limited. In the EU27 the haulage distributed on roads is equivalent to 73 %. The railway sector has increased its market share of haulage distribution the most. While the proportion of haulage distributed on railway is quite low compared to the EU27, the share of haulage distributed on inland waterways is significantly higher; 31 % in the Netherlands compared to just over 5 % in the EU27.

Table 2.15 Distribution of haulage by vehicle in the Netherlands. Source: EC, Energy and transport in figures 2007.

	2002		2006	
	Tonkm, billions	%	Tonkm, billions	%
Road	77.4	60 %	83.2	61 %
Railway	4.0	3 %	5.3	4 %
Inland waterways	40.8	32 %	42.3	31 %
Pipeline	6.0	5 %	5.8	4 %
Sum	128.3	100 %	136.6	100 %

Even though the car is the dominant mode of transportation, a slight decrease of the market share of the car has occurred during 2002 – 2006 even though the total amount of personkilometres (pkm) by car has increased. This arises from the increase of trips made with buses and coaches by 11 % from 2002 - 2006.

Table 2.16 Distribution of person trips by means of transportation in the Netherlands. Source: EC, Energy and transport in figures 2007.

	2002		2006	
	Pkm, millions	%	Pkm, millions	%
Passenger Cars	144.2	84 %	148.0	84 %
Buses and Coaches	10.8	6 %	12.0	7 %
Tram and Metro	1.5	1 %	1.5	1 %
Railways	14.3	9 %	14.7	8 %
Sum	170.8	100 %	176.2	100 %

The amount of CO_2-emissions has increased by 58 % during 1990 – 2006, which is equivalent to an annual increase by 2.9 %. The mean annual increase during 2000 – 2006 has been a little larger; almost 3.3 %.

Table 2.17 CO_2 emissions from transport, including international bunkers. Source: EC, Energy and transport in figures 2007.

	1990	2000	2006	Change 1990-2006
CO_2, million tons	64.9	84.8	102.8	58 %

1. Improving quality in the road transport sector

The legislation following the liberalisation in freight transport sector encourages transparency of all costs related to transports and of potential competition hindering measures. The law on freight transport by road meets the EU requirements on reliability, professional skills and financial standing. The Dutch law is even stricter than the EU requirements on some points.

Traffic safety has steadily been improved and the number of road fatalities are very few, both regarding per pkm and per inhabitants. Road pricing is being implemented, which most likely will have positive effects on both mobility and accessibility. Handling of traffic and transport growth is highlighted as an important topic in *Nota Mobiliteit*, the Dutch Policy document on mobility. In this document, reliable and fast road travel is also pointed out as one of the key topics to handle when managing traffic growth.

2. Revitalizing the railways

The railway sector in the Netherlands has been liberalised, both regarding passenger transport and freight transport. The aim is to remove barriers for competition in the freight market. Investments are done to improve the commercial attractiveness of rail haulage distribution, via increased utilisation, cost reduction, quality and liability improvement. There are ten train operators, of which four are operating passenger services and six are operating freight services. The main operator regarding passenger services is *Nederlandse Spoorwegen* (*Dutch Railways*), which operates about 5 000 trains.

The haulage distributed on railway has increased during 2002 – 2006, from 4.0 billions of tonkilometres (tonkm) to 5.3 billions of tonkm. Its market share has also increased from 3 % to 4 % during the same period. During these years the

person trips on railways has increased by 0.4 millions of pkm. However, the market share of the railway sector has not increased regarding person trips. It is Trivectors' opinion that the policy implementation is being on schedule.

3. Controlling growth in air transport

The main airport in the Netherlands is Amsterdam Airport Schiphol, which is one of the top ten biggest airports in the world when it comes to number of passengers. The Minister of Justice bears the final responsibility for security in civil aviation, and the responsibility has been delegated to the Directorate of Civil Aviation Security. The importance of the airport for the national economy is therefore unquestionable. The Dutch government improves the airspace capacity and provides the rules for development in spatial terms, but it is up to the aviation sector to handle the development of air transport itself.

The short and medium term policy for Schiphol emphasizes the importance of retaining Schiphols' position as a major hub as well as the reduction of noise pollution on surrounding residents. Due to problems with determining Schiphols' importance 20 years from now, the long term policy is under development and the government is investigating the possibilities and bottlenecks for the airport with regard to the quality of the living environment, the climate for establishing a business, employment, and safety, in combination with the growth of Schiphol. The policy is assessed being on schedule.

4. Promoting transport by sea and inland waterway

There are four major port areas in the Netherlands; Rotterdam Rhine-Meuse delta, North Sea Canal area, Scheldt basin respective Northern seaports. During 2006, the Rotterdam Rhine-Meuse delta by itself contributed with 388 million tons of transhipped gods, equivalent to 76.5% of the total transhipment in Dutch ports. Half of all goods arriving to and departing from the Netherlands is distributed by sea, and the growth of container shipping is increasing by 7-10 % annually. In Table 2.15 it was shown that distribution of haulage on inland waterways constituted a major share of all modes for distribution of haulage.

This means that the seaports are a key issue for the Dutch transport policy and contributes to the national economy. Therefore, The Ministry of Transport, Public Works and Water Management in June 2008 adopted *Responsible Shipping and a Vital Fleet – Maritime Transport Policy Paper of the Netherlands*. The policy paper deals with the economy, environment and safety regarding maritime transports. The maritime transports contribution to air pollution is considered as a major problem and the Dutch government is advocating further tightening up of the standards of ship engines and fuels. The Dutch authorities are examining the possibility of charging the most polluting ships higher port fees and lowering the fees of more clean ships, which brings incentives to use clean technology in the fleet.

In November 2004, the government also adopted the *National Seaports Policy* for 2005-2010, which dealt with economic growth with constraints. Trivector consider that the policy has been well implemented in the Netherlands.

5. Turning intermodality into reality

A network of inland rail and waterway terminals has been achieved by funding and subsidy programmes. The ministry states that an increased capacity in in-

frastructure by improved co-modality (meaning to use different modes on their own and in combination aiming to obtain an optimal and sustainable utilisation of resources) is a necessity. The Ministry of Transport, Public Works and Water Management is of the opinion that this can be achieved by improved usage of existing infrastructure by development and implementation of innovative, intelligent and integrated systems.

ACTION PRIORITY 2: Eliminating bottlenecks

6. Building the Trans- European transport network

The Netherlands are involved in the TEN-T Priority Projects N° 2 and N° 18. Priority project N° 5 *freight Betuwe railway line* was completed in 2007. The Priority Project N° 2 is a high-speed railway axis from Amsterdam to Brussels, further on to Cologne, Paris, and London respectively. Its total length in kilometres is 1 124 km of which 1 094 km is completed. Construction work with the Dutch section began in 2000, and the southern part (from Rotterdam to the Belgian border) was completed in 2006. The northern part (from Amsterdam to Rotterdam) was completed in 2007. The whole Priority Project is estimated to be completed in 2015.

The Priority Project N° 18 Waterway axis Rhine/Meuse-Main-Danube is one of the longest corridors in the Trans European Transport Network with a total of 3 255 km of which 1 781 km is completed. The whole axis is estimated to be completed in 2016. Construction work with the Dutch part, the Maasroute project, started in 2007 and is estimated to be completed in 2013. The project aims to upgrade the waterway from class Va to class Vb and increasing draught from 3.0 m to 3.5 m. This will allow the waterway to accommodate more inland shipping.

It is Trivector's opinion that the implementation of this policy is on schedule.

ACTION PRIORITY 3: Placing users at the heart of transport policy

7. Improving road safety

Since 2000 to 2006 the number of road fatalities has decreased by 33 %. The Netherlands is a top ranked nation in the European Union when it comes to number of road fatalities, regarding both per pkm and per inhabitants. Only Sweden and the United Kingdom have better statistics than the Netherlands in 2006 when it comes to road fatalities per 10 billion pkm. Regarding road fatalities per million inhabitants only Malta is ahead of the Netherlands. The average for the EU27 is 90 road fatalities per 10 billion pkm respectively 87 road fatalities per million inhabitants.

	2000	2006	Change	Per 10 billion pkm 2006	Per million inhabitants 2006
Road Fatalities	1 082	730	-33 %	48	45

According to statistics from TISPOL[6], 700 road fatalities occurred in the Netherlands during 2008. With a population on 17 million inhabitants this is equal to

[6] https://www.tispol.org/node/3980

41 road fatalities per million inhabitants, which means that the road safety has been improved even more.

The Ministry of Transport, Public Works and Water Management has adopted the Strategic Road Safety Plan 2008-2020. The ministry aims to reduce the number of road fatalities to 500 until 2020. Among other measures, those who drink and drive and those who exceed the speed limit will be dealt with more severely, and unprotected road users as pedestrians, cyclists and children will be offered more protection due to this document. Trivector assess the policy being well implemented.

8. Adopting a policy on effective charging for transport

Road pricing is intended to replace the fixed car taxes, which means that car owners will pay for using a car, not for owning a car. The implementation of road pricing will start at 2012 and will be fully implemented at 2017. At first in 2012, road pricing will only concern freight but later the same year road pricing will concern passenger cars as well. The road pricing tax consists of two rates; the basic rate and the peak rate. The basic rate applies to every driven kilometre and varies by type of car. The peak rate will be applied during peak hours to reduce traffic jams and it does not differ depending on the type of vehicle. However, vintage cars which are at least 25 years old, i.e. built before 1st of January 1987, will be exempted from the tax as they are exempted from the motor vehicle tax under the current system.

The revenue from the road pricing will go to the Infrastructure Fund, which will finance investments in traffic and transport.

9. Recognizing the rights and obligations of users

The implementation of the public transport chip card (see *10. Developing high-quality urban transport*) has contributed to the security of public transports, as it works as a key to access a station. This means that only public transport users will have access to metro stations and train stations.

When the Passenger Transport Act 2000 was implemented 1st of January 2001, the obligation for authorities to organize public consultation on their policies and measures concerning public transport was introduced.

10. Developing high-quality urban transport

In the Netherlands an integrated ticket system for all public transport by bus, tram, metro and some train services has been used since the 1980's. This means that the same ticket for public transport can be used anywhere in the country. Since 1st of January 2009 a public transport chip card has been fully implemented. This allows public transport customers to pay electronically. The public transport chip card is also expected to increase safety on public transport. For example, the only way to open the gates to closed stations is to hold the card in front of the card reader.

The bicycle is used as an important part of the multimodal chain; 30 % of all railway passengers reach the station by bicycle. 26 % of all trips in the Netherlands are achieved by bicycle, and a continuous growth of its market share is hoped to be achieved by implementing a programme to stimulate bicycle use in relation to public transport.

Light rail has been implemented in a great extension in the Netherlands, and many projects are ongoing. One of them is the RandstadRail, the rail link between The Hague, Zoetermeer and Rotterdam, which is planned to be implemented by 2010. Another ongoing project is the RijnGouwelijn between the cities of Gouda, Alphen, Lieden, Katwijk and Noordwijk. The main part of this project is already completed, but the whole project will not be completed before 2010. All in all, Trivector is of the opinion that the Netherlands has done well implementing this policy.

11. Putting research and technology at the service of clean, efficient transport

The Ministry of Transport, Public Works and Water Management has gained experience from a number of different Public Private Partnership (PPP) projects and states that PPP will be used consistently for new infrastructure projects in the future. The High-Speed Rail Line South and the A59 and N31 motorways are all examples on PPP projects. The ministry will work as a coordinator in future projects, i.e. set up a project process, analyse costs and benefits, draw up technical specifications, select market parties and decide who does what and when. The business sector executes the tasks.

The Netherlands Institute for Transport Policy Analysis (*KiM*) is carrying out policy studies and analysis on transports, independently from politics and policies. KiM is demand-driven and carries out trend, scenario and cost benefit analyses as well as international comparisons. The Lower House as well as a policy department and the Inspectorate can request an analysis from KiM.

Many measures, policy initiatives and technological innovation programmes has been carried out to reduce environmental pollution and energy consumption in road traffic. Among them the research with implementing hydrogen as an energy carrier can be mentioned. The Netherlands invest around € 35 million each year in the development of hydrogen energy and the project, carried out as a PPP, involve many different stakeholders.

The policy is assessed being well implemented.

2.3.3 Comments on the ASSESS-study

According to a spokesperson on the Ministry of Transport, Public Works and Water Management, the most important measures implemented in the Netherlands are mentioned and the prediction made in the ASSESS-study is regarded as more or less correct. He also points out that there is a new organizational structure for the ministry since 2005.

The Netherlands considers:

- Balanced regulation
- Smooth mobility based on co-modality
- Sustainable transport based on the polluter-pays-principle

as the most important matters for all member states to deal with, including the Netherlands. Regarding balanced regulation, our spokesperson highlights the importance of exchange of best practices, guidance material and benchmarking

in front of further regulation in order to make a solid assessment of policy instruments at an early stage. It is also important to consider in which extent actions shall be taken on EU level, or on higher (global) level or lower (intergovernmental) level.

Much has been done to achieve co-modality and an internal market for transport has in many respects been developed in the Netherlands. Among other things, the legislative framework for achieving an integrated, user-friendly, technology-led transport system has been implemented in a high extent. However, the capacity of the transport network must be extended to be able to deal with challenges in transport demand. This should be achieved predominantly by improving the use of existing infrastructure by development and implementation innovative, and intelligent and integrated systems with a central concept of co-modality. But in some extent new infrastructure must also be built, with emphasis on transboundary projects leading to inoperability.

To be able to achieve the EU CO_2 reduction goal of 20 %, the Netherlands acknowledges that introduction of CO_2 standards are required, just as further introduction of standards for alternative fuels and vehicle technology. Furthermore the Netherlands is willing to cooperate in developing concrete proposals to internalize external cost based on the polluter-pays-principle.

2.3.4 Greening Transport Package

The Netherlands supports the Greening Transport Package and the efforts done by the commission towards a sustainable transport system. Concerning pricing and internalisation (chapter 3 in Greening Transport) following statements by Transport en Logistiek Nederland (TLN) was highlighted by our spokesperson on the Ministry of Transport, Public Works and Water Management:

- Internalisation shall not be misused making road transport more expensive, forcing a shift to other modes. This would both be unfair and have a negative impact on the competitiveness of the European economy. All modes shall be treated equally, regarding both freight and passenger transport.
- The system of pricing must be transparent and clear and easy to understand for users of infrastructure.
- The system of pricing must provide the users of infrastructure with sufficient incentives to avoid charges by choosing the right measures. This will reduce the actual external effects.
- Revenues from a transport mode must be used for handling external costs within the modal of transportation.
- The system of pricing must provide certainty about the size of charges in the long term.
- There must be a pragmatic approach to determining which relevant costs are to be internalised. Determining of costs of pollution, noise and accidents will lead to a series of interdependent assumptions, which will always be open to criticism.

The Netherlands has implemented the Eurovignette directive, which makes it possible to charge heavy trucks and lorries, in line with the polluter pays principle (PPP). The regular paper Eurovignette system was replaced in 15th September 2008 by an electronical Eurovignette system. The paper version will still be available to but in a transition period of 15 days. The new e-Eurovignette system needs no registration for your business, needs no purchase of on-board units, has no risk of fraud or theft from the vehicle and needs no use of cash when paying.

2.3.5 Green paper: Towards a new culture for urban mobility

The Netherlands is supporting the green paper and the issue is on the agenda at the moment. However, there has not been any visible impact yet derived from the document as it was adopted quite recently.

2.3.6 Conclusions

All in all the Netherlands has done a lot to implement the European Transport policy. Despite the fact that the Netherlands already was a top ranked country in year 2000 regarding road safety, the country has improved road safety even more. The harbours have been improved, and as much as half of all the gods arriving to and departing from the Netherlands is distributed by sea. The urban transport system has also been developed and improved, resulting in already implemented, as well as planned, light rail services. There has been improved security on public transport stations due to the implementation of the public transport chip card and a continuous growth in market shares of the bicycle, etc.

As stated, road safety has been improved during the latest decade. The number of road fatalities has dropped from 1 080 road fatalities during 2000 to 700 road fatalities during year 2008. The Ministry of Transport, Public Works and Water Management has adopted the Strategic Road Safety Plan 2008-2020, in which is stated that the aim is to reduce the number of road fatalities to 500 until year 2020.

CO_2-emissions from transport have increased during 1990-2006 with 58 %; from 64.9 million tonnes to 102.8 million tonnes. During 2002-2006 the total amount of travelled pkm increased by 3 %. During this period the total amount of distributed haulage in tonkm increased by 6.5 %. This increase in transports can partly explain the recent increase of CO_2-emissions from transports.

The Netherlands has fulfilled their undertaking with Priority Project N^o 2, a high speed railway axis from Amsterdam to Brussels, further on to Köln, Paris respectively London, by completing the Dutch section in 2007. The whole project is estimated to be completed by 2015. Priority Project N^o 18, Waterway axis Rhine/Meuse-Main-Danube, is estimated to be completed in 2013. Construction work with the Dutch part started in 2007. Priority Project N^o 5, *freight Betuwe railway line*, was completed in 2007.

Road pricing will be fully implemented by 2017, which means that car owners will pay tax for using the car, not for owning a car. The implementation will start at 2012 and will in the beginning only concern freight. Road pricing will replace the current fixed car taxes. The revenue from road pricing will finance investments in traffic and transport. The implementation of road pricing will

hopefully lead to reduced usage of the car, greater density in persons per vehicle, but still allowing individuals the flexibility from owning a car. This will hopefully also lead to a reduction in CO_2-emissions from passenger transports. However, there is an aim that pricing may not be used to make usage of roads more expensive, aiming to force a modal shift. All modes of transport must be treated equally, which is most fair and which is a prerequisite for the economy's competitiveness in a global perspective.

3. Overview of implementation and effects in nine EU member states

Implemented measures

In this section a brief summary of each member country's implementation of the 12 policies of the White paper will be presented.

As shown in Table 3.1 all countries have implemented WP7 'Increase road safety' well. A high grade of implementation has been accomplished of WP1 'Raise quality in the road transport sector' as well. However, most countries have failed to implement WP5 'Promote intermodality'. Both Slovenia and Lithuania are lacking behind on this policy implementation, whilst the Netherlands is on schedule.

Table 3.1 Implementation of the 12 policy areas in the White Paper (Trivector's assessment 2009)

WP		Sweden	Spain	France	Poland	Germany	Austria	U.K.	Slovenia	Lithuania	Netherlands
1	Raise quality in the road transport sector	High	Medium	High	Medium	Medium	Medium	High	High	High	High
2	Vitalise the railway sector	Medium	High	Medium	Medium	Medium	Medium	High	Medium	Medium	Medium
3	Combine growth of air traffic with high environmental requirements	Medium	Medium	Medium	Medium	High	Medium	High	Medium	Low	Medium
4	Promote transport at sea and on inland waterways	Medium	Medium	Medium	Low	High	High	Low	High	High	High
5	Promote intermodality	Low	Low	Low	Low	Medium	Medium	Medium	Low	Low	Medium
6	Realise the trans-European transport network	High	Medium	Medium	Medium	Medium	Medium	Medium	High	High	Medium
7	Increase road safety	High	High	High	Medium	Medium	High	High	Medium	High	High
8	Formulate an efficient pricing policy	Medium	Low	Medium	Low	High	High	High	Medium	Medium	High
9	Travellers' rights and obligations	High	Low	Medium	Low	Low	No information	Medium	Low	Medium	Medium
10	Develop urban traffic	High	Low	High	Medium	High	Medium	High	Medium	Medium	High
11	New technology and alternative fuels	Medium	Low	High	Low	High	High	Medium	Medium	Medium	High
12	Control the effects of globalisation										

No information
Low
Medium
High

The implementation of an efficient pricing policy has been made with various results. Both Slovenia and Lithuania have implemented the Eurovignette directive. The Netherlands are about to implement a road pricing policy, which will charge car usage instead of car owning.

Effects on road safety, transport performance and CO_2-emissions

In this section a brief comparing study is made of the nine countries on the basis of road safety, transport performance and CO_2-emissions from transports. All countries excluding Lithuania have reduced their no. of road fatalities between 2000 and 2006. However, the no. of road fatalities in Lithuania remarkably dropped afterwards from 739 fatalities 2007 to 498 fatalities 2008. Lithuania is also the only of the studied countries which has lowered their CO_2-emissions from transport during the period 1990-2006. Note that the amount of CO2-emissions per inhabitant is remarkably high in the Netherlands.

Table 3.1: Key statistics for the countries studied for road safety, transport performance, allocation between modes of transport and carbon dioxide emissions

	Sweden	Spain	France	Poland	Germany	Austria	U.K.	Slovenia	Lithuania	Netherlands
Road safety										
No. of fatalities per million inhabitants 2006	49	93	77	137	62	88	54	51	118	45
Change in no. of fatalities 2000-2006	-25 %	-29 %	-42 %	-17 %	-32 %	- 25 %	-8 %	-16 %	18 %	-33 %
Transport performance										
Person km total per inhabitant	13.1	9.7	14.3	7.1	12.5	11.5	13.2	12.4	14.5	11.0
Change pkm 2002-2006	1 %	7 %	0 %	22 %	1 %	5 %	3 %	7 %	48 %	3 %
Change pkm by car 2002-2006	2 %	8 %	-1 %	31 %	1 %	6 %	1 %	8 %	52 %	3 %
Distribution mode of transport										
Share of pkm by car	83 %	81 %	84 %	81 %	84 %	76 %	87 %	93 %	91 %	84 %
CO_2 emissions from transport										
CO_2 in tonnes per inhabitant	3.2	3.3	2.7	1.0	2.3	3.0	2.9	2.4	1.7	6.4
Change CO2 1990-2006	34 %	98 %	21 %	47 %	5 %	85 %	24 %	71 %	-28 %	58 %

Source: Trivector's processing of statistics from EC, Energy and Transport in Figures 2007

Road safety

France has lowered it's no. of road fatalities the most with 42 % during 2000-2006. The Netherlands is still the country with least no. of road fatalities per million inhabitants, followed by Sweden and Slovenia. As shown in the table, Poland still has most no. of road fatalities per million inhabitants and therefore a lot of road safety work to deal with.

Transport performance

Most transport performance per inhabitant is done in Lithuania, slightly more than in France. Lithuania has also got the largest change in pkm during 2002-2006 with 48 %, while France has no change at all.

In Poland and Lithuania the passenger car has taken market share from buses, coaches and trains. In all the other studied countries, besides Slovenia who did not have any trams or metros in 2006, the metro and tram has had an increased market share. The passenger car is the dominant means of transportation in all the studied countries; in Slovenia the passenger car constitutes 93 % of pkm travelled.

Great Britain, Sweden and Germany all have had increasing market shares of the railway. In both Lithuania and Slovenia the railways market share has almost remained the same during 2002-2006.

CO_2-emissions

Spain and Austria have both almost doubled their CO_2-emissions during 1990-2006. Slovenia has increased its level of CO_2-emissions during this period with totally 71 %. As shown in the table above Lithuania is the only country who has reduced its CO_2-emissions.

SIKA is an agency working in the transport and communications sector. Our main tasks are to make analyses, descriptions of the current situation and other reports for the Government, to develop forecast and planning methods and to be responsible for the official statistics.

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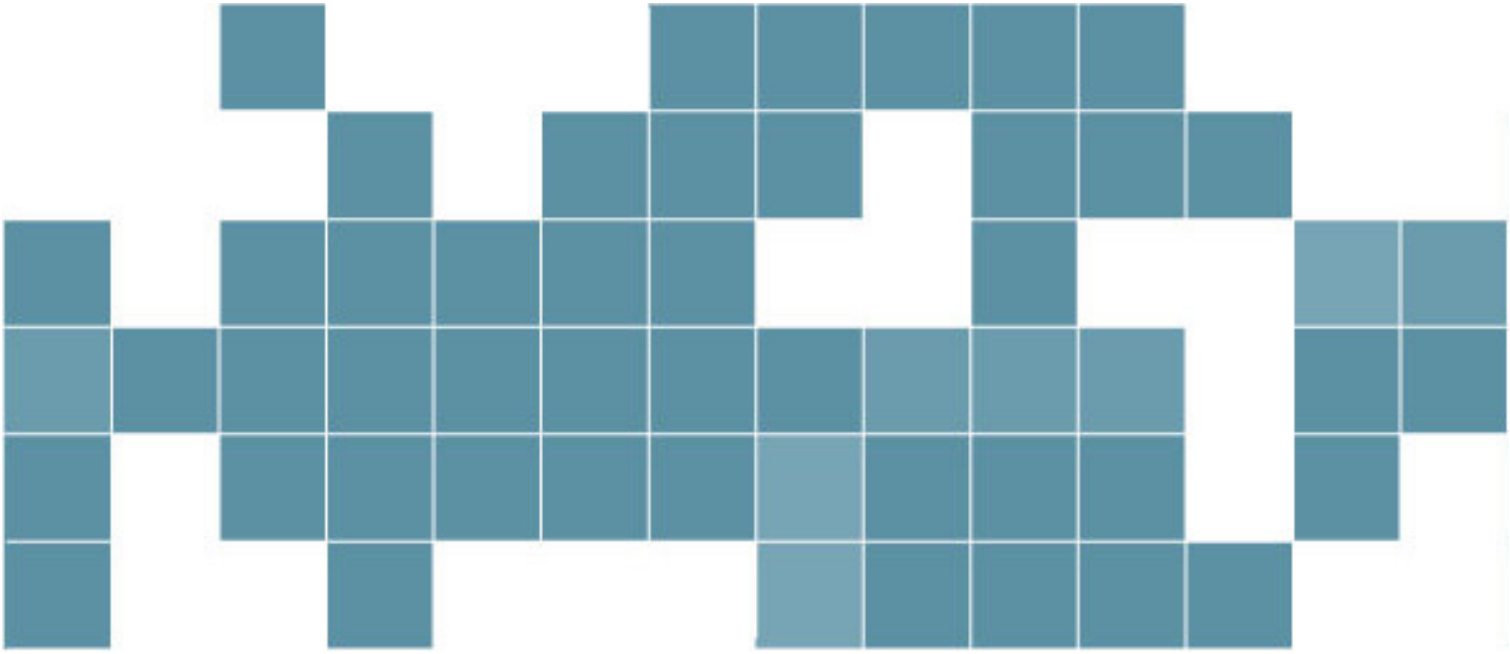

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