

Transport Trends and Economics

2011 - 2012

“the transport voice of Governments”

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Inland Transport Committee

Working Party on Transport Trends and Economics

Transport Trends and Economics 2011 - 2012

“the transport voice of Governments”

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United Nations Economic Commission for Europe (UNECE)

The United Nations Economic Commission for Europe (UNECE) is one of the five United Nations regional commissions, administered by the Economic and Social Council (ECOSOC). It was established in 1947 with the mandate to help rebuild post-war Europe, develop economic activity and strengthen economic relations among European countries, and between Europe and the rest of the world. During the Cold War, UNECE served as a unique forum for economic dialogue and cooperation between East and West. Despite the complexity of this period, significant achievements were made, with consensus reached on numerous harmonization and standardization agreements.

In the post-Cold War era, UNECE acquired not only many new member States, but also new functions. Since the early 1990s the organization has focused on analyses of the transition process, using its harmonization experience to facilitate the integration of Central and Eastern European countries into the global markets.

UNECE is the forum where the countries of western, central and eastern Europe, central Asia and North America – 56 countries in all – come together to forge the tools of their economic cooperation. That cooperation concerns economics, statistics, environment, transport, trade, sustainable energy, timber and habitat. The Commission offers a regional framework for the elaboration and harmonization of conventions, norms and standards. The Commission's experts provide technical assistance to the countries of South-East Europe and the Commonwealth of Independent States. This assistance takes the form of advisory services, training seminars and workshops where countries can share their experiences and best practices.

Transport in UNECE

The UNECE Inland Transport Committee (ITC) facilitates the international movement of persons and goods by inland transport modes. It aims to improve competitiveness, safety, energy efficiency and security in the transport sector. At the same time it focuses on reducing the adverse effects of transport activities on the environment and contributing effectively to sustainable development. The ITC is a:

- Centre for multilateral transport standards and agreements in Europe and beyond, e.g. regulations for dangerous goods transport and road vehicle construction at the global level
- Gateway for technical assistance and exchange of best practices
- Promoter of multi-country investment planning
- Substantive partner for transport and trade facilitation initiatives
- Historic centre for transport statistics.

For more than six decades, ITC has provided a platform for intergovernmental cooperation to facilitate and develop international transport while improving its safety and environmental performance. The main results of this persevering and important work are reflected in more than 50 international agreements and conventions which provide an international legal framework and technical regulations for the development of international road, rail, inland water and intermodal transport, as well as dangerous goods transport and vehicle construction. Considering the needs of transport sector and its regulators, UNECE offers a balanced approach to and treatment of facilitation and security issues alike.

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Executive Summary

Transport Trends and Economics 2011 – 2012



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This publication is meant to be a platform for ECE member States to share their inland transport policies – best practices of the past year or two, as well as perspectives and plans for the years ahead. Its content also forms a knowledge sharing tool for the Inland Transport Committee and its working parties. Their decisions, experiences and work results are presented to show the trends of inland transport modes the coming years.

What are the short-term trends in inland transport and how do they relate to the mid- and long-term trends? What were the major achievements or challenges in the course of the past 12 months and what expectations do the UNECE governments have for the forthcoming 12 months? These were the broad questions we sought to answer both through the detailed questionnaires to the UNECE governments and through our own thinking and review.

The primary objective of this publication is to serve as a reference and source of information and best practices in inland transport. We also hope to provide data for intertemporal analysis of trade-offs in transport policy measures. Over time and with your continued support, I am convinced that we shall achieve it.

Thirty-five ECE member States responded to our invitation to participate in the survey despite the very short notice. Many replies to the questionnaire arrived within a single month. A few other countries expressed their willingness to take part, but lacked the time to collect all the data. This positive response has been very encouraging indeed. It also shows that there is a need for a regular platform for national governments to keep abreast of the latest transport developments of their neighbours and beyond.

In addition to the desk research and the analysis of the country responses, we have asked well-known professors and business representatives how they see the situation in a specific transport mode or in transport policy segment and what short term trends they could identify for 2011-2012. Their input has brought not only value to our analysis, but also supplemented it through a scientific perspective.

I take this opportunity to sincerely thank all those who contributed and made this paper possible.

Transport Trends and Economics is not just another publication that collects statistics on inland transport. It summarizes transport policies of Governments and illustrates practical and implemented decisions and their results.

The short-term transport trends underpinned with some data and information about main achievements in 2011 and expectations for 2012 are as follows:

Successful transport policies and main obstacles for the development of inland transport in 2011

In their replies to the questionnaire, UNECE member Governments focused on the

national transport policies of 14 different themes subject to the specific needs in their country. Nonetheless the following four themes were included in the majority:

- (a.) the reforms and improvement of railways (efficiency, infrastructure, and competitiveness);
- (b.) the development of transport infrastructure;
- (c.) the improvement of road safety;
- (d.) the implementation of intelligent transport systems.

Albania mentions the creation of a common integrated infrastructure network for tourism and trade as successful transport policy. **Canada** launched the Rail Freight Service review so as to identify ways to improve the efficiency, effectiveness and reliability of Canada's rail-based logistics system. **France** launched the Lanes of high speed (LGV) for railways with 800 km in 2011 and an objective of 2000 km in 2020. Between 2009 and 2011, the Federal Government of **Germany** provided a total of 500 million Euros from the second Economic Stimulus Package to fund the development and commercialization of electric mobility. **Poland** has taken several actions to increase road safety including the Program of Abolishment of Dangerous points on Roads (PADPR). During this programme, 397 investments projects were completed.

In addition, transport policy deliberations at national and particularly at international levels reflected a growing concern for sustainable development. In this respect climate change mitigation and adaptation were the strong up-coming new themes (partly as a reflection of the global preparation for Rio+20). Furthermore, the emphasis on the balanced approach towards the three pillars, i.e. economic, social and environmental sustainability is further strengthened with an increased concern about economic growth and the role of transport (obviously triggered by the extended economic and financial crisis).

As it concerns the obstacles for the development of inland transport in 2011 the countries replied the following:

For transport infrastructure: long and bureaucratic administration processes for completing public tenders, financing problems or financing alternatives, etc.

For railways efficiencies: railway companies' reform and separation of infrastructure from operations, railways profitability and investments in infrastructure, maintenance of existing infrastructures.

Cyprus considers the lack of infrastructure as main problem that has hindered the development of transport. The **Czech Republic** mentions that the lack of resources in public budgets caused the necessity to stop already running infrastructural projects, including maintenance. **Italy** indicates that motorway network upgrading should be completed as the present network was last upgraded in 2000. **Lithuania** declared the underdevelopment of infrastructure connections with the EU member States and third countries.

Geopolitical changes in the ECE region have been leading to plurilateral legal, regulatory and institutional frameworks - e.g. the transport Single Market of the European Union, the NAFTA arrangements and the emerging EuroAsian customs union and with this contributing to a more complex legal and regulatory transportation web.

At the industry level, we can also see trends of convergences among sectors,

especially in the automotive industry and in new transport and transport related customer services. Telecommunication, the electronic industry, as well as the overall Information and Communication technologies expand the horizons of transport. At the same time, the earlier demarcation lines between the sectors are becoming less obvious, the categorisation of enterprises according to sectors is decreasingly correct or possible. In addition, there is a growing demand for closer cooperation among these changing and renewed sectors, e.g. Transport planning and urban development.

Road transport

Road transport both in terms of car use and commercial operations grew. Almost in all responding countries following the drop in 2009, road transport grew in 2010, sometimes by more than 5%. The forecasts for 2011, in general, show that there is an increase but less so than in 2010. Concerning road freight transport, the issue of TIR Carnets can be a reliable barometer: in 2011 the TIR Carnets issued exceeded three million, having increased by 38% compared to 2009 and more than 9% compared to 2010.

As far as individual car traffic and particularly the car ownership is concerned the mega-trends are determined by the macroeconomic relationship with the per capita incomes. According to Marcos Chamon, Paolo Mauro and Yohei Okawa car ownership rates are minimal in the lowest income countries, but increase rapidly as per capita incomes grow above the initial threshold, which they estimate to be about USD 5000 per capita -based on 2000 prices -, and it falls slightly beyond a per capita income of USD 10,000. With this mega-trend car ownership from the today' level of around 1 billion cars will more than triple by 2050. Many UNECE transition economies of today will reach or pass the 600 cars per 1000 people level. The question is if this is realistic to expect that this macroeconomic association between the rising per capita incomes and the average car ownership can be de-coupled and if so how. The European Union's earlier transport policy planned to de-couple economic growth and transport. Nonetheless, with regard to individual car ownership and use the trend might be altered. In fact over the past years the number of mobility choices has already increased significantly in many places through

- more possibilities for safe walking and biking
- the development of car-sharing
- and especially through better public transport.

The UNECE countries - particularly in Europe - have a traditionally extended public transport system. In our questionnaire we asked about the cost of daily ticket for a bus, tram or underground. Based on the responses we could analyze the bus prices. It appears that the most expensive daily bus ticket is in Norway at \$11,9 and the cheapest one is in Tajikistan at \$0,25. The average cost of daily bus ticket in ECE region is \$3,53. These figures reveal not only the differences between cities in the UNECE countries, but also the concerns about the cost recovery capacity of public transport operators simply due to the prices determined by the individual affordability of citizens.

Croatia adopted the National Road Traffic Safety Programme 2001 – 2020 which is divided into five main topics: behaviour of all road users, improvement of road infrastructure, safe driving, efficient medical care of road crash victims and other areas of work. The **Cyprus** regular passenger transport by bus was transformed and

modernized. **Germany** under the road safety programme 2011 decided to enhance transport safety and reduce the number of deaths in road accidents by 40 per cent by 2020. **Greece** decided the liberalization of the transport market and simplification of the business access procedures. The **Slovak Republic** mentions that there is no cooperation between bus and rail passenger transport and an act on Public Transport is under preparation. **Switzerland** created an infrastructure fund for the transport problems that concentrate in urban areas. The main purpose of this fund is to co-finance infrastructure projects in urban areas.

Rail transport

The creation of high speed train networks concurs with the revitalisation of railways during the past two decades. Wherever high speed and very high speed lines have been built, they have proven an enormous success for passenger transport. The main drivers of transformation that railways face today are liberalization and privatization. Increase of competitiveness and efficiency, relieving the burden on the state in terms of financial support and stimulation of investments are the main objectives of railways liberalization. The ultimate goal of liberalization can be considered the privatization. In environmental terms, railways generate the least CO₂ emissions among the inland transport modes. Green logistics and the need to reduce CO₂ emissions should also be a key driver for the rail freight market.

With a view on megacities and agglomerations, a regional settlement structure has to be designed which set up on the elements density, mixing of different land uses, poly-centrality and capacity of public mass transport systems and public facilities. Railways have a significant role to play.

Bulgaria considers as main problem the situation of Bulgarian railways today. The volume of railway traffic is decreasing; the quality of passenger and cargo services was lower from citizen expectations; the productivity of railway sector in Bulgaria was the lowest in the whole EU. **Serbia** mentions that Serbian railways had downtrend transport volume primary due to lack of rolling stock and the poor state of infrastructure. Punctuality for passenger traffic as well as for freight transport of **Swedish** railways has changed for the worst. Large parts of the infrastructure are worn down partly because of neglected maintenance, neglected re-investments and increased traffic volumes. **Ukraine** pointed out the need to reform the sector taking into account the positive experience from the rest of the world. The old railway network in a large geographical area of **Turkey**, physical inadequacies and geometrical standards, inadequacy of railway network per unit area and inadequacy of ability to provide combined transport services are considered as main problems of Turkish railways. **Slovenia** mentions that the old rail infrastructure is not meeting the characteristics of modern rail transport needs. Therefore the country is facing a modal shift in favour of road freight transport. **Finland** reported problems with train traffic during the two previous winters. There are plans to renew rail managements systems and rail switches.

Inland water transport

As described in the recent UNECE White Paper on the Efficient and Sustainable Inland Water Transport in Europe, inland water transport in the ECE region is losing its market share. Countries reported that the use of inland water transport is low and becoming worst. Another major issue is the subject of missing links in IWT infrastructure. The economic crisis and the lack of funds have been reported

as main obstacles for inland waterways infrastructure improvement. In addition to the lack of proper infrastructure, the old fleets are reported as a barrier towards efficiency. Another important topic is that inland waterways are at risk of losing their environmental performance. The old fleets and the no use of alternative fuels become a significant disadvantage.

Serbia mentions that the main problems in Inland Waterways are the low use of inland water transport freight and the reduced turnover of goods in the domestic market. **Bulgaria** noted that one of the main measures under implementation is the acceleration of infrastructure projects in the field of inland waterways. The continued implementation of the River Information Systems in the inland navigation area of **Croatia** pursuant to two important strategic documents in this area: the development strategy for inland waterway transport (2008 – 2018) and mid-Term development plan for inland navigation and inland ports (2009 – 2016). **Lithuania** notes as the main obstacle the insufficient developed inland waterways transport sector (old fleet, more than 30 years, differences of depth in the separate parts of the main inland waterways of international importance, Kaunas – Klaipeda). **Canada** stated that the Federal review process for applications under the Navigable Waters Protection Program streamlined through amendments to the Navigable Waters Protection Act (NWPA).

Intermodal transport

In the 35 ECE countries there are more than 144 freight villages or logistic centres. Twelve Governments replied that they have already developed a master plan for their logistics industry and 11 for their intermodal transport.

One of the most important issues that surfaced through the responses was countries' geographical location as a logistics competitive advantage. Twenty-three Governments stated that their country has a logistics – transport competitive advantage and six said that the logistics advantage of the country is directly connected with private sector initiatives and investments.

Albania stated that combined – intermodal transport in Albania is at a low level. The interaction among the different means of transport is weak, mainly due to lack of adequate port and rail infrastructure. The Government of the Republic of **Armenia** has approved the programme of construction of an international logistic centre and transport infrastructure. The Government of **Canada** released the National Policy Framework for strategic Gateways and Trade Corridors as to support specific strategies and seize geographic, trade and transportation opportunities in key regions. The Federal Government of **Germany** has developed a Freight Transport Logistics Action Plan.

The countries replied that their geographical – logistics competitive advantage were:

Bulgaria stated that the country has a lot of competitive advantages from logistics and transportation point of view such as its Geographical location, the sustainable political and economic situation, its railway and road network density and river – sea connection. **Croatia** mentioned that the country is excellently positioned for establishing connections between Western and South Eastern Europe and between Central Europe, the Adriatic and the Mediterranean. **Greece** stated that forms the natural gate to the EU from the Far East countries. **Italy** mentions that the Italian geographic position in the Mediterranean Sea provides potential

advantages along Asia-Europe maritime routes.

An 8 per cent rise in traffic for unaccompanied and accompanied transport was reported for 2010. Although post-crisis levels have yet to be obtained, international traffic in 2010 increased by 9 per cent (3,52 million TEU) whereas national traffic increased by 6 per cent (2,54 million TEU). Particular problems arose in 2010 due to the lack of rail pocket wagons able to carry semi-trailers.

Intermodal road-rail traffic continued to grow in the first half of 2011. However, this trend slowed down in the second half of 2011. The outlook for 2012 is bleak as economic growth in Europe will be negatively affected by the austerity measures taken in a number of European countries. In addition, the scheduled temporary closure of the Brenner railway line in 2012 for maintenance and rehabilitation works will complicate transalpine services and may reduce its reliability and punctuality, while increasing costs.

Vehicles regulations

The political pressure is huge for technological innovations first of all to arrive at Environmentally Friendly Vehicles with a lot of high tech safety features. In addition, it is no longer technological improvement, but technological shift from traditional to new and very new solutions. Let's just think about the automatic emergency braking system that shall automatically detect a potential forward collision, warns the driver and activate the vehicle's braking system to stop the vehicle and/or avoid a collision. Similarly the lane departure warning system (LDWS) is another new safety feature of vehicles. However, the investment in vehicle safety will be impossible to reap unless road infrastructure keeps pace.

New technologies can bring many solutions to past and current problems, but as they open new avenues they also encounter new problems. For example, the hybrid and electric vehicles have the benefit of no-noise. As one man's dish is the other's poison, this benefit is a disadvantage for those with impaired vision and increased reliance on noises. For them silent vehicles make it practically impossible to recognize the approach, presence and/or departure of the vehicle. Regulators, e.g. at the UNECE World Forum (WP.29), therefore, consider requiring audible, acoustic signalling techniques when the vehicles speed is low (level of speed to be indicated).

While many technological changes are revolutionary, the automotive industry and its markets are undergoing major changes. Similar to the airline markets that were shook and shook up by the emergence of low-cost carriers, in the automotive sector low cost manufacturers emerged in emerging economies where the new customers are located.

Climate change

Thirty Governments replied that they are taking measures on to climate change. Sixty per cent of these countries are taking measures for both mitigation and adaptation of climate change, while 40 per cent for mitigation only.

Many innovative climate change police measures were reported by the countries. More specifically:

Belgium has taken several measures in 2010 regarding climate change such as

compensations for bicycle use, discounts for the purchase of new vehicles, eco-bonus and eco – penalty implementation measures, benefits for companies' cars. The Government of **Canada** will spend more than \$149 million over the next five years on climate change adaptation initiatives. Currently, the **Bulgarian** Government coordinates the development of the Third National Action Plan on Climate Change which is to be implemented in 2013 – 2020. The **Danish** Government has taken several measures with a main aim of reducing CO₂ emissions by 40 per cent in 2020 compared to 1990. The Republic of **Tajikistan** allocated \$50 million as to begin developing and implementing projects for climate change. The Government of **Ukraine** has approved the National Action Plan to implement the provisions of the Kyoto Protocol. **Norway** reported that weather conditions, a cold winter followed by heavy rainfall, caused damages to transport infrastructure.

The need for the development and use of a standard monitoring assessment tool for CO₂ emissions in inland transport including a transport policy converter for Governments exists and Governments replies confirmed so. The ForFITS project of the Transport Division meets this need with the development of such a standard monitoring and assessment tool for CO₂ emissions including a transport policy converter.

Adaptation to climate change impacts has not been given as much priority as mitigation. This conclusion is also documented by Governments responses. The term adaptation refers to the ability of a transport system to adjust to climate change and to moderate potential damage. UNECE Transport Division established a group of experts on climate change impacts and adaptation on international transport networks. The main objective of this expert group is the identification of potential climatic impacts on transport infrastructure, the determination of the costs of climatic impacts for inland transport networks and the identification of existing best practices.

Intelligent transport systems

Twenty-six of the participating countries replied positively on the use of intelligent transport systems in their public transport network. Buses, trains, trams and metro are the most popular transport means where UNECE Governments have installed ITS.

There is one main trend and basic need for this subject: reaching a common definition for intelligent transport systems. In addition, interoperability and the ITS architecture should be facilitated.

Germany reported that the use of ITS is included within a 300 million Euro Project "Road Telematics 2015". **Latvia** mentioned that in order to efficiently use the transportation infrastructure, as well as to ensure most smooth transit via the country the International Freight Logistics and Port Information System (SKLOIS) is being implemented. The Government of **Canada** supports ITS deployment through contributions to projects undertaken in partnership with provincial and municipal governments and through PPP schemes. The **Czech Republic** illustrates that a nationwide information system on Timetables (NISTT) provides State guaranteed data on public passenger transport for the general public, transport customers and carriers.

Transport Infrastructure

TEM and TER are flagship infrastructure projects of UNECE. In 2011 published their revised Master Plan. According to the TEM status map, it is possible in 2020 that motorway or dual carriageway sections will be in full operation in five countries and with a few exceptions also in another six countries. According to the TER status map railway sections with a design speed of 160km/h exist at present in nine out of the 25 countries participating in the revision.

In addition, under the Euro Asian Transport Linkages Project (EATL) 421 projects were proposed with a total cost amounting to approximately \$271 billion. One hundred forty six are road projects (47 per cent) with value of \$ 113 billion (53 per cent of the total investment cost), 121 are railway projects (39 per cent) with value of \$75 billion (35 per cent) and 44 other projects (14 per cent) with value of \$25 billion (12 per cent of the total investment cost).

The Government of **Azerbaijan** has prepared the new Strategy for development of the Transport systems for approval by the cabinet of Ministers. **Bulgaria** mentions that railways infrastructure is in bad condition and that the subsidies for the railway sector were increasing but less and less were the resources for investments. The implementation of **Canada's** Economic Action Plan which injected nearly \$500 million of stimulus money into the economy had resulted in a more modern transportation infrastructure. In 2010, the **Croatian** Government adopted an Action Plan to remove administration obstacles to investments in the Republic of Croatia comprising of 50 measures. **Cyprus** reported that the main problem that has hindered the development of transport in the country is the lack of infrastructure. **Israel** mentioned that the increasing congestion in urban areas and the decreasing share of public transport made the Government decide for more investments in rail and road systems. **Turkey** reported that the General Directorate of Highways considered the realization of some of motorways projects by PPP financing by the end of 2023 as to meet road transport demand.

A blue-tinted photograph of a narrow street in an urban setting. A tram is visible in the distance, moving along tracks that curve to the right. Laundry is hanging from lines strung across the street. The buildings are multi-story and feature windows and balconies. The overall scene is a mix of old-world architecture and modern public transport.

Transport Policy Review

CHAPTER 1. Transport Policy Review

Albania

1. The real GDP growth of Albania is forecasted to slow from an estimated 2.2 per cent in 2011 to 1.9 per cent in 2012, and accelerate to 3.5 per cent in 2013. Inflation is expected to average 3 per cent in 2012- 13 and the current-account deficit to stay large, averaging 10.4 per cent of GDP. The draft budget for 2012 projects a deficit of 3 per cent of GDP, down from the targeted 3.5 per cent in 2011. Poor revenue performance (up by only 1 per cent year on year) led to a 27 per cent expansion of the budget deficit, to Lk31bn (US\$300m) in January- September 2011.

2. Fiscal policy has become more prudent since the parliamentary election in 2009, which was preceded by a rush to finish large public investment projects. Most notably, sections of the Durres-Kukes road.

Successful transport policy measures

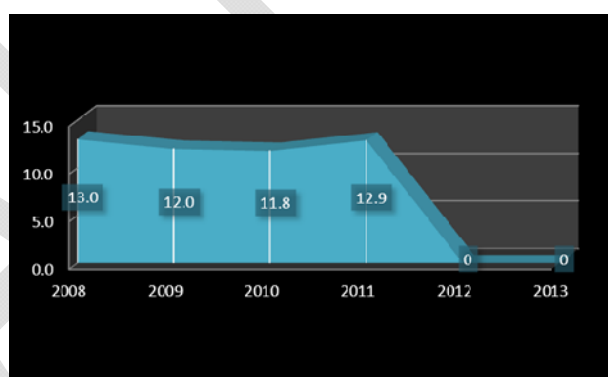
3. The country reported as successful transport policy measure the creation of a common and integrated infrastructure network for tourism and trade challenges.
- (a.) North-South Corridor between Greece and Montenegro;
 - (b.) Corridor VIII (East – West National Road Corridor);
 - (c.) Durres – Kukes – Morine - Kosovo border Corridor.

4. Another successful measure was the implementation of the legal approximation and administrative capacity. In the road transport sector, in compliance with NPISAA (National Plan of Implementation of Stabilisation Agreement of Association), the Albanian Government has completed the legal initiatives with regard to the definition of qualitative criteria that must be fulfilled for admission to the road haulage occupation and to passenger transport operators.

Main obstacles for the development of inland transport

5. The combined intermodal transport in Albania is at a low level. The interaction among the different means of transport is weak, mainly due to a lack of port and rail infrastructure. The construction of the container terminal at the port of Durres and of the fuel storage station in Porto-Romano, the rehabilitation of the rail network and the development of rail services are some of the measures that would contribute to the development of intermodal transport in Albania.

Figure 1 Albania GDP estimates and forecast (2008-2013).



Source: The Economist Intelligence Unit, UNECE

Andorra

No data available.

Armenia

6. The real GDP growth of Armenia is forecasted to slow to 3.6 per cent in 2012, from an estimated 4 per cent in 2011, owing to the worsening external environment. The state budget deficit was Dram14.8 billion (US\$40 million) in the first eight months of the year, significantly smaller than the Dram26.5bn deficit in the year earlier period. Real GDP grew by 3.9 per cent year on year in the second quarter. The Economist Intelligence Unit estimates that Armenian real GDP will expand by 4 per cent in 2011, and forecast that growth will slow to 3.6 per cent (revised down from 3.8 per cent) in 2012.

Successful transport policy measures

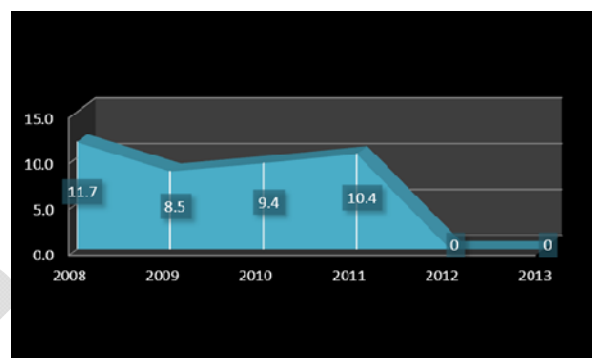
7. The policy of the Government of the Republic of Armenia in the field of passenger and goods transportation by road is mainly directed at increasing service quality and safety levels; compliance of National legislation with international laws; and the development of several modes of transport.

8. The Republic of Armenia during 2011, in order to meet the requirements of the “European Agreement Concerning the Work of Crews of Vehicles engaged in International Road Transport”, invested in a system that controls the respective devices (digital tachograph).

Main obstacles for the development of inland transport

9. The transportation costs for imports and exports of Armenia are very high. This is mainly due to the extensive use of sea instead of inland routes. As a result, Armenia faces high prices for consumer goods which have a negative effect on the country's economy.

Figure 2. Armenia GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Austria

10. Austria's GDP growth slowed to 0.3 per cent in the third quarter of 2011, with a particular slowdown in the manufacturing sector, driven by much reduced export growth (0.6 per cent). The government has agreed in principle with the European Commission in its Stability Programme for 2011-2014 to act to reduce the government deficit to below 3 per cent of GDP by 2013. A Stability Programme for 2011-2014, to bring the deficit below the euro zone threshold of 3 per cent of GDP from 2013 and to 2.4 per cent by 2014, was submitted to the European Commission in early 2011.

11. The government has also proposed a constitutional deficit limit at 0.35 per cent of GDP from 2017 to bring debt to 60 per cent of GDP by 2020/2021. It is estimated that the deficit of 4.6 per cent in 2010 will shrink to 3.6 per cent of GDP in 2011. The government forecast that the 2012 budget would bring the deficit to 3.2 per cent of GDP in 2012, below the Stability Programme target of 3.3 per cent.

12. Cost-curbing measures that are currently envisaged for 2012 include limiting early retirement, reducing personnel costs in schools, cutting costs at **Austrian Federal Railways (ÖBB)**, reforming healthcare and hospitals, and simplifying the

tax code.

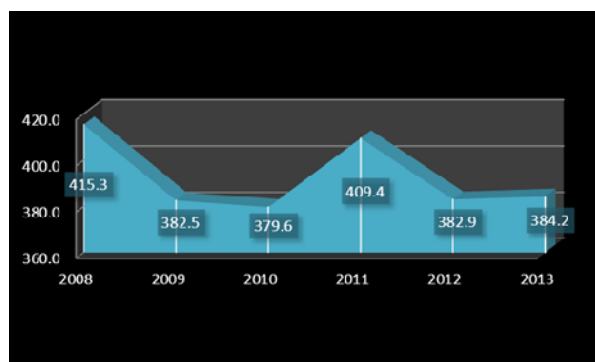
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 3. Austria GDP estimates and forecast (2008-2013)

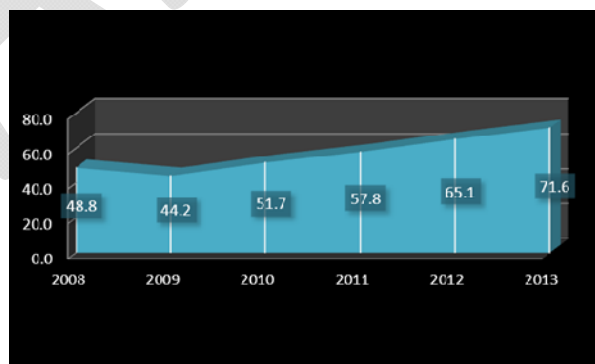


Source: The Economist Intelligence Unit, UNECE

Azerbaijan

13. Azerbaijan's current account is forecasted to remain firmly in surplus in 2012-2016, averaging 12.6 per cent of GDP. High oil exports will continue to be the main driver of the substantial trade surplus. Azerbaijan rose by three places, to sixty-sixth out of 183 countries, in the World Bank's latest annual Doing Business survey. The economy is forecast to grow at an annual average of 3.5 per cent in 2012-2016, down from an average of 9.9 per cent in 2007-2011.

Figure 4. Azerbaijan GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Successful transport policy measures

14. The Ministry of Transportation has prepared a draft "Strategy for the development of transport system" and a "Concept paper of an integrated transport policy" of the Azerbaijan Republic, which has been agreed with the relevant government authorities and submitted for approval by the Cabinet of Ministers.

Main obstacles for the development of inland transport

No data available.

Belarus

15. The Economist Intelligence Unit estimated that a slowdown of real GDP growth Belarus to 3.6 per cent in 2011 and forecasted as annual average growth of just 3.2 per cent in 2012-2013 as domestic demand and government spending are hit by rouble devaluation. In the first three quarters of 2011, real GDP grew by 7.9 per cent year on year. However, this compares with year-on-year growth of just over 11 per cent in the first half, implying an abrupt slowdown in the third quarter. Nevertheless, the performance of industry, which has driven the recovery following the downturn in 2009, remains solid, with output growing by 10.6 per cent in January- September.

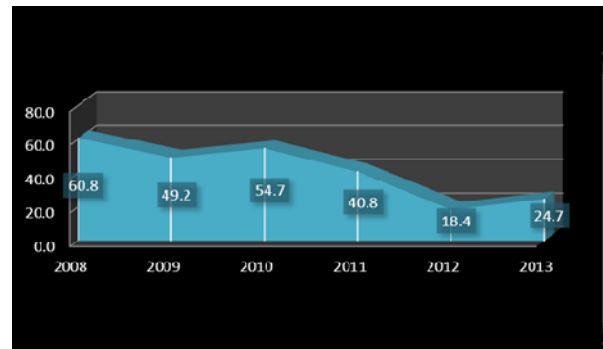
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 5. Belarus GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

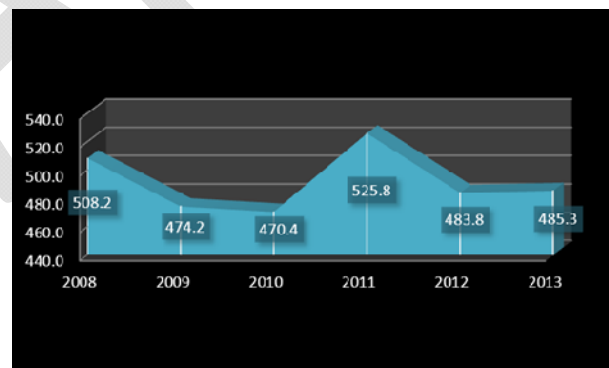
Belgium

16. The Economist Intelligence Unit forecast is for the general government deficit to narrow from 4.2 per cent of GDP in 2010 to 3.8 per cent in 2011 and to 2.5 per cent by 2016. It forecasts that real GDP growth will slow to 2 per cent in 2011, weakening further to just 0.4 per cent in 2012, and average under 2 per cent over 2013-2016.

Successful transport policy measures

17. The "Home-Work" project of the Belgian Government illustrates the statistics of workers travelling every day from their home to their workplaces using different transport modes. It keeps statistics of private and public sector workplaces with more than 100 employees. The diagnostic evaluations are taking place every three years (2005, 2008, and 2011). The Government of Belgium has also taken several fiscal measures to decrease CO₂ emissions :

Figure 6. Belgium GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

- Since 2007, the deductibility of company cars is based on class CO₂ emissions;
- Since 2010, the benefit in kind of a company car is calculated based on CO₂ emissions;
- Since fiscal 2010, compensation Bicycle 0.20 euro / km tax-free is granted by the employer for commuting;
- In 2011, the discount for the purchase of new vehicles for individuals is 15 per cent of the purchase with a maximum of € 4640 (after indexation) when emissions are less than 105 g CO₂/km. It is 3 per cent (maximum 870 EUR) when emissions are between 105 and 115 g CO₂/km;
- In the Walloon region an eco-bonus of 600 Euros is granted for the use of a new or used vehicle emitting between 0 and 98 grams of CO₂ per km, with special arrangements for large families and LPG vehicles and that list prices do not exceed;
- An eco-penalty ranging from 100 to 1,500 Euros is seen in other cases, depending on the level of emissions of the vehicle being used, the average emissions of vehicles in circulation and the level of emission vehicle being replaced;
- Since 2009, the Flemish Region grants a bonus for the installation of a particulate filter on used diesel cars.

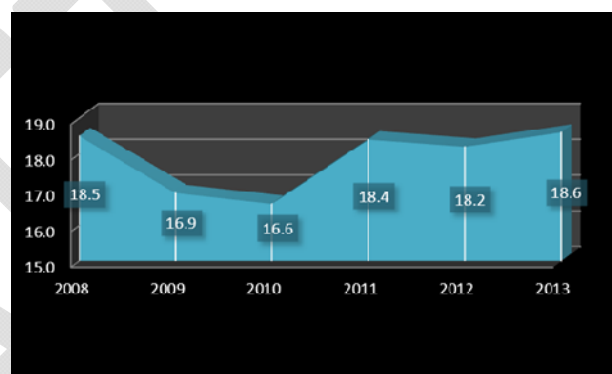
Main obstacles for the development of inland transport

18. The Government of Belgium reported as main obstacles for the development of inland transport the congestion and the cumbersome administrative procedures in major infrastructure projects.

Bosnia & Herzegovina

19. The Economist Intelligence Unit forecasts that real GDP growth in 2012 will remain sluggish, at 1 per cent—slowing from an estimated 1.6 per cent in 2011—before a modest acceleration to 2.5 per cent in 2013 as external demand picks up. The current-account deficit is forecasted to narrow from an estimated 5.7 per cent of GDP in 2011 to 5.3 per cent of GDP on average in 2012-2013, as international oil prices drop and tighter fiscal policies limit import demand growth.

Figure 7. Bosnia and Herzegovina GDP estimates and forecast (2008-2013)



Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Source: The Economist Intelligence Unit, UNECE

Bulgaria

20. The Economist Intelligence Unit estimated a real GDP growth of 1.9 per cent in 2011 and forecasted that the recovery will weaken in 2012, with 1.6 per cent growth, given slackening export demand and a forecast recession in the euro zone. In 2010 the budget deficit, using the cash-based national methodology, stood at Leva 2.8 billion (US\$1.9 billion), or 4 per cent of GDP. The government intends to continue with fiscal consolidation, and its 2012 draft budget targets a deficit of just 1.35 per cent of GDP.

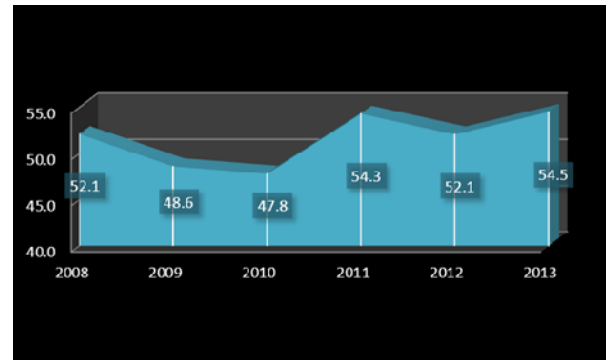
Successful transport policy measures

21. The main measures that are under implementation are as follows:
- Acceleration of the implementation of infrastructure projects in the field of railway, road, inland waterway, air and combined transport;
 - Provision of transparent and harmonised competitive business environment of the transport market;
 - More intensive usage of public-private partnership mechanisms in transport infrastructure projects;
 - Limiting harmful gas emissions and the negative impact on the environment caused by the transport sector in general;
 - Update of the existing regulatory norms to adapt to the international and European safety and security standards;
 - Renewal and modernisation of different transport modes' vehicles, rolling stock, fleet, facilities and equipment.

Main obstacles for the development of inland transport

22. One of the main problems that hindered the development of Bulgarian transport in 2010 was the condition of the Bulgarian Railways. The volumes of the railway traffic and their market quotas were decreasing; the traffic in 2010 was 40 per cent lower compared to 2007; the quality of passenger and cargo services was lower than expected; the productivity of the railway sector in Bulgaria was the lowest in the whole European Union.

Figure 8. Bulgaria GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Canada

23. The Economist Intelligence Unit forecasts Canada's GDP growth of 1.8 per cent in 2012, as shipments slow to Canada's main export market, the United States. In the medium-term, high household debt will weigh on consumer spending. A less bright outlook for the economy has forced the government to retreat from its target of balancing the federal budget by fiscal year 2014/15 (April- March).

Figure 9. Canada GDP estimates and forecast (2008-2013)

Successful transport policy measures

24. In the context of the global economic slowdown, Canada's relatively strong performance can be attributed, in part, to sound economic fundamentals that include improvements to trade-supporting infrastructure and enhanced policies and regulations resulting from the Government of Canada's National Policy Framework for Strategic Gateways and Trade Corridors.

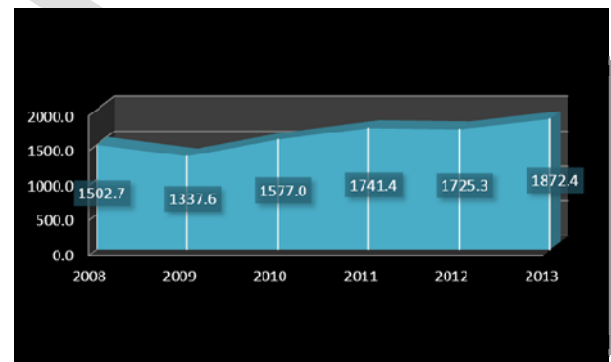
(a.) Successful implementation of Canada's Economic Action Plan (EAP), injecting nearly \$500 million of stimulus money into the economy. The result is a more modern transportation infrastructure;

(b.) The department fostered the use of sustainable transportation approaches in communities across the country and encouraged improvements in fuel efficiency and in the reduction of air pollutants;

(c.) Efforts to modernize and harmonize standards, policies, programs and regulations for improving safety across all modes;

(d.) In June 2010, amendments to the Railway Safety Act were tabled in Canada's Parliament under the Safer Railways Act. Nearly \$5 million was invested in rail safety initiatives, Transport Canada also invested over \$4 million in 57 grade crossing improvement projects across Canada;

(e.) The federal review process for applications under the Navigable Waters Protection Program was streamlined through amendments to the Navigable Waters Protection Act (NWPA).



Source: The Economist Intelligence Unit, UNECE

Main obstacles for the development of inland transport

25. The global economic slowdown and the resulting decrease in demand for manufactured goods and key commodities.

26. The Rail Freight Service Review was launched in 2008 to identify ways to improve the efficiency, effectiveness and reliability of Canada's rail-based logistics system.

Croatia

27. The Economist Intelligence Unit forecasted that the 2012 budget deficit will be similar to that of 2011, at around 5 per cent of GDP, before gradually contracting to within 3 per cent of GDP by 2016. Rising public debt will put a strain on government finances.

Successful transport policy measures

28. The Croatian Government reported as successful transport policy measure the adoption of the National Road Traffic Safety Programme for 2011-2020 that includes: behaviour of all road users, improvement of road infrastructure, safe driving, efficient medical care of road crash victims and other areas of work.

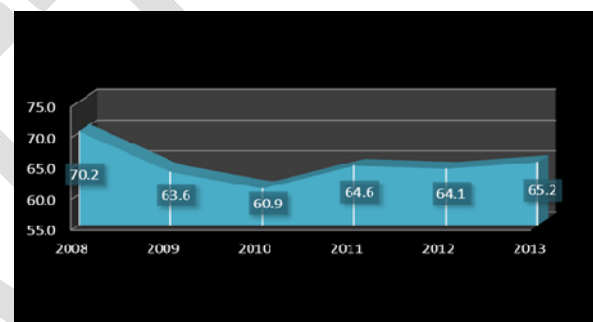
29. In addition, the Government reported the continuing implementation of the River Information Service (RIS) in the inland navigation area pursuant to two strategic documents in this area: the Development Strategy for Inland Waterway Transport (2008-2018) and Mid-Term Development Plan for Inland Navigation and Inland Ports (2009-2016).

Main obstacles for the development of inland transport

30. The Government reported that the Croatian economy still struggles with the after-effects of the global economic crisis.

31. On 20 October 2010, the Croatian Government adopted the Action Plan to remove the administrative obstacles for investments, comprising 50 measures concerning registration of a company, property acquisition, construction, judiciary, taxes, customs, etc.

Figure 10. Croatia GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Cyprus

32. According to Economist Intelligence Unit the budget deficit is expected to rise from 5.3 per cent of GDP in 2010 to 7 per cent of GDP in 2011, reflecting investment in a new power plant, but to decline to close to 3 per cent of GDP in 2016. Real GDP growth is expected to fall from 1.1 per cent in 2010 to 0.1 per cent in 2011.

Successful transport policy measures

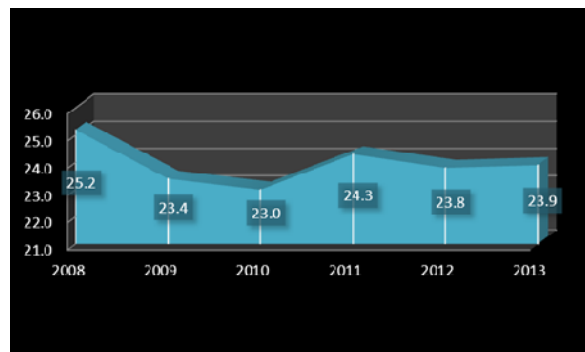
33. The Cyprus regular passenger transport by bus was transformed and modernized to reflect the provisions of the Regulation on public passenger transport services by rail and by road. The new system basically consists of five operators for urban transport (5 geographical areas: Nicosia, Limassol, Larnaca, Ammochostos, Pafos) and one for intercity buses. Presently, the new system of public passenger transport by bus, offers 1,755,000 routes every year covering 31.5 million kilometres.

34. In addition to the urban and intercity bus service, a new closed door service connecting Nicosia and Limassol with Larnaca international airport was put into operation with great success.

Main obstacles for the development of inland transport

35. The main problem that hindered the development of transport in Cyprus is the lack of infrastructure. The bus fleet, which consists mostly of old buses, will be replaced with new buses. So far, 20 per cent of the buses have been renewed and the operators have the obligation to renew them all gradually.

Figure 11. Cyprus GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Czech Republic

36. The economy is estimated to grow by 2.1 per cent in 2011, with fiscal austerity slowing the pace of expansion. The Economist Intelligence Unit forecast for 2012 has been revised down to just 1.5 per cent in 2012 owing to an expected recession in the euro zone.

Successful transport policy measures

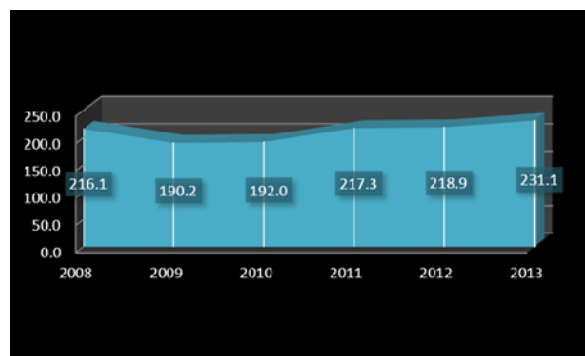
37. The transport policy of the Czech Republic for the period 2005 - 2013 contains a number of measures:

(a.) Harmonizing conditions on the transport market and user charging, i.e. from 2007 gradually implement a performance-based toll collection system of the road infrastructure;

(b.) Development of integrated transport systems ex. elaborate the legal framework for ensuring transport services in regions;

(c.) Railway sector transformation, i.e. completion of the transformation process in the railway sector.

Figure 12. Czech Republic GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Main obstacles for the development of inland transport

38. The main problem hindering the development of transport in 2010 was the lack of resources in public budgets. It even caused already running infrastructural projects to stop (including maintenance). Another negative consequence of public deficits is the lack of funds for the operation of public transport.

Denmark

39. The budget deficit is expected to widen to close to 6 per cent of GDP by 2012, from 2.9 per cent of GDP in 2010. The deficit is expected to fall back from 2013, but in the absence of far-reaching reform, it is unlikely to return to surplus. Real GDP growth is forecasted to stagnate in 2012, recovering moderately thereafter.

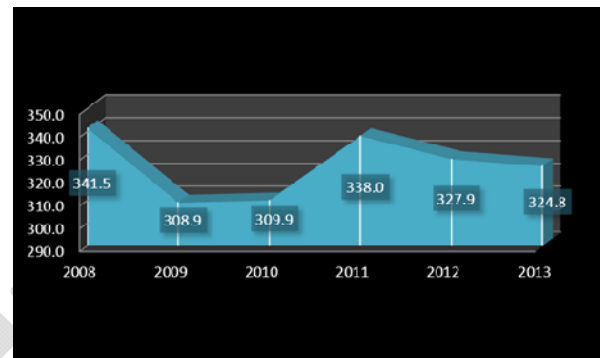
Successful transport policy measures

40. The Danish Government aims at reducing CO₂ emissions by 40 per cent in 2020 compared to 1990. In the Transport sector the Government is promoting public transport and bicycle transport in order to reduce CO₂ emissions. More than two-thirds of the investment budget is in the rail sector.

Main obstacles for the development of inland transport

No data available.

Figure 13. Denmark GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Estonia

41. The budget deficit is expected to remain well below the EU-mandated limit of 3 per cent of GDP in 2011-2013, before returning to surplus as from 2014. The Economist Intelligence Unit estimates for real GDP growth in 2011 of 6.5 per cent reflects the strength of the economic performance in the first eight months. Worse external prospects will see growth slow to an annual average of just 3.2 per cent in 2012-2016.

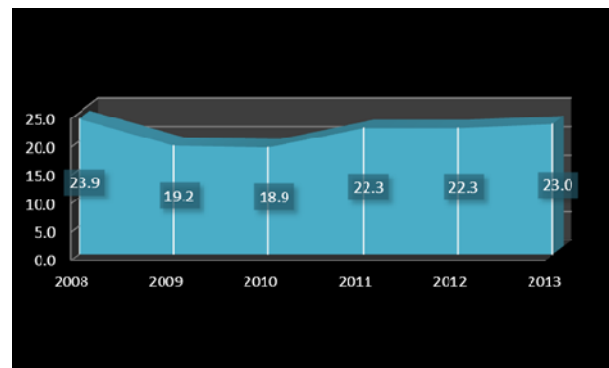
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 14. Estonia GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Finland

42. The Economist Intelligence Unit expects that fiscal policy will remain cautious, with spending cuts and tax rises being implemented in 2012 and, to a lesser extent, in subsequent years. It is also expected that the government accounts remain in deficit, but at low levels, up to 2016. The recovery from the 2009 recession has come to a sharp halt and the Economist Intelligence Unit forecasts that after a growth of 3.6 per cent in 2010 and 2.7 per cent in 2011, there will be a 0.1 per cent contraction in GDP in 2012.

Successful transport policy measures

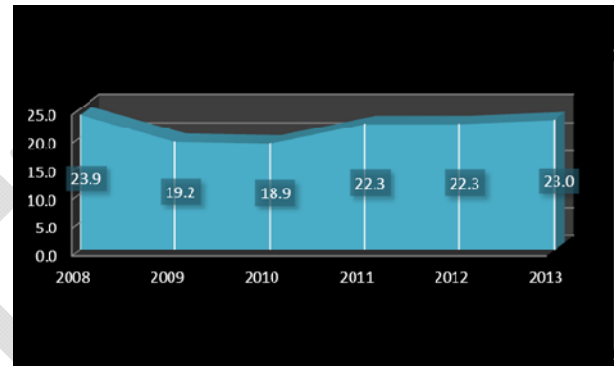
43. The main successful transport policy measures implemented by the Finish Government are as follows:

- (a.) national travel centre concept;
- (b.) regional public transport ticketing systems;
- (c.) national smart card system for long distance coaches (over 400 companies), national multimodal journey planner www.journey.fi.

Main obstacles for the development of inland transport

44. The problems with train traffic during the two previous winters were reported as main obstacles. There are plans to renew rail management systems (partly implemented) and rail switches. There are some plans for increasing the capacity of Helsinki's main rail station.

Figure 15. Finland GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

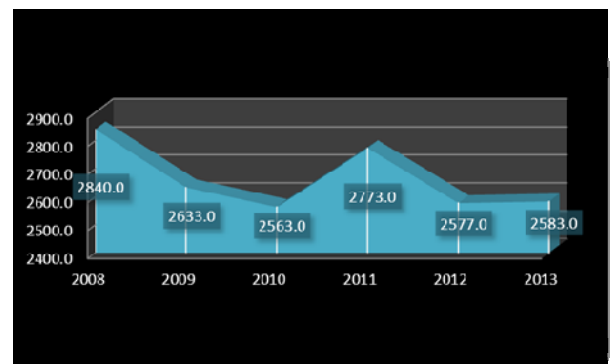
France

45. The Economist Intelligence Unit forecasts that fiscal policy will remain restrictive in 2012, as the government tries to reduce the budget deficit from close to 6 per cent of GDP in 2011. The French economy is forecasted to experience a mild recession around the turn of 2011-2012. Growth is expected to contract by 0.5 per cent in 2012, with a gradual recovery from 2013. The government is targeting a reduction in borrowing of €113.1 billion over 2012-2016.

Successful transport policy measures

46. The Government reported the LGV (Lanes Grand Vitesse) programme as a successful transport policy measure: eight hundred km were launched in 2011 with a target of 2,000 km up to 2020. Another successful measure is the Public Transport with environment friendly means of transport programme (Transport en commune en site proper, TCSP). Six hundred and twenty two km were launched in major cities in 2011 with a target of 1,500 km up to 2020. In addition, the French Agency for Multimodal Information and Ticketing was created to improve information for

Figure 16. France GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

users of public transport.

Main obstacles for the development of inland transport

47. The Government reported that rail traffic both for freight and passengers should increase. Two initiatives were begun: the National commitment for rail freight (ENFF) and the Focus on the Railways.

Georgia

48. Real GDP expanded by 5.8 per cent in the first quarter of 2011. Year-on-year growth was recorded in the majority of sectors, with the highest growth recorded in finance (24 per cent) transport (9.1 per cent) and manufacturing (8.6 per cent).

Successful transport policy measures

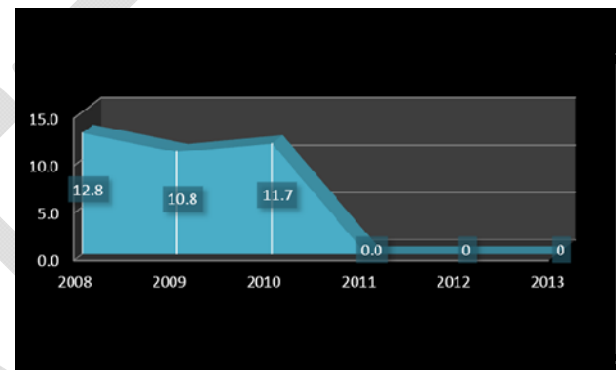
49. Measures taken for Land transport:

- (a.) Georgia became a party of the (AETR) agreement in 19 May 2011;
- (b.) Georgia actively participates in the projects within the EC TRACECA Programme.

Main obstacles for the development of inland transport

No data available.

Figure 17. Georgia GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Germany

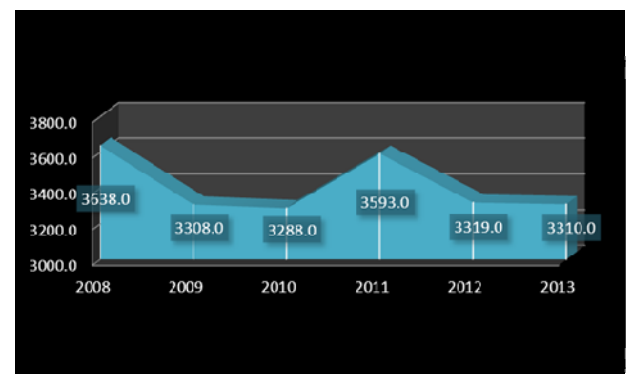
50. The Economist Intelligence Unit forecasts that the German economy will return to recession in late 2011 and early 2012. It expects a contraction of 0.2 per cent on average in 2012, followed by growth of 1 per cent in 2013 and a pick-up to an average of 1.5 per cent in 2014-2016.

Successful transport policy measures

51. The Federal Government's Freight Transport and Logistics Action Plan is a strategic approach containing concrete measures for the future direction of freight transport. Initial works on a new Federal Transport Infrastructure Plan 2015 have already begun.

- (a.) Using of ITS within a 300 Million Euro project "Road-Telematics 2015";
- (b.) Enhancing transport safety and reducing the number of deaths in road accidents by 40 per cent up to 2020 (road safety program 2011);
- (c.) National Hydrogen and Fuel Cell Technology Innovation Programme (NIP); Fossil energy sources are becoming increasingly scarce and expensive;

Figure 18. Germany GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

- (d.) Between 2009 and 2011, the Federal Government provided a total of 500 million Euros from the Second Economic Stimulus Package to fund the development and commercialization of electric mobility;
- (e.) In 2009 the Federal Government announced that it would develop a mobility and fuel strategy which would not favour a specific technology and would include all modes of transport;
- (f.) Reducing traffic noise significantly by the "National Noise Protection Program" until 2020;
- (g.) Further development of the national plan to enhance bicycle traffic from 2013 to 2020.

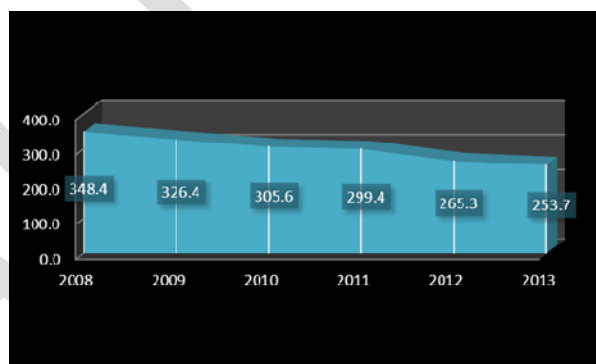
Main obstacles for the development of inland transport

No data available

Greece

52. The Economist Intelligence Unit forecasts that severe austerity measures will reduce the government deficit from 10.6 per cent of GDP in 2010 to 9.5 per cent in 2011 and substantially to 6.2 per cent in 2012 and 4.2 per cent in 2013, helped by debt relief. GDP is forecast to decline steeply for the fourth year running in 2012, by 7.5 per cent. It is then expected to fall by 1 per cent in 2013 and to grow slightly over 2014-2016.

Figure 19. Greece GDP estimates and forecast (2008-2013)



Successful transport policy measures

53. The country reported as one of the successful transport policy measures the liberalization of the transport market and the simplification of business access procedures. In addition, the Government reported the restructuring and modernization / consolidation of railway and urban transport organizations / agencies. The configuration of the institutional framework towards the deployment of Intelligent Transportation Systems (ITS) and the progression, enhancement and promotion of the TEN-T networks and of the intermodal transport were reported as additional successful measures.

Source: The Economist Intelligence Unit, UNECE

Main obstacles for the development of inland transport

54. The country reported that the consequences of the economic crisis, as well as the dramatic increase in the recession of the economy, have reflected into the country's development and consequently affected the development of transport in direct and indirect ways.

Hungary

55. The Economist Intelligence Unit expects a return to deficits from 2012, averaging 3 per cent of GDP per year in 2012-2016. The expected euro zone recession in 2012 will have a negative impact on Hungarian growth, with real GDP expanding by only 0.6 per cent. The Economist Intelligence Unit forecast average annual real GDP growth of 2.4 per cent per year in 2013-2016.

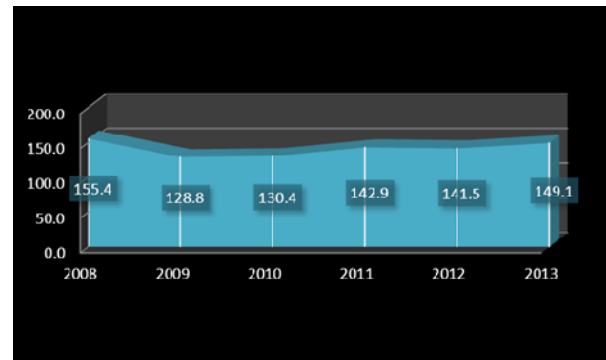
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

56. The country reported that the conditions of the economy have hindered the development of transport in Hungary. The economy started to recover after the downturn, but some investments were postponed or slowed down because of decreased incomes. At the same time, there are still problems with crediting processes, and high and volatile currency rates.

Figure 20. Hungary GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Iceland

57. Based on Economist Intelligence Unit analysis, after recording large surpluses of over 5 per cent of GDP in 2006-2007, the public finances deteriorated massively in 2008-2009. The general government accounts showed a deficit of 10 per cent of GDP in 2009. Fiscal consolidation has seen the deficit fall to 7.8 per cent of GDP in 2010, and we estimate an outturn of 6.2 per cent for 2011. However, the Economist Intelligence Unit expects little further progress in 2012-2013 owing to an economic slowdown and the government's reluctance to risk further unpopularity as the 2013 election approaches.

58. Gross government debt rose from 28 per cent of GDP at end of 2007 to 111 per cent at end of June 2011, largely owing to recapitalisation of the failed commercial banks and the Central Bank of Iceland. Net debt remains more manageable, at an estimated 42 per cent of GDP.

Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Ireland

59. The Economist Intelligence Unit forecasts that the budget deficit will fall from an estimated 10.7 per cent of GDP in 2011 to 8-8.5 per cent in 2013 and about 2 per cent in 2016, assuming that public debt restructuring will be agreed upon after the European Union/ International Monetary Fund lending facility expires in 2013. A gradual pickup is forecasted from 2013, with GDP growth accelerating to 2-2.5 per cent in 2014-2016.

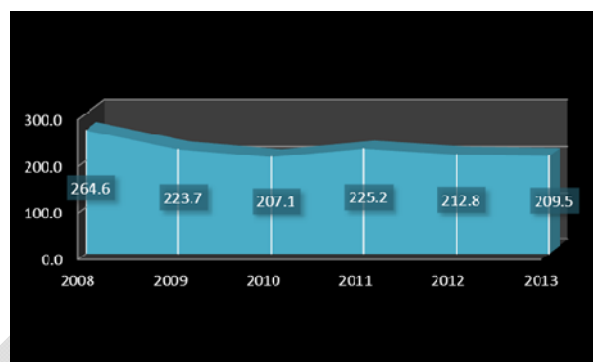
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 21. Ireland GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Israel

60. The Economist Intelligence Unit expects the economic growth to weaken to 2.8 per cent in 2012, as consumption growth slows to a more sustainable pace and export demand weakens sharply. Growth will pick up again in 2014-2016, averaging a robust 5 per cent a year. Monetary policy will be loose in 2012, as inflationary pressures weaken and global demand growth slackens, tightening only slowly thereafter.

Successful transport policy measures

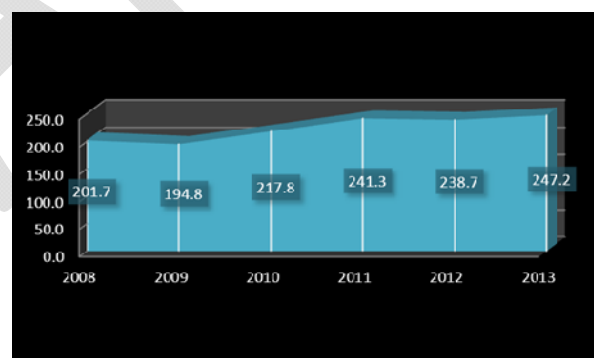
61. The Government reported the following successful transport policy measures:

- Multiyear investment programme - rail system and inter urban roads;
- "Green" Taxation on vehicles - low tax rates on low pollution level vehicles;
- Liberal civil aviation policy - increased frequency, improved level of service and lower prices;
- High occupancy lane to Tel Aviv (Fast Lane) - additional lane on Road 1 to Tel Aviv with dynamic toll for private car usage, free parking and shuttle service;
- Port service price reform - elimination of cross subsidies.

Main obstacles for the development of inland transport

62. The country reported as main obstacles for inland transport development the congestion in urban areas and the decreasing share of public transport. The increasing investments in rail and road systems and the deregulation of public transport sector were reported as measures to be taken.

Figure 22. Israel GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

63. The Economist Intelligence Unit forecasts that the budget deficit will fall from an estimated 4 per cent of GDP in 2011 to 1 per cent in 2013. The Unit also expects that weakening demand from trade partners and fiscal austerity at home will lead to a decline of 0.6 per cent in GDP in 2012, followed by near stagnation in 2013 and growth of just over 1 per cent from 2014 to 2016.

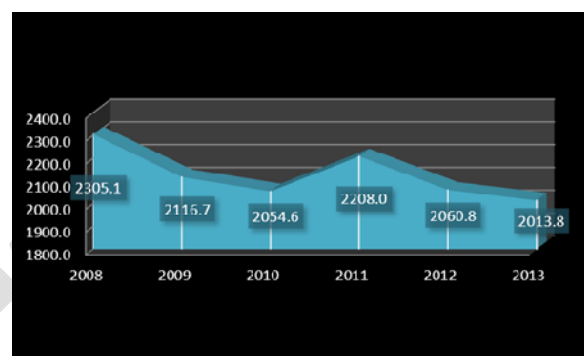
Successful transport policy measures

64. The Government reported as successful transport policy measures the development of a high speed railway network and the increase in capacity of the road network.

Main obstacles for the development of inland transport

65. The completion of the motorway network upgrading was reported as one of the main obstacles for the development of inland transport. The last upgrade of the network took place in 2000. In addition, the lack of subsidy for local public transport was reported.

Figure 23. Italy GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

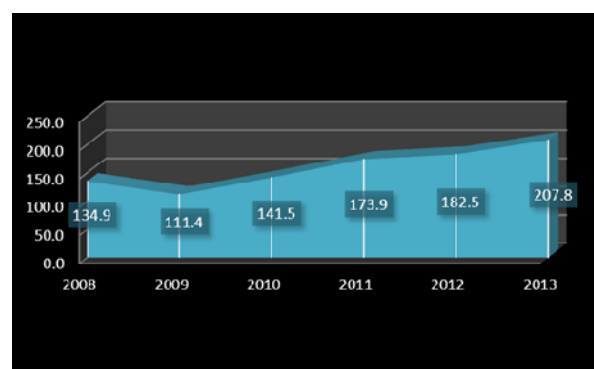
66. According to Economist Intelligence Unit, the state budget deficit is estimated to have narrowed to 2.3 per cent of GDP in 2011, from 2.5 per cent of GDP in 2010. The deficit will remain unchanged in 2012, before narrowing from 2013 owing to improving economic conditions. Over the forecast period, an improvement in domestic conditions, as well as investment in the energy sector, will drive GDP growth. However, annual average growth, forecast at 5.6 per cent in 2012-2016, will be slower than in 2000-2007. The current account is expected to remain of surplus in 2012-2016. The trade surplus will be boosted by rising oil production volumes. This will offset the continuing deficits in other components of the current account.

Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

Figure 24. Kazakhstan GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

No data available.

Kyrgyzstan

67. Difficulties with revenue-raising and high levels of social spending will produce large budget deficits in 2012-2013. After a strong recovery in 2011, the Economist Intelligence Unit expects real GDP growth to slow to an average of 6.5 per cent in 2012-2013, assuming no renewed political instability and that troubled Western economies do not trigger another global recession. It also expects the current-account deficit to narrow from 8.8 per cent of GDP in 2011 to just over 6 per cent per year in 2012-2013.

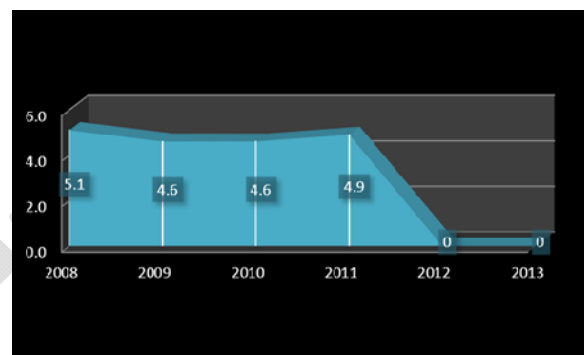
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 25. Kyrgyzstan GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Latvia

68. Real GDP growth resumed in the second half of 2010 and the economy rebounded strongly in 2011. The Economist Intelligence Unit estimates real GDP growth at 4.6 per cent in 2011 and forecasted that it will slow to 3 per cent in 2012. The recession led to a sharp decline in inflation, and consumer prices fell by 1.1 per cent in 2010. Consumer price growth is estimated to have risen to 4.4 per cent on average in 2011 as global oil and food prices increased, but will fall in 2012-2013.

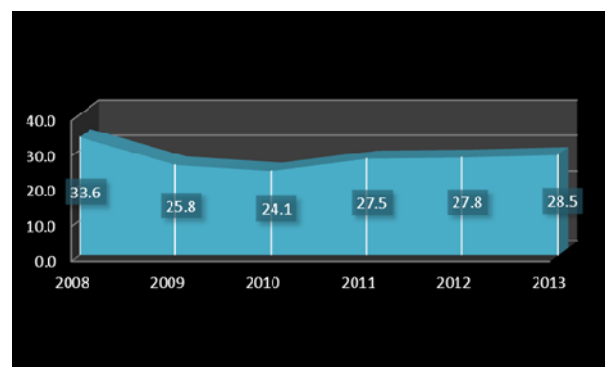
Successful transport policy measures

69. The transport infrastructure works completed in 2009 – 2010 were reported:

- Opening of the “Rīgas Ekspresis” container-train route Riga-Moscow;
- Already in 2009, Latvia complied with the target set in the “Verona Declaration on Road Safety”;
- Promotion of container transit to the Russian Federation, China, Belarus and Ukraine.

70. In 2010, the reconstruction of Liepaja and Riga ports access roads, the change of rail turnout transmission

Figure 26. Latvia GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

in the Eastern-Western rail corridor as well as the improvement of TEN road network have been completed.

71. In addition, the public transport service system was adjusted to spend the less financial resources as possible.

Main obstacles for the development of inland transport

72. It was reported that the available financial resources for infrastructure projects are not sufficient.

73. In order to efficiently use the transportation infrastructure and to ensure more efficient transit transport via Latvia, the international freight logistics and port information system (SKLOIS) is being implemented.

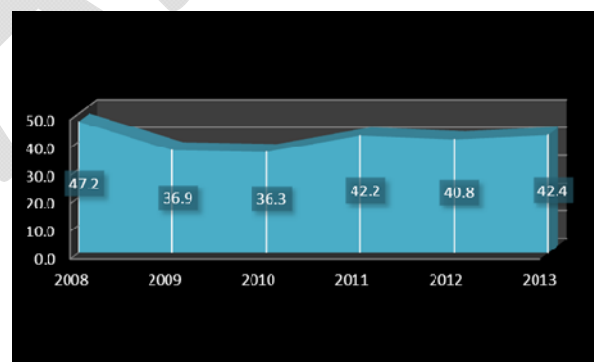
Liechtenstein

No data available.

Lithuania

74. The Economist Intelligence Unit estimates a recovery in real GDP growth to 6 per cent in 2011. However, growth is forecasted to slow sharply in 2012, to 2.5 per cent, owing to a worsening external environment. It also forecasts average annual growth of 3.3 per cent in 2012-2016. The current-account deficit will widen further from 2012 as continued growth in domestic demand pulls in imports, reaching 4.2 per cent of GDP by 2016.

Figure 27. Lithuania GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Successful transport policy measures

75. The Government reported that in a period of 11 months in 2011 the following results were achieved:

- (a.) Reduction of the number of fatalities on the roads by 8 per cent compared to the same period in 2010;
- (b.) Reduction of the number of injured people in traffic accidents by 8 per cent compared to the same period in 2010 ;
- (c.) 340 fewer accidents in the reported period compared to the same period in 2010.

76. In 2011, the Lithuanian Government successfully implemented the shuttle container train project "Saule". The first 41 container train with computer-aided equipment was launched from China on 28 October and reached Lithuania within 13 days. The remaining distance to Belgium was reached in six days.

Main obstacles for the development of inland transport

77. The following main obstacles were reported:

- (a.) Insufficiently developed network of access connections (road and railways) to the Port of Klaipeda;

- (b.) Underdevelopment of infrastructure connections with the EU member States and third countries;
- (c.) Lack of public centre's effective interaction among modes of transport that would facilitate the development of multimodal transportation services;
- (d.) Insufficiently developed inland waterways transport sector;
- (e.) Inadequate railway infrastructure for freight transportation in the North - South directions;
- (f.) Border crossing is still a problem. Lithuania is the EU's border with the Russian Federation and Belarus and there is a lack of proper infrastructure with other non-EU countries.

Luxembourg

78. GDP growth is expected to slow from 2.7 per cent in 2010 to 2 per cent in 2011. In 2012, the Economist Intelligence Unit estimated that Luxembourg will experience a moderate recession with GDP declining by 0.4 per cent, followed by a modest recovery to 0.7 per cent growth in 2013.

79. The 2012 budget removes the 0.8 per cent 2011 "crisis" supplement on income tax and expects a low 0.7 per cent deficit for the year. Results for the first nine months of 2011 were favourable.

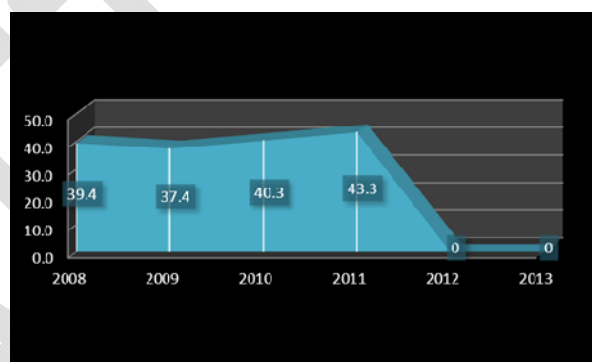
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 28. Luxembourg GDP estimates and forecast (2008-2013)



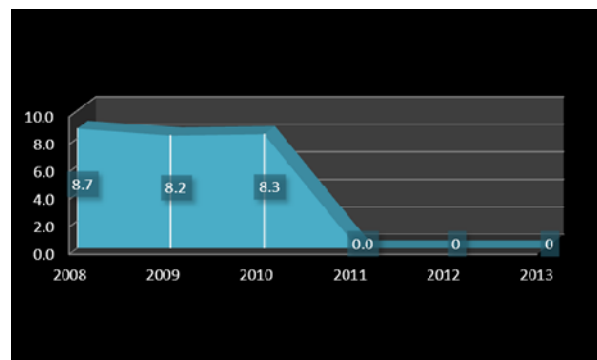
Source: The Economist Intelligence Unit, UNECE

Malta

80. GDP growth slowed to 0.7 per cent quarter-on-quarter in the first quarter of 2011, mainly on the back of weaker domestic demand, driven mostly by lower investment and a drawdown of inventories. Private and public consumption recovered. The contribution of net exports remained highly positive. Inflation remained high, while unemployment eased further.

Successful transport policy measures

Figure 29. Malta GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

No data available.

Main obstacles for the development of inland transport

No data available.

Monaco

Successful transport policy measures

81. The country reported that the creation of an underground road infrastructure that will better serve the inter-districts by reducing transit traffic inside the districts as a successful transport policy measure. In addition the qualitative and quantitative improvement of transport by bus and the implementation of a single ticket pricing (single ticket at 1 euro) were successful measures. Monaco has cooperation with the French SNCF for the rail sector. The country is planning the purchase of five TER (Train Express Regional) of 50 million Euros to set at SNCF disposal with main objective the increase of rail traffic.

Main obstacles for the development of inland transport

82. The country reported as main obstacle for the development of inland transport the limited size of the country's territory as well as its lanes together with the congested undergrounds. There is only one coastal railway line.

Montenegro

83. The central government budget deficit in the first half of 2011 amounted to 52.4 million Euros (US\$73.4m), down from 54.1 million Euros in the first quarter, but sharply up from 11.5million Euros a year earlier. The government expected the 2011 budget deficit to amount to 3.3 per cent of GDP—up from 2.4 per cent projected in the budget.

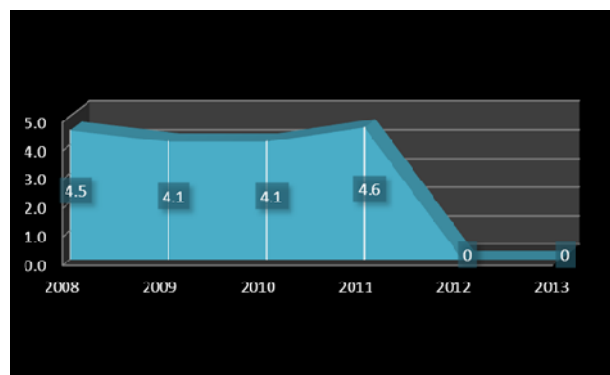
84. Real GDP grew by 2.1 per cent in the first half of 2011, according to the Ministry of Finance, which provided no further details. Industrial output picked up in August, rising by 18 per cent year-on-year, after a sharp contraction in the first half of the year. Tourism rebounded in January-July 2011, with revenue rising by 7.9 per cent year on year. Inflation accelerated to 3.6 per cent year on year in August (from 3 per cent in July).

Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

Figure 30. Montenegro GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

No data available.

Netherlands

85. Based on the Economist Intelligence Unit estimates, the budget deficit is expected to fall below 3 per cent of GDP from 2013. Public debt will rise to around 70 per cent of GDP, before falling back. The Economist Intelligence Unit has revised its GDP growth forecast down to 1.4 per cent (from 1.6 per cent) in 2011 and expects a deeper recession in 2012 (-0.6 per cent), followed by sluggish average growth of 1.5 per cent in 2013-2016.

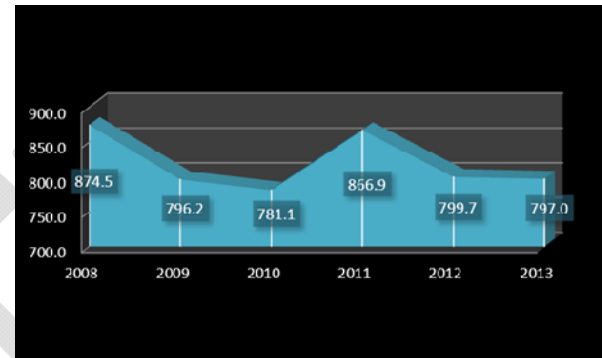
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 31. The Netherlands GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Norway

86. The 2011 revised national budget does not exceed the 4 per cent rule, and equates to a moderate fiscal tightening of 0.3 per cent of mainland trend GDP. The impact of the 2012 budget on mainland GDP is estimated to be broadly neutral. The Economist Intelligence Unit estimates that the general government budget surplus should be around 13 per cent in 2011. The government has pledged to keep the overall tax burden constant. It has earmarked future public spending for road and rail infrastructure programmes and an expansion of healthcare.

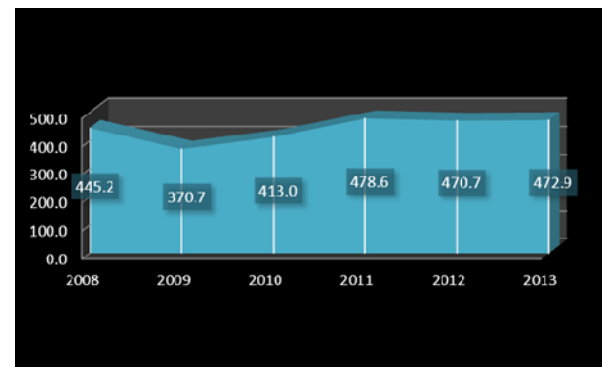
Successful transport policy measures

87. The country reported a considerable increase in infrastructure investments (road and rail) for 2011.

Main obstacles for the development of inland transport

88. As main obstacles were reported the weather conditions where the cold winter was followed by heavy rainfall causing damages to transport infrastructure. (frost heave, flood and landslides).

Figure 32. Norway GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Poland

89. The Economist Intelligence Unit estimates real GDP growth at 3.8 per cent in 2011, the same as in 2010, sustained by strong domestic demand. Inflation is estimated to average 4.1 per cent in 2011, owing to higher indirect taxes, strong domestic demand and high commodity prices. Annual inflation will fall thereafter, fluctuating around 2.6-3.3 per cent, within the authorities' target range.

Successful transport policy measures

90. The country reported the introduction on 1 July 2011 of an electronic toll collection system on public motorways, selected expressways and national roads for heavy goods vehicles and buses.

91. The Law on public mass transport entered into force in March 2011. The Law regulates the obligations of various public bodies for organization of public transport.

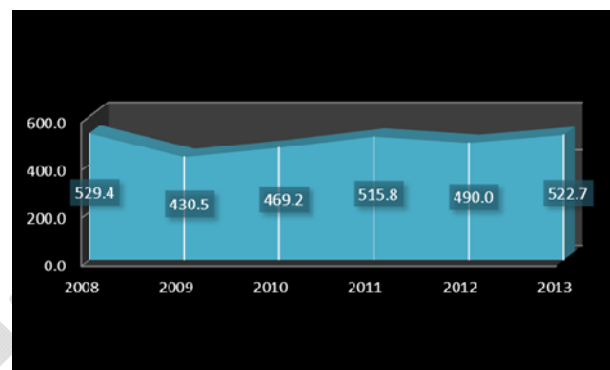
92. The government has taken several actions to increase road safety. Among these actions, the Program of Abolishment of Dangerous Points on Roads (PADPR) was included. During the duration of PADPR programme (2005-2010) 397 investments were completed.

Main obstacles for the development of inland transport

93. The country reported that the economic crisis decreased the income of the National Road Fund and therefore prevented more investment in road infrastructure. Also, the amount of resources for infrastructure development in the next European Multiannual Financial Perspective 2014-2020 is uncertain.

94. The current level of road safety in Poland is still at unsatisfied levels. The government reported that new infrastructure (motorways, expressways and by-passes) is being built and awareness campaigns targeted for different groups of road users are being launched to increase road safety.

Figure 33. Poland GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Portugal

95. The Economist Intelligence Unit forecasts that the deficit is to fall gradually, to below 3 per cent of GDP in 2016, but the process will be slowed by recession and subject to implementation risk. According to the Economist Intelligence Unit estimates, the economy is expected to be extremely weak, weighed down by the effect of severe fiscal consolidation on all domestic demand components. Inflation is expected to peak at 3.7 per cent in 2011 and to be more subdued in 2012-2016.

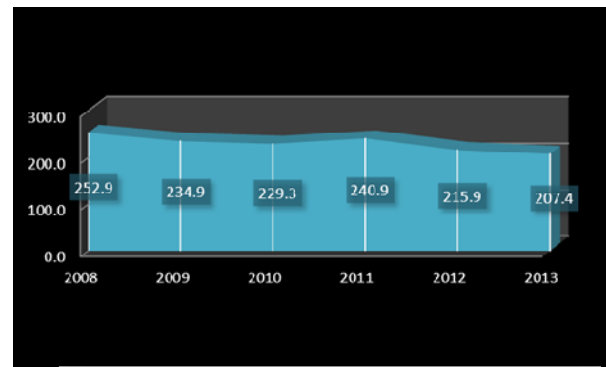
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 34. Portugal GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Republic of Moldova

96. The Economist Intelligence Unit forecasts a contraction to 1.1 per cent of GDP by 2013. It also estimates real GDP growth at 5.5 per cent in 2011. It is forecasted to slow to 3.5 per cent in 2012, as prospects in the euro zone have worsened greatly.

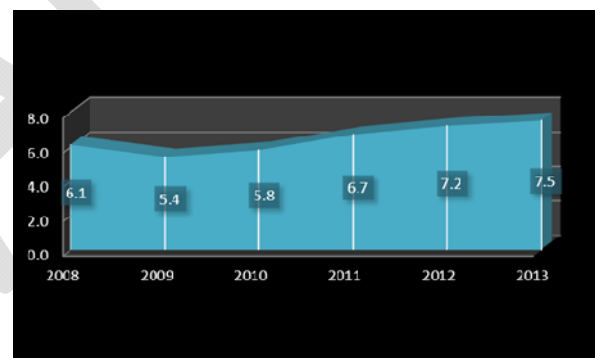
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 35. Republic of Moldova GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Romania

97. The Economist Intelligence Unit forecasts real GDP growth of 1.5 per cent in 2012, after estimated growth of 2 per cent in 2011, reflecting a contraction in the euro zone and the impact on domestic demand of fiscal austerity. Growth is forecasted to average 4.2 per cent in 2013-2016.

Successful transport policy measures

98. The government reported the following transport policy measures and actions that have been implemented:

- (a.) Spatial Planning of the National Territory (Law no. 363/2006);
- (b.) Sectoral Operational Programme on Transport 2007-2013 (SOP-T);
- (c.) TEN-T revision, in the framework of the new regulation promoted by the European Commission;

(d.) Directive 2010/40/UE (ITS Directive) will be transposed in the national legislation until to the 27th of February 2012;

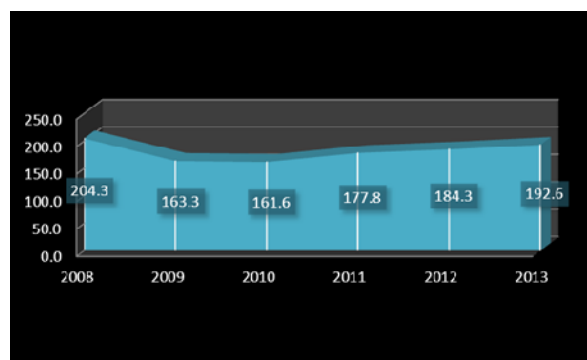
(e.) The Intermodal policy in Romania is under implementation, being approved by the Order of the Minister of Transport and Infrastructure no. 457/2011 (20.06.2011).

Main obstacles for the development of inland transport

99. The main problems occurring in transport development are:

- (a.) The provision of financing and technical documents;
- (b.) The preparation of contracts for new works and their execution within the completion date;
- (c.) Obstacles in intermodal transport: (i). development of ports rail hinterland connection, (ii). short distance rail transport is less efficient compared to road transport, (iii) absence of awareness and information on the benefits of intermodal transport.

Figure 36. Romania GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Russian Federation

100. Based on Economist Intelligence Unit analysis, contrary to previous plans, the latest fiscal plans suggest that the overall budget will remain in deficit in 2012-2014. The budget's reliance on oil has increased greatly: from 3.6 per cent of GDP in 2007, the non-oil budget deficit widened to 13.9 per cent of GDP in 2009 and narrowed only marginally in 2010, to 12.8 per cent.

Successful transport policy measures

101. The measures that are being implemented under the Transport Strategy are:

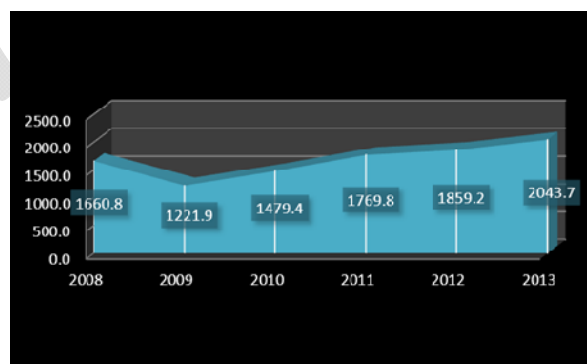
- (a.) The formation of a single transport space in the Russian Federation on the basis of a balanced development and of an efficient transport infrastructure;
- (b.) Accessibility, competitiveness and quality of transportation services for passengers and cargo;
- (c.) Integration into the global transportation system and realization of transit potential of the country;

Main obstacles for the development of inland transport

102. Given the large area of the country and the large fluctuations in population density the following issues could be considered as main obstacles for the development of inland transport:

- (a.) territorial heterogeneity of transport infrastructure development (long-term factor);
- (b.) the need to further improve the availability of transportation services for the population (long-term factor);
- (c.) insufficient use of transit transport;

Figure 37. Russian Federation GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

(d.) the need to ensure transport safety.

San Marino

No data available

Serbia

103. The Economist Intelligence Unit forecasts a steady, modest real appreciation of the dinar in 2012-2016, following sharp real depreciation in 2009-2010. It also forecasts modest real GDP growth, of 2.4 per cent, in 2012, following estimated growth of 2.3 per cent in 2011, as euro zone growth turns negative.

Successful transport policy measures

104. The country reported as successful transport policy measure the strategy for railway, road, inland waterway, air and intermodal transport development in the Republic of Serbia from 2008 until 2015.

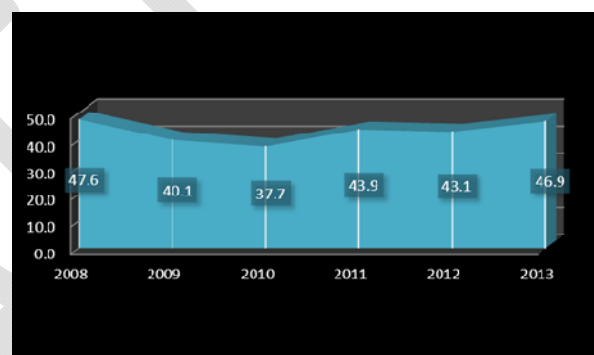
Main obstacles for the development of inland transport

105. The passenger traffic on Serbian railways saw a downward trend in transport volume, primarily due to a lack of vehicles as well as to the poor condition of infrastructure.

106. The main problems in inland waterway are the lack of full use of water transport freight and the reduced turnover of cargo in the domestic market (including import and export of goods).

107. Insufficient funds for modernization and maintenance of the road network, obsolete vehicle fleet and lack of ITS on roads significantly affect the development of road transport in the Republic of Serbia.

Figure 38. Serbia GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Slovak Republic

108. The consolidated government deficit is unlikely to shrink to less than 3 per cent of GDP until 2013. Real GDP growth is forecast to average 3.2 per cent per year in 2012-2016, which is subdued compared with the pre-crisis years. The Economist Intelligence Unit forecasts that in 2012-2016, Slovakia will register average annual current account deficits of 3.4 per cent as the trade balance gradually shifts to deficit.

Successful transport policy measures

109. The Slovak Republic implements the Operational Programme for Transport 2007 – 2013.

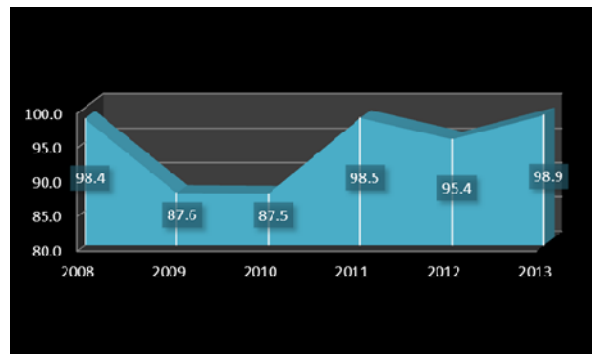
110. In January 2011, a new decree on charging of railway infrastructure entered into force. The charging of infrastructure will be based on costs that are directly related with movement of the train.

Main obstacles for the development of inland transport

111. The country reported as main problem the unfinished motorway connection between the western and eastern part of Slovakia.

112. In addition, the lack of connection between bus and rail passenger transport was reported as a basic obstacle. The act on public transport is under preparation in which the basic principles and tasks for both transport modes will be introduced. The high charges of railway infrastructure usage and the obsolete railway freight rolling stock were also reported.

Figure 39. Slovak Republic GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Slovenia

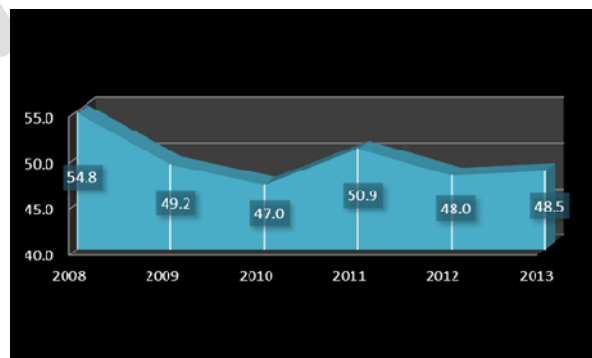
113. The Economist Intelligence Unit forecasts that the general budget deficit will remain large in 2012, at 4.4 per cent of GDP. From 2013, it is forecasted to shrink to within 3 per cent of GDP, as required by the European Union. It also expects real GDP growth to slow from an estimated 1.2 per cent in 2011 to 0.5 per cent in 2012.

Successful transport policy measures

114. The Republic of Slovenia introduced in 2008, a vignette system for charging motorway passenger's cars and motorbikes. Due to that measure, a substantive shift from state roads to motorway roads has been achieved which has decreased the number of fatal road accidents.

115. In 2010, the Republic of Slovenia implemented cross financing of transport infrastructure. The development of rail infrastructure is being financed by funds collected from road pricing and port concession.

Figure 40. Slovenia GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Main obstacles for the development of inland transport

116. Public passenger transport – decrease in the number of passengers / the national project on integrated public passenger transport is under way and will be finished by 2014.

117. Old rail infrastructure is not meeting the characteristic of modern rail transport needs. Therefore Slovenia

is facing a modal shift in favour of road freight transport.

118. Due to the economic crisis substantial decreases in the transport market accrued. Slovenia is taking measures to improve its competitiveness on the market by improving the transport infrastructure and logistics.

Spain

119. The Economist Intelligence Unit believes that the general government budget deficit will narrow only gradually from 9.3 per cent of GDP in 2010 to below 3 per cent of GDP by 2016, with the government missing its target of 3 per cent of GDP by 2013. Over the whole of 2012-2016, however, EIU forecast is for a slow improvement, with average annual real GDP growth of 1.2 per cent.

Successful transport policy measures

(a.) Strategic Plan for transport infrastructure (Plan Estratégico de Infraestructuras del Transporte) 2005-2020 (PEIT).

www.fomento.es/MFOM/LANG_CASTELLANO/ESPECIALES/PEIT/;

(b.) Plan de ahorro, eficiencia energética y reducción de emisiones en el transporte y la vivienda (2011).

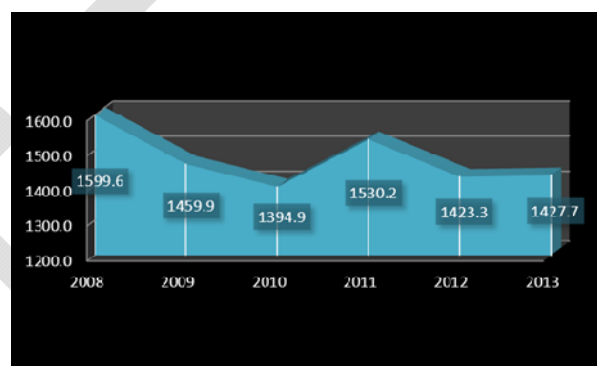
www.fomento.gob.es/NR/rdonlyres/3A6E2F43-5449-45ED-B6DC-3C39E9E6AA30/101081/11040601P3PlanAhorroenergético.pdf;

(a.) Plan Estratégico para el Impulso del Transporte Ferroviario de Mercancías en España. www.fomento.gob.es/NR/rdonlyres/E9229D97-59DB-44BE-BA47-AC93A45C4C72/98696/10091401PEITMF.pdf;

(b.) Plan de líneas de actuación para el transporte en autobús (PLATA 2010-2014). www.fomento.gob.es/MFOM/LANG_CASTELLANO/DIRECCIONES_GENERALES/TRANSPORTE_POR_CARRETERA/Documentos/Plata/;

(c.) Plan Estratégico de actuación para el transporte de mercancías por carretera (PETRA II); www.fomento.gob.es/MFOM/LANG_CASTELLANO/DIRECCIONES_GENERALES/TRANSPORTE_POR_CARRETERA/Documentos/PETRA_2/.

Figure 41. Spain GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Sweden

120. The Economist Intelligence Unit expects that following a growth of 5.4 per cent in 2010, the economy is estimated to grow by 3.3 per cent in 2011, but with a sharp slowdown from mid-year leading to a growth of only 0.3 per cent in 2012. A gradual pick-up to around 2 per cent is expected by 2016. Inflation (EU harmonized measure) is estimated to average 1.7 per cent in 2011.

Successful transport policy measures

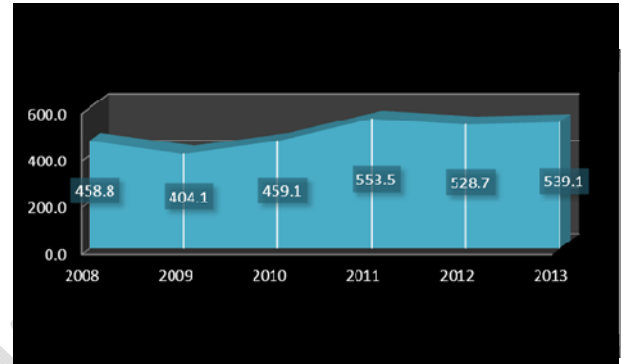
121. The Swedish transport policy and policy measures, based on the vision zero concept aiming to reduce the

number of severe accidents related to road traffic, have been very successful.

Main obstacles for the development of inland transport

122. Large parts of railway infrastructure are worn down partly because of neglected maintenance and neglected re-investments and finally because of the increased traffic volumes on the railways.

Figure 42. Sweden GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Switzerland

123. The Economist Intelligence Unit expects GDP growth to slow sharply from an estimated average of 1.9 per cent in 2011, and to be in recession in late 2011 and early 2012. It expects a gradual recovery in 2013-2016, but net exports will be particularly weak.

Successful transport policy measures

124. The government reported as successful transport policy its policy in heavy goods transport. This policy relies on three pillars: the Heavy Vehicle Fee, new Railway lines across the Alps and a rail reform to make rail more competitive. It also depends on three main factors: the distance driven, the admissible weight of the vehicle and the emissions.

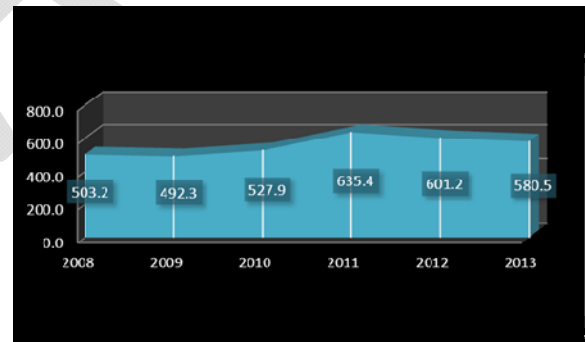
www.are.admin.ch/themen/verkehr/00250/00461/index.html?lang=en

125. The policy in urban transport (agglomerations) was also reported as a successful measure. The creation of an infrastructure fund to co-finance infrastructure projects in urban areas was the main pillar of this policy.

Main obstacles for the development of inland transport

126. Congestion was reported as the main obstacle. The above mentioned measures help to alleviate the problem of the congestion.

Figure 43. Switzerland GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

127. Real GDP rose by 6.9 per cent year on year in January-June 2011, with growth picking up from 6.5 per cent in the first quarter to 7.3 per cent in the second quarter. Industrial output growth has been patchy owing to lower aluminium production, but picked up rapidly in June. Inflation rose to an average of 13.3 per cent in January-June.

Successful transport policy measures

128. The Government of the Republic of Tajikistan developed and approved the State programme for the development of the transport system of the Republic of Tajikistan until 2025. Also the government developed 37 projects totalling U.S. \$ 1.1 billion to attract new investments. In accordance with the rehabilitation programme the network of roads is being constructed linking the capital to other regions of the country. Including:

- (a.) China's exit to the highway Karakarumskoe;
- (b.) Dushanbe-Khujand-Aini-border of Uzbekistan;
- (c.) Dushanbe-Kurgan-Tube-Nizhny Panj-border Afghanistan;
- (d.) Dushanbe-Vahdat-Jirgatol-border Kyrgyzstan.

129. The Republic of Tajikistan government also pays special attention to the development of railway transportation. Work is underway to bring the level up to the requirements of international standards for the railway line Kurgan-Tube-Kulyab and its infrastructure.

Main obstacles for the development of inland transport

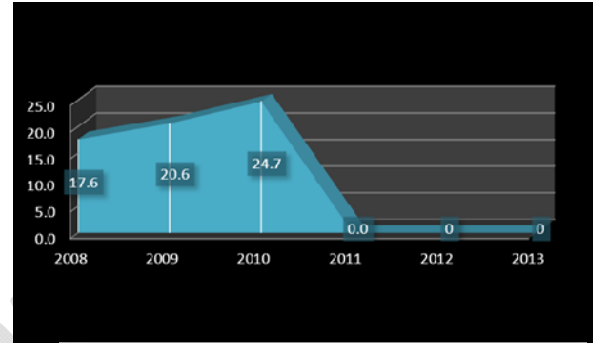
130. The country reported as main problems the following:
- (a.) unofficial fees at border crossings and long waiting of vehicles (especially in Kyrgyzstan and Uzbekistan);
 - (b.) unwarranted delay in the appointment of trucks in the Republic of Tajikistan;
 - (c.) the lack of road freight terminals that meet the requirements of international standard;
 - (d.) the lack of a mechanism of logistics and logistics centres.

The former Yugoslav Republic of Macedonia

131. The Economist Intelligence Unit estimates a real GDP growth of 3.1 per cent in 2011, slowing to 2.8 per cent in 2012, reflecting our euro zone recession forecast. Stronger growth is forecasted in 2013, supported by government consumption and recovering domestic demand. The budget deficit will remain large in 2011-2013, but the government is committed to narrowing it, supported by a 390 million (US\$550 million) precautionary credit line (PCL) with the IMF.

Successful transport policy measures

Figure 44. Tajikistan GDP estimates and forecast (2008-2013)



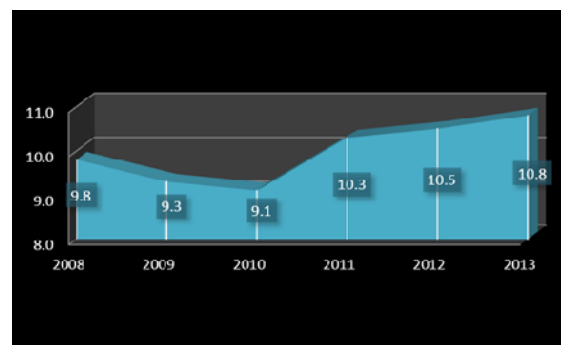
Source: The Economist Intelligence Unit, UNECE

Figure 45. The former Yugoslav Republic of Macedonia GDP estimates and forecast (2008-2013)

No data available.

Main obstacles for the development of inland transport

No data available.



Source: The Economist Intelligence Unit, UNECE

Turkey

132. Following a sharp rise in 2009, the budget deficit is expected to ease from 3.6 per cent of GDP in 2010 to 1.8 per cent in 2011, and stabilise around 2 per cent in 2012-2016. The Economist Intelligence Unit expects GDP growth to slow from an estimated 7.5 per cent in 2011 to 3.5 per cent in 2012, before picking up to 5-5.5 per cent a year in 2013-2016.

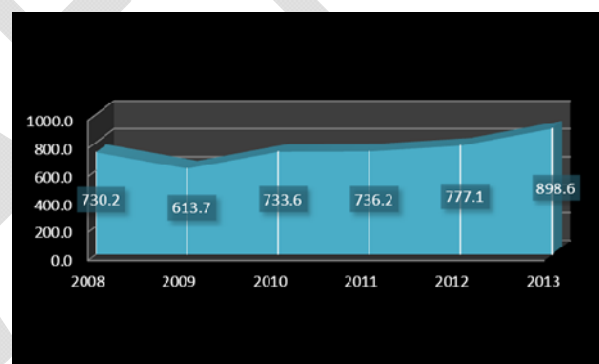
Successful transport policy measures

133. The government of Turkey reported the following legislative and administrative improvements in Road Transport as successful transport policy measures:

- (a.) International and domestic operations have been licensed on the basis of the new road transport law and legal regulations enacted in line with EU requirements;
- (b.) Necessary administrative and institutional measures have been taken for the training requirements on the Certificate of Professional Competence (CPC);
- (c.) A Ministerial Decree on road safety was published on 19 March 2009 for the gradual withdrawal of old motor vehicles from traffic;
- (d.) As of October 2011, there are 193 fixed and 73 mobile inspection stations operating in 81 provinces;
- (e.) A comprehensive investment plan has been prepared for increasing the number of control stations up to 160 until the year 2020;
- (f.) Turkey became a Contracting Party to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) as of 22 February 2010;
- (g.) Regarding the implementation of digital tachograph, on 4 January 2010, the Ministry of Transport was appointed as the National Authority for the implementation of digital tachograph in Turkey.

134. For Railway Transport the country reported the following:
- (a.) Introduction of high speed train services by constructing High Speed Railway Lines;
 - (b.) Increasing the average speed of trains by upgrading the existing lines and fleet;
 - (c.) Making Turkish railways more efficient and productive by taking appropriate reform measures like other railways in the world;

Figure 46. Turkey GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

(d.) Enabling private sector to operate in railways.

Main obstacles for the development of inland transport

135. The country reported that financing transport infrastructure projects is quite difficult due to budget constraints. Public Private Partnership (PPP) schemes are considered as an important option.

136. In addition, the old railway network in a large geographical area, the physical inadequacies and the low geometrical standards of the network were reported as basic obstacles.

Turkmenistan

137. The Economist Intelligence Unit estimates real GDP growth of 11 per cent in 2011, and forecasts growth of 6 per cent in 2012 and of 7 per cent in 2013 as gas exports rose more slowly and investment picks up. It also estimates a return to surplus on the current account in 2011, after recording deficits in 2009 and 2010.

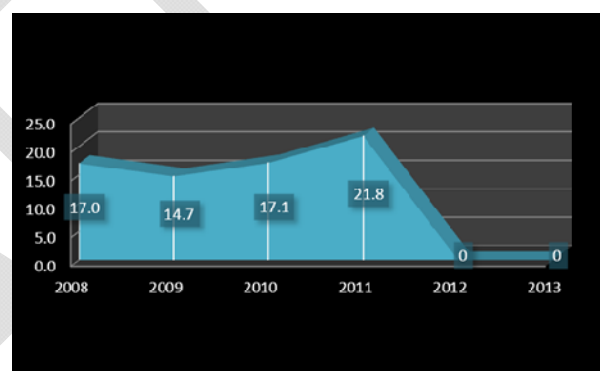
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

Figure 47. Turkmenistan GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Ukraine

138. Real GDP growth is estimated at 4.2 per cent in 2011, supported by domestic demand and export growth. In 2012 it is forecast to dip to 3.4 per cent owing to weaker export demand growth, before strengthening in 2013-16.

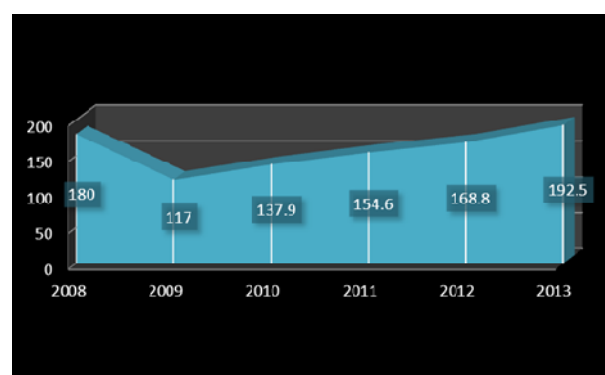
Successful transport policy measures

139. Development and approval by the Cabinet of Ministers of Ukraine of the Transport Strategy of Ukraine until 2020:

(a.) Drafting of the State Target Economic Program on development of road and urban electric transport in 2012 - 2015 ;

(b.) New edition of the State Target Program of reforming railway transport;

Figure 48. Ukraine GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

(c.) A draft Law on Amendments to the Law of Ukraine "On Railway Transport", aimed at improving the management of rail systems;

(d.) In the second half of 2010, opening of the rail-road bridge over the Dnieper river.

Main obstacles for the development of inland transport

140. The main problems hindering the development of passenger transport in 2011:

(a.) Operations of public bus routes in a large number of "small" carriers;

(b.) The presence of "illegal carriers" who under the guise of non-scheduled operations run in parallel on regular bus routes;

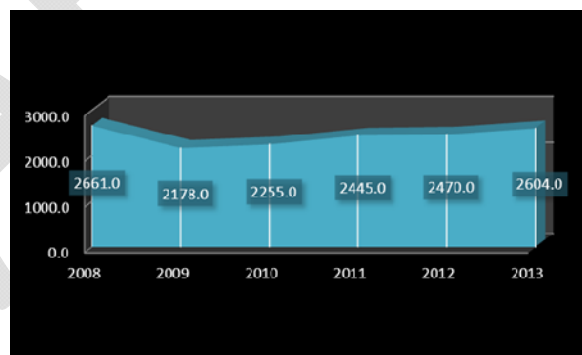
(c.) The presence of large numbers of passengers who are entitled to free travel on buses;

(d.) One of the most acute problems in the railways is the physical deterioration of locomotives and inconsistency of its technical and economic characteristics with the modern requirements.

United Kingdom of Great Britain and Northern Ireland

141. After contracting by a cumulative 7.1 per cent over five quarters during 2008-2009, real GDP grew by 1.8 per cent in 2010. Weak growth of 0.7-0.8 per cent is forecast for 2011-2012. The Economist Intelligence Unit assigns a 50 per cent risk to a contraction of GDP in 2012. The economy expanded by a quarterly 0.5 per cent in July-September.

Figure 49. United Kingdom GDP estimates and forecast (2008-2013)



Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

United States of America

142. The Economist Intelligence Unit forecasts that Federal debt (net of debt holdings by government agencies) to rise from just fewer than 38 per cent of GDP in 2008 to around 73 per cent in 2014, before stabilising. The Economist expects the deficit to fall from 8.7 per cent of GDP in 2011 to 7.8 per cent of GDP in 2012, before dropping back to 3.4 per cent by 2016.

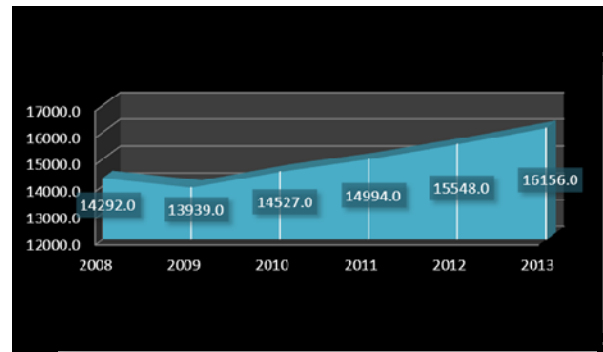
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

Figure 50. United States of America GDP estimates and forecast (2008-2013)

No data available.



Source: The Economist Intelligence Unit, UNECE

Uzbekistan

143. Real GDP growth will remain robust in 2012-2013, owing to broadly favourable export prices. The Economist Intelligence Unit expects that the current-account surplus will reach more than 15 per cent of GDP in 2011, before falling to around 10 per cent of GDP by 2013 as global prices for Uzbek commodity exports decline.

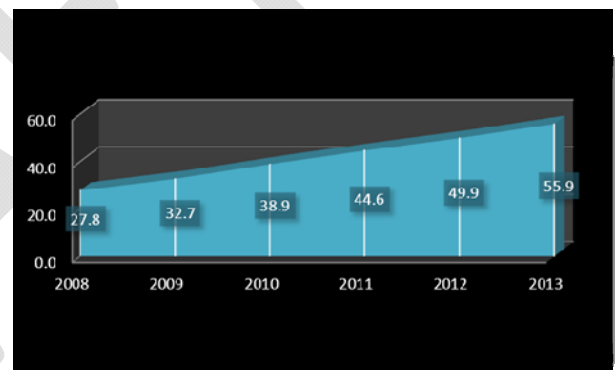
Successful transport policy measures

No data available.

Main obstacles for the development of inland transport

No data available.

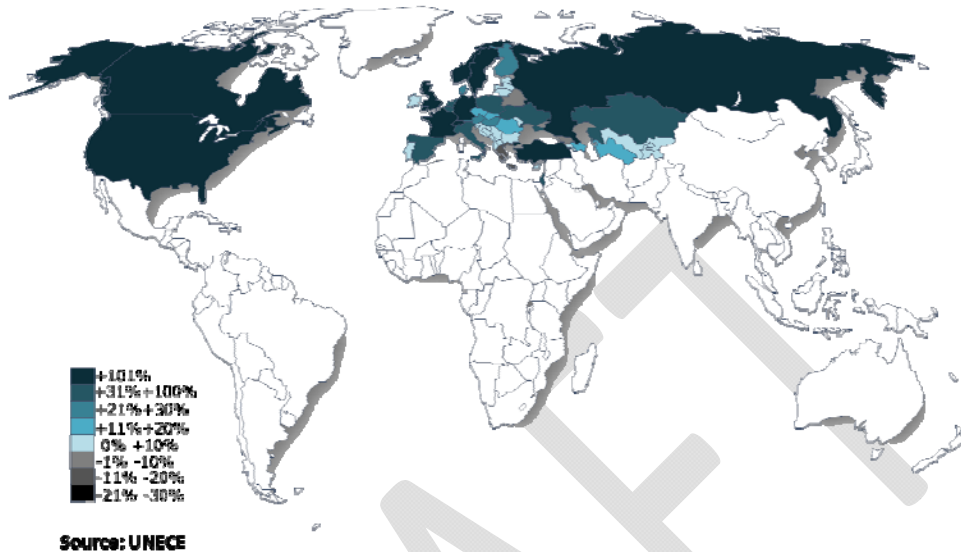
Figure 51. Uzbekistan GDP estimates and forecast (2008-2013)



Source: The Economist Intelligence Unit, UNECE

Statistics - Trends

Figure 52. GDP percentage change from 2009 – 2011 in UNECE member States

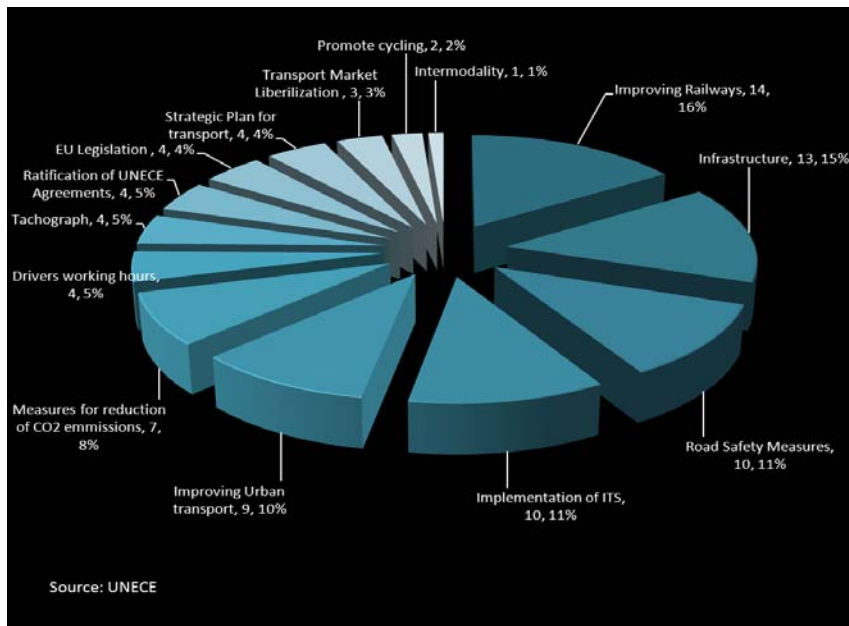


Transport Trend

The majority (84%) of ECE countries it is forecasted that will have an increase of their GDP in 2011 comparing to 2009

144. Seventeen per cent of UNECE member States (10 countries) are forecasted to have a positive percentage change of their GDP from 2009 to 2011 more than 100 per cent. Fourteen per cent of ECE member states are forecasted to have a GDP increase comparing to 2009 between 30 per cent and 100 per cent. 47 countries (84 per cent) are forecasted to have positive increase of their GDP and only 2 countries are forecasted to have a decrease of their GDP comparing to 2009.

Figure 53. Successful Transport Policy measures in UNECE member States

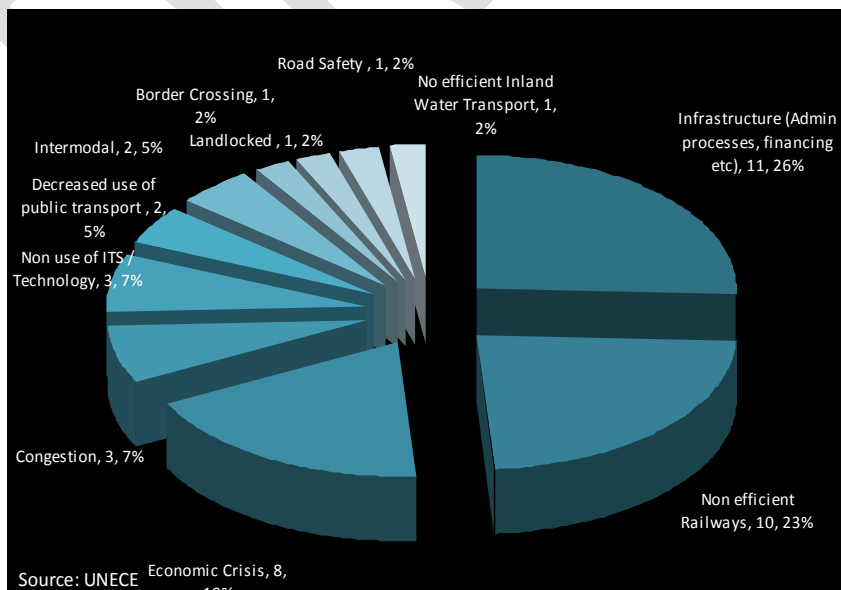


Transport Trend

Improving railways, infrastructure, road safety and the implementation of Intelligent Transport Systems were the most popular successful transport policy measures that UNECE member States implemented in 2011

145. **Successful transport policy measures:** At successful transport policy measures question the 14.16 per cent of the countries replied about the implementation of successful measures in improving railways, the 13.15 per cent measures on improving infrastructure and the 10.11 per cent measures on road safety and Intelligent transport systems.

Figure 54. Main obstacles for the development of Inland Transport in ECE member States

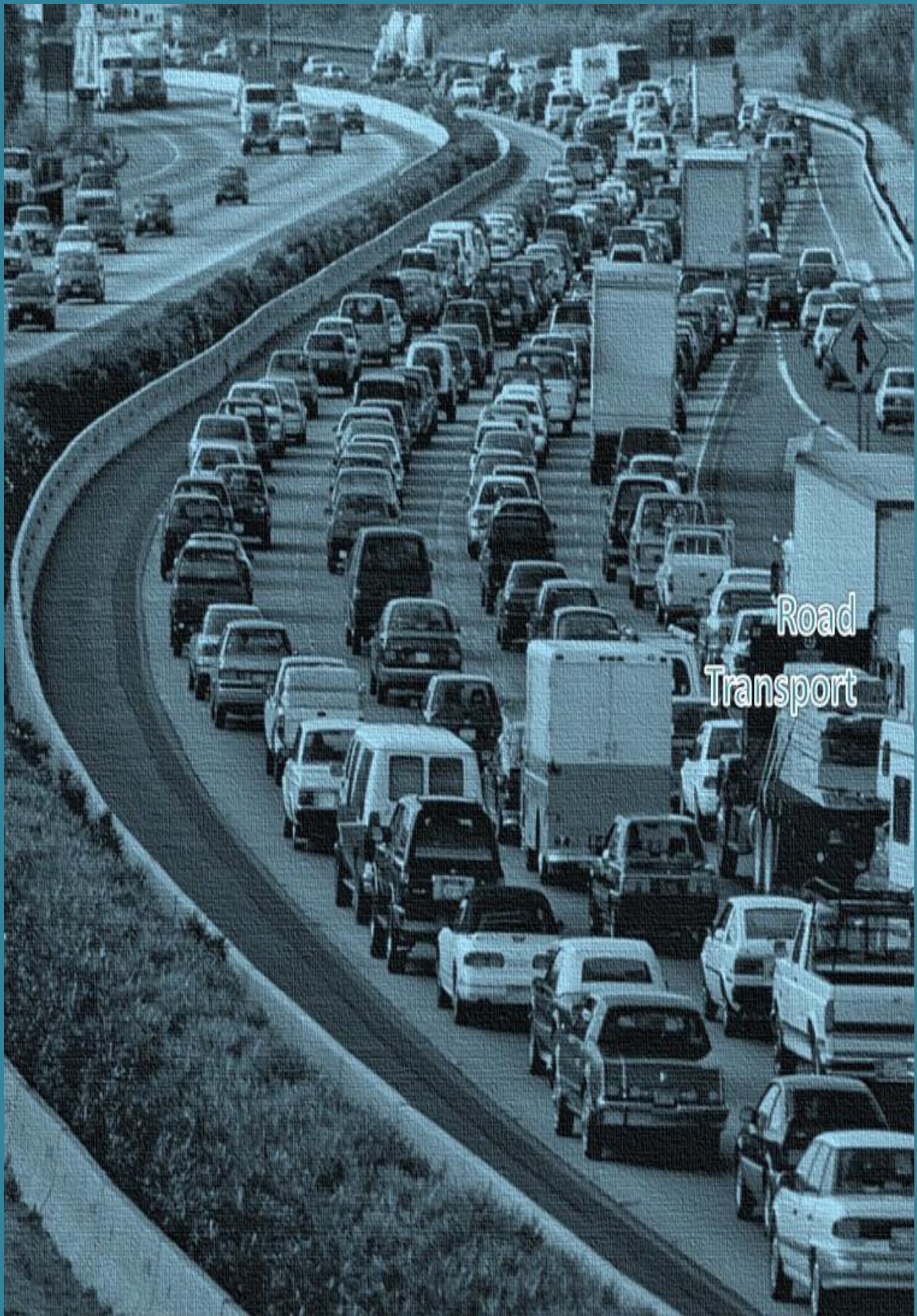


Transport Trend

Administration processes and financing schemes for infrastructure development, railways efficiency and the economic crisis were the main obstacles for the development of inland transport in 2011

146. **Main obstacles for the development of inland transport:** The UNECE member States participated at our questionnaire considered as main obstacles the following:
- a. The 11.26 per cent indicated as main obstacle the infrastructure development. The main problems that countries are facing with infrastructure are the bureaucratic administration processes that cause delays on the development of the projects and the difficulties regarding financing infrastructure projects.
 - b. The 10.23 per cent of the countries indicated the inefficient railways. Railways appear to be at the top of the agenda of UNECE member States regarding both the successful transport policy measures and the main obstacles for the development of inland transport.
 - c. The economic crisis (8.19 per cent) comes third as a main obstacle for the development of inland transport.

DRAFT



Road
Transport

CHAPTER 2. Road Transport

Introduction

147. UNECE does substantive work in the area of road transport, primarily through the Working Party on Road Transport (SC.1) which promotes the development and the facilitation of international transport of goods and passengers by road through harmonization and simplification of the rules and requirements.

148. Following are illustrated UNECE member States responses to the Transport Division's questionnaire on the evolution of traffic volumes of the various transport modes in their country in 2011 and discussion of prospects for the next few years.

Albania

149. Arrivals of foreigners by means of transport 2010 (in thousands) :

- (a.) 2,418 Total;
- (b.) 1,956 By land.

Forecasted number of passengers and passenger-km until 2030 (road transport)			
YEAR	2010	2015	2030
Passengers per day	210 070	412 007	743 891
Passeng.km per day	21 735 767	51 946 981	91 312 021
Average trips length in km	103	126	123
Tons (Thousand per year)	14 207	19 607	35 930
Average trips length in km	117	117	120

Maritime Transport						
2010	Durres			Vlore		
	Total	Enter	Exit	Total	Enter	Exit
Passengers	834 040	407 775	426 265	165 229	77 002	88 227
Vehicles	198 807	108 857	89 950	32 932	16 781	16 151
Trucks	52 767	28 004	24 763	9 743	5 237	4 506
Trailer	15 695	8 127	7 568	761	408	353
2010	Sarande			Shengjin		
	Total	Enter	Exit	Total	Enter	Exit
Passengers	116 069	58 182	57 887	4 467	2 741	1 726
Vehicles	604	299	305	1,253	798	455
Trucks						
Trailer						

Armenia

150. In the year 2010, 10,577,500 tonnes of freight were shipped, out of which 6,196,000t by road

151. In the year 2010, 251,600,000 passengers were carried, out of which

- (a.) 206,000,000 by road;
- (b.) 18,000,000 by taxi;
- (c.) 4,900,000 by trolley-bus.

152. The prospect for the upcoming few years is around 10 per cent of increase in the overall traffic volume.

Belgium

153. If we consider the evolution of transport since 1985, we see that traffic has experienced a period of increase especially in Highways between 1997 and 1999, then reduced from 1999 to 2005 followed by an increase in 2006 - 2007, and finally a decline in 2008 as a result of the economic crisis. The years 2009 - 2010 are marked by a slight increase in traffic on the motorways.

Synthesis of the evolution of automatic counts 1985 – 2010 (annual increase in per cent based on 1985 = 100 per cent)		
Year	Daily average intensity (6h - 22h)	
	highways	Other roads
Base	23 800 car/jour = 100 per cent	6 500 car/jour = 100 per cent
2003 – 2004	+0.80	+1.50
2004 – 2005	+0.70	-0.50
2005 – 2006	+3.30	+0.60
2006 – 2007	+3.00	+0.97
2007 – 2008	-0.60	-1.90
2008 - 2009	+0.90	+0.50
2009 - 2010	+0.66	-0.11

Bulgaria

154. Transport performance of road freight transport for 2011 on quarter basis:

- (a.) I quarter – 4,678.2 million tonnes / km;
- (b.) II quarter – 5,161.0 million tonnes / km.

155. Compared to the data for I quarter and II quarter of 2010 there is a significant increase in transport performance of road freight transport at about **33 per cent and 13 per cent** respectively. Having in mind the economic crisis there is a tendency of growth in transport performance for 2011. In the next few years we are expecting steady increase of the traffic volumes for all transport modes.

* Our conclusions are based on the road freight transport because until now quarterly based data missing for the other modes of transport. But the tendency in percentage change of turnover indices in transport approves the steady increase of traffic volumes for all modes of transport.

** The data is received from the National Statistical Institute of Republic of Bulgaria and it is available on www.nsi.bg

Canada

156. Based on available information for the first 9 months of 2011, Canada's traffic volumes carried by various modes (road, rail, marine and air) continued to increase in 2010-2011 after the significant slowdown linked to the economic recession of 2008-2009.

157. Trucking is the main mode carrying cargo between Canada and the United States (U.S.). After a decrease of 15 per cent in 2009, truck movements at the Canada/U.S. border increased by 7.6 per cent in 2010, but reached almost no growth after the first 9 months of 2011, reflecting the slow recovery of the U.S. economy. Volumes of truck freight at the border are expected to grow at a lower rate overall in 2011 than in 2010.

Croatia

158. At present, data on traffic volumes on various modes of transport in 2011 are available from the period from January to September of this year. For the different transport modes (road, railway, air, maritime, inland waterway and pipeline transport) in 2011, January-September period, road transport represented 42.9 per cent of passenger transport and 59.1 per cent of goods

transport.

159. According to the data available, evolution of traffic volumes compared to the same period in 2010 is as follows: The total number of transported passengers decreased by 14.36 per cent, while the total transport of goods carried increased for 0.17 per cent.

- **Road transport:** number of transported passengers decreased by 7.02 per cent, while volume of transported goods increased by 3.22 per cent.

Source: Internal calculations using the data provided from the Central Bureau of Statistics web site. Republic of Croatia – Central Bureau of Statistics. 14 November 2011 First Release According to the Publishing Programme 2011 – Transport and Communications. www.dzs.hr

Czech Republic

160. The total number of persons carried, as well as transport performance of public transport, went up in this year, but not too significantly. The increase in the number of persons carried amounted to 0.4 per cent, and the performance amounted to 2.4 per cent. Contrary to the preceding year, the number of passengers carried by bus transport is again showing an increase, namely by 4 per cent, and transport performance in passenger-kilometres for the same period increased more markedly, namely by 14 per cent.

161. The total volume of goods carried in freight transport dropped moderately in 2010, namely by 1.5 per cent. On the contrary, total volume of transport expressed in tonne-kilometres rather markedly increased, the increase amounted to more than 13 per cent. This volume of transport increase took place for all transport modes but the air transport. Therefore the figures have returned roughly to the level of 2008.

162. In the years 2012 – 2014, passenger transport in passengers / km is not expected to grow very significantly. The increase is estimated to about 3 – 4 per cent during these three years, share of rail transport should increase. As far as freight transport is concerned further increase is expected in 2012 and onwards especially in tonnes / km. The growth for the same period is predicted to be about 6 – 7 per cent.

Denmark

163. Car/Lorry: In Denmark we expect a small growth of 0-1 per cent in personal car traffic but a larger growth in lorry traffic of 3-5 per cent compared to 2010.

164. Public transport (bus and rail): Public transport is expected to grow by 0-3 per cent in 2011 compared to 2010.

Finland

165. Quite stable, very modest growth, more info:

- (a.) www.liikennevirasto.fi/julkaisut/pdf3/lti_2011-06_tietilasto_2010_web.pdf (road);
- (b.) www.liikennevirasto.fi/julkaisut/pdf3/lti_2011-08_finnish_railway_web.pdf;
www.liikennevirasto.fi/julkaisut/pdf3/lti_2011-02_ulkomaan_meriliikennetilasto_web.pdf (shipping)

France

166. Road Freight: -2.6 per cent 1st tr. 2011, - 0.9 per cent 2nd tr. 2011.

Georgia

167. Road (I-IX month) 2010- 20.7 million/tonnes ; 2011-20.9 million/tonnes.

Germany

Transportation of Goods

	Million tonnes					Change p.a. in per cent			
	2008	2009	2010	2011	2014	09/08	10/09	11/10	14/11
Road	3 438.4	3 094.2	3 129.8	3 230.1	3 490.8	-10.0	1.1	3.2	2.6
Rail	371.3	312.1	355.4	367.4	397.9	-15.9	13.9	3.4	2.7
IWT	245.7	203.9	232.5	237.2	245.4	-17.0	14.0	2.0	1.1
Total ¹	4 150.0	3 702.0	3 810.2	3 927.9	4 227.9	-10.8	2.9	3.1	2.5

Transportation of Passengers

	Million Persons					Change p.a. in per cent			
	2008	2009	2010	2011	2014	09/08	10/09	11/10	14/11
Cars etc ²	56 120	57 128	57 083	57 586	58 692	1.8	-0.1	0.9	0.6
Public Tr.	9 104	9 261	9 268	9 340	9 504	1.7	0.1	0.8	0.6
Total ³	67 738	68 916	68 914	69 546	70 905	1.7	0.0	0.9	0.6

Greece

168. Athens Metro :

(a.) 2010 : 185.4 million passenger;

(b.) 2011 prediction: 182.7 million passengers: - 1.5 per cent / Gradual increase anticipated, due to the construction and operation of new lines and stations.

169. Urban Transport :

(a.) 2010 : 626.7 MP

(b.) 2011 : prediction : 552.6 MP :- 11.8 per cent

170. Freight Transport :

Road freight: 2011 statistical data have not been authorized yet.

Hungary

171. There was a significant decrease in transport volumes 2-3 years ago because of the economic crisis. The traffic volumes are still under the peak year.

	Road	Total
2011. Q1-Q2 (million tonnes)	87 071	126 019
In percent of 2010. Q1-Q2 data	95.03 per cent	96.27 per cent
In percent of 2009. Q1-Q2 data	83.64 per cent	90.18 per cent
In percent of 2008. Q1-Q2 data	73.82 per cent	78.35 per cent

Source: Hungarian Central Statistical Office

¹ Including pipelines and air transport.

² including individual cars, motorbikes and taxis

³ including air transport and rail

Israel

172. In 2011 land transport will have an increase of 3-4 per cent.
173. Next few years Land transport - 3-4 per cent.

Italy

174. Road transport: after a dramatic reduction of about 10 per cent in 2009, the year 2011 seems to show an increase on both passengers and goods rail transport: goods transport suffered the consequences of the economic crisis; transport of passengers recorded an increase.

Latvia

175. Cargo traffic by road in total in 2010 has increased to 46.8 million tons comparing to 37.8 million in 2009, however, still not as high as in 2008 (54.5 million tons) - before the economic crisis. Growing domestic and neighbouring economics lead to expect an increase in cargo traffic by road in 2011.

Lithuania

176. Contribution of transport sector to the total Lithuanian GDP is estimated at 11.5 per cent in 2011. 7.3 per cent of total number of persons employed has been employed in this sector in 2011. According to preliminary forecast, cargo volumes (by all modes of transport) will increase by 7.1 per cent in 2011 compared with 2010.

177. Volumes of passenger transportation by all modes of transport in 2011 increased by 0.6 per cent compared to 2010. Nevertheless, forecasts show trends of slight increase already in 2012.

Norway

178. An expected 1 per cent increase in road traffic, a slightly higher increase for heavy vehicles.

Poland

179. According to the 2010 road census the average daily traffic on national roads was 9,888 vehicles/day. On E-roads the traffic was 16,667 vehicles/day. From 2005 to 2010 average daily traffic on Polish roads increased by 22 per cent. The volume of goods transported by road in 2010 increased by 5.6 per cent compared with 2009 (791.8 million tonnes). Further development depends on economic situation and the impact of rising fuel prices.

Romania

180. Road transport registered in the first semester of 2011 had a positive evolution for transported goods volume (tonnes) as well as for the goods transport performance (tonnes –km). In the first semester of 2011, the freight traffic volume carried by transport operators increased compared to the first semester of the previous year by 7.5 per cent. Road transport registered the most significant share of the freight transport in total, due to its greater flexibility. The freight road transport will continue to register a negative evolution and the rail transport will decrease in 2011 compared to 2010, then it will register a positive evolution for the next 2 years.

181. In the first semester of 2011, road transport for cargo performance increased by 8.0 per cent compared to the same period of the previous year. In the first semester of 2011, compared to the first semester of the previous year, the number of transported passengers (number of passengers) for road transport has registered a positive evolution, growing by 2.0 per cent. The passenger performance (passengers-km) has registered positive evolutions in the first semester of 2011 compared to the first semester of the previous year growing by 0.1 per cent. Nevertheless the road passenger transport was dominant with a share

of 7.9 per cent from the total passenger transport.

Russian Federation

182. According to estimates by the Federal State Statistics Service of the Russian Federation in January-October 2011 the turnover amounted to 4,059.9 billion tons of transportation-miles from which 181.0 billion by road. Freight turnover in 10 months of 2011 increased compared to the same period last year to 3.5 per cent.

183. The passenger transport in January-October 2011 amounted to 374.7 million-passenger-kilometres from which 113.7 billion by private cars. The share of road transport in January - October 2011 accounted for over 37.6 per cent of total passenger traffic of all types of public transport.

184. Compared to the same period in 2010, the passenger transportation in the Russian Federation increased by 3.7 per cent. In accordance with the socio-economic development of the Russian Federation for 2011-2013, developed by the Ministry of Economic Development is expected an increase in turnover of 6.5 per cent per year.

Serbia

185. Road transport is dominated passenger traffic (without public/city transport) by 73.1 per cent of the total number of passenger-kilometres (pkm).

Slovak Republic

186. In road transport a decrease in the amount of transported cargo (tonnes) in comparison with the last two years can be observed, although the traffic performance (tkm) has a slight decrease.

Slovenia

187. In 2010, road traffic amounted to 17.8 billion vehicle-kilometres, almost the same as in 2009. Of that 15.6 billion vehicle-kilometres were made by passenger cars (87.7 per cent) and 1.9 billion vehicle-kilometres (10.6 per cent) by trucks. A lower share of vehicle-kilometres was made by buses and motorcycles (both 0.8 per cent).

Spain

188. So far the previous year's levels are maintained in average. Average daily light vehicle, which can be used as an indicator of private passenger transport, has gone down by 0.5 per cent. In public transport, the number of passengers in urban transportation has grown by 0.9 per cent and by 1.3 per cent in long distance due to the growth of rail travellers, increasing by 2.7 per cent (Coach Transportation has only grown by 0.3 per cent and other modes are not relevant).

189. Road Transport dominates the transportation of goods but the number of tonnes transported during 2011 has fallen by 6 per cent.

190. The development of transport, especially for cargo, will depend mostly on the evolution of GDP. It is forecasted a slight increase for 2012 and a higher increase by 2013. Therefore for 2012 similar to 2011 figures are forecasted on road transport.

Sweden

191. The statistics on traffic volumes for 2011 are not yet available. However, during 2010 traffic volumes increased significantly compared to 2009, mainly as a result of a rapid economic recovery. The economic growth continued in 2011, but appears to be slowing down. This will most likely mean that there will be a limited

growth in traffic volumes during the next few years.

Switzerland

192. The recent evolution of traffic volumes in Switzerland is as follows:

1960 - 2009:

- (a.) Transport volume in passenger transport road (Mio. Person-km) 18,590 and 89,930 respectively or a 484 per cent increase;
- (b.) Freight transport road (Mio. Tkm) 2,152 and 16,734 respectively or 778 per cent increase.

193. Distances travelled by freight transport on Switzerland's roads will increase by between +36 per cent and +87 per cent by 2020. These figures include the effects of the Heavy Vehicle Fee (HVF) and the 40-tonne limit, as well as other ancillary programmes. This forecast growth is much higher than the linear trend (+27 per cent). Growth in tonnage distance (tkm) by rail will be between +48 per cent and +96 per cent.

Tajikistan

194. During the first 10 months of 2011, all modes of transport moved 51,726.6 thousand tonnes of cargo, meaning a 3 per cent increase compared with the same period of 2010.

	January – October 2011	Compared to 2010 per cent	Compared to 2009 per cent
Freight Total (in tons)	51 726.6	103.0	109.0
By road	51 724.8	103.0	109.0
Rail	7 715.0	90.0	71.5
Car	44 009.8	105.7	122.4
Air	1.6	96.0	104.9

Turkey

	Road (million tones)
<i>Freight</i>	80.63
<i>Passenger</i>	89.59
2023 Targets	
Freight	60
Passenger	72

195. Concerning traffic volume in state roads in 2011, initial studies show that traffic volume is likely to increase approximately 6-9 per cent compared to 2010 traffic volume.

Ukraine

196. In 2011 4,250 million passengers were moved on Ukrainian roads. The forecast for 2015 is that these figures will reach the 4,876 million passengers. Consumers demand for transportation by road in quantitative terms was fully satisfied.

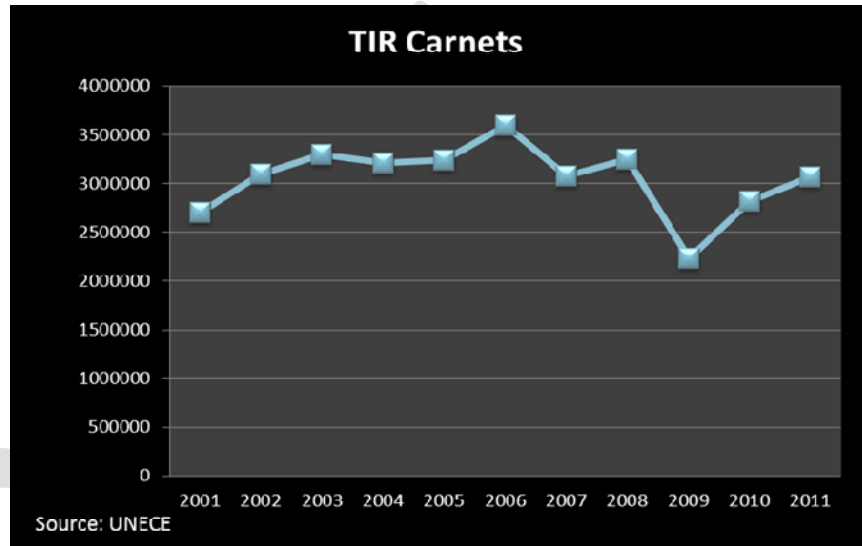
Statistics

Transport Trend

The number of TIR carnets issued is increasing

197. In spite of previous estimations, TIR carnets have exceeded the mark of 3,000,000 TIR carnets issued by IRU in 2011 (so far 3,074,050). This means an increase of approx. 38 per cent compared to 2009 and of 9 per cent compared to 2010.

Figure 55. Number of TIR Carnets issued (2001 – 2011)

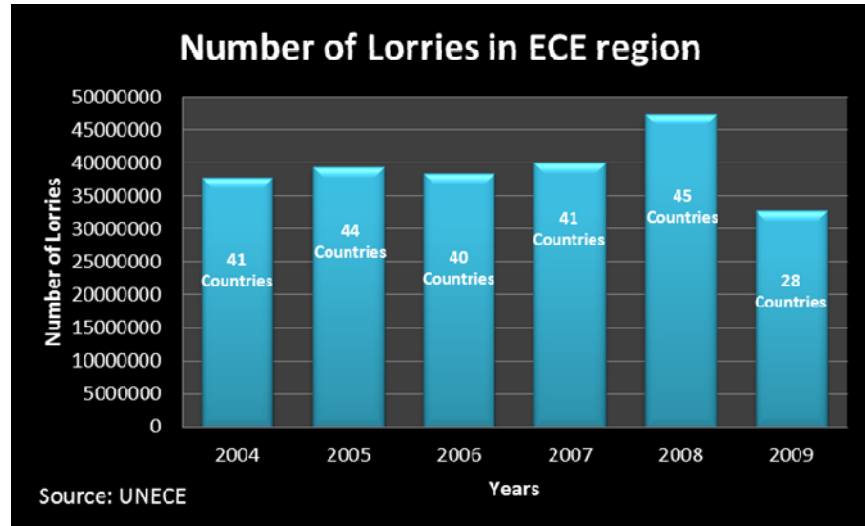


Transport Trend

The number of lorries in ECE region remains stable

198. The glossary of transport statistics prepared by UNECE, ITF and Euro stat defines as a lorry the rigid motor vehicles designed, exclusively or primarily, to carry goods. The number of lorries in UNECE member States is stable for the six years from 2004 to 2009. The analysis does not include data from USA. In 2004, 41 countries provided data. In 2005 44 countries. In 2006 40 countries. In 2007 41 countries, in 2008 45 countries and in 2009 28 countries.

Figure 56. Number of Lorries in selected ECE countries

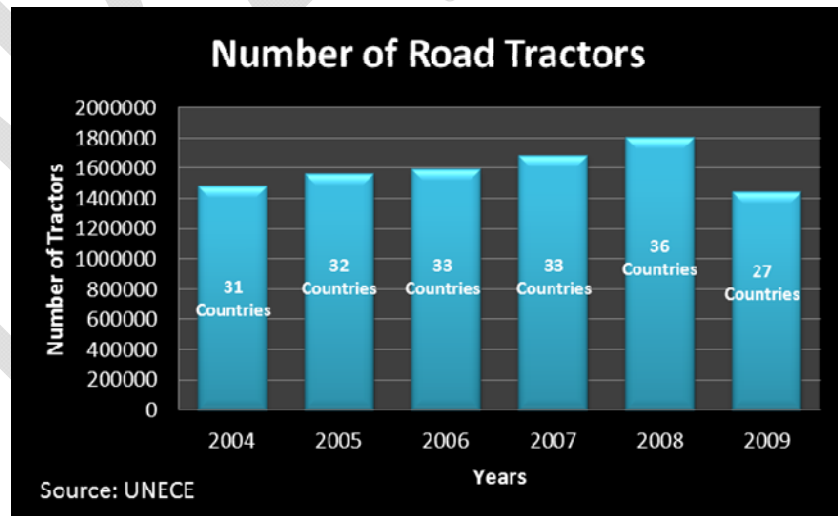


Transport Trend

The number of Road Tractors in ECE region is stably increasing

199. The glossary of transport statistics prepared by UNECE, ITF and Eurostat defines a road tractor as the road motor vehicle designed, exclusively or primarily to haul other road vehicles which are not power-driven (mainly semi-trailers). The number of road tractors in ECE region for the last 6 years is increasing. Only 2009 showed a decline but this was due to fewer countries participation.

Figure 57. Number of Road Tractors in selected ECE countries

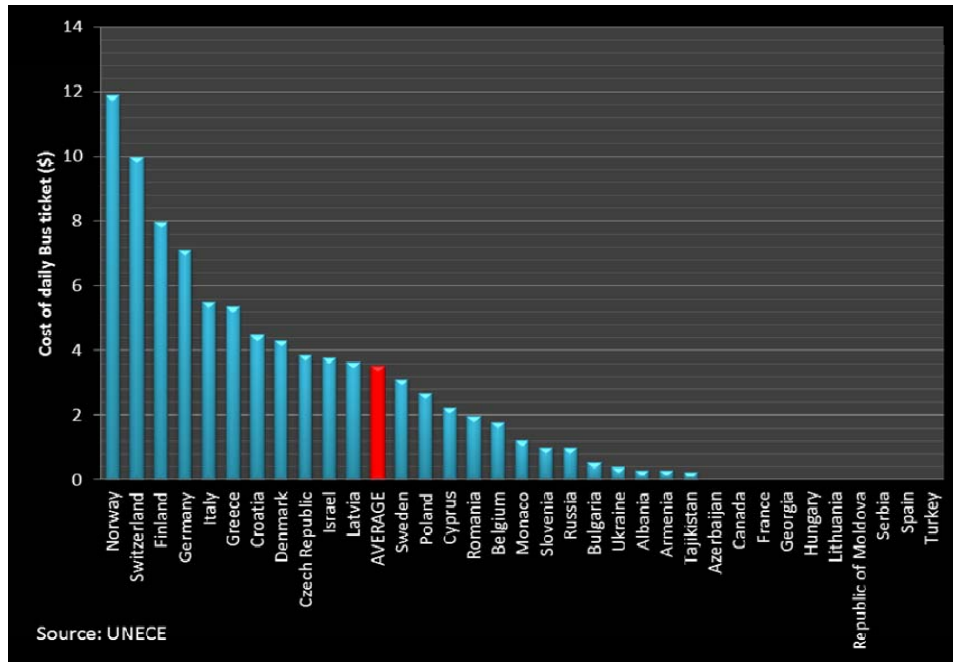


Transport Trend

The average cost of a daily bus ticket in the ECE region is 3,53US\$

200. The following graph illustrates the cost of a daily bus ticket in ECE region in United States \$. The average cost of a daily bus ticket is 3.53US\$ where the most expensive one is 11.9US\$ in Norway and the cheapest one 0.25US\$ in Tajikistan.

Figure 58. Cost of a daily bus ticket in selected ECE countries

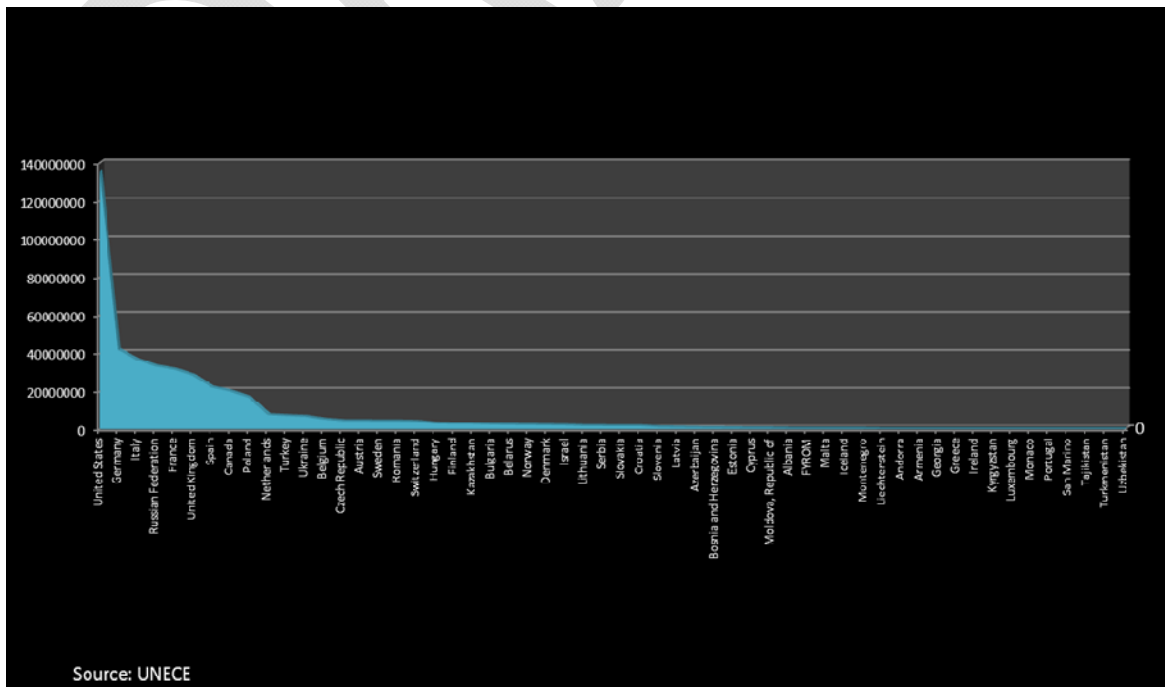


Transport Trend

The number of passenger vehicles circulating in the UNECE region reaches 445,299,147

201. The number of passenger vehicles in 2009 that are circulating in ECE region reached the 445,299,147 cars. The average is 10,355,794 cars. Thirteen countries did not provide data. The country with the highest number of passengers' vehicles is USA with 135,932,930 cars and the one with the lowest number is Lichtenstein with 25,909 cars.

Figure 59. Number of Passengers Vehicles in selected ECE countries



Stabilisation in travel by road in the EU27, but not by rail



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Travel by car in the EU27 seems to have stabilised, not as a result of the global downturn in 2008, but since 2006. On average every person now travels 9,600 km a year by car, with a total of about 12,000 kms by all forms of land based transport. Similar trends can be seen in the USA, where the stabilisation figures are much higher at 24,000 kms per person by car and 28,000 kms by all modes. It is unclear why such a stabilisation should have taken place as the previous period (1980-2005) were all characterised by substantial increases in the distances travelled by car and other forms of transport. The recent growth in air travel may explain the changing trends, as land travel is being replaced by longer distance travel by air, and the figures may have been compounded by the more recent economic downturn, the reductions in real incomes, the rising costs of travel and the higher levels of unemployment.

Over the recent past there has also been a substantial increase in rail travel in the EU27, principally driven by the growth in High Speed Rail (HSR). On average, travel by rail in the EU27 is still a small part of the total land travel market (about 820 kms per person per year). HSR now accounts for over 26 per cent of all rail travel (2010), an 80 per cent increase on the 2000 figure. Rail travel seemed to be in terminal decline twenty years ago, but there has now been a renaissance.

With the stabilisation in car travel and the growth in rail travel, one would expect reductions in CO₂ emissions from transport in the EU27, yet land transport has not made any contribution to the 8 per cent target set for the EU by the Kyoto Protocol for reductions in GHG emissions by 2011 (on 1990 levels). The increase in transport GHG emissions (primarily CO₂) has been 12.5 per cent over this period, but again there has been a slight reduction since the peak in 2007, but only of 2 per cent. If these figures are normalised by the population increase, a stabilisation figure seems to be apparent since 2005 of 1.89tCO₂ per person for land transport.

This means that the levels of CO₂ emissions in land transport have only very recently begun to stabilise and reduce, but even then, this reduction is minute when compared with the targets of an 80 per cent reduction by 2050 (on 1990 levels). Technological innovation within transport and communications will help, but the real task is to reorganise the way in which people carry out their everyday activities to reduce their travel distance and substitute technology for transport as well as within transport.

“For better, for worse; for richer, for poorer; in sickness and in health ...”



Alan Pearman
Professor of
Management
Decision Analysis,
University of Leeds

“For better, for worse; for richer, for poorer; in sickness and in health ...”, as the wording of the traditional British wedding ceremony has it, road transport and the society of which it is part are inseparably linked. Social, political and economic events of the last two or three years together with larger, longer trends in transport and society more generally have again amply illustrated in 2011 just how deep and enduring the linkage is.

Recent events affecting the Global Economy have posed multiple challenges to the road sector and people working in it. Although there are encouraging signs that the very worst may have passed, recovery is still hesitant and fragile to further macroeconomic shocks. Nonetheless, international GDP growth seems a little stronger, as are some of the key indicators of road sector activity.

However, not all the economic and financial challenges road transport faces stem from economic shocks and essentially cyclical responses. There are

critical secular trends also. Demographic changes are leading to higher populations and, in many parts of Europe, to ageing ones. These affect the level and nature of the demand for transportation, but also, critically, put substantial demands on public and in terms of healthcare, pension provision, etc., competing with transport for investment funds. Populations are more itinerant, supply chains more globalised and economic activity more mobile. Much transport infrastructure is location-specific. Getting the right transport infrastructure (physical but also institutional) can be a major facilitator of robust recovery; errors, on the other hand, will have increasingly high opportunity costs.

Internationally, and with the active engagement of the major international transport bodies such as UNECE, ITF and the EU, the road sector is responding to these challenges, seeking greater Efficiency (high output with low input) and greater Effectiveness (aligning output with what is wanted).

Recent initiatives have sought to increase efficiency through more straightforward border-crossing, encouraging inter-modality, understanding better the links between ports and the transport needs of their hinterlands, promoting more efficient vehicle design and the use of Intelligent Transport Systems technology. Active efforts to broaden the range of funding sources for infrastructure, for example through different types of PPP arrangement, are also under way.

However, the services provided by the transport sector must also change to be effective in meeting developing societal expectations. International initiatives to promote safety and mitigate adverse health and environmental consequences are in place and indeed to promote sustainability in all its dimensions. Responding to the range of security challenges posed by mass international transport is an active area of investigation. Recognition of climate change and increasingly unpredictable climatic conditions in some locations is also an important trend for the inland transport sector.

Open, long-term and fully international co-ordination lies at the heart of much of what is needed and what is being done. Efforts to harmonise legislation and systems; policy co-ordination through things like the EU White Paper; long-term international infrastructure plans such as TEM and initiatives such as EATL and the TEN-T all have critical parts to play.

Trends for the next few years....

- A slow, but not necessarily uninterrupted, return to growing levels of demand.
- Continued pressure on public funds with increasing emphasis on innovative, 'second generation' public-private partnership arrangements.
- Emphasis on efficient vehicle design and use with ITS having a central role affecting logistics, infrastructure capacity utilisation and safety.
- Significant changes in supply chains, with both global and local sourcing growing, depending upon the product.
- Continued pressures to diminish the health and environmental externalities of road transport.
- Continuing need for close international collaboration to address emerging issues.

Facilitated international Road Transport Drives Trade and Economic Development



Martin Marmy
Secretary General
International Road
Transport Union (IRU)

Road transport is instrumental in interconnecting every business in every region to every major world market through its high quality, flexible and unique door-to-door services. It is the backbone of strong economies and dynamic societies, drives trade, creates employment and ensures a better distribution of wealth.

Growth in BRIC countries directly results from innovation and investment in production tools, and in particular in small and medium-sized enterprises (SMEs), such as road transport companies, that generate some 85 per cent of employment.

OECD and EU policies differ in that they increasingly restrict the activities of SMEs and the road transport industry with new regulatory and fiscal burdens. Governments of OECD countries must recognise that the further facilitation of international road transport, hence trade, is key to restoring and expediting economic growth in 2012, as it has been the case in BRIC countries.

In the spirit of public-private partnership, and based on its 60 years of well appreciated experience, the IRU has provided tried and tested effective solutions for facilitating international road transport, such as the revitalisation of trade along the Silk Road through the development of international road transport. It should be known that while several countries are landlocked to sea transport, NO country is landlocked to international road transport!

Launched in 2008, the IRU's New Eurasian Land Transport Initiative (NELTI) Project has been monitoring the commercial deliveries of goods by truck on various itineraries along the Silk Road. The results show a competitive potential for the development of trade on the NELTI routes, but highlight that over 40 per cent of transport time along the Silk Road is lost at borders due to inappropriate procedures.

Streamlining these customs procedures can be easily achieved by simply ratifying and effectively implementing the key UN multilateral trade and road transport facilitation instruments, in particular the Harmonization and TIR Conventions.

The facilitation and security provided by these UN global conventions is further complemented by, on the one hand, the IRU Border Waiting Times Observatory (BWTO), an IRU web-based application enabling customs authorities to report on waiting times at their borders, free of charge, anywhere in the world and, on the other hand, by the IT TIR risk management tools, such as TIR Electronic Pre-Declarations (IRU TIR-EPD) and Real Time SafeTIR (RTS) developed by the IRU in fruitful partnership with the national Customs authorities of more than 25 countries.

These tools simplify customs formalities at borders by improving trade security while reducing waiting times by ensuring that customs procedures take place at origin and destination as called for in the Harmonization Convention. These effective facilitation tools, based on UN Conventions, can be applied not only on NELTI routes, but everywhere on continents where trade and international road transport operators are confronted with the same barriers affecting global trade and economic growth.

By effectively implementing the key UN Conventions, which have proven to be effective in numerous regions for more than 50 years, and according to the IRU's motto "working together for a better future", we can drive progress, prosperity and ultimately peace throughout the world!

Online UNECE Transport Division resources for review.

Annual Bulletin of Transport Statistics for Europe and North America

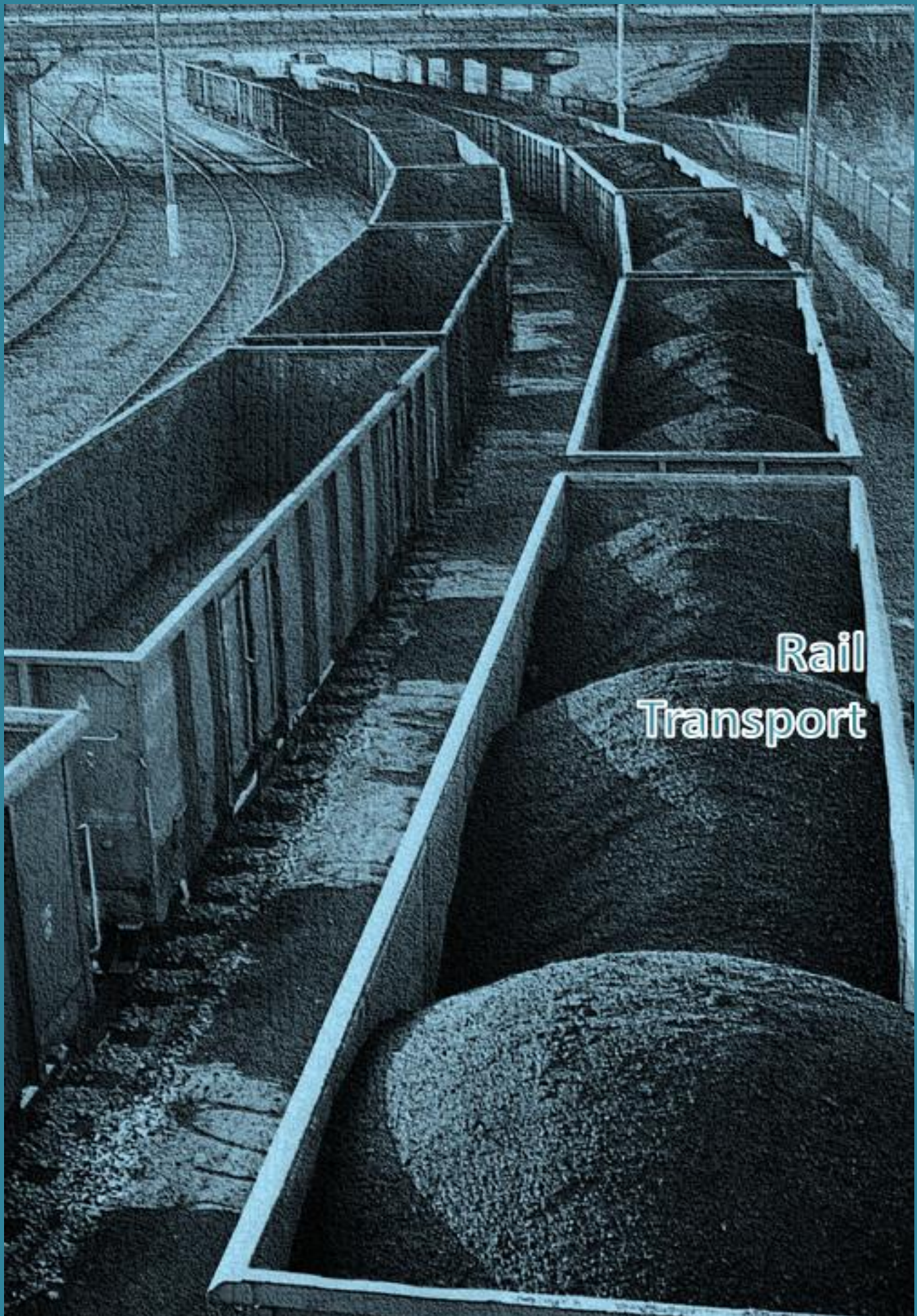
Main Transport Indicators in the UNECE Region



www.unece.org/transport/areas-of-work/road-transport/transmainsc1sc1publications/bulletin-of-transport-statistics.html



www.unece.org/transport/areas-of-work/road-transport/transmainsc1sc1publications/main-transport-indicators-in-the-unece-region.html



Rail
Transport

CHAPTER 3. Rail Transport

Introduction

202. According to UNECE Governments, rail transport makes up a small piece of the transport pie. However, these same Governments have railways at the top of their transport agenda and consider it the transport mode of the future. As described above in the transport policy segment, investment in railway infrastructure, efficiency and profitability are the most important issues.

203. UNECE Governments recognise the important and sometimes crucial role of railways in the development of intermodal transport and reducing climate change impacts. That is the reason why for both intermodality and climate change Governments responded with regards to measures to improve railway efficiency.

Albania

204. Railway freight transport has been the same as in 2009. The traffic of passenger transport is reduced. The prospect for the next few years is optimistic.

Year	2010	2011	2013
a. Passenger Traffic			
-000 passengers	462	570	650
-million pass/km	20.8	26.2	31.2
b. goods traffic			
-000 tons	420	450	460
-Million ton/km	69.0	74.2	76.4

205. The rehabilitation of the rail network and rail service reform will give a positive impact to improve the interoperability between different types of transport.

Armenia

206. In the year 2010, 10,577,500 tonnes of freight were shipped, of which 3,063,300 tonnes by railway.

207. In the year 2010, 251,600,000 passengers were carried, of which 800,000 by railway.

Bulgaria

208. One of the main problems that has hindered the development of Bulgarian transport in 2010 was Bulgarian Railways condition. The volumes of the railway traffic and their market quotas were decreasing; the traffic in 2010 was 40 per cent lower compared to 2007; the quality of the passenger and cargo services was lower than expected; the productivity of the railway sector in Bulgaria was the lowest in the whole European Union.

Canada

209. Railway traffic (both intermodal and non-intermodal) grew by 12 per cent in 2010, and a lower 5.6 per cent (first 9 months in 2011) after having experienced a decrease of more than 13 per cent in 2009.

Croatia

210. The railway transport represented 43.1 per cent of passenger transport and 9.4 per cent of goods transport for the January – September 2011 period.

211. According to the data available, evolution of traffic volumes compared to the

same period in 2010 is as follows: number of transported passengers decreased for 24.58 per cent, while volume of transported goods decreased for 0.25 per cent.

Czech Republic

212. After three years, the volume of railway transport in passenger kilometres increased moderately, namely by 1.4 per cent, and the number of passengers carried remained, more or less, the same.

213. After three years the railway transport recorded an increase by 8 per cent with respect to the volume of goods carried, and by 7.7 per cent with respect to volume of transport expressed in tonne-kilometres.

Finland

214. There were problems with train traffic during two previous winters. The Government has plans to renew rail managements systems (partly implemented) and rail switches, planning phase, how to increase capacity at the Helsinki main rail station.

	2010	2009	Change per cent
Train km (1000)	51 000	50 019	2.0
Passenger Traffic	35 048	35 120	-0,2
Freight Traffic	15 952	14 899	7.1
Gross ton km (1000000)	33 091	31 412	5.3

France

215. . Rail Freight had a 14.8 per one hundred the first trimester of 2011, and a -5.5 per one hundred 2nd rev. 2011 / use of regional express trains (TER) had a -2.9 per one hundred the first trimester of 2011 and a 2.9 per one hundred 2nd rev. 2011 / TGV Frequency: 6.3 per one hundred first tr. 2011, 1.1 per one hundred 2nd rev. In 2011.

Georgia

216. Railway (I-IX month) 2010- 14.7 per cent and in2011 a 15.0 per cent in million/tonnes

Germany

	2008	2009	2010	2011	2014
Rail freight in million tones	371.3	312.1	355.4	367.4	397.9
Rail passengers in million passengers	2 348	2 369	2 396	2 442	2 507

Greece

217. Railway freight: 2010 - 2011 volume decreased, respective revenue increased.

Hungary

	Rail
2011. Q1-Q2 (million tonnes)	22 147
In percent of 2010. Q1-Q2 data	101.80 per cent
In percent of 2009. Q1-Q2 data	108.97 per cent
In percent of 2008. Q1-Q2 data	88.04 per cent

Italy

218. Rail transport: goods transport suffered the consequences of the economic crisis; transport of passengers recorded an increase.

Latvia

219. Rail passenger turnover in 2010 has decreased by 3 per cent to 20.9 million passengers in comparison with 2009, bus passengers – by 15 per cent less in 2010 than in 2009 (144.3 million passengers).

220. Cargo traffic by rail in total in 2010 has decreased to 49.2 million tonnes (app. 4.5 million tonnes less than in 2009, app. 6.9 million tonnes less than in 2008). However in the first half of the year 2011 an increase has been observed by 4.6 million tonnes leading to expect in 2011 the largest rail cargo traffic in past 10 years. Compared to EU average, in Latvia the rail transport's share of the total freight transport is very significant.

Lithuania

221. Railways traffic volumes are partially restored – comparing with the results of 10 months of 2010 year and transportation by railway traffic has increased about 16 per cent this year. JSC “Lithuanian Railways” during 9 months of 2011 year, transported 39.72 million tonnes of goods in total, which is 14.1 per cent more compared to 2010 corresponding period.

Poland

222. In 2010 the volume of goods transported by rail transport increased by 8 per cent in comparison with 2009 (216,9 million tonnes). The long-term forecast foretells stagnation.

Romania

223. In the first semester of 2011, the freight traffic volume carried by transport operators has increased compared to the first semester of the previous year for the rail transport (18.2 per cent). In the first semester of 2011, the rail goods transport performance has increased with 13.7 per cent compared to the same period of the previous year. In the first semester of 2011, compared to the first semester of the previous year, the number of transported passengers (number of passengers) for rail has had a negative evolution, decreasing with 4.2 per cent.

224. The passenger performance (passengers-km) has registered negative evolutions in the first semester of 2011 compared to the first semester of the previous year for the rail with 6.5 per cent. Nevertheless, the rail passenger transport was dominant with a share of 20.0 per cent from the total passenger transport.

Russian Federation

225. According to estimates by the Federal State Statistics Service of the Russian Federation in January-October 2011 the turnover amounted to 4,059.9 billion tons of transportation-miles from which 1,756.1 billion tonnes-km by rail.

226. Freight turnover in 10 months of 2011 increased compared to the same period last year by 3.5 per cent. The passenger transport in January-October 2011 amounted to 374.7 million-passenger-kilometres from which 119.3 billion by railways and 113.7 billion by vehicles.

Serbia

227. In the first half (I – VI) of 2011, traffic volumes of the various transport modes in the Republic of Serbia are different. Rail transport is represented in passenger traffic (without public/city transport) by 8.0 per cent. The highest percentage of cargo is

transported via railway (49.2 per cent)

Slovak Republic

228. In rail transport there is a slight increase in transported goods and also traffic performance in comparison to last two years.

229. Number of passengers carried by railway transport in first half of the year:
- (a.) 01-06/2011 -> 22 997 844;
 - (b.) 01-06/2010 -> 22 324 012;
 - (c.) 01-06/2009 -> 22 748 924.

230. Therefore the number of passenger flow is about 22.5 millions. The aim is to maintain the same level and eventually to reach some increase.

231. Traffic volumes of freight railway transport in first half of the year:
- (a.) 01-06/2011 -> 8 920 174 tis. gross tkm (7 097 157 train km) ;
 - (b.) 01-06/2010 -> 8 848 226 tis. gross tkm (7 050 188 train km).

Slovenia

232. In 2010, in railway traffic almost 19.1 million train kilometres were made, which is 9.4 per cent more than in 2009 and 7.3 per cent more than in 2000. Eleven million train kilometres were made by passenger trains (the same as in 2009) and 8.0 million train kilometres by goods trains (23.5 per cent more than in 2009).

Spain

233. As it concerns the evolution of goods transport by rail, this has grown by 10 per cent, but its contribution to total transport is very weak.

Switzerland

234. The recent evolution of traffic volumes in Switzerland is as follows:

a. 1960 2009 Increase: Transport volume in passenger transport Rail (Mio. Person-km) 7,973 and 18,571 respectively or 233 per cent increase / Freight transport rail (Mio. Tkm) 4,315 and 9,398 respectively or 218 per cent increase.

Tajikistan

	January – October 2011	Compared to 2010 per cent	Compared to 2009 per cent
Freight Total (in tons)	51 726.6	103.0	109.0
By road	51 724.8	103.0	109.0
Rail	7 715.0	90.0	71.5
Car	44 009.8	105.7	122.4
Air	1.6	96.0	104.9

Turkey

		Railways (million/tonnes)
	<i>Freight</i>	4,76
	<i>Passenger</i>	2,22
2023 Targets	Freight	15
	Passenger	10

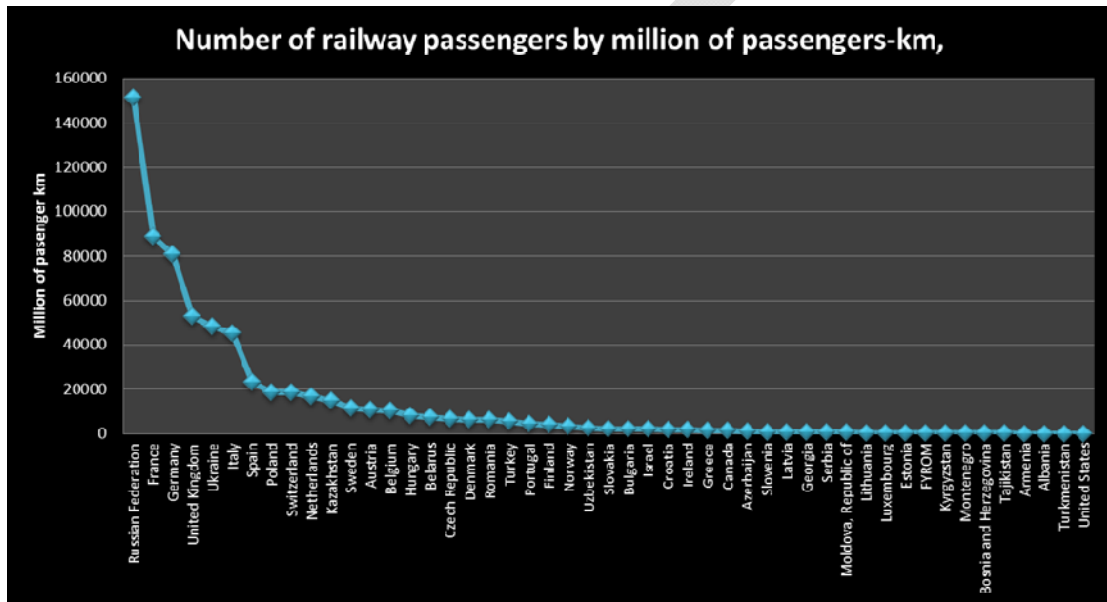
Statistics

Transport Trend

11 countries out of 56 performed more than the 80% of the number of railway passengers in 2009 in ECE region

235. The number of passengers by millions of passengers – km rose to the amount of 663,110. The data from two countries (USA and Turkmenistan) is missing. From our analysis we found that 20 per cent of the ECE member States (11 countries) perform more than the 80 per cent of the total number of railway passengers meaning 530,488. Eight out of the eleven countries are from Western Europe and the three others are CIS countries.

Figure 60. Number of railway passengers by million of passengers-km



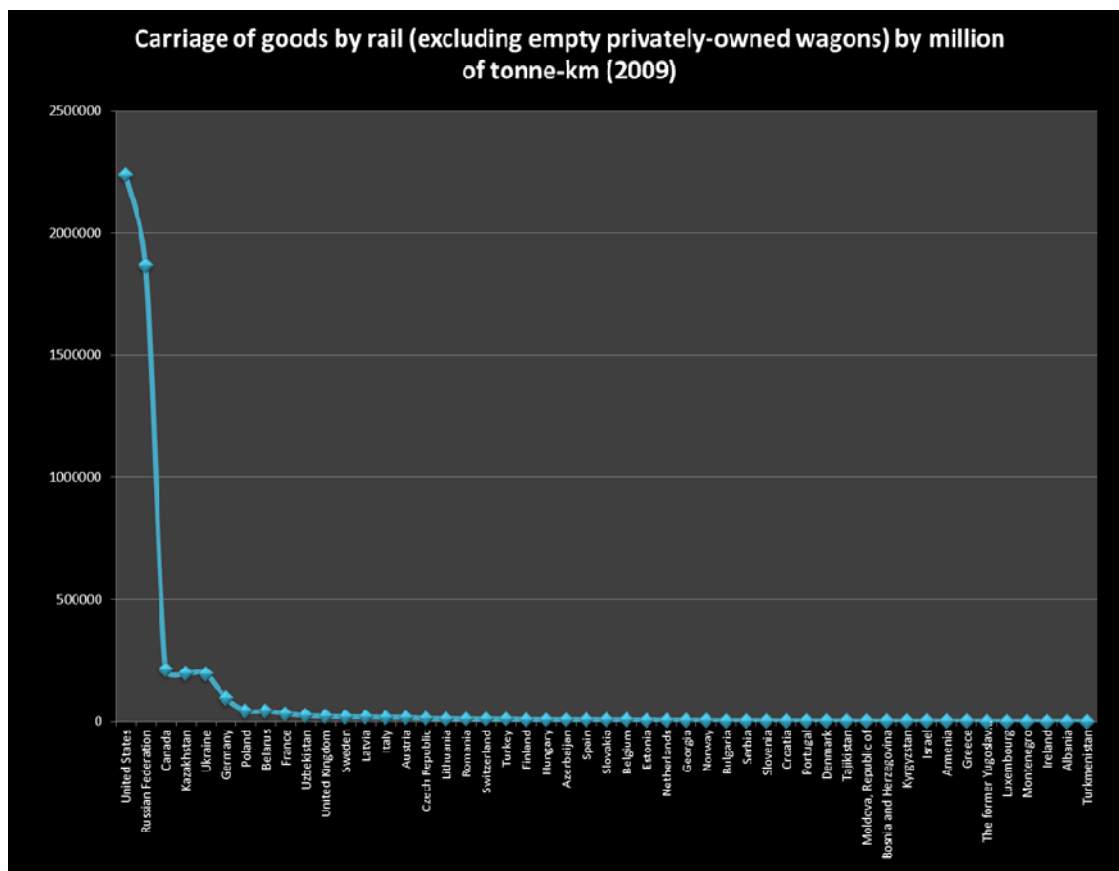
Source: UNECE

Transport Trend

11 countries out of 56 performed more than the 80% of the carriage of goods by rail in 2009

236. Twenty per cent of the countries of ECE region (11 countries) perform more than the 80 per cent of the carriage of goods by rail. These eleven countries perform more than 4,968,739 million of tonne km from a total of 5,187,495.

Figure 61. Carriage of goods by rail (excluding empty privately – owned wagons) by millions of tonne km in the UNECE region in 2009



Source: UNECE

Transport Trend

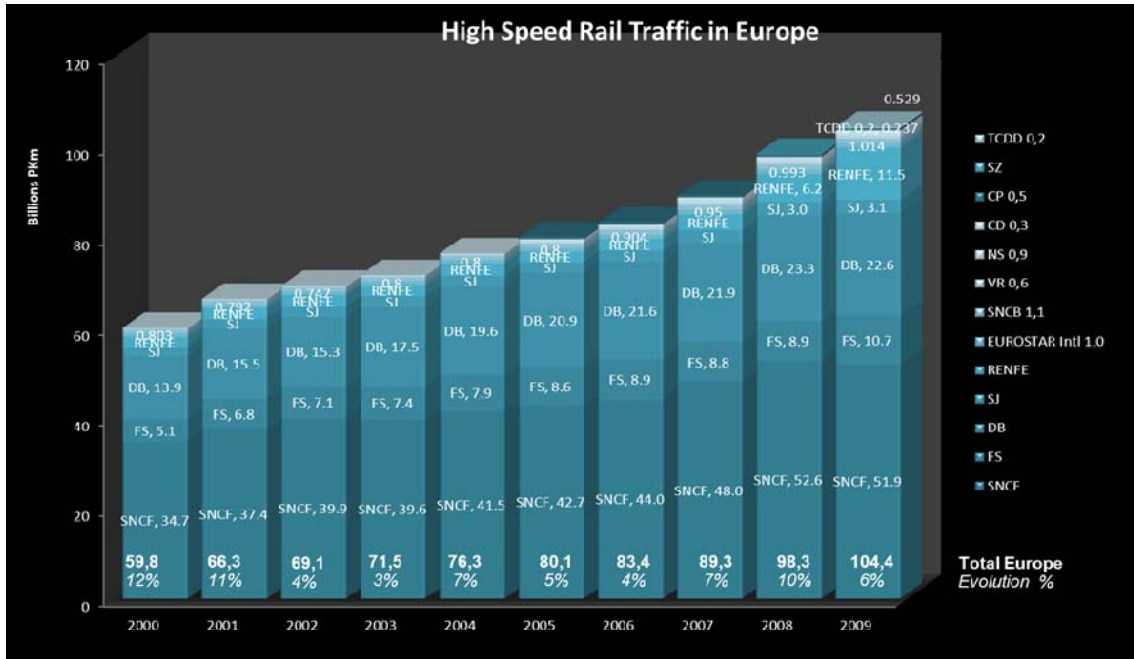
High speed trains development contributes to the revitalization of railways

237. The creation of high speed networks coincides with the revitalisation of rail during the past two decades. It is, in fact, an essential part of it. Wherever high speed and very high speed lines have been built, they have proven an enormous success for passenger transport. These networks have met customer demand and passenger numbers have frequently grown in double-digit percentages in member States that have created these lines.

238. The figure below illustrates the development of high speed rail traffic in Europe the last decade. As we see, the French railways have the biggest share of the market 51,9 billion Pkm in 2009. The first high speed line between Paris and Lyon was primarily created to resolve capacity problems. Since then, it has become evident that time is a major competitive factor for rail. It is essentially high speed lines that contribute to the growth of modal share for rail in passenger transport.⁴

⁴ Michael Clausecker, Director General UNIFE, Nike Bonnen, UNIFE Public Affairs Manager, Article on “Railway transformation” book of Roland Berger Strategy Consultants 2010.

Figure 62. High Speed Rail Traffic in Europe



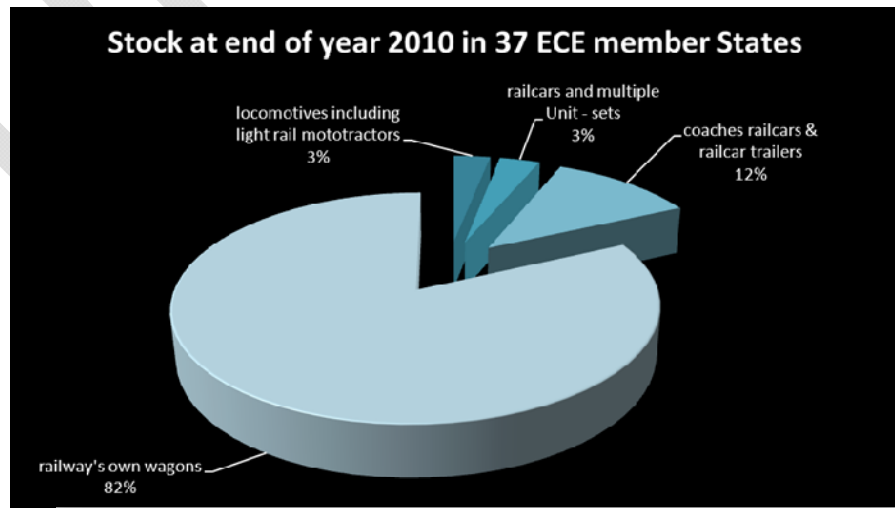
Source: UIC, UNECE

Transport Trend

More than 82% of railways stock end of year 2010 was railways own wagons.

239. Based on data from UIC, at the end of year 2010 in 37 UNECE member states the stock of railways was 82 per cent railways own wagons, 3 per cent locomotives, 12 per cent coaches – railcars and 3 per cent multiple units.

Figure 63 Rail Stock at the end of the year 2010 in 37 UNECE member States



Source: UIC, UNECE

Rail Transport Trends and Economics in East Europe and CIS countries



**Stefan
Roseanu**

Senior Partner
Club Feroviar
Secretary
General
Romanian
Railway Industry
Association (AIF).

Background

EEC and CIS define a space with a recent common history (with the notable exception of Turkey and Greece they were part of communist area which has determined a 20-year period of reshaping economies and social-politic systems). Also they represent the middle point between the productive intensive Far East and consumer-markets of Western Europe. This geographic position is the new advantage of the given countries in attracting transit routes. But the high political fragmentation of this area and integration in different political constructs (EU, CIS, Eurasian Union etc.) requires a very delicate game of negotiations and concessions that would lead eventually to a technical and administrative harmonisation of railway infrastructures.

The impact of financial crisis on railway sector

The high interest that the communist leaders have shown to railways translate in a positive legacy among the public of this transport mode (the quota of railways in EEC and CIS is more than double to the one in Western Europe), but, at the same time, in an economic burden when we speak of maintenance and investments. Thus we can consider that the real railway crisis manifested even before the actual financial crisis.

The recent accession of 12 Central-East European Countries to the European Union (2004 and 2007) has offered the chance to attract more cheap money. The same period represents the rebirth of Russian economy, which is welded with money coming from natural resources and a national ambition to host major international sport and cultural events. A similar experience we witness at other countries in the area, e.g. Azerbaijan, Kazakhstan, Turkmenistan that use their "gas-dollars" to invest in railways.

On these grounds we can consider that the actual financial crisis has hit dramatically more the freight business with initial drops of 30 per cent-40 per cent in total volumes and reshaping of markets (e.g. one major European wagon manufacturer and freight railway undertaking, IRS, went for insolvency and has sold its railway business). The statistics show a slight recover of volumes in 2010 compared to 2009 in all given countries, except Bulgaria and Greece. At the same time 2010-2011 represent the starting point of railway commercial services between China/Korea/Japan and Western and Central Europe through Russian Federation /Belarus/Poland. The southern route - „The Iron Silk Route“ - still suffers over fragmentation and low infrastructure quality.

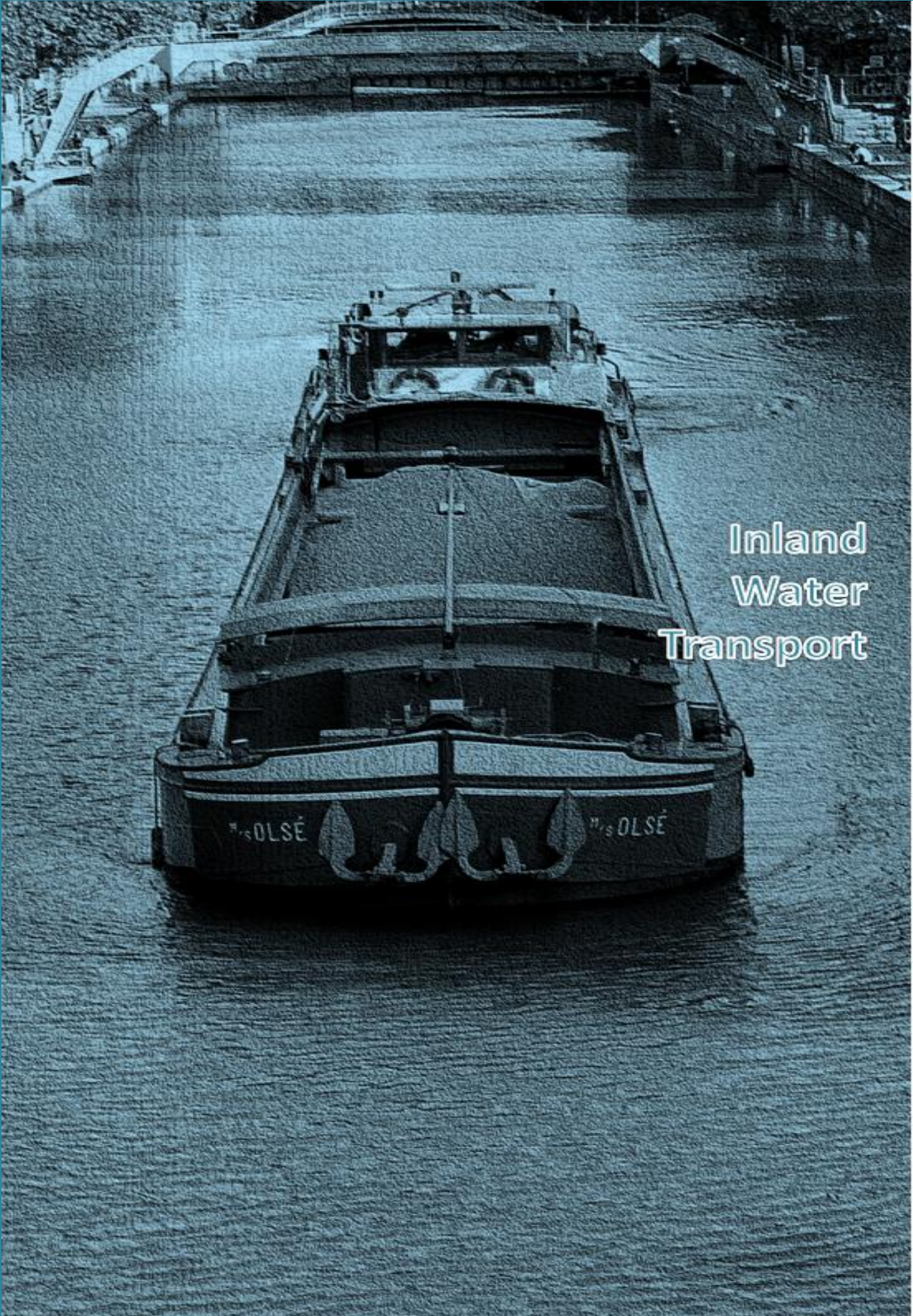
The international policies translate in pressure on governments to push on unbundling of the sector, not only inside EU. Russian runs an ambitious reforming program and are well advanced in the process while countries like Ukraine, Azerbaijan, Turkey lag behind. Russian has managed recently to successfully privatise Freight One, while Poland, Bulgaria, Romania and Slovakia are in different stages of privatisation.

The high ambitions of countries like Russian Federation and Turkey to be international players translate into big investment programs in high-speed lines and international technology partnerships (Alstom, Siemens, General Electric, Knorr-Bremse are only a few of the companies to partner with local manufacturers). Regional players like Kazakhstan, Azerbaijan use their new money to invest both in their own railways and in the ones of their neighbours (e.g. Georgia is the beneficiary of Azeri funds in their sector of Baku-Tbilisi-Kars line).

2012 - a mixed image

The extension of the financial crisis cannot bring peace to the railway players in EEC and CIS. The freight transport can still see dramatic changes as the steel mills show mixed expectations. But with the rise of new Eurasian services and new multimodal platforms railways would become a real solution on the continental platform. On the other hand, the pressure on public authorities raised by the big dead-lines of the moment (the end of actual European budgetary period, European Football Championship 2012, Olympic Games 2014, etc.) would determine the increase of investments in infrastructure and upgrades in passenger fleets. Under the pressure of the big international financial organisations (World Bank, International Monetary Fund) the public authorities will proceed with closure of lines, personnel reductions and privatisation of certain activities.

DRAFT



Inland
Water
Transport

CHAPTER 4. Inland Water Transport

Inland Water Transport in the ECE region

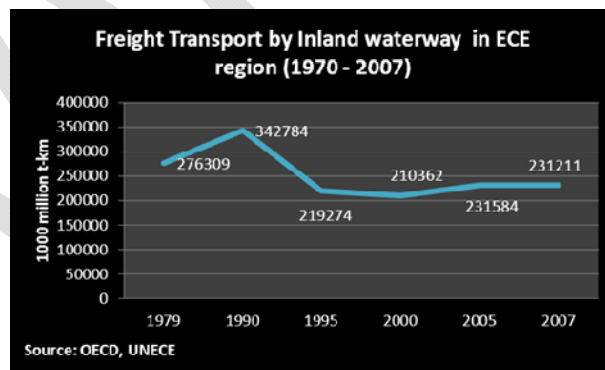
240. The United Nations Economic Commission for Europe (UNECE) works for smooth and efficient Inland Water Transport (IWT) across the region, as well as for further expansion of its network to take advantage of this safe and sustainable mode of transport. UNECE provides a unique platform and policy forum for its 56 member States, where technical and legal issues of IWT are addressed with emphasis on the Pan-European dimension of inland waterways and ports, intermodal linkages, cross-sectoral issues and establishment of common rules, regulations and benchmarks.

241. Twenty-seven UNECE member States possess inland waterways of international importance which play or could play an important role in international freight and passenger traffic.

242. The place of IWT in overall freight transport operations in UNECE member countries varies greatly both between the countries and within their borders. The amount of goods transported by IWT is usually fairly modest when compared with other modes of inland transport, such as rail and road.

Figure 64. Freight transport by inland waterway in ECE region (1970 – 2007)

243. The recent UNECE White Paper on the Efficient and Sustainable Inland Water Transport in Europe draws attention to the declining market share of IWT in most of the UNECE countries.



Source: OECD, UNECE

The IWT in the European Union (EU) carried 144.6 billion t-km in 2007. Belgium (9 billion t-km), Germany (64 billion t-km) and the Netherlands (42 billion t-km) together accounted for 80 per cent of this traffic. In the Russian Federation, the volume of cargo carried by IWT in 2007 was 153.4 million tonnes (as opposed to 108.9 in 2006), with a turnover of 86 billion t-km (57.7 in 2006). Of these, domestic carriage accounted for 131.6 million tonnes (87.9 in 2006) and international navigation 21.8 million tonnes (21.8 in 2006). In Kazakhstan, the inland fleet in 2007 carried 1,288.8 thousand tonnes of cargo (1,260.4 thousand tonnes in 2006), with an overall freight turnover of 52.0 million t-km (39.9 million t-km in 2006). In the Ukraine; in 2007, 15 million tonnes were transported by IWT with the turnover of 18 billion t-km out of a total freight turnover of 496.4 billion t-km. In the United States of America in 2007, inland and intra-coastal waterway traffic reached 622 million tonnes with the turnover

Transport Trend

Inland Water Transport in the ECE region is losing its market share

Environmental Performance

Transport Trend

IWT is at risk of losing its environmental performance

of 272 billion tonne-miles.

244. Global warming and carbon emissions have become a key issue for the future of IWT in Europe. First, because IWT can be one of the solutions towards reducing the carbon emissions of the transport sector through a modal shift from road transport, wherever possible. However, in order to maintain this competitive edge, efforts are required to ensure that the continuing reduction of CO₂/t-km (CO₂ intensity) in road transport is paralleled by similar progress in IWT.

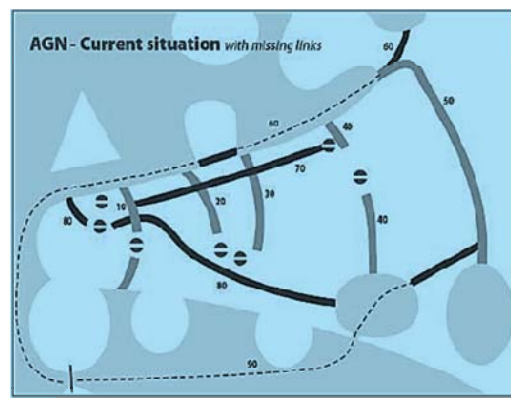
245. It is essential for IWT to work on maintaining and increasing its advantage in environmental friendliness through research and innovation, considering, for instance, the use of alternative fuels. At the present time the experts of the Central Commission for the Navigation of the Rhine (CCNR) are studying the possibility to approve liquefied natural gas (LNG) as a fuel in combustion engines for inland vessels.

246. Investigations into monitoring data of air temperature lead to obvious findings in all regions of the Rhine watershed. During the past 100 years, a considerable rise in the air temperature has been recorded (about +1.0°C to +1.6°C). On the other hand, the rise of temperature in summer is less significant (ca. +0.6°C to +1.1°C). This leads to a mean annual rise of temperature in the Rhine watershed between +0.5°C and +1.2°C, which is slightly above the global mean value of +0.56 to +0.9°C/100 years. Due to rising temperatures, glaciers are retreating in Switzerland. Additionally, investigations into snow parameters such as average depth of snow reveal a negative trend. However, with increasing altitude, trends are less distinct⁵.

Infrastructure

247. During 1995–2005, investments in transport infrastructure throughout the 15 EU countries amounted to €800 billion, of which 64 per cent for roads, 32 per cent for rail, 3 per cent for ports and only 1.4 per cent for inland waterways. Studies have shown that the increase in IWT has been achieved despite inadequate characteristics of the infrastructure. They suggest that a small transfer of available investment funding in favour of inland waterways to address these infrastructure bottlenecks could produce a over-proportionate impact on modal split.

Figure 65. IWT Missing links



Source: UNECE

Transport Trend

Infrastructure Investments in IWT decreased

⁵ Source: Analysis of the state of knowledge on climate changes so far and on the impact of climate change on the water regime in the Rhine watershed - Literature evaluation, International Commission for the protection of Rhine, 2009.

248. Missing links make up nearly 1500 km, or 5.3 per cent of the E waterway network of 27,900 km. The percentage is small, but the impact of the interruptions significantly weakens the network as a whole. The above diagram represents the schematic geographic outline of the region covered by the AGN⁶ and the main AG corridors and highlights the missing links, showing clearly the limits of the network in the current situation.

249. The answer to this drawback lies in phased completion of the infrastructure. The impending start to works on the Seine-Nord Europe Canal, with locks up to 30 m deep and a network of ports, proves the feasibility of building high capacity canals connecting parts of the existing network with a significant economic cost-effectiveness, excellent environmental performance and strong acceptance by the regions involved in the project.

250. Combined river-sea vessels can play an increasingly important role in providing transport for foreign trade. Mixed-navigation vessels now account for a significant portion of the world trading fleet. The main types of vessels of this class have a dead-weight tonnage of between 2,000-3,000 and 5,000-6,000 tonnes, and are used to carry goods between river, river-mouth and sea ports along the coasts of Europe and North Africa, with an autonomy of 15-20 days. Such vessels generally have constraints related to range and seasons of use, allowable distance from harbours and the wave and wind conditions in which they may operate. Accordingly, they are classified as vessels of limited navigation area.

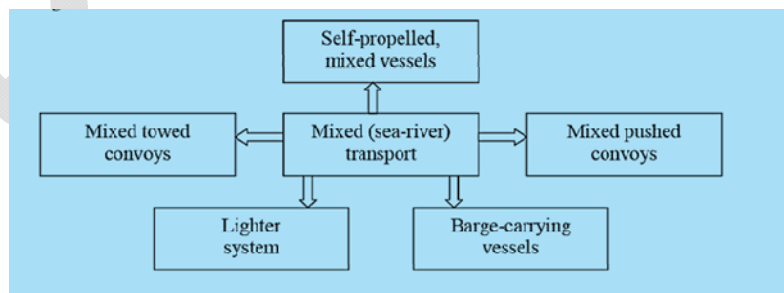
251. There are various types of mixed (sea-river) freight transport systems in use in the world as shown in figure 66. The operation of vessels of any type or designation involves a high level of risks and hazards for the life and health of people, for property, the environment, the life and health of animals and water Resources.

River – Sea vessels

Transport Trend

Development of technical requirements for River – Sea vessels

Figure 66. Types of mixed freight transport systems used in IWT



Source: UNECE IWT White Paper

⁶ European Agreement on Main Inland Waterways, UNECE, Transport Division

252. RIS represent a harmonized information services aimed to facilitate information exchange between parties in inland navigation (boat masters, lock/bridge operators, waterway authorities, terminal operators, operators in calamity centres, fleet managers, cargo shippers, consignors, consignees, freight brokers, and supply forwarders) using a variety of available technological solutions (VHF radio, mobile data communication services, Global navigation satellite system, internet, etc.). This facilitated exchange of traffic related information (e.g. fairway information services, traffic information services, traffic management, calamity abatement reports, information for transport logistics and information for law enforcement, etc.) contributes safe and efficient IWT operations.

253. To ensure the harmonized introduction of RIS services into the pan-European level, UNECE Resolution No. 57 on “Guidelines and Recommendations for River Information Services” (TRANS/SC.3/165) describes the principles and general requirements for planning, implementing and operational use of River Information Services and related systems. These guidelines have been established on the basis of the standards of international expert groups and river navigation commissions.

254. RIS Guidelines are used in conjunction with other, more specialized UNECE Resolutions on the different components of RIS, such as Electronic Chart Display and Information System for Inland Navigation (Inland ECDIS), Standard for Notices to Skippers and for Electronic Ship Reporting in Inland Navigation, Guidelines and Criteria for Vessel Traffic Services on Inland Waterways and International Standard for Tracking and Tracing on Inland Waterways using the Automatic Identification System (AIS).

Implementation of the European NAIADES action programme



Andreas Bäck
Deputy Project Coordinator
of PLATINA

In January 2006, the European Commission launched the multi-annual action programme NAIADES for the promotion of inland waterway transport. The NAIADES action plan is the European Union’s initiative to enhance the use of inland navigation, in order to create a sustainable, competitive and environmentally friendly European transport network. This objective was embraced by the inland navigation sector, which, together with the European Commission, has created PLATINA, an EU-financed research project consisting of 22 partners from nine different countries, in order to accelerate the achievement of the NAIADES aims.

Recognising that the implementation of the European NAIADES action programme is a shared responsibility, the PLATINA consortium is dedicated to supporting the European Commission and national authorities in the implementation of selected NAIADES actions. Organised along the lines of the NAIADES action programme, five thematic areas are pursued.

PLATINA has initiated several actions in the fields of fleet innovation, education and training, image and awareness, River Information Services and infrastructure development. Selected PLATINA activities include the establishment of a central register of inland vessels and steps towards the development of Standards of Training and Certification for Inland Navigation.

Certain inland waterways vessels require a technical inspection before being allowed to sail on European inland waterways. During technical inspections, authorities register data such as the “Unique European Vessel Identification Number”, the name of vessel. Within PLATINA, a central register of inland vessels, the European Hull Database, which eases the required data exchange, was implemented. At present (January 2012), about 75 per cent of the European Union’s fleet has been made available. After the end of PLATINA, the operation of the European Hull Database needs to be continued in a pan-European way, i.e. all countries issuing certificates need to be able to participate.

Highly qualified personnel are crucial for the efficient operation and competitiveness of tomorrow’s fleet on European inland waterways. As demonstrated in the NAIADES action programme, the lack of skilled labour will pose a major problem to the future development of inland navigation in Europe. A core function of PLATINA is therefore to provide support for the harmonisation of inland waterway transport education and training standards in Europe. As part of this, PLATINA initiated a Joint Working Group (JWG) on professional competencies which was attended by key representatives of the European inland waterway transport sector. A development strategy of the harmonisation of standards has been prepared. It is based on the concept of “Standards of Training and Certification Inland Navigation” (STCIN) which will be elaborated further by the participants of the JWG to support the Social Partners in developing recommendations for harmonised professional profiles within the frame of the Sectoral Social Dialogue.

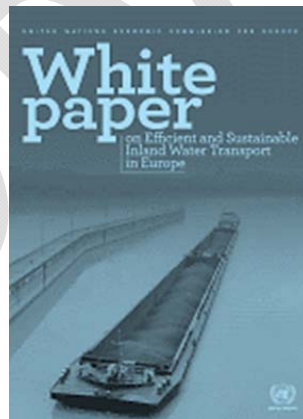
UNECE Publications for Review

Recommendations on Harmonized Europe-Wide Technical Requirements for Inland Navigation Vessels – Revision 1



www.unece.org/index.php?id=26687

White Paper on Efficient and Sustainable Inland Water Transport in Europe

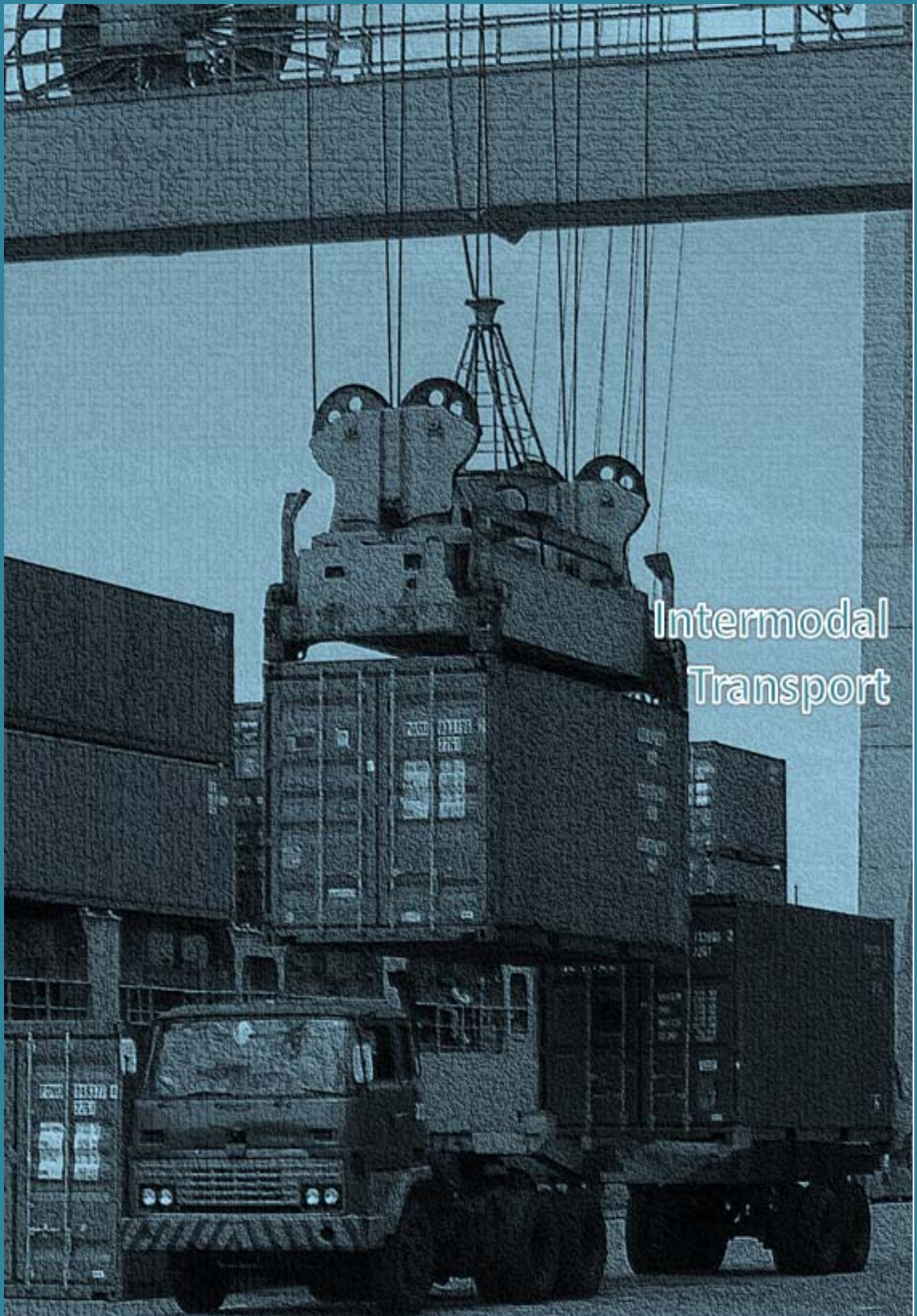


www.unece.org/index.php?id=26068

CEVNI – European Code for Inland Waterways - Revision 4



www.unece.org/index.php?id=26061



Intermodal Transport

CHAPTER 5. Intermodal Transport

Albania

Does your Government take specific measures for the development of Logistics industry? Mention some

255. Albania is perceived as having poor logistic infrastructure. In the short-term, development of logistics and intermodality in Albania will be centred on activities generated by the port of Durres. In the longer-term, it will depend largely on maritime transport and on the implementation of several different projects such as completion of the railway links on Corridor VIII connecting Durres to the former Yugoslav Republic of Macedonia and Bulgaria, the potential development of a large transshipment container port at Vlora and/or the Energy and Industrial Park adjacent to Porto Romano with possible new railway connections to serve them.

256. In addition, there is insufficient connection between the Albanian Railways and other modes of transport (Customs procedures and Development of Multimodal terminals).

Armenia

Does your Government take specific measures for the development of Logistics industry? Mention some

257. The Government of the Republic of Armenia has approved the programme of construction of an international logistic centre and transport infrastructures in the territory adjacent to the "Zvartnots" International Airport. This will be part of a free economic zone and will ensure the transport of passengers from highways and the city of Yerevan to the airport through the construction of a new motor highway and railway. The construction of the logistic centre is expected to last for 3 years; the cost will be around €25 million which will be provided by Public Private Partnerships.

Does your Government take specific measures for the development of Logistics industry? Mention some

Azerbaijan

258. On 3 November 2010 started the construction of the new Baku International Sea Trade Port. The construction area is 400 hectares. The land allocated to the port complex is 100 hectares and an international logistic centre is planned to be build.

Belgium

Does your Government take specific measures for the development of Logistics industry? Mention some

259. Specific measures for transport and logistics have been taken in the first two

⁷ For the definition of poles, please check www.clusters.wallonie.be/federateur/fr/poles-decompetitivite/index.html

axes. Firstly, the first axis of the plane: the clusters.⁷

260. Then the second plane axis: budgets have also been made available for the development of business parks and the finance of certain infrastructure of related sectors including logistics (including budget Trilogiport). Finally, it should be noted that the AWEX specific actions led to the attraction of foreign investors in Logistics in Wallonia. In the Flemish Region, the initiative includes "Flanders Port Area" (see www.flandersportarea.be) which sets 10 goals in logistics and aims to strengthen cooperation among port managers and the private sector.

261. The project "Vlaanderen in Actie (ViA)" – Flanders in Action is an ambitious project of the Flemish Government that started in 2006. One crucial breakthrough action is to become Europe's smart logistics hub (www.vlaandereninactie.be). In order to turn Flanders into a real smart hub for transport and logistics, traffic management for citizens and companies, a broad action plan is designed for seven key projects.

- (a.) Organization of a logistics chain;
- (b.) Provision of infrastructure;
- (c.) Multi-modal transfer;
- (d.) Broad policy plan as a compass;
- (e.) Smart kilometre tax;
- (f.) Multi-modal counselling;
- (g.) Knowledge for logistics with added value.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

262. In Flanders, in its general policy note (www.docs.vlaamsparlament.be/docs/stukken/2009-2010/g217-1.pdf) the Flemish Government specifies the advantages of Flanders including the presence of major port in Europe and worldwide.

Bulgaria

263. The Project for "Development of Strategy for Integration of the Bulgarian Railway Infrastructure into the European Intermodal Transport Network" was implemented in 2006. Additionally, appropriate legal measures for different PPP schemes in the field of intermodal transport based on EU best practices were identified and proposed.

Does your Government take specific measures for the development of Logistics industry? Mention some

264. The role of the Government and particularly of the Bulgarian Ministry of Transport, Information Technology and Communications is mainly to create a favourable environment for the development of the logistic industry. Basically, this is one of the priorities in our transport policy and, therefore, different supporting measures were introduced.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

265. The Bulgarian Government believes that the country has a lot of

competitive advantages from logistics and transportation point of view including its Geographical location, sustainable political and economic conditions, the European support, Railway and road network density, "River –Sea" Connection, PPP opportunities.

Canada

266. Canada does not have a master plan aimed solely at logistics or intermodal transport. However, the National Policy Framework for Strategic Gateways and Trade Corridors (www.canadagateways.gc.ca) provides an overall framework within which regional gateway and trade corridor strategies have been developed:

- (a.) the Asia Pacific Gateway and Corridor Initiative, www.pacificgateway.gc.ca ;
- (b.) the Atlantic Gateway and Trade Corridor, and www.atlanticgateway.gc.ca ;
- (c.) the Ontario-Quebec Continental Gateway and Trade Corridor

www.continentalgateway.ca .

267. Railways are vital to intermodal transportation in Canada. Canada's rail system is based on two major national railways, both with extensive networks in the United States market.

Does your Government take specific measures for the development of Logistics industry? Mention some

268. Specific measures to assist in the development of the logistics industry have been taken:

- (a.) Providing grade separation of roads and railways;
- (b.) Building or improving road interchanges;
- (c.) Moving road infrastructure to allow for expansion of facilities;
- (d.) Expanding value-added cargo services, and increasing handling capacity.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

269. Geography has given Canada certain natural advantages. The North American ports that are closest to Europe and Asia are Canadian. Canada is a Pacific, Atlantic and Arctic nation, with high quality infrastructure, interconnected with the world's biggest economy and our largest trading partner (the U.S.), with infrastructure that reaches deep into the continent's economic heartland.

Croatia

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

270. The geographical location of the Republic of Croatia represents a competitive advantage concerning transport. Croatia is excellently positioned for establishing connections between Western and South-Eastern Europe, and between Central Europe, the Adriatic and the Mediterranean.

Cyprus

271. No measures have been taken for intermodal transport so far.

Czech Republic

272. The Strategy for support of logistics from public resources was adopted in 2009. For the period 2005 – 2010, the Programme for support of combined transport was approved. Currently, a similar programme for the period from 2013 is being prepared.

Does your Government take specific measures for the development of Logistics industry? Mention some

273. The basic measure is investments in transport infrastructure. The above mentioned Strategy envisages a programme to support freight villages, which is prepared to be started in 2013. Currently, the programme for the support of railways revitalization is running (2008 – 2013).

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

274. The logistics sector plays important role in the Czech economy. Main advantages are:

- (a.) Good geographical position in central Europe;
- (b.) Relatively dense and quality road and rail infrastructure in comparison with other Central East Europe countries;
- (c.) Traditionally manufacturing orientation of industry to ensure the high demand for transport.

Denmark

Does your Government take specific measures for the development of Logistics industry? Mention some

275. The Danish Minister for Transport meets 2-3 times a year with representatives from the Logistical Industry. The purpose of these meetings is to coordinate and develop the Logistic industry with close cooperation between the private and public sector.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

276. Danish shipping companies hold the world leading position in container shipping. Denmark is recognized by IMD's "Yearbook for competitiveness" to have a very efficient transport system.

Finland

277. International multimodal transport is mainly short sea shipping and road. Domestic combined transport by train is very modest and has been declining.

Does your Government take specific measures for the development of Logistics industry? Mention some

278. Facilitate cooperation and research and development support.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

279. Location close to the growing Russian Federation market, location along the shortest air-route between Central Europe and Asia, stable society and no congestion.

France

Does your Government take specific measures for the development of Logistics industry? Mention some

280. Development of an action plan for green industrial sector: logistics and flow management action plan was released in late 2011.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

281. The country reported that has a competitive advantage on logistics and green actions.

Does your Government take specific measures for the development of Logistics industry? Mention some

282. The development of free economic zones and the road infrastructure facilitation.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

283. The competitive advantage of the country is its location for Caucasus and Central Asian countries

284. The Federal Government has developed a Freight Transport Logistics Action Plan. This plan lays down a concrete transport policy framework for action in the field of freight transport and logistics. It is the central plan setting the course for ensuring an efficient infrastructure and at the same time making transport more efficient in general.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

285. Yes, because of its excellent infrastructure; good customs clearance; friendly and excellent environment (e.g. legislation) for small and mid-sized enterprises/businesses.

Does your government take specific measures for the development of Logistics industry? Mention some

286. A Logistics Committee has been established during 2010, by Ministerial Decision.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

287. Greece holds an important geo-economical position on the transportation map. Due to its bordering with three continents (Europe, Asia, and Africa) consists an ideal location for the access to the emerging SE European countries and the East Mediterranean.

288. Greece features the transport infrastructure required for the effective and rapid distribution of goods and people. Available in operation :

- (a.) Railway network incorporated to the EU networks;
- (b.) Road network, consisted of 1,500 km of new national roads;
- (c.) Maritime network consisted of 16 international ports;

Georgia

Germany

Greece

Hungary

(d.) Air network, consisted of 15 international and 25 domestic flights airports.

289. The Hungarian intermodal development conception was adopted in 2006 and the Hungarian logistics action plan two years ago.

Does your Government take specific measures for the development of Logistics industry? Mention some

290. We provide state aids for investment in logistics centres:
(a.) GOP (Economic Competitiveness Operational Programme);
(b.) KözOP (Transport Operational Programme).

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

291. We believe that Hungary has a transport competitive advantage, because:
(a.) Of our geographic position (middle of Carpathian basin);
(b.) Hungary is on the Eastern EU border.

Israel

Does your government take specific measures for the development of Logistics industry? Mention some

292. Promotion of an inland port connected by railways to major sea ports.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

293. The geographical location of Israel on the eastern shore of the Mediterranean gives it a potential competitive advantage for freight flow between Europe and Eastern Mediterranean States.

Italy

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

294. The Italian geographic position in the Mediterranean Sea provides potential advantages along Asia-Europe maritime routes.

Latvia

Does your government take specific measures for the development of Logistics industry? Mention some

295. In Latvia there are no such public logistic centres that are considered as "Freight Villages" in Western Europe.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

296. Latvia has a favourable geographical location which makes it possible to serve as a bridge between East and West. We have a well-developed transport infrastructure, which includes three major ports, extensive railway and road network, as well as modern logistics and distribution centres. Many countries use Latvian ports to export their commodities to the EU and other markets. The railway system of Latvia is in compliance with the railway system of Russian Federation and CIS countries - the gauge size 1,520 mm. Therefore, there is no

need for additional documentation and change the railway wagons gauge.

Lithuania

Does your government take specific measures for the development of Logistics industry? Mention some

297. Four freight villages are under development - they should be operational in 2012-2013. In addition a Master Plan for Intermodal Transport - Long-term Strategy (until 2025) of Lithuanian Transport System was developed.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

298. Our country has external EU border with third countries, Lithuanian geographical place is very good for transit and logistics activities. Well-developed road, rail network and good accessibility to any kind of transport. Northernmost ice-free deep water Klaipeda seaport in Baltic's, four international airports. Very competent and well educated transport specialists.

Monaco

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

299. Implementation of a centralized parking place for heavy vehicles, close to the motorway with provision for logistics services. Implementation of an urban distribution centre linked with the above –mentioned centralized parking place.

Norway

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

300. No, geographical conditions exclude competitive advantages.

Poland

Does your government take specific measures for the development of Logistics industry? Mention some

301. Development of the transport infrastructure (road, rails, seaports); financing of intermodal terminals from Operational Programme Infrastructure and Environment 2007-2013; development of intelligent transport systems; creation of special economic zones

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

302. Advantages of Poland:
(a.) Poland is a transit country on the Europe-Asia corridor;
(b.) connection to the railway system of Ukraine and Russian Federation;
(c.) dense rail network;
(d.) access to Baltic sea;
(e.) Good seaport infrastructure.

Does your government take specific measures for the development of Logistics industry? Mention some

303. Ministry of road transport and infrastructure is now developing the new strategy for transport and logistics.

Republic of
Moldova

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

- (a.) Geographical location;
- (b.) Access to European transport corridors;
- (c.) Presence of all main types of transport.

Romania

Does your government take specific measures for the development of Logistics industry? Mention some

304. The Romanian Ministry of Transport and Infrastructure has a strategy for the development of the intermodal transport.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

305. Romania's geo-strategic position – riverain country at the Black Sea and crossed by the most important inland waterway of Europe, the Danube river, on a length of 1,075 km – situated at the confluence zone of the transport generator poles in Europe, the Balkans and Asia, offers a competitive advantage for the development of intermodal transport as well as freight international transit.

Russian Federation

Does your government take specific measures for the development of Logistics industry? Mention some

306. At the state level by the development of interregional Sviazhsky multimodal logistics centre (Tatarstan). The development of logistics centres is provided for under development projects, Euro-Asian transport corridors TRANSIB and north-south, included in the federal target programme "Development of the transport system of the Russian Federation (2010-2015)". Work is also on the development of logistics centres in the Moscow region in the framework of the Coordinating Council for the Development of the Moscow transport hub

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

307. Competitive advantage the Russian Federation in the field of logistics / transport lies in the benefits of geographic location in Eurasia, the presence of rail and road routes of high density that ensure Euro-Asian transport links on the shortest distance.

Serbia

Does your government take specific measures for the development of Logistics industry? Mention some

308. Through the Serbian Transport Strategy (2008) there are the several objectives that support intermodal transport and logistics centres in Serbia, such as:
(a.) strengthening institutional framework and raising the awareness of competent state bodies;

- (b.) making legal framework for intermodal transport;
- (c.) creating the financial support model;
- (d.) Liberalization of intermodal transport activities.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

309. Serbia, thanks to its favourable geographical position, has traditionally played the role of a transit country between the Western and South-Eastern Europe. This role was important for economic development the country in the past and is expected to be very important in the future. This expectation is further supported by the recent start-up of rehabilitation works on the Pan-European Corridor X and greater integration of the country in Europe.

Slovak Republic

Does your government take specific measures for the development of Logistics industry? Mention some

310. Preparation for the construction of public terminals for intermodal transport as part of the logistics centres.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

311. Yes, because the Slovak Republic lies in the centre of Europe, where many international European multimodal corridors pass through it. Moreover Slovakia is a transit country for European Union and other third countries. The recent developments of the economy create opportunities for the development of logistics.

Slovenia

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

312. Due to its favourable geographical location, Slovenia has been the crossroads of land routes between the East and the West, North and South for centuries. With its single port of Luka Koper, it also offers the shortest connection to the Mediterranean, the Middle East and countries in the Far East. The next strategic goal is to make Slovenia a logistics platform for Central and South Eastern Europe. More info: www.mzp.gov.si/en

Sweden

Does your government take specific measures for the development of Logistics industry? Mention some

313. In 2007, the government appointed the Logistics Council. The council will provide the government with input on matters of importance for the logistics industry, and they are, among other tasks also responsible for an annual logistics conference.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

314. Sweden has a well-developed multi-modal transport system, generally with high quality. Sweden has a long coast, with ports capable of accommodating large vessels both on the west and east coast. The Swedish transport system is

often ranked high in international comparisons such as the Logistics Performance Index used by the World Bank, or the Global Competitiveness Index presented by the World Economic Forum.

Switzerland

Does your government take specific measures for the development of Logistics industry? Mention some

315. A Master Plan for Logistics is currently being developed. The Master Plan for Intermodal Transport consists of different measures to promote intermodal transport (subsidies and compensation payments to intermodal transport operators, subsidies and interest free loans for intermodal transport terminals, etc.). Details can be found here: www.bav.admin.ch/verlagerung/03063/index.html?lang=de (German, French, Italian) Measures are based on the Freight Traffic Transfer Act (www.admin.ch/ch/d/sr/c740_1.html)

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

316. By providing an excellent transport infrastructure on road and rail including two base tunnels in order to facilitate north-south transit through the Alps. The promotion of intermodal transport and the provision of an excellent terminal infrastructure (Road/Rail/Inland Waterways) is a main focus of the Swiss transport policy.

Tajikistan

317. Organization and development of logistics industry in Tajikistan are provided by the programme of development of the republic of Tajikistan until 2025.

Turkey

Does your Government take specific measures for the development of Logistics industry? Mention some

318. A programme for increasing the number of freight villages.

Does your Government believe that your country has a Logistics and / or Transportation competitive advantage? Please specify

319. Turkey is located at the heart of the most important production and consumption centres of the world at the crossroads of the three continents. Turkey has huge diversities in terms of geography and topography. Pursuant to this fact, Turkey defined construction and upgrading of lines on the corridors connecting these three continents to each other as a strategic priority.

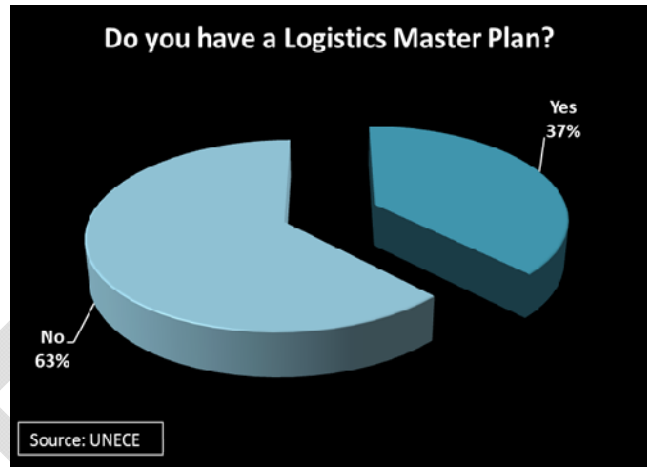
Statistics

Transport Trend

Countries start developing National Logistics Masterplans

320. The 37 per cent (12 countries) of the countries who replied to the UNECE Transport Division questionnaire replied positively on the development of a logistics master plan and 63 per cent (20 countries) negatively.

Figure 67. Logistics Master Plan



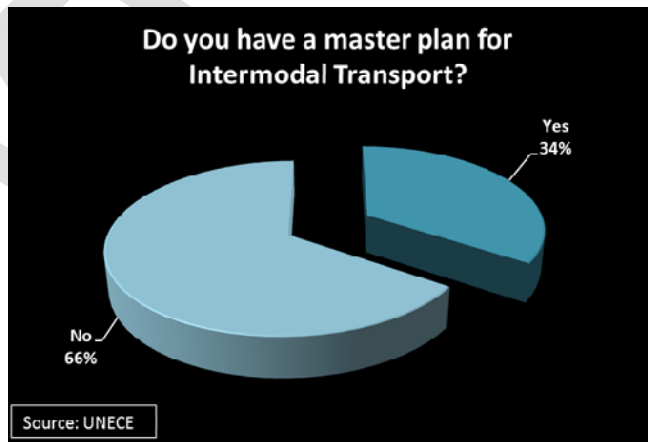
Source: UNECE

Transport Trend

Countries start developing National Master plans for Intermodal Transport

321. Thirty-four per cent (11 countries) of the countries who replied to the UNECE Transport Division questionnaire replied positively on the development of a national master plan for Intermodal transport and 66 per cent (21 countries) negatively.

Figure 68. Intermodal Transport Master Plan



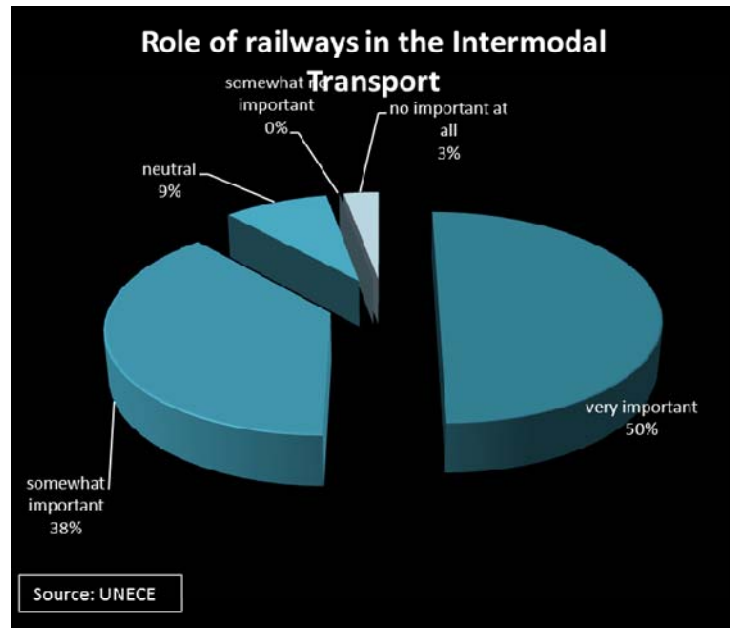
Source: UNECE

322. Eighty-eight per cent of the countries (30 countries) replied that the role of railways in the intermodal transport it is very important or somewhat important. Only the 9 per cent (3 countries) indicate the role of railways as neutral and only one country (Cyprus) as not important at all.

Transport Trend

Countries consider the role of Railways as very important for intermodal transport

Figure 69. Role of railways in the intermodal transport

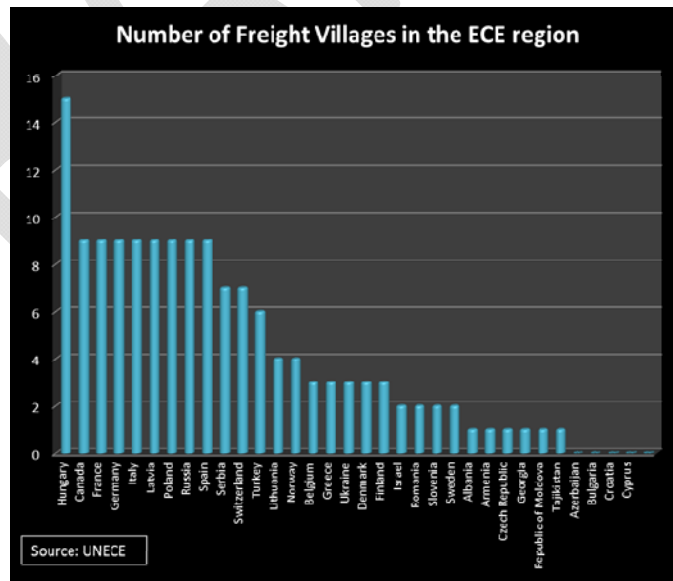


Source: UNECE

Transport Trend

Freight Villages are a reality in ECE region

Figure 70. Number of Freight Villages in the ECE region

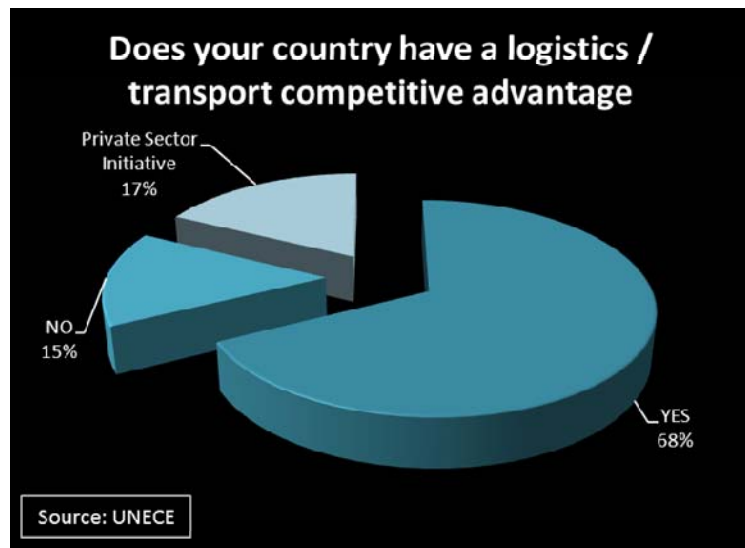


323. One-hundred-forty-four (144) – at least – freight villages exist in the ECE region. The total number is not absolute since 8 countries have chosen the “more than 9” freight villages choice at the questionnaire. From the replies, it becomes clear the need for harmonisation of the terms “freight village”, “logistics centre”, “freight station” etc. among the ECE member States.

Transport Trend

The majority of ECE countries believe that have a logistics / transport competitive advantage

Figure 71. Countries with logistics – transport competitive advantage



Source: UNECE

324. Sixty-eight per cent of the countries participated in the questionnaire of the Transport Division. Twenty three answered positively on the existence of a logistics – transport competitive advantage. Seventeen per cent of the countries (6 countries) connected their geographical - logistics advantage with private sector initiatives and investments.

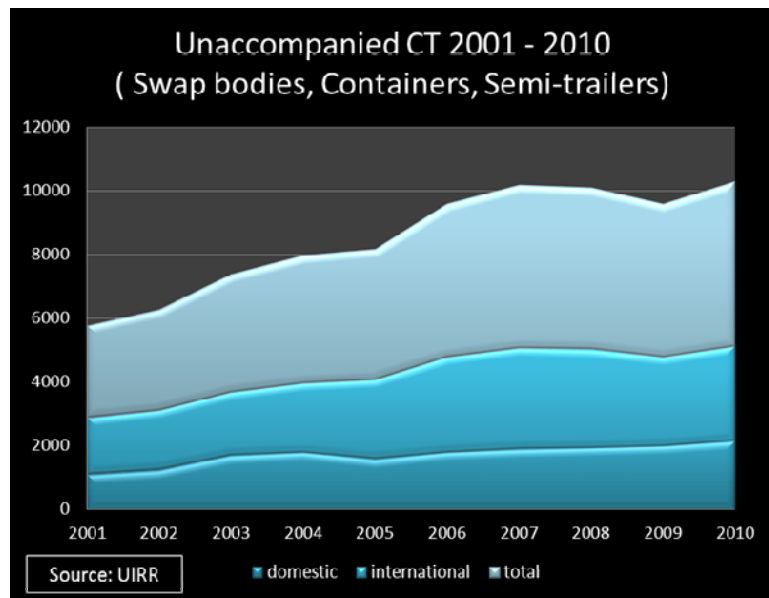
Transport Trend

Combined transport increased its volumes at 38 billion tkm in 2010

325. Despite the slower than anticipated demand during the first half of 2010, UIRR Operators have managed – in a faster way than foreseen – to slightly exceed the turnover of 2008 (including the once-off effects related to one member company in that year). Consequently close to 2.6 million UIRR consignments, or the equivalent of 5.2 million TEUs, were carried constituting a recovery of half the volume lost during the economic crisis. The traffic performance expressed in tonne-kilometre grew in a similar manner and reached 38.2 billion tkm of which 78 per cent are achieved through border-crossing services (covering an average distance of 900 km) and with a gross tonnage of 22 per tons consignment, while these figures in domestic relations amounted to 443 km and 18 tons⁸.

⁸ UIRR 2010, Annual Report

Figure 72. Unaccompanied CT 2001 - 2010



Source : UIRR

326. The Working Party on Intermodal transport and Logistics (WP.24) and on the basis of a comprehensive presentation made by the UIRR representative, noted that intermodal road-rail transport had recorded, since the late 1990s and until 2008, annual growth rates in the order of 6–7 per cent. (www.unece.org/trans/wp24/wp24-agenda/24age.html ECE/TRANS/WP.24/125, paras. 4–8).

327. In 2010, UIRR companies recorded again a considerable increase in traffic in the order of 8 per cent, both for unaccompanied (containers, swap bodies and semi-trailers) and accompanied transport (Rolling Road). This amounted to total shipments in the order of 3,03 million consignments or 6.06 million TEU equivalents (5,16 million TEU for unaccompanied and 0,90 million TEU for accompanied traffic). One consignment is equivalent to two twenty-foot equivalent units (TEU).

328. Intermodal road-rail traffic continued to grow in the first half of 2011. However, this upward trend is already slowing down in the second half of 2011. The outlook for 2012 is bleak as economic growth in Europe will be negatively affected by the austerity measures taken in a number of European countries. In addition, the scheduled temporary closure of the Brenner railway line in 2012 for maintenance and rehabilitation works will complicate transalpine services and may reduce its reliability and punctuality, while increasing costs.

Green Balkan Intermodal Corridors



**Pr. Simeon
Ananiev**
Higher School of
Transport (Sofia,
Bulgaria),
President of Bulgarian
Rail Carriers
Association

Background

We are at the beginning of a political and technological revolution for renewable energy and new transport models, not only because of the crisis. Road freight transport is dominant in Europe, in 2009 most countries reported declines in freight traffic, meanwhile Bulgaria is an exception with 16 per cent growth. Bulgaria has dense rail and road networks. The country ranks 28th in the world for railways per capita and 39th for railway length. At the same time freight transported by rail decrease with 33 per cent in Bulgaria and 27 per cent in Romania. Bulgarian railway infrastructure supports speeds of up to 100 km/h, mainly because of utilizing old technologies, high costs and inaccessible financial resources for maintenance. Furthermore, there are no programmes and initiatives for the development of railway services. Rail freight market has been liberalized, with private companies having 27 per cent of traffic volume. National Railways Cargo carrier is in the process of privatization.

Rail freight in Europe follows the model for integration and privatization of airline carriers through division of large companies and partnerships with regional stakeholders. The leaders in Easter Europe are DB SCHENKER RAIL and Rail Cargo Austria, companies implementing new concepts and providing integrated transport solutions.

The Alternative - Green Balkan Intermodal Corridors

The alternative is 'green' corridors integrating rail and water transport, with minimal impact on the environment. States have the capacity to solve transport problems by natural green corridors and multimodal combined transport solutions for traffic allocation and development of railways. We can formulate three concrete policies for the Balkans:

1. Identifying and adopting common regional strategic and political objectives for rail transport. Regional Transport Plan "Green Transport".
2. Implementing joint projects for building efficient infrastructure by providing financial support and public-private partnerships.
3. Supporting regional and social development and commitment. Clusters, branch organisations and expert support.

Two projects for combined carriage of goods are currently being developed.

1. Europe – Bulgaria Danube Bridge Vidin, ferry Varna – Russian Federation, The Eurasian Union, China
2. Europe - Bulgaria Danube Bridge Vidin – Greece, Turkey (Asia)

To realize these projects it is essential to improve the infrastructure and construct intermodal terminals in all states involved. Bulgarian terminals include Burgas, Varna, Sofia (Yana), Ruse and Vidin. Currently there is combined transport, linear routes and processing of containers and unaccompanied trailers from Koper, Slovenia to Sofia, Bulgaria, from Austria and Germany to Bulgaria, Turkey and Greece.

Bulgaria – Europe's alternative gateway to Russian Federation, The Eurasian Union and China

Through a new transport corridor connecting the rail network with transcontinental rail and ferry lines from the Black Sea to Russian Federation (Varna – Caucasus), Ukraine and Georgia (Poti), Bulgaria could comfortably become Europe's alternative gateway to Russian Federation, The Eurasian Union and China.

Successful projects are a mixture of common interests between governments and business, reasonable deadlines and budgets feasibility.



Pr. Serban Raicu

Professor of Transport
Systems
Transport, traffic and
Logistics department
Transport Engineering
faculty
Polytechnic University
of Bucharest
(Romania)

Currently the transport system does not meet the requirements of sustainable development. The trend of the last decade, translated into the continuing growth of the road freight share, is the result of policies that swung between public interventionism and liberalism. Technological progress, sometimes unpredictable, has been and will continue to change the distribution of flows (material, energy and informational) on each network. Therefore, a global vision for the assembly of technical infrastructures of the society must come into being.

The transport system, with its specific infrastructure, cannot be decoupled from the other technical infrastructures of the territory. Although the infrastructure is relevant for the potential of the transfer capacity, the role of vehicles and technologies cannot be omitted either. All of them provide the service function of the transport infrastructure network. Exactly this function has been deeply damaged by the institutional separation between rail infrastructure and rail operators; this explains the diminishing attractiveness of the rail transport, unable to meet customers' requirements and expectations.

The state, as manager of the infrastructure, through poor maintenance of the rail infrastructure, has severely affected the performance of the rail operation. The slow technical speeds, the lack of network capillarity and the degradation of the connections with other transport modes, in Romania, for example led to permanent performance losses. The competition among transport modes is dominant and the cooperation quasi-inexistent.

The inability of the state to provide fair competition on the transport market is obvious. The lack of a common pricing principle for infrastructure access, the disregard of the social costs, the lack of minimal responsibilities for the technical performance of the rail infrastructure, the absence of prioritization of the infrastructure investments according to technical, financial and economic efficiency are only some of the issues that we will have to consider to achieve the sustainability goals.

Taking into account the requirements of sustainable development, achieving high speed railways in South-Eastern Europe is more appropriate than highway construction.

The use of loading units and performing feeder services in multi-modal "hub and spoke" networks could satisfy the long and medium distance freight demand even in the absence of highways.

A systemic strategy concerning the evolution of the technical infrastructures within a territory, avoiding the waste of resources and protecting the natural and human environment meets the objectives of sustainable development. For this, a lot of professionalism and political responsibility are required.

An aerial photograph of a complex highway interchange, showing multiple levels of overpasses and ramps. The roads are light-colored, and the surrounding area is a mix of green and brown. The text "Transport Infrastructure" is overlaid in white on the right side of the image.

Transport
Infrastructure

CHAPTER 6. Transport Infrastructure

Introduction

329. Infrastructure investment is important for effective service delivery and long term growth. In order to support this type of investment, a number of governments with a relatively strong fiscal position provided grants for capital expenditures, accelerated the pace of infrastructure.

330. During 2011, amounts invested by ECE Governments for transport infrastructure declined. The majority of the countries replying to our questionnaire declared infrastructure financing and administration processes as the main obstacle for transport infrastructure investments the last year. The economic crisis in combination with difficulties implementing flexible financing laws, i.e. Public Private Partnerships, was the two main obstacles that Governments mentioned for transport infrastructure development during 2011.

TEM and TER revised Master Plan 2011

331. In 2011 UNECE published the Trans European Motorway (TEM) and the Trans - European Railway (TER) revised Master Plan. TEM and TER projects are flagship infrastructure projects of UNECE. The objectives of the Master Plan revision were (a) to analyse the results of the road and rail infrastructure development in 25 participating countries of Central, Eastern and South-Eastern Europe and the Caucasus in the period 2005 to 2010, (b) to describe the existing status of road and rail networks and (c) to set out the road and rail networks development programme until the year 2020.

Transport Trend

In 2020, based on TEM status map, the motorway network will be in full operation in 11 countries

332. According to the TEM status map, it is possible to assume that in 2020 the TEM Master Plan backbone network with motorway or dual carriageway sections will be in full operation in 5 countries, and with a few exceptions in another 6 countries. There also seems to be some hope for its completion in the foreseeable future in another 5 countries while in the remaining 9 countries, the chance seems to be rather low.

Transport Trend

In 2020, based on TER status map, 17 countries will have railway sections with a design speed of 160 km/h

333. According to the TER status map, railway sections with a design speed of 160 km/h exist at present in 9 out of the 25 countries participating in the revision. In 2015, this number is expected to grow to 14 and in 2020 to a total of 17 countries. It seems possible that that in the region in 2020, a few more or less continuous 160km/h main lines may exist, interconnecting most of the countries of Central and Eastern Europe.

Euro Asian Transport Linkages Project (EATL)

334. Inter-country cooperation under the EATL Project promoted by the UNECE encourages cooperation among 27 countries along the Euro-Asian land bridge for the coordinated development of Euro-Asian inland transport links. The project has so far produced tangible results and potentials for the development and operation of safe, secure and efficient Euro-Asian transport solutions addressing both physical and non-physical obstacles to transport. Results include an investment strategy for developing 404 identified priority transport infrastructure projects along the main Euro-Asian routes together with analysis of non-physical obstacles to transport, elaboration of

focused studies, development of a GIS database and related applications, as well as policy recommendations

335. **Four hundred twenty one** projects were proposed by the participating countries with total cost amounting to approximately \$271 billion: **311 projects** have been identified to be along the approved and proposed EATL Phase II Routes **110 projects** are of national importance (Reserve Category).

Transport Trend

EATL Expert Group proposed 146 road projects with value of \$113 billion

336. **One hundred forty six** are road projects (47 per cent of total), with value of **\$113 billion**, representing 53 per cent of the total investment cost, of which:

- 57 per cent belong to Category I, with value of \$22,3 billion, representing 20 per cent of the total investment cost for road projects.
- 27 per cent belong to Category II, with value of \$88,3 billion, representing 78 per cent of the total investment cost for road projects.
- 2 per cent belong to Category III, with value of \$0,3 billion, representing 0.3 per cent of the total investment cost for road projects.
- 14 per cent belong to Category IV, with value of \$1,9 billion, representing 1.7 per cent of the total investment cost for road projects.

Transport Trend

EATL Expert Group proposed 121 rail projects with value of \$75 billion

337. **One hundred twenty one** are railway projects (39 per cent of total), with value of **\$75 billion**, representing 35 per cent of the total investment cost, of which:

- 62 per cent belong to Category I, with value of \$28,3 billion, representing 38 per cent of the total investment cost for rail projects.
- 16 per cent belong to Category II, with an estimated value of \$9,2 billion, representing 12 per cent of the total investment cost for rail projects.
- 2 per cent belong to Category III, with value of \$2,7 billion, representing 4 per cent of the total investment cost for rail projects.
- 19 per cent belong to Category IV, with value of \$31,3 billion, representing 42 per cent of the total investment cost for rail projects.
- 1 per cent has been completed, with value of \$3.6 billion, representing 5 per cent of the total investment cost for rail projects.

The World Bank

338. According to the World Bank the countries in the region (ECE) need to increase competitiveness, improve productivity and strengthen regional integration. The Bank supported regulatory reforms and public finance management in Croatia and Poland; helped stabilize the financial sector in Serbia; and increased access to finance for small and medium enterprises in Armenia and Turkey. It supported road improvements in Belarus, Kazakhstan, the Kyrgyzstan and the South Caucasus and public sector reforms to improve governance and transport and energy delivery in Romania.

Transport Trend

The World Bank, for fiscal year 2011, lent 1 per cent of its budget for transportation projects to Europe and Central Asia region

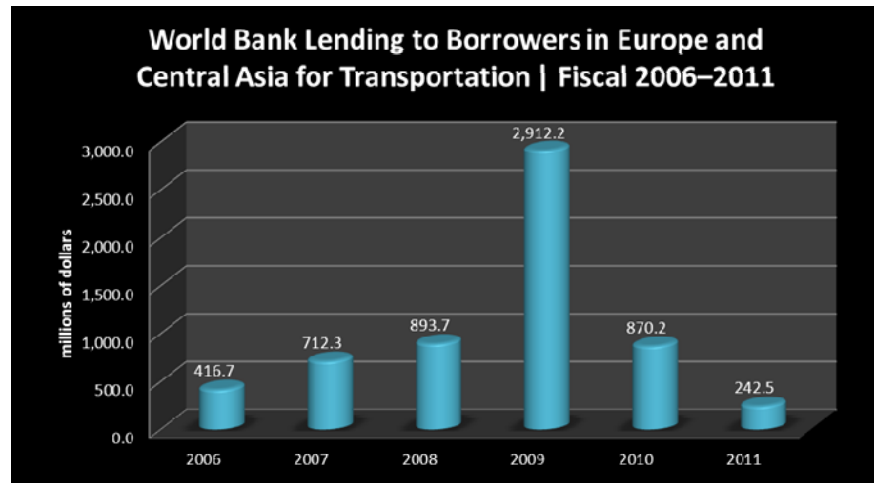
339. Bank support reached \$6.1 billion this fiscal year (2011), including \$5.5 billion from IBRD and \$655 million from IDA. Turkey (\$1.4 billion), Poland (\$1.1 billion) and Romania (\$1.1 billion) were the largest borrowers. Sectors receiving the most funding were energy and mining (\$1.9 billion); Public Administration, Law, and Justice (\$1.7 billion) and Health and other Social Services (\$1.2 billion).

340. Bank's lending to countries in Europe and Central Asia for transportation projects has dramatically decreased: from 2,912 millions of dollars in 2009 to 242,5 millions of dollars in 2011.

Transport Trend

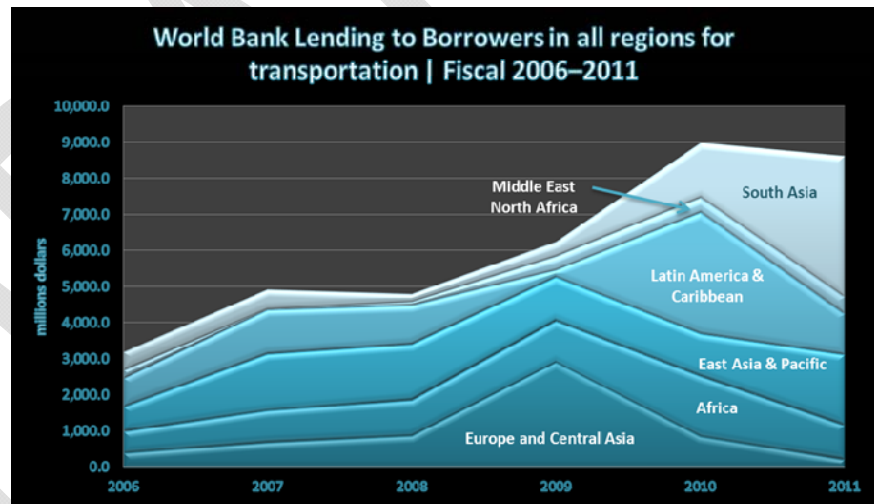
The World Bank, lending to borrowers in Europe and Central Asia for transportation has dramatically decreased from 2,912 millions \$ in 2009 to 242 millions \$ in 2011

Figure 73. World Bank lending to borrowers in Europe and Central Asia for transportation /fiscal 2006 - 2011



Source: World Bank , UNECE

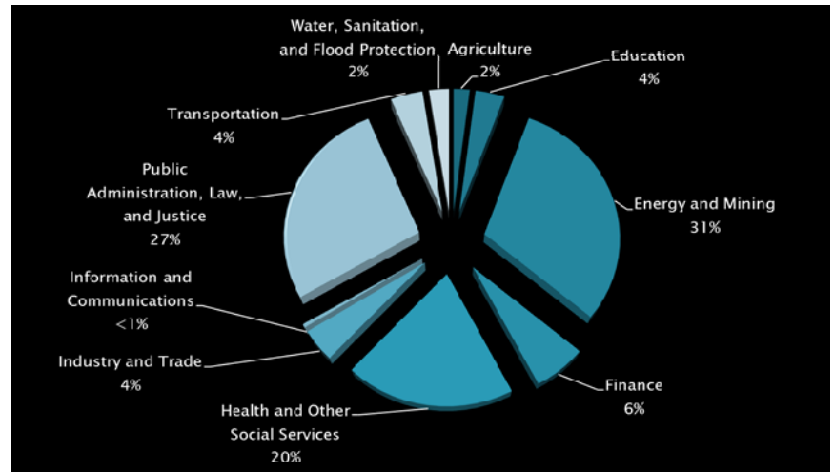
Figure 74. World Bank lending to borrowers in all regions for transportation /Fiscal 2006 - 2011



Source: World Bank , UNECE

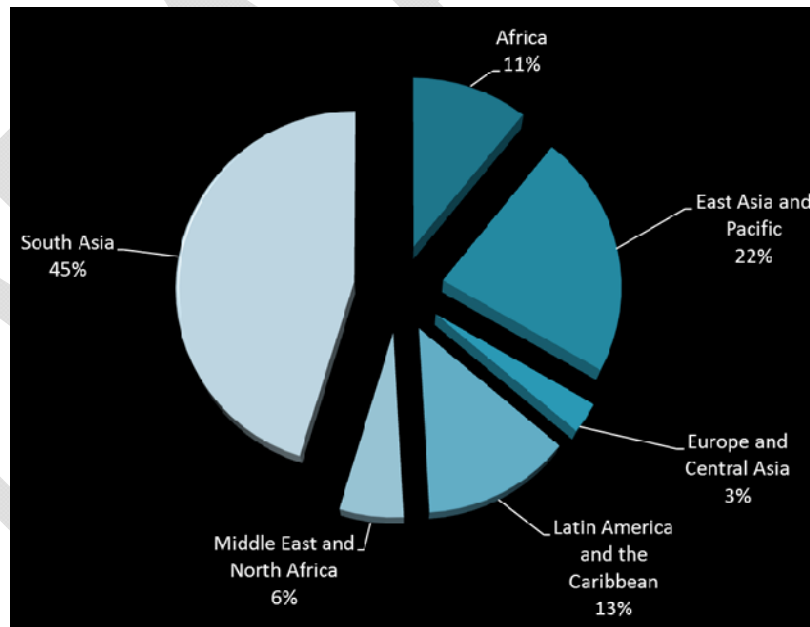
341. South Asia gets the highest amount with 3,914 million \$ for 2011. South and East Asia and Pacific are the only region that received higher amounts in 2011 compared with to 2010. The total amount that the World Bank lent to borrowers in the period from 2006 to 2011 for transportation projects was increasing getting its highest pick in 2010 with a total of 8,585 million \$. Then, in 2011, there was a decrease to 8,155 million \$.

Figure 75. Europe and Central Asia lending by Sector | Fiscal 2011
Share of Total Lending of \$6.1 Billion



Source: World Bank , UNECE

Figure 76. Transportation lending by region Fiscal 2011, share of Total Lending of \$8 .6 Billion



Source: World Bank , UNECE



342. Transport. Approval of the Sustainable Transport Initiative Operational Plan placed ADB at the forefront of sustainable transport in developing member countries. The ADB Transport Forum 2010 discussed issues related to urban transport, mainstreaming climate change, cross border transport and logistics, and road safety and social sustainability. The Kathmandu Sustainable Urban Transport Project was approved, serving as a showcase for support in urban transport.

Transport Trend

Asian Development Bank in 2010 lent \$1.3 billion for transport infrastructure projects in Central Asia

343. Improved connectivity through investments in transport and logistics, energy security and efficiency, upgraded urban services, and public sector reforms are at the heart of the ADB strategy in the sub region (Central and West Asia). More than \$1.2 billion has been directed at energy supply and transmission, with the same amount for transport infrastructure. The Central Asia Regional Economic Cooperation Program reached major milestones in 2010.

344. About \$1.3 billion provided for transport infrastructure, mostly under multitranche financing, including a \$340 million regional road project in Afghanistan, and \$456 million for CAREC corridors in Kazakhstan and \$115 million in Uzbekistan.

345. ADB and its partners—including the European Bank for Reconstruction and Development (EBRD), the Islamic Development Bank, and the World Bank— approved sub regional transport and energy projects worth \$2 billion. These covered the CAREC Corridor (Zhambyl Oblast Section) in Kazakhstan and the Talimarjan Power Project in Uzbekistan. Under an agreement signed by the Kyrgyzstan and Tajikistan in December to facilitate the cross-border transport of goods and people, trade facilitation bodies were established, including the CAREC Federation of Carrier and Forwarder Association.

Railway infrastructure trends in Europe



Libor Lochman

Community of European Railways and Infrastructure Companies (CER)
Executive Director

The European railway infrastructure suffers from insufficient coordination of investments, which results in a patchwork of lines that are not connected to the backbone network. Whilst this represents a certain obstacle for international passenger traffic, it poses a serious barrier for efficient rail freight transport.

The implementation of rail freight corridors has seen problems all over Europe due to the lack of commitment of member States to provide funding on time.

The European Commission recognises this situation and published the Regulation concerning a European rail network for competitive freight in 2010. This regulation comprises a list of nine initial freight corridors which take priority in terms of investments and coordinated management.

The tendency to support rail as the sustainable transport mode has been confirmed in 2011 when the European Commission presented two important political projects for European transport infrastructure: The Transport White Paper of March 2011, which gives a clear vision for a competitive and sustainable Single European Transport Area and especially for a Single European Railway Area, and the proposal for a revision of the Trans-European Transport Network (TEN-T) Guidelines published in October 2011.

The proposed core network connects EU capitals, ports, airports and key land border crossings, as well as other economic centres through the use of multimodal corridors which, with the help of improved standardisation and harmonization at EU-level, are to carry large volumes of freight and passengers with high efficiency and low emissions throughout Europe.

There is however persistent discrepancy between financing needs and available funds. The dominance of investments in road – especially in the new member states (EU-12) – is particularly striking.

The European transport network clearly requires substantial financial resources at a time when governments are under immense pressure to reduce their public budgets. In order to meet the expected demand for transport, the European Commission has estimated that over 1.5 trillion EUR are needed for the period 2010-2030 for transport infrastructure alone.

In order to mobilise the large amount of funds needed for the implementation of the TEN-T network, alternative sources of funding from both public and private investors will have to be explored. These should include the full internalisation of all external costs for all modes, the application of the polluter-pays and user-pays principle, and the elimination of tax distortions.

Transport Infrastructure developments along the Euro Asian Transport Linkages



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The Euro-Asian Transport Links (EATL) project during its Phase I was a joint effort by the United Nations Economic Commission for Europe (UNECE) and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). Phase I was carried out from 2002 to 2007 with participating countries Afghanistan, Armenia, Azerbaijan, Belarus, Bulgaria, China, Georgia, Greece, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Moldova, Romania, Russian Federation, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan. UNECE is implementing Phase II during a four-year period from 2008 to 2012. Finland, Germany, Latvia, Lithuania, Luxembourg, Mongolia, Pakistan, and the former Yugoslav Republic of Macedonia are the new participating countries.

One of the main achievements of the study is related to the selection of the transport infrastructure projects along the approved EATL routes by the participating countries, and involves all transport modes: road, rail, inland waterways, transshipment points and ports. The identified EATL inland transport routes, for specific origins-destinations are - in terms of distance-up to three times shorter and often quicker than the respective maritime routes. In addition, the study has developed an international investment plan of the identified priority transport infrastructure projects along the specified EATL routes. It includes an extensive inventory of specific road, rail, inland waterway, maritime port, inland terminals and other infrastructure projects for the 27 participating countries, together with their estimated budget and pragmatic investment time plan for their implementation, according to four implementation time periods, each related to a specific time horizon going beyond 2020.

A total of 311 infrastructure projects were proposed under the EATL Phase II Study, the majority of which being related to the road network. The implementation of the EATL network as a whole would require the approximate sum of \$213 billion, out of which only 33 per cent has secured funding to this date. Currently, new transport infrastructure is being constructed in some parts of the inland EATL routes. During the years 2009 and 2010, only 1 per cent of the EATL Network was completed, while over half of the proposed projects (60 per cent) are planned to be completed within the upcoming period 2012- 2013. More specifically, in the following two years (2012- 2013) will see the completion of 57 per cent of road projects and 62 per cent of the railway projects. On a country basis, the completion of all planned infrastructure projects by year 2013 is expected in Azerbaijan, Greece, Kazakhstan, and Lithuania, while most of the projects' development would have been realised in Bulgaria, Islamic Republic of Iran, Latvia, Romania, Ukraine and Uzbekistan.

Today, maritime transport dominates the transport of goods from Asia to Europe, while there are significant unutilized capacities along some parts of the EATL road and railway routes running east-west and north-south. There is a high political commitment for the development of EATL inland transport routes by the concerned governments and various international and sub-regional organizations are promoting relevant initiatives. Moreover, the study showed that Euro-Asian rail transport and its combination with maritime and road transport is a feasible and competitive transport option. To this end,

the real development potential of EATL inland transport connections lies upon their capacity to become part of the main EATL supply chains, functioning complementary among various transport modes. Thus, transport logistic services related to the end-to-end transportation cost-and-time efficiency and reliability are required. These necessitate urgent trade and cross-border facilitation to be undertaken in the EATL countries, as well the introduction of appropriate measures to reduce transport cost and time along the EATL routes.

Sustainable Transport Networking in ECO Region



**Dr Esmail
Tekyeh Sadat**
Director of Transport
and Communication
ECO Secretariat

Accessible, safe and secure road/ Rail corridors are the main concern of suppliers and customers and impact reliability in time and cost and accordingly sustainability of flow of trade in the world. Initiatives of such type of corridors and networking will enhance collective thinking and accordingly social development which will be the main task of United Nation. This study very briefly would like to demonstrate the volume of Trade in the world and more specify the geo strategic position of Economic Cooperation Organization (ECO) for initiating reliable infrastructure connectivity. That means the on-going ECO transport projects for revitalizing of Silk Road which always recognized to be as accessible, safe and secure Rail/Road Corridors.

The research design and methodology is based upon the key questions on Rail / Road corridors in Euro- Asian routes which could be applied in ECO due to inland hegemony and connectivity. The study also enriched with primary data which generated through face to face meetings, working panels and observations from the findings of ECO Truck Caravan. The research finding shows the gaps still remain in the process of initiating dynamic transport networking in ECO Region and it would be as a priority to make at the first stage interconnection among key stakeholders (forwarders, Customs, Transport ...) for enhancing reliable ECO Rail/Road corridors networking and at the second stage to enhance capacities of each members to adopt with this networking. The more important modalities which are required for enhancing capacity for initiating ECO sustain transport networking in each member states could be consider the role of creating container operating terminals networking in ECO region for better interconnectivity , monitoring and services to border crossing transit facilitation.

There are a quite numbers of strategic implemented and planed Rail/Road Corridors in ECO Region. Below are some of strategic Rail/Road corridors which could be expected to impact on flow of Trade through ECO inter-operability management mechanism. We call it Rail/Road corridors, because the most Road corridors in ECO Region have had a significant privilege to be use as a Rail Corridors and this significant privilege will impact on time and cost efficiency in interoperability of fright management system in ECO Region.

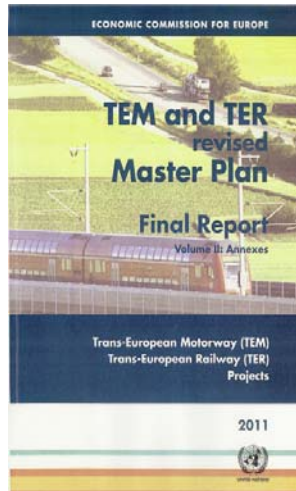
- 1- From Turkey via Iran to Pakistan (Istanbul - Islamabad)
- 2- From Turkey via Iran, Turkmenistan, Uzbekistan to Kazakhstan (Istanbul to Dostyk (Almaty))
- 3- From Azerbaijan to Iran (Yalama - Bandar e Emam Khomeyni)
- 4- From Kazakhstan via Turkmenistan to Iran (Tobol to Bandar e Abbas)
- 5- From Kazakhstan via Uzbekistan, Turkmenistan to Iran (Astana to Bandar Abbas)

UNECE Publications for Review

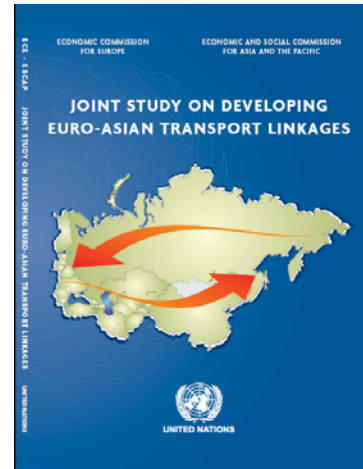
TEM and TER revised Master Plan Final Report , Volume I: Main text



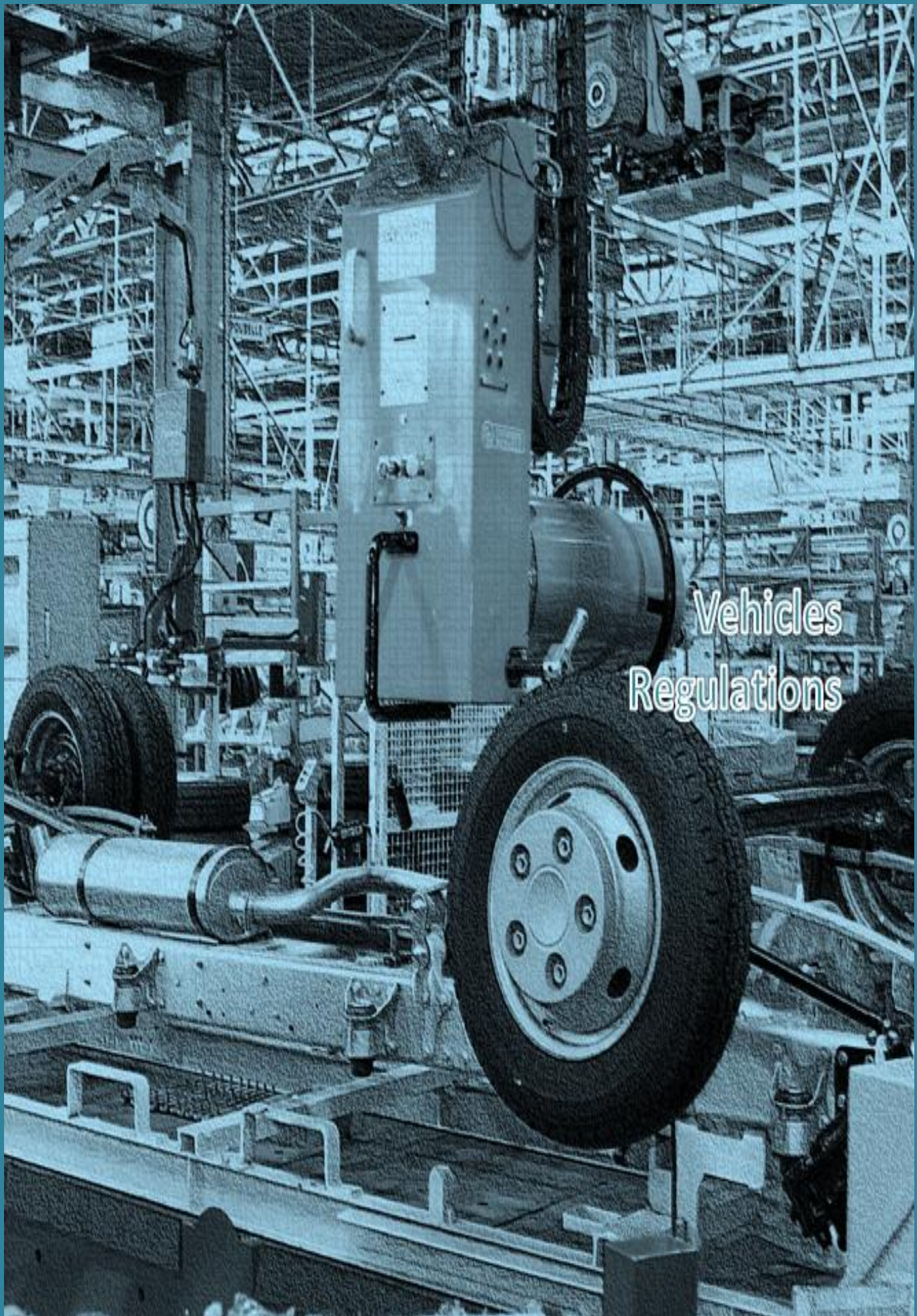
TEM and TER revised Master Plan Final Report , Volume II: Annexes



Joint study on developing EURO-ASIAN TRANSPORT LINKAGES



DRAFT



Vehicles Regulations

CHAPTER 7. Vehicles Regulations

Introduction

346. In 2011, the UNECE World Forum for Harmonization of Vehicle Regulations (WP.29) adopted new regulations aimed at improving vehicles' safety and their environmental performance, while also continuing to update the existing regulations. More than 100 amendments were adopted in 2011, some of which were designed to adapt the existing vehicle regulations to an adequate level of technical progress, while others introduced more severe limits. Among them, provisions were made to protect occupants of electric vehicles in case of collisions. New provisions for side facing bus seats were also completed in 2011. In addition, the World Forum adopted new provisions for adaptive driving beams to reduce glare caused by headlamps.

347. The main trends for vehicles regulations for 2011 – 2012 are summarized below:

Electric Vehicles

348. The technology of electric propulsion is fairly mature, but recent advances in energy storage (batteries, capacitors, flywheels) have largely improved electric vehicles' performance and made them a valid choice for consumers. There is a considerable potential for further developments in automotive energy storage. Electric vehicles, like hydrogen and fuel cell vehicles, represent a promising technology in terms of addressing climate change, improving air quality and cutting oil dependency. The ongoing regulatory efforts to reduce the emissions of gaseous pollutants, particulates and CO₂ are helping to drive an increasing market penetration of electric vehicles. Thus, many governments support the development and deployment of electric vehicles by financing research or offering incentives for consumers. Consequently, the automotive industry is investing in research and development, as well as the production capacity for electric vehicles, at a scale not seen in the past. It is important to note that while electric vehicles are currently on the market and regulators are moving forward with setting applicable technical requirements, the technology is still evolving. This ongoing technology development needs a flexible yet solid regulatory framework - one that is performance-oriented, based on the best available data and scientific research and analysis.

Transport Trend

Development of a UN
Global Technical
Regulation on electric
vehicles

349. At this aim, WP.29 adopted provisions for electric vehicles into the UN Regulations annexed to the 1958 Agreement to pave the way for quick penetration of new electric vehicles into the market.

350. In the long-term, there will be a shift in the automotive sector from the use of fossil energy to innovative propulsion systems, alternative energy sources and integration of less energy demanding technologies. It is obvious that this shift alone will not solve the problem, if the generation of electricity and the production of hydrogen are not also sustainable. It is important to note that the effectiveness of an integrated approach for green vehicles depends on the energy sector ensuring the sustainable and cost-effective generation of electricity and production of hydrogen. Electricity generators need to develop a more sustainable electricity supply and electricity distributors have to adapt their grids to the new users with the possibility of slow and fast recharging of electric vehicles.

Audibility of quiet vehicles

Transport Trend

Development and harmonization of "quiet vehicle" audible acoustic signaling techniques

Automatic Emergency Braking System (AEBS)

Transport Trend

Establishment of uniform provisions for advanced emergency braking systems (AEBS)

Lane Departure Warning Systems (driver assistance)

Transport Trend

Development of lane departure warning systems

Light Emitting Diodes (LED)

351. The advent of road transport vehicles that rely, in whole or in part, on alternative drive trains (e.g. electromotive propulsion) are serving to significantly reduce both air and noise pollution and their adverse impacts on citizens throughout the world. However, the very positive environmental benefits achieved to date by these "hybrid or pure electric" road vehicles have resulted in the unintended consequence of removing a source of audible signal that is used by various groups of pedestrians, (e.g. in particular blind and low vision persons), to signal the approach, presence and/or departure of road vehicles.

352. The World Forum WP.29 has determined that road transport vehicles propelled in whole or in part by electric means, present a danger to pedestrians. Further, the World Forum has mandated its subsidiary Working Party on Noise (GRB) to assess and determine what, if any, steps might be taken to mitigate potential pedestrian hazards through the use of acoustic means, recognizing that other means of communication may also be appropriate.

353. The automatic emergency braking system automatically detects a potential forward collision, provide the driver with a warning and activate the vehicle braking system to decelerate the vehicle with the purpose of avoiding or mitigating the severity of a collision in the event that the driver does not respond to the warning. The system shall only operate in driving situations where braking will avoid or mitigate the severity of an accident, and shall take no action in normal driving situations.

354. In the case of a system failure the safe operation of the vehicle shall not be endangered. The system provides as a minimum an acoustic or haptic warning, which may also be a sharp deceleration, so that an inattentive driver is made aware of a critical situation.

355. During any action taken by the system (the warning and emergency braking phases), the driver can, at any time through a conscious action, e.g. by a steering action or an accelerator kick-down, take control and override the system.

356. "Lane departure warning system (LDWS)" warns the driver of an unintentional drift of the vehicle out of its travel lane. "Lane" means one of the longitudinal strips into which a roadway is divided.

357. "Visible lane marking" are delineators intentionally placed on the borderline of the lane and directly visible by the driver while driving (e.g. not covered by snow, etc.). Whenever the system is active, the LDWS warns the driver if the vehicle crosses over a visible lane marking for the lane in which it is running.

358. LED light sources are consuming less electric energy than filament lamps used in the past on vehicles for lighting and light signalling purposes.

359. The use of LED light sources can reduce the energy consumption of new vehicles and therefore contribute to the reduction of CO₂ emissions.

360. In this respect, the World Forum has developed a new UN Regulation, under the 1958 Agreement, on uniform provisions concerning the approval of

Transport Trend

Uniform provisions concerning the approval of light emitting diode (LED) light sources for use in approved signaling lamp units on power-driven vehicles and their trailers.

Pedestrian Safety

Transport Trend

Development of global technical regulation to reduce the number of pedestrian fatalities.

Safety provisions of Hydrogen and Fuel Cell Vehicles

Transport Trend

Set of regulations for Hydrogen and Fuel Cell Vehicles

LED light sources.

361. Each year, thousands of pedestrians and cyclists are struck by motor vehicles. Most of these accidents take place in urban areas where serious or fatal injuries can be sustained at relatively low speed, particularly in the case of children. In the most representative pedestrian to car accidents, the pedestrian is in normal walking posture, meaning that the pedestrian is standing sideways to the vehicle, and is struck by the vehicle from the side.

362. In this respect, the World Forum has developed, in the framework of the 1998 Agreement, a UN GTR that will significantly reduce the levels of injury sustained by pedestrians involved in frontal impacts with motor vehicles. The same provisions are being transposed into a new UN Regulation under the 1958 Agreement.

363. In the ongoing debate over the need to identify new sources of energy and to reduce greenhouse gas emissions, companies around the world have explored the use of various alternative fuels, including compressed natural gas, liquefied propane gas and hydrogen. Hydrogen has emerged as one of the most promising alternatives due to its vehicle emissions being virtually zero. For decades scientists, researchers and economists have pointed to hydrogen, in both compressed gaseous and liquid forms, as a possible alternative to gasoline and diesel as a vehicle fuel.

364. Ensuring the safe use of hydrogen as a fuel is a critical element in successful transitioning to a global hydrogen economy. The safe use of hydrogen, particularly in the compressed gaseous form, lies in preventing catastrophic failures involving a combination of fuel, air and ignition sources as well as pressure and electrical hazards.

365. The development of globally harmonized technical requirement for hydrogen and fuel cell vehicles occurred within the framework of activities of WP.29. The goal is to develop and establish UN GTRs on hydrogen-fuelled vehicles that: (i) attain or exceed the equivalent levels of safety of those for conventional fuelled vehicles; (ii) is performance-based and (iii) does not restrict future technologies.

366. The GTRs will include, amongst others, vehicle crash performance requirements for hydrogen storage systems and fuel lines to limit hydrogen releases and leakages. Furthermore, the GTR will provide technical requirements for electrical isolation to protect occupants and others against electric shock. Both set of requirements are tested in in-use and post-crash

conditions.

367. The World Forum will also address the issue of reusability, recyclability and recoverability of hydrogen vehicle components.

Child Restraint Systems

368. Children will be safer when transported in passenger cars thanks to new provisions for child seats in a new Regulation currently in progress by the World Forum WP.29.

Transport Trend

Development of harmonized technical provisions on Child Restraint Systems

Protection against pole side impact crashes

369. The new UN Regulation on Child Restraint Systems (CRS) will increase the safety of the child restraint system and ease its handling for users and reduce its misuse. Its implementation will increase the level of safety and reduce the injury risk of children in case of road accidents.

Transport Trend

Regulation to reduce the risk of serious and fatal injury of vehicle occupants in side impact crashes

Protection against whiplash injuries

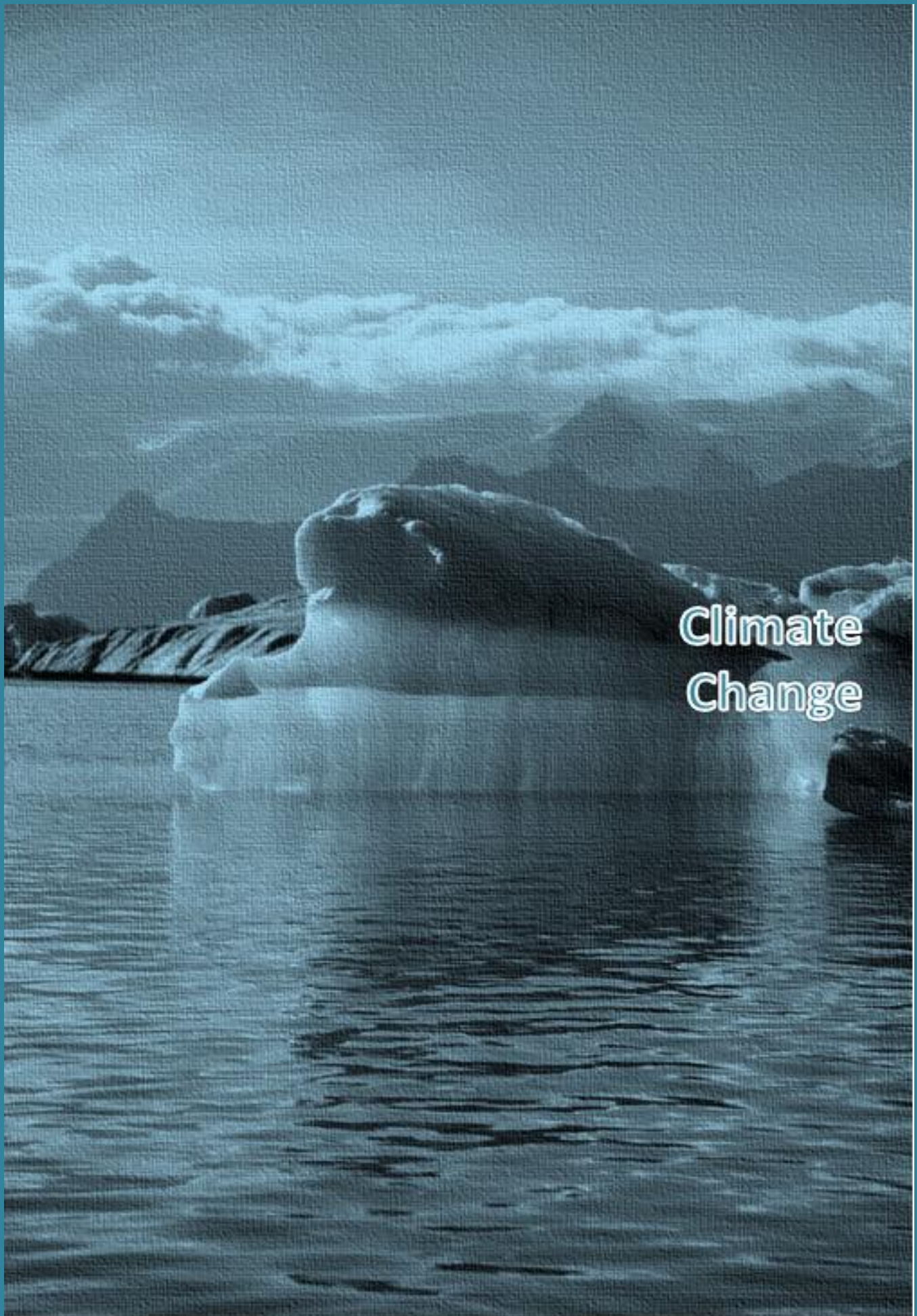
370. The World Forum WP.29 is developing a regulation to reduce the risk of serious and fatal injury of vehicle occupants in side impact crashes by limiting the forces, accelerations and deflections measured by anthropomorphic test devices in pole side impact crash tests as well as by other specified means.

Transport Trend

Identification of a set of regulations regarding protection against whiplash injuries

371. Whiplash injuries are a set of common symptoms that occur in motor vehicle crashes involving the soft tissues of the head, neck and spine. Symptoms of pain in the head, neck, shoulders, and arms may be present along with damage to muscles, ligaments and vertebrae. In many cases, lesions are not evident. The onset of symptoms may be delayed and may only last a few hours; however, in some cases, effects may last for years or even be permanent. The relatively short-term symptoms are associated with muscle and ligament trauma, while the long-term ones are associated with nerve damage.

372. WP.29 is taking a comprehensive approach to determining the most appropriate regulatory requirements for testing head restraints and seats of vehicles to mitigate minor neck injuries and to improve those requirements already existing in the UN GTR addressing the whiplash issue.



Climate
Change

CHAPTER 8. Climate Change

Introduction

373. Thirty Governments replied that they are taking measures on climate change. Sixty per cent of these countries are taking measures for both mitigation and adaptation of climate change, while forty per cent only for mitigation.

374. An increasing trend over the last 30 years is the advent of natural disasters. A long term increasing trend is clear on the atmospheric surface air temperature.

Albania

375. The important documents or resources for climate change policies and measures in Albania are:

- (a.) National Environmental Strategy;
- (b.) Environment sector and cross-cutting strategy;
- (c.) law "on environment protection";
- (d.) Strategy and Action Plan for Biodiversity;
- (e.) The strategic action plan (SAP) for Shkodra / Skadar lake Albania & Montenegro;
- (f.) Strategy for forestry development;
- (g.) Fourth national report to the United Nations Convention on Biological Diversity.

376. Online sources: www.moe.gov.al ; www.mete.gov.al

Armenia

377. The Republic of Armenia has made initial steps towards adaptation and mitigation of climate change affects: several legal reforms have been made to mitigate the potential influence caused by emissions and to control the technical state of vehicles to minimize the pollution or any other possible effects. Works are realized directed to the development and implementation of specific strategies and action plans for the Republic of Armenia.

Belgium

378. The measures are described in details in the transport policy chapter. Indicatively we mention the following:

- (a.) benefit in kind of a company car is calculated based on CO₂ emissions;
- (b.) compensation Bicycle 0.20 euro / km tax-free is granted by the employer for commuting;
- (c.) discount for the purchase of new vehicle for individuals, etc.

Bulgaria

379. The Second National Plan on Climate Change (Second NAPCC) is a governmental plan to streamline and guide the efforts of the Bulgarian government in mitigating climate change. In the NAPCC, the individual sector mitigation policies and measures are described in detail, including the estimation of the emission reduction and requirements for implementation.

380. Currently, the Ministry of Environment and Waters coordinates the development of the Third National Action Plan on Climate Change (which is to be implemented in 2011-2012 and 2013-2020) under a project for international cooperation funded by the Norwegian programme for cooperation and development "Holistic approach to the reduction of GHG in Bulgaria".

381. Online resources:

www.moew.government.bg/recent_doc/international/climate/NAPCC_Final_English.doc
www.moew.government.bg/recent_doc/climate/npdik/broshuraNPDIK.pdf
www.eeagrants.org/id/13?act=search&numprpage=10&country=Bulgaria&mainsector=all&subsector=all&funds=all&freetext=Free+text&casenumber=Case+number&orderby=casenumber&orderdir=asc

Canada

382. The Government of Canada is applying a sector-by-sector regulatory approach to address domestic greenhouse gas (GHG) emissions as a key factor to meet Copenhagen and Cancun reduction targets of 17 per cent by 2020 based on 2005 levels. This includes regulations targeting the transportation sector.

383. Canada will spend \$149 million over the next five years on climate change adaptation initiatives, to help frame a credible, science-based response to the climate change's impact on Canada's economy, health, security, as well as northern and Aboriginal communities.

384. Online resources: www.ec.gc.ca/default.asp?lang=En&n=56D4043B-1&news=B67A7995-A1CA-4DE3-89D2-E4E3C0E24BFB

385. Regarding the rail sector, Canada entered into a voluntary MOU with the rail industry to reduce air emissions, including GHGs: www.tc.gc.ca/eng/programs/environment-ecofreight-rail-menu-424.htm #Rail-Annual Report.

386. Canada has also delivered a suite of clean transportation initiatives through its eco TRANSPORT Strategy. Further details on these programs are available at: www.tc.gc.ca/eng/programs/environment-ecotransport-menu-604.htm .

387. In October 2010, Canada announced final regulations for GHG emissions from new Light - duty vehicles for model years 2011-2016, aligned with the U.S. Details are available at: www.ec.gc.ca/default.asp?lang=En&n=714D9AAE-1&news=3C7732ED-B2B7-4E45-8A54-A495500E58DB .

Croatia

388. The 2008-2011 Air Quality Protection and Improvement Plan for the Republic of Croatia (Official Gazette 61/2008) defined 33 measures for climate change mitigation which are currently either in preparation or being implemented. An accompanying GHG emission trend in the period 1990-2008 indicates an obvious deceleration of the emission increase during the recent years, which is partly an outcome of measures taken to fulfil the commitments under the Kyoto Protocol.

Czech Republic

389. On the regional level, there exists the Master plan for emission reduction and Master plan for improvement of air quality. Each Master plan contains specific indicators and goals for reduction of emission production from transport sector. Other activities such as finance benefits or tax, supporting environmental friendly transport, alternative fuels, low CO₂ emission cars, are under consideration.

Denmark

390. The Danish Government aims at reducing CO₂ emissions by 40 per cent in 2020 compared to 1990. In the Transport sector the Government is promoting public transport and bicycle transport in order to reduce CO₂ emissions. More than

two-thirds of the investments budget goes to the rail sector. Adaptation www.kemin.dk/en-US/Sider/frontpage.aspx

Finland

391. Climate policy programme for the transport sector by the Ministry of Transport and Communications www.lvm.fi/web/fi/julkaisu/-/view/1198918

France

392. Lois Grenelle 1 et 2:

- www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000020949548
- www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000020949548

393. Plan Climate:

- www.developpement-durable.gouv.fr/IMG/pdf/ONERC-PNACC-complet.pdf

Georgia

394. Georgia is working on adopting the MARPOL Annex-VI Regulations for the Prevention of Air Pollution from Ships.

Germany

395. More information can be found at: www.bmvbs.de/EN/TransportAndMobility/TransportPolicy/TransportAndEnvironment/transport-and-environment_node.html & http://www.bmvbs.de/DE/VerkehrUndMobilitaet/Verkehrstraeger/Wasser/Klima-UndUmweltschutz/klima-und-umweltschutz_node.html

Greece

396. The Greek Government has taken the following measures regarding climate change mitigation:

- (a.) Design and construction of environmentally friendlier and energy efficient transport means and systems;
- (b.) Adoption of regulatory and administrative actions;
- (c.) Incentives for the use of new technology vehicles;
- (d.) Application of EU regulations and directives;
- (e.) Enhancement of multimodality;
- (f.) Deployment of freight villages;
- (g.) Encouragement of the use of alternative transport means (bicycle);
- (h.) Incentives for hauliers' fleet replacement with newer technology vehicles;
- (i.) Institutional measures;
- (j.) Effort for the extended use of renewable energy sources;
- (k.) Use of Intelligent transport systems for more efficient and greener mobility.

Hungary

397. The Government of Hungary has taken two measures :

- (a.) Electrification works on rail lines (Boba-Bajánsénye/Hodos – 101 kms and Szombathely-Szentgotthárd – 56 kms) were finished last year;
- (b.) Ro-La (rolling road) operating grant. It helped to carry 30,742 trucks on rail in 2010.

Israel

398. "Green" taxation, Public transport promotion, Plans for Railway electrification, Congestion toll feasibility studies.

Italy

399. www.minambiente.it

Latvia

400. Promotion of the use of bio fuel,

401. Feasibility study on railway electrification (www.ldz.lv/?object_id=4385)

402. National Reform Programme of Latvia for the Implementation of the „Europe

2020" strategy – information about the policy measures for climate change
www.em.gov.lv/images/modules/items/LV_NRP_eng.pdf

Lithuania

403. The Government encourages the development of environmentally friendly transport modes. Improves transport infrastructure, establishes green corridors and freight villages, etc.

Norway

404. Online resources for Norway: www.klif.no, www.cicero.uio.no, www.regjeringen.no/en/dep/md/

Poland

405. Mitigation: EU www.cdr.eionet.europa.eu/pl/eu/ghgpro/envtejd5g UN FCCC V-the report (English) http://unfccc.int/resource/docs/natc/pol_nc5.pdf UN FCCC In-depth review of the V-the report (English) http://unfccc.int/resource/docs/natc/pol_nc5.pdf Adaptation: strategy (for all sectors) under preparation (expected second half 2012), leading role is under the Minister of the Environment of Poland.

Romania

406. The Government took measures on climate changes. Romania, as a member state of the European Union, implemented the Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community. The measure is to be applied starting in 2012.

Russia
Federation

407. Decree of the President of the Russian Federation of 17 December 2009 p N861-approved "Climate Doctrine of the Russian Federation" (<http://Kremlin.ru/acts/6365>)

Serbia

408. The Republic of Serbia is member of the UN Framework Convention on Climate Change of 10 June 2001. Making the First report of Republic of Serbia under the Convention, represents one of the government activities in order to contribute to mitigating climate change globally, but also adapting to changing climatic conditions at the national level. Online resources: Ministry of Environment, Mining and Spatial Planning www.ekoplan.gov.rs / Designated National Authority of the Republic of Serbia (DNA) www.ekoplan.gov.rs/DNA

Slovenia

409. Integrated public passengers transport system, reconstruction of railways, green public procurement, and adaptation of system of taxation. More information can be found on web page of a Government Office of Climate Change of the Republic of Slovenia / www.svps.gov.si/en/ .

Spain

410. Estrategia española de sostenibilidad urbana y local(2011).2010 e-strategy Published: www.marm.es/es/calidad-y-evaluacion-ambiental/participacion-publica/sostenibilidad_local.aspx / Estrategia española de cambio climático y energía limpia (2007-2012-2020). www.marm.es/es/cambio-climatico/publicaciones/documentacion/cle_ene_pla_urg_meatcm7-12478.pdf / Estrategia de ahorro y eficiencia energética en España 2004-2012. www.marm.es/en/cambio-climatico/publicaciones/documentacion/resumen_plan_accion_2008_2012_tcm11-12656.pdf /

411. Planes de Energías Renovables 2005-2010 y 2011-2020 www.idae.es/index.php/id.670/reلمenu.303/mod.pags/mem.detalle / Plan de ahorro, eficiencia energética y reducción de emisiones en el transporte y la vivienda www.fomento.gob.es/MFOM/LANG_CASTELLANO/GABINETE_COMUNICACION/OFICINA_DE_PRENSA/NOTICIAS1/2011/ABRIL/110406-01.htm / Plan de Acción del Vehículo Eléctrico 2010-2012 (Plan MOVELE) www.movele.es/

Sweden

412. Information regarding measures that the Swedish Government has taken regarding climate change mitigation and adaptation can be found in the following internet link: www.sweden.gov.se/sb/d/5745/a/21787

Switzerland

413. Mitigation: CO₂ law, revision of the CO₂ law for the period after 2012 is currently in parliamentary debate, Link: www.bafu.admin.ch/klima/00493/index.html?lang=fr Adaptation: The Federal Administration is currently elaborating a National Adaptation Strategy, Link: www.bafu.admin.ch/klima/00493/06573/index.html?lang=fr

Tajikistan

414. Regarding Climate change the Government of the Republic of Tajikistan:
(a.) Adopted a decision on accession to the UN Framework Convention on Climate Change and the ratification of the Kyoto Protocol;
(b.) Adopt a national plan of action to mitigate climate change;
(c.) -State Program for the Study of glaciers in the period 2010-2030 (May 3, 2010);
(d.) The Republic of Tajikistan, has been selected Subcommittee Climate Investment Fund as a pilot country for participation in the program to adapt to climate change, which is implemented by the World Bank in 2009.

Turkey

415. Turkey became a party to UNFCCC on 24 May 2004. Turkey has developed the “National Climate Change Strategy” in order to contribute to global efforts to reduce the impacts of climate change, taking into account its own special circumstances and capacity. Online resources: <http://iklim.cob.gov.tr/iklim/AnaSayfa/resimliHaber/11-08-01/percentC4percentB0KLpercentC4percentB0MDEpercentC4percent9EpercentC4percentB0percentC5percent9EpercentC4percentB0KLpercentC4percentB0percentC4percent9EpercentC4percentB0ULUSALEYLEMPLANITAMAMLANDI.aspx?sflang=tr>

Ukraine

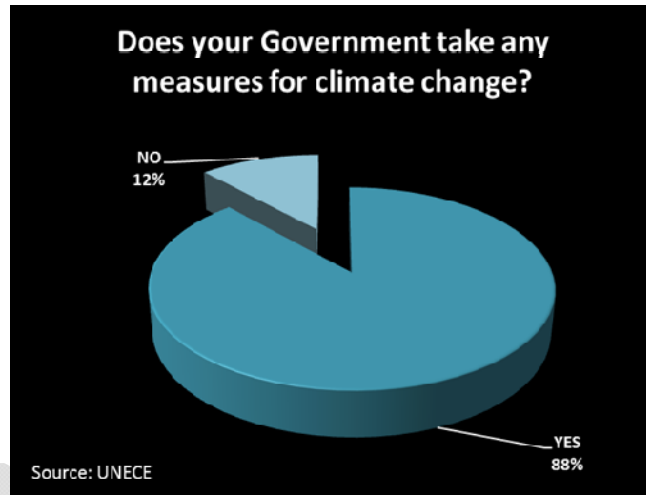
416. National Action Plan to implement the provisions of the Kyoto Protocol to the United Nations Convention on Climate Change (<http://zakon2.rada.gov.ua/laws/show/272>)

Statistics

Transport Trend

The majority (88 per cent) of UNECE member States participating in our research have taken measures on climate change during 2011

Figure 77. Do Governments take any measures for climate change?



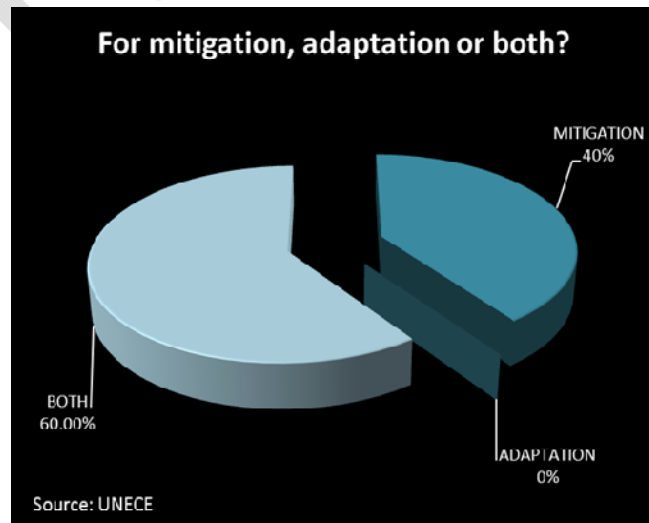
Source: UNECE

417. The majority (31 countries) of the ECE member States participating in the questionnaire replied positively on measures taken for climate change. Only four countries replied that no measures are taken on climate change.

Transport Trend

The majority of UNECE member States that are taking measures for climate change (18 countries) they are doing so for both mitigation and adaptation

Figure 78. For mitigation or adaptation?



Source: UNECE

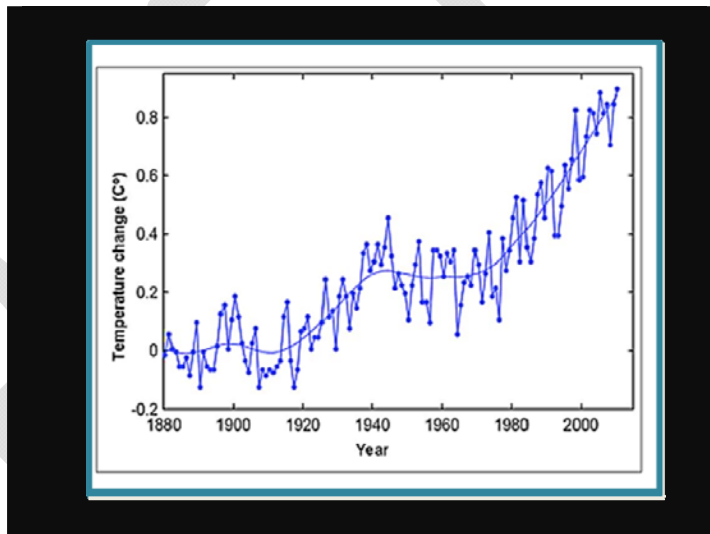
418. Sixty per cent of the 30 countries that replied positively regarding measures for climate changes are taking measures for both mitigation and adaptation to climate change. Forty per cent of them are taking measures only for mitigation of climate change and there were none taking measures only for adaptation.

Transport Trend

A long-term increasing trend is clear and inevitable for the atmospheric surface air temperature

419. A long-term increasing trend is clear for the atmospheric surface air temperature, (see figure 79); this is in accordance with previous Intergovernmental Panel on Climate Change (IPCC) forecasts (IPCC, 2001). Concerning temperature projections for the end of the 21st century, it is expected that the temperature will increase between 1.8 and 4.0 Celsius degrees, depending on the emission scenario used. Climate does not change uniformly. Temperature is rising faster close to the poles than at the equator, whereas precipitation is changing in a much more complex manner, with some regions becoming wetter and others dryer. This trend is expected to pick up pace in the future; for example, mean rainfall in the Eastern Mediterranean has been predicted to decrease by up to 25 per cent in the decade 2020-2029 compared to that of the period 1990-1999 (IPCC, 2007a).⁹

Figure 79. Change of mean temperature in the period 1880-2010



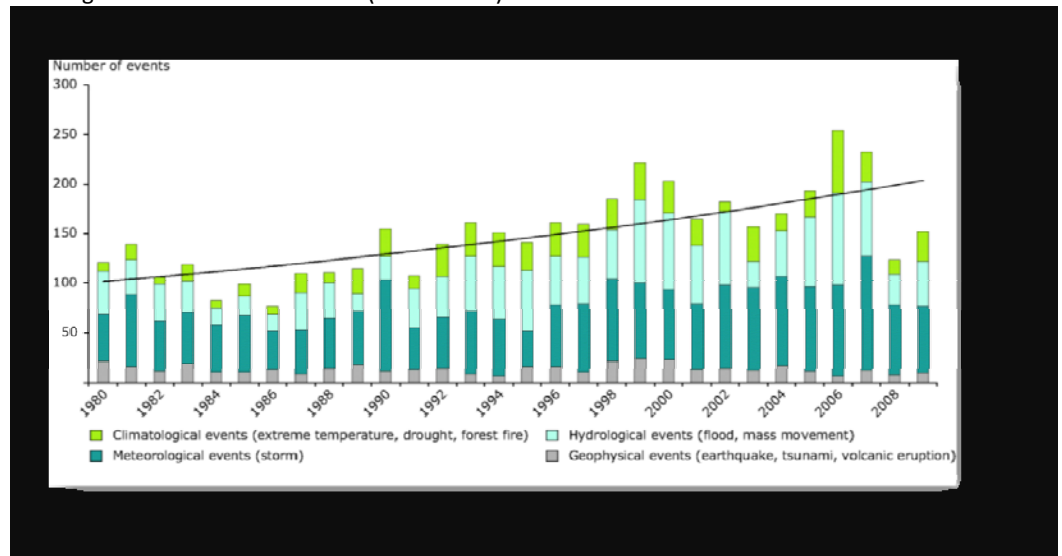
Source: Data from NASA (Rahmstorf, 2011).

Transport Trend

Increasing trend of natural disasters the last 30 years in the ECE region

420. Changes in the frequency/intensity of extreme events and the patterns of 'natural' variability may have even more severe socio-economic effects upon human societies than changes in the mean variables, as societies have become dependent on predictable, long-term climatic patterns. The figure illustrates the natural disasters from 1980 to 2010 in the European Environment Agency (EEA) member States. An increasing trend can be discerned, which appears to be controlled by extreme storms, floods, mass movements/landslides, heat waves, droughts and forest fires, as the number of natural disasters induced by geophysical events has remained more or less stable during this period (EEA, 2010).

Figure 80. Natural disasters (1980-2010) in the EEA member States



Source: EEA 2011

421. Extreme events have consequences that are difficult to predict. The variability of extreme events covers a large spectrum, e.g. sudden and transient temperature changes, rapid retreats of sea and lake ice, bouts of abnormally high precipitation, intensive storms, extended droughts, heat waves and wildfires and sudden water release from melting glaciers and permafrost slumping that may have very substantial impacts (e.g. Post et al., 2009).¹⁰

Transport Trend

Development and use of a standard monitoring and assessment tool for CO₂ emissions in inland transport

Assessing CO₂ emissions For Future Inland Transport Systems (ForFITS Project)

422. The need for the development and use of a standard monitoring and assessment tool for CO₂ emissions in inland transport including a transport policy converter for Governments exists. The UNECE Transport Division initiated a project to study the impact of inland transport on climate change and called the UN Development Account (UNDA) for funds to build up this project together with all UN regional commissions, as climate change is a global problem and needs a global solution. The funds for this 3- year project have been released and the work activities are in progress. The implementation of this project started in January 2011 and will conclude in December 2013.

423. The main objective of the project is to enhance international cooperation and planning on sustainable transport policies through the development and use of a standard monitoring and assessment tool for CO₂ emissions in inland transport including a transport policy converter. This first activity within this project is to develop an information and analysis tool based on a uniform methodology for the evaluation of the emissions of carbon dioxide (CO₂) in the inland transport sector (road, rail and waterways except national and international aviation and maritime transport), taking into account climate-relevant indicators, new transportation trends and the implementation of regional, national or local policy measures.¹¹

Adaptation to Climate Change Impacts

424. The term adaptation refers to the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damage, to take advantage of opportunities, or to cope with the consequences. Adaptation responses have not been given, generally, as much priority as mitigation. It is however imperative that policymakers and stakeholders focus on this aspect of addressing the climate change challenge.

425. Developing effective adaptation strategies for climate change impacts on international transport requires both policy action and collaborative research. UNECE is taking coordinated steps to address climate change adaptation in the field of transport. At its seventy-third session, in March 2011, the Inland Transport Committee, agreed to establish a Group of Experts on climate change impacts and adaptation for international transport networks.¹² The work of the expert group will focus on the identification of potential climatic impacts on transport infrastructure, the determination of the costs of climatic impacts for international inland transport networks, the identification of existing best practices in national policies and risk management.

Climate Change impacts in Asia countries



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Transport nodes (seaports, river ports and inland ports) are crucial linkages between transport modes, both maritime and inland. Hence, transport nodes affected by climate changes would bear substantial economic costs by disrupting inland transport systems and regional development, notably in Asia. By 2070, 90 per cent of the asset exposure in large port cities would be concentrated within eight countries with six being Asian (Nicholls et al., 2008). Asian transport nodes are highly vulnerable to climate changes, though there is a general misunderstanding, and negligence, of such challenges. Here the major problems, and the way forward, of Asian transport nodes in adapting climate changes are discussed.

What: In Asia, the exact impacts are still unclear. For example, China has a very long coastline and three of the world's longest rivers, and thus the impacts are diversified due to specific local characteristics: what will be affected (seaports, river ports or inland ports)? How will they be affected (flooding or icy water so as to affect safe shipping routes)?

Willingness: The impacts on transport nodes (like flooding seaports) are often relatively moderate and implicit against other aspects of lives (like flooding the urban areas and farms), thus posing the question on whether adaptation by transport nodes is a priority. For example, in 2010 alone, serious flooding happened in 16 Chinese provinces. So far, incentives for transport nodes to adapt are inadequate.

Capacity: resources (not just financial) have been inadequate to effectively develop and implement appropriate solutions: reliable database and scientific research. Thus, it poses a question on whether transport node managers really understand the issue, not to mention the implementation of effective solutions. For example, based on my research, in China, there is often a mix-up of the issue, and considerable resources are used for 'slowing down', rather than 'enhancing resilience', to climate changes.

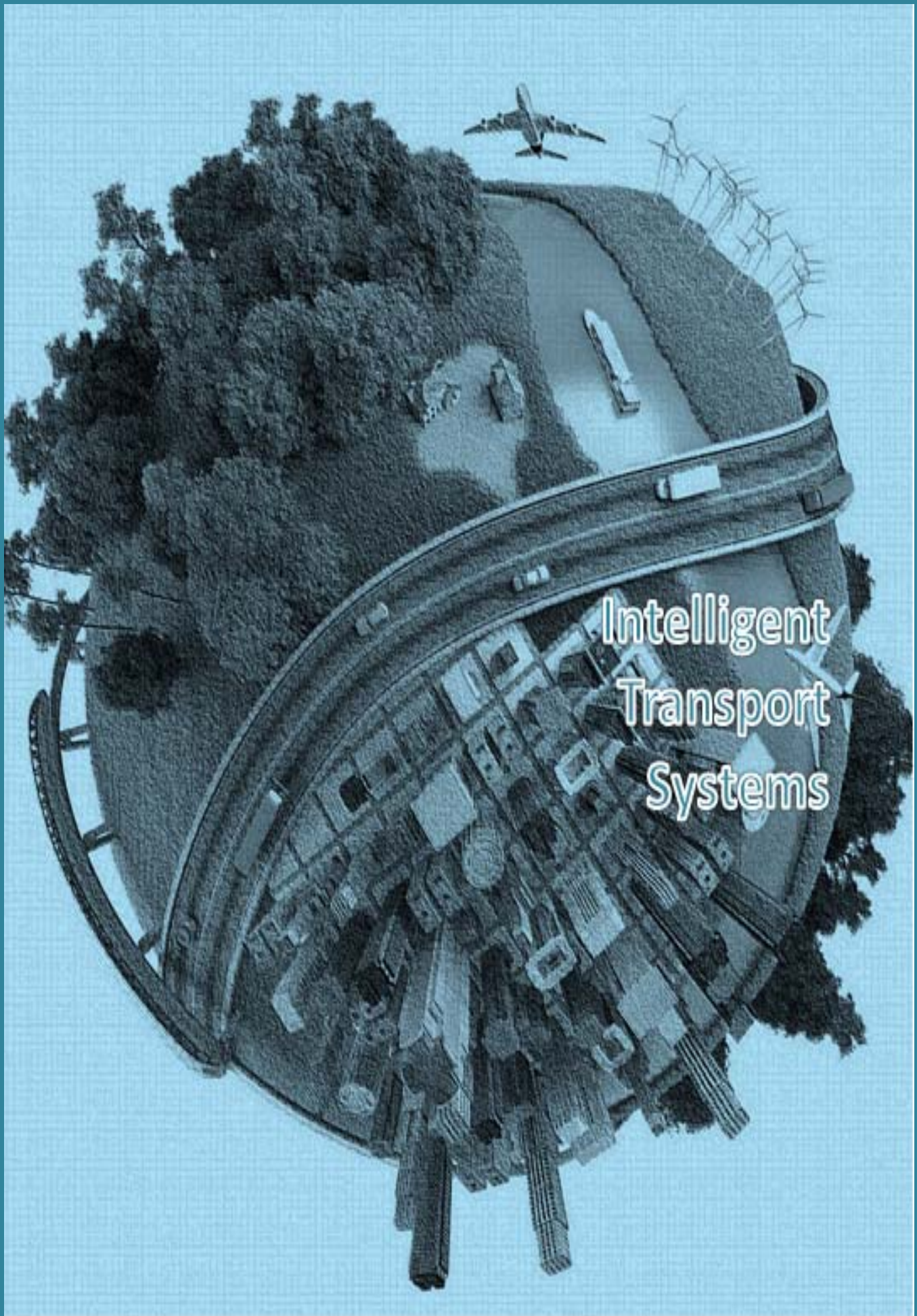
In conclusion, so far, Asian transport nodes still lack organizational resilience: preparedness, protection, response and recovery. Given the diversified characteristics between Asian regions, adaptation is a highly localized issue what needs more than just

international best practices. In 2012, we should facilitate open and transparent information sharing, effective cooperation with local authorities and enhance the ability for managers to apply international practices locally. Also, scientific research and database building - comprehensively investigate the impacts of climate changes and effective adaptation strategies by transport nodes, thus averting misunderstanding and low social awareness on this issue - should be strongly supported.

Reference

Nichols, R.J., Hanson, S., Herweijer, C., Patmore, N., Hallegatte, S., Corfee-Morlot, J., Chateau, J. and Muir-Wood, R. (2008): 'Ranking port cities with high exposure and vulnerability to climate extremes: exposure estimates'. OECD Environment Working Papers No. 1 (ENV/WKP(2007)1).

DRAFT



Intelligent
Transport
Systems

CHAPTER 9. Intelligent Transport Systems

Introduction

426. Intelligent Transport Systems are increasingly considered as a part of the solution to current and future transport challenges. They are becoming widely accepted as an instrument towards achieving efficient, safe and overall sustainable mobility while at the same time contributing to a better quality of life.

427. In achieving its mission, the ITC and the UNECE secretariat launched a strategic review on how Intelligent Transport Systems can contribute to this goal and how UNECE can promote the use of ITS solutions. The review package consists of:

- (a.) A background paper that has the primary objective to share information (including best practices) and raise awareness about the values ITS solutions can deliver;
- (b.) A strategic note that attempts to identify the main gaps in and impediments to the broader use and faster dissemination of ITS applications irrespective which organizations, institutions or bodies can or will fill the gap; and
- (c.) This Road Map that outlines the areas and lists the activities UNECE can embark upon either as a continuation of on-going tasks or as new initiatives.¹³

Selected Countries best practices based on the responses on the Transport Division Questionnaire.

Bulgaria

428. Urban Transport: Virtual tables - information about the timing of public transportation vehicles in real time.

429. Inland Waterways: BULRIS – Implement harmonized River Information Services (RIS) on the Danube.

Canada

430. The projects undertaken have involved each of the service areas outlined in the ITS Architecture for Canada, including:

- (a.) Traveller Information;
- (b.) Traffic Management;
- (c.) Public Transportation Management;
- (d.) Electronic Payment;
- (e.) Commercial Vehicle Operations;
- (f.) Emergency Management;
- (g.) Advanced Vehicle Safety Systems;
- (h.) Information Management; and
- (i.) Maintenance and Construction Management

For more information on Transport Canada's role in supporting ITS, please refer to our website: www.tc.gc.ca/eng/innovation/its-menu.htm.

Croatia

431. Concerning urban public transport, the city of Zagreb, capital of Croatia, implemented the traffic management and monitoring system that encompasses city buses and trams. The system consists of real-time vehicle location monitoring, communication (through digital radio-communication TETRA system) between the traffic centre and buses and trams, audio-visual information for on-bus and on-tram passengers and dynamic passenger information on bus and tram timetable that passengers can read on displays installed on most bus and tram stations.

432. Concerning road transport, communication and information systems for the control and management of traffic are in use on motorways on the entire Croatian territory.

433. Concerning inland navigation, River Information Services (RIS), modern traffic management systems enhancing a swift electronic data transfer between water and shore through in-advance and real-time exchange of information, is soon not only going to cover the Croatian parts of Danube and Drava River, but also that of the Sava River.

Czech Republic

434. Nation-wide Information System on Timetables (NISTT) provides State guaranteed data on public passenger transport for the general public, transport customers and carriers.

435. The majority of public transport carriers offer passengers an electronic travel document on a data carrier in the form of contact less chip card. A number of transports provide the passengers with text message ticket, in cooperation with all mobile operators.

Lithuania

436. The main information provided by ITS deployment in public transport is:

- (a.) Deployment of electronic ticketing (smartcards) systems and real time traffic information screens, (www.sviesoforai.lt);
- (b.) Timetable planning and synchronisation project.

Romania

437. ITS applications in Romania:

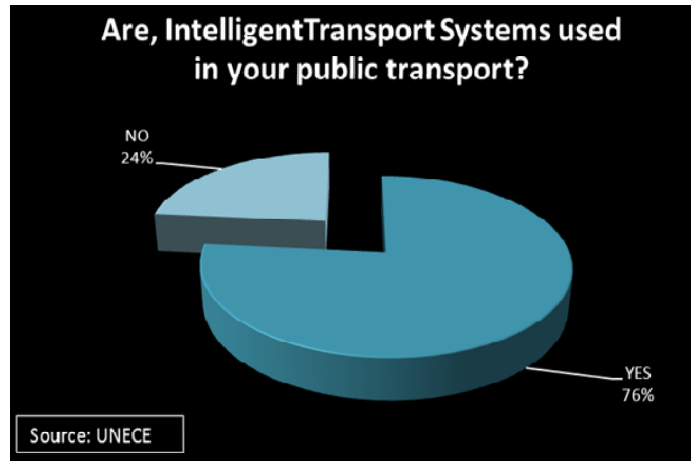
- (a.) real time information;
- (b.) predicted and forecast information;
- (c.) exchanged information using DATEX2 standard;
- (d.) passenger travel information;
- (e.) traffic management information;
- (f.) electronic ticketing;
- (g.) electronic interlocking system;

Statistics -Trends

Transport Trend

The majority of ECE countries are using ITS systems on their public transport systems

Figure 81. Do countries use Intelligent Transport Systems?



Source: UNECE

438. Seventy six per cent (27 countries) of the countries participating in the UNECE questionnaire replied positively on the use of Intelligent Transport systems in their public transport. Twenty four per cent (8 countries) replied negatively.

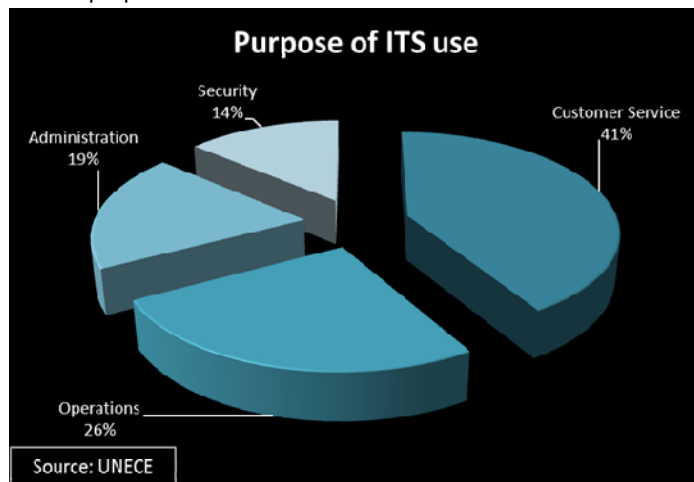
439. It appears from the country replies that the need for harmonization of the terms and of the applications that are being included to ITS systems should be realized.

Transport Trend

Customer Service and operations facilitation are the main purposes for ITS implementation in the ECE region

440. Forty one per cent of the countries replied that are using ITS to facilitate customer service and 26 per cent to facilitate the operations of their public transport. Administration and security with 19 per cent and 14 per cent respectively are the third and fourth purposes for implementing ITS.

Figure 82. ITS purpose

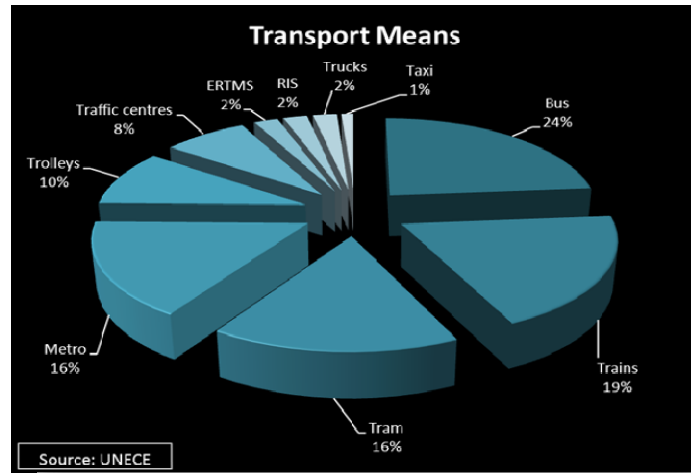


Transport Trend

Buses, trains, trams and metro are the most popular transport means for the implementation of ITS

Source: UNECE

Figure 83. Transport means that use ITS



Source: UNECE

441. Buses with 24 per cent and trains with 19 per cent are the most popular transport means for the implementation of ITS following by trams (16 per cent) and metro (16 per cent).

Transport Trend

Reaching a common definition for Intelligent Transport Systems

442. Applying information technologies in inland transport is generically named “Intelligent Transport Systems” (ITS). However, the ITS framework which provides the ability to gather, organize, analyse, use and share information about transportation systems have different boundaries. Different economic and development priorities of Governments and institutions drive ITS deployment in different directions. Accordingly, this leads to a lack of understanding, thus a commonly agreed upon definition of ITS is warranted.

443. A myriad of variations exists and different definitions are used. As a global partner, UNECE endeavours to facilitate the dialogue ITS deployment, which should lead to a common definition used by all stakeholders. This definition should be designed in a holistic way.¹⁴

Transport Trend

Interoperability and the ITS architecture should be facilitated

444. Innovative technologies in various transport fields are rapidly developing and made available. Given that the design and industrial development cycle of innovative technologies is shorter than the policy cycle, national regulatory authorities often lag behind, but this is particularly evident at the international level. This leads to technical fragmentation and eventual interoperability issues within and across the countries. Therefore, efforts to speed up development and implementation of regulations and agreements on technical and technological compatibility are warranted.

445. Additionally, through the sharing of data, services and information, the overall cost and the cost of providing each component of the system

are reduced. The ability for the private sector to operate effectively is enhanced because already available data from existing systems could be shared at a lower cost.

446. The EU ITS Action plan is an encouraging step towards the systematic and comprehensive implementation of ITS in the EU member countries. However, the full effect and the benefits of the ITS implementation can only be achieved and multiplied if a complementary strategy is developed for all other non-EU, UNECE member countries at the pan-European level. It is with this objective that the UNECE Road Map and Strategy for promoting ITS is being developed to harmonize and ensure full coverage and implementation of the commonly adopted strategy throughout its 56 member countries.¹⁵

Transport Trend

Promoting vehicle-to-vehicle and vehicle-to-infrastructure communication

447. As a basic innovation, cooperative systems bring infrastructure and vehicle related intelligent transport devices that are active and 'cooperate' in order to perform a common service. Consequently, in cooperative systems, communication could be vehicle-to-vehicle or vehicle-to-infrastructure.

448. Vehicle to vehicle (V2V) communication can be defined as the cooperative exchange of data between vehicles through wireless technology, with the objective of improving road safety, mobility, efficiency and improving the use of road capacity.

449. Cooperative systems are expected to make use of state-of-the-art communication facilities to allow the driver access to all road and traffic information.¹⁶

Transport Trend

UNECE puts ITS on the international transport agenda

450. Intelligent Transport Systems integrate information and communication technology between vehicles, transport infrastructure and the user; but ITS is more than just technology. They are the "heartbeat" of future enhanced mobility, bringing in a new culture for doing business and new tools that will enable Governments to accomplish their objective of building more sustainable, more efficient and better quality transport services and international organisations to maximise their contribution to these national objectives.

451. Since 2008 the Transport Division intensified promoting its work on ITS outside the UN. In 2010 UNECE hosted an ITS side event at the International Transport Forum in Leipzig where the main challenges facing Governments and international organizations in fostering the deployment of ITS were addressed.

452. Intelligent Transport Systems constitute a major challenge for governments and international organizations. ITS in the transport systems of the future will have implications beyond just advanced technology, but provide the link to build infrastructure and enhance mobility while impacting on global economies and further greening the transport.

453. The published in May 2011 UNECE paper on "Transport for Sustainable Development in the UNECE region» identifies ITS as one important link for future transports. Within the interaction of the three

pillars of sustainable transport - that are social, economic and environmental and the five UNECE working areas which are accessibility, affordability, safety, security and environmental – ITS are an integrator and the tool for modal shift, sustainability and the mobility change¹⁷.

ITS in Europe

Trends of ITS in Europe for the past years (2010-2011), as well as expectations regarding developments for 2012



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In the last years, the whole field of ITS became highly visible within Europe first with the publication of the ITS Action Plan (December 2008) resulting in the ITS Directive (August 2010), secondly with the publication of the Transport White Paper (February 2011), and finally with the Draft TEN-T Guidelines (October 2011). All mentioned publications see an important role in ITS for reaching our goals to make Europe's mobility more sustainable, safer and more efficient.

The major fields are the following:

Traveller Information Systems and Services: This kind of service is well covered by the ITS Directive Priority Area 1 and as well addressed by Transport Commissioner Sijm Kallas who launched in June 2010 the challenge for a European wide Journey Planner. While solutions for European wide traveller information are feasible through commonly agreed interfaces for information exchange between authorities, operators, and service providers (as demonstrated in 2011 in the In-Time project, www.in-time-project.eu), European wide booking-services are still a future challenge.

Traffic Management: New standards in data and information exchange between different operators are finalised in 2011 (DATEX II). These standards will help all operators in providing improved Traffic Management Services by having as well knowledge on the neighbouring transport networks. This is a big step for providing seamless interoperable services for the European traveller.

Intelligent Truck Parking: An important topic for freight and logistics operators is Intelligent Truck Parking (ITP) solutions to make parking lots safer and securer. Until the end of 2012 the European Commission has planned to provide specifications for ITP information services. The European EasyWay programme (www.easyway-its.eu) has already defined different levels of ITP services, which serve as basis for harmonised deployment of ITP services.

Cooperative Systems: For car-to-car communication-systems and infrastructure-to-vehicle communication-systems 2011 was a high important year in Europe as the day 1 systems to be implemented first have been defined and agreed between the relevant stakeholders. In 2012 the communication standard to be used will be finalised and at the ITS World Congress in October 2012 in Vienna a demonstration of the functionality and the benefits of cooperative systems could be the kick-off for the deployment.

eCall: Here it is expected that by end of 2012 the European Commission will present specifications for the implementation of eCall in Europe.