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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

Working Party on Transport Trends and Economics

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Item 6 of the provisional agenda

**REPLIES TO THE QUESTIONNAIRE ON TRANSPORT DEVELOPMENTS**

Addendum

Submitted by the Governments of Spain and Sweden

I. GENERAL TRANSPORT POLICY ASPECTS

- A. Developments with regard to your Government's policy objectives for inland transport as a whole and for special sectors (road, rail, inland waterway, urban transport, etc.) as well as external objectives (land use planning, regional development, etc.) to the extent they are related to transport

Spain

1. The present transport policy is under the framework of the "Strategic Infrastructures and Transport Plan" (PEIT 2005) in a medium- and long-term horizon (2005-2020). This Plan represents the largest-ever drive to provide infrastructure in Spain, with expenditure of close to €10 billion, for inland transport, an annual mean of more than €1.38 billion and average investment of some of 1.5 GDP.

2. Rail is one of the strategic options and includes the development of an ambitious high performance network; in fact rail accounts for more than 48% of total expenditure under the

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Plan. Also, the Plan proposes a diversified financing strategy, maintains a strong budget base 60%, but opens up other sources and instruments for non-budgetary.

B. Organizational developments with regard to measures for achieving transport policy objectives, e.g. the structure, functioning and competence of the public administration responsible for transport policies and the relationships of this administration with other administrations (national, regional, and local) and with transport enterprises

3. There have been different changes in the transport structure:

(a) The new rail model. Following the European Union (EU) model, in 2005 by law, the railways company RENFE was divided in two, “Renfe operadora” for transport services, and “ADIF” the new infrastructure company. In this new structure, the Ministry of Public Works and Transport and ADIF undertaking are responsible for infrastructure investments, while “Renfe operadora´s” investment is in rolling stock and its own installations.

(b) The new inland transport agency. This agency was born with the objective of financing infrastructure investments out of the budget, in order to have more flexibility in these matters.

C. Policies adopted or action taken by public authorities to enhance safety (users, personnel and third persons) and reduce adverse environmental impact of various modes of inland transport

4. Safety. The introduction of driving licence by points for private cars and public transport (2006), and also the EU policy in these matters, like a safety bell in all vehicles, speed limited device, and so on. Additionally an increase in the number of inspectors to follow up on the legislation fulfilment in the road sector.

5. Environmental. Support the heavy vehicles less pollutant through fiscal incentives; Exemption in the fuel tax for the biofuel; Incentive Programme (Plan Prever), the aim is to modernize the stock of passenger cars so as to take advantage of the greater efficiency of new vehicles.

D. Action taken and provisions made by public authorities to promote a rational use of available transport capacity (e.g. to give a better distribution of traffic between collective and individual transport) including measures carried out to encourage the use of urban public transport and to reduce the use of individual motor vehicles in urban areas

6. Besides the great effort in investment at the national level in railways, the main cities in Spain have made an enormous effort in investments in the underground, to increase the length of the network as in Madrid, Barcelona or to open new ones, as in Bilbao, and Seville. Also urban transport has received a boost throughout Spain.

E. Measures to promote a rational use of energy in transport

(a) In the short term, a tax system that imposes a rate of sales tax on new cars that will be proportional to their fuel consumption;

- (b) Urban Mobility Plans;
- (c) Management of transport infrastructure;
- (d) Company transport plans;
- (e) Updating of the road transport fleet;
- (f) Efficient driving of lorries and buses.

7. The goal is to reduce specific energy consumption by 2012 at least 20% compared with 1990 in v-km and t-km.

## II. ECONOMIC, TECHNOLOGICAL AND OPERATIONAL ASPECTS

A. Major, technological developments, with regard to existing infrastructures, transport equipment, traffic control, etc., including in particular traffic control measures in urban areas

### 1. Spain

- (a) Dedicated Short Range Communications (DSRC)
- (b) Incident Management
- (c) Advanced Traveller Information Systems (ATIS) Traveller Information (Information Service Provider Interfaces)
- (d) Location referencing
- (e) Traffic Management Centre to Field Devices
- (f) Commercial Vehicle Operations (CVO)-related system interfaces
- (g) Archived Data Management Centre Interfaces
- (h) Emergency Management Centre to other Centres
- (i) Transit Centre to other Centres and Transit Vehicles

### 2. Sweden

8. During spring 2006 an experiment was carried out with congestion charging in the inner city of Stockholm. In that context an advanced system for registration and charging was developed. All cars entering or leaving the charging zone were photographed and the cars were registered for the fee that was applied at the actual time. The charging system will be reintroduced in August 2007, and the technical system has been trimmed with respect to the experience from the trial period. In parallel research is going on aimed at developing a suitable system for a distance based charging system for heavy-duty vehicles ("the ARENA project").

B. Measures to improve the profitability and productivity of transport operations

- (a) Support by regional and local authorities the new logistic centres;
- (b) Introduction of the system of charges for the use of the infrastructure in railways;
- (c) Aids to the haulage sector to improve the training for drivers, particularly ecological driving;
- (d) Aids to encourage retirement for old and self-employed drivers.

C. Progress achieved with regard to integrated services of different transport modes for passengers and goods (car-carrying passenger trains, containerisation, palletization, piggy-back), and improved efficiency for transfer operations (commuting, links with airports, collection, handling and distributions of freight at ports and other major centres)

1. Passengers

9. Airports - Underground to Barajas airport, including the new Terminal 4. Approved new line by rail to Barajas airport. In construction a High Speed train connection to Barcelona via Barcelona airport by the end 2007.

10. Urban transport - Integrated system of charging in eight metropolitan areas, for commuter services, metro and buses.

2. Freight

11. Short sea shipping – Concessions to promote the intermodality among shipping, rail and road.

D. Urban and suburban transport plans and the problems arising in relation to the interaction between them

12. High speed lines for public transport and car sharing in the entrance to big cities. New and expansion of interchange station for commuters rail service, metro and coaches in big cities.

E. Identification and localization of permanent traffic impediments (bottlenecks, saturation of certain roads, operational difficulties)

13. Spain has congestion problems on the outskirts of the main cities and in some interurban corridors. For freight, the main problems are in border crossing in the Pyrenees, for road and rail.

F. Research activities in the field of economics which might be of significance to other member countries

1. Spain

14. The Ministry of Public Works and Transport launched an ambitious R&D +I Programs, for four years, started in 2006 with 0.5% of the Ministry expenditure to 1.5% in 2008. Research has focused on aspects of efficiency and the optimization of transport infrastructures and services; the impact and improvement of the environmental compatibility of transport in the field of biodiversity and the territorial integration of infrastructures

15. The main lines of research are grouped into four headings:

- (a) Enhanced transport safety;
- (b) Increases transport system efficiency;
- (c) New infrastructures and vehicle technologies; and
- (d) An enhanced socio-economic and institutional environment.

2. Sweden

16. One of the main principles in Swedish transport policy is that the marginal costs for the external effects of transport should be internalized in the variable costs for transport. In order to design the taxation of transport according to that principle, it is necessary to know the marginal costs for the external effects. A lot of research is going on in this field and about the development of methods (mainly cost-benefit analysis) for assessing infrastructure investments and other transport policy measures.

III. INFRASTRUCTURE ASPECTS

A. Developments with regard to the planning or realization of major transport infrastructure projects (road, rail, inland waterway, pipeline, domestic or international) as well as improvements to existing infrastructure

1. Spain

(a) Road

17. Interurban actions on the State Basic High-Performance Network, including that for the creation of high performance intercity routes, and cross-border connections.

18. New radial trunk road by concessions in Madrid's access and Malaga.

(b) Rail

19. Completion of high-performance trucks to UIC gauge. Working in the new line to the French border (2012) which permits full interoperability

2. Sweden

20. During spring 2007 the process for a new planning period (2010-2019) for infrastructure investments was started. During this first phase the main outline of the investments and maintenance will be established and the amount of money for investments in roads and railways will be fixed. The planning process is aimed at defining the role of infrastructure investments as a part of the general transport policy, which means that the appropriate investments are dependent on which other transport policy instruments will be implemented. In parallel the existing investment plans are being reconsidered. The existing plans contain some major infrastructure projects such as "Botniabanan" (a railway along the coast in the north of Sweden) and "Norra länken" (a part of a ring road around the inner city of Stockholm). Big railway tunnel projects in Stockholm and in Gothenburg are under discussion.

B. Methodological developments with regard to criteria for establishing priorities and programmes of infrastructure investment projects

1. Spain

21. Avoiding the radial concept focusing in the centre of the country and extend the infrastructure under the framework of network along the country. Connecting all the province's capital by high-speed trains.

2. Sweden

22. The mainly used method for cost-benefit analysis of infrastructure projects and other transport policy measures is continuously under development. An advanced model system for passenger transport forecasting has been developed during the last 10 years, and the new model is now in place and is being used in the infrastructure planning. For the time being, an advanced system for goods transport forecasting is being developed. The existing model can handle route and modal choice. The new one will also contain a module for logistics.

C. Developments with regard to arrangements for financing infrastructure projects (e.g. road, rail, inland waterway, pipeline, urban transport infrastructure) particular modalities possibly envisaged (e.g. by introducing global or specific financing resources, allocation of infrastructure costs)

1. Spain

23. Participation of the private sector in infrastructure investments is an important issue for the development of the present Transport Plan. This partnership means that the percentage over the total budget from private companies is around 25% in road, while for new ones and also for maintenance it is normally by concessions agreements. In the case of railways the participation rises to 19%.

24. In urban transport, new modalities start in the underground (Madrid) for some specific lines.

2. Sweden

25. The Government is very interested in the possibilities of using PPP (Private Public Partnership) in the financing of infrastructure projects and has asked the National Road Administration to investigate these possibilities. A report on that matter has recently been delivered to the Government. In the ongoing infrastructure investment plans, suggestions to objects suitable for PPP-financing will be pointed out.

IV. FIGURES REFLECTING THE PLANNED OR ANTICIPATED QUANTITATIVE DEVELOPMENTS WITH REGARD TO SOME KEY ELEMENTS IN THE INLAND TRANSPORT SECTOR

A. Total employment

1. Spain (2005)

Road	524,000
Railways.....	44,000
Pipeline.....	6,000
Other activities.....	190,000

2. Sweden

26. There were 239,798 people employed within the transport and communication sector in 2004.

B. Total investment in the transport sector

1. Spain (2005)

	<u>Euro</u> (million)
Road .....	8,244.89
Railways.....	6,259.36
ADIF (infrastructure railways company).....	3,532.08
RENFE (railways company) .....	743.58
Urban transport .....	2,126.08
Infrastructure underground .....	1,932.91
Rolling stock .....	193.17
Others (buses,) .....	169.41
Pipeline.....	177.34

2. Sweden (2005)

27. The total investment in 2005 was SKr 32,067 million, by mode of transport:

	Skr (million)
Road.....	13,844
Rail .....	16,512
Ports .....	899
Airports .....	812

## C. Volume of passenger transport in passenger km (pkm) (2005)

1. Spain (2005)

(pkm)

Road .....	417.834
Rail .....	21.600
Air.....	23.244

2. Sweden (2005)

28. The volume of road passenger transport for collective (public) transportation was 10,622 million pkm. Information regarding individual transport volume will be available later. The volume of rail passenger transport was 9,591 million pkm, and in domestic air transport a total number of 3.3 billion pkm (2006) and 6,9 million domestic passengers were transported

## D. Volume of freight transport (in tonne kilometre)

1. Spain (2005)Freight  
(tkm)

Road .....	367,497
Rail .....	11,641
Pipeline.....	11,658
Shipping .....	41,300
Air.....	91

2. Sweden (2005)

(tkm)

Rail .....	21,675 million
Road .....	35,455 million

## E. Length of networks

1. Spain

Total Road ..... 165,646 km

State highway network ..... 25,415 km  
of which

Dual carriageways ..... 7,302 km

Toll motorways ..... 2,163 km



Regional highway network..... 140,231 km  
of which  
Dual carriageways..... 2,387 km  
Toll motorways..... 359 km

#### Rail

Rail network..... 15,000 km  
of which  
High speed lines ..... > 1200 km (2006)  
Pipelines ..... 3.800km

#### 2. Sweden (2006)

29. The national road network in Sweden is 98,334 km of which 1,677 km are highways (motorways). If private roads are included, the Swedish road network consists of more than 138,000 km (2006).

30. The length of the rail network in 2005 was 11,017 km.

#### F. Transport equipment: capacity of railway rolling stock

##### 1. Spain

##### Rail transport

Total locomotives..... 729  
Total railcars ..... 796  
Total wagons ..... 22,658

##### Road transport

Private cars ..... 20,250,377  
Lorries ..... 4,655,413  
Buses ..... 58,248

##### 1. Sweden (2005)

Passenger carriages – 1,857  
Total number of seats - 117,332  
Total number of sleeping-berths - 6,487  
Number of goods vehicles – 16,637  
Total capacity of goods vehicle – 772,195 ton  
Number of private cars – 4,202,463 (by the 31.12.2006)

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