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Infrastructures and socio-economic issues in the Mediterranean Arc Euroregion

Consultation process of the Green Paper on Trans-European Networks

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To produce the “White Paper on Infrastructures in the Euram”, a series of consultation meetings took place between June 2007 and February 2009, mainly with entrepreneurs but also with representatives of trades unions, politicians, sector experts and university professors. During this twenty-month period many issues, ranging from the general expectations of our society to concrete proposals on certain infrastructures for the Euram (Euroregió de l’Arc Mediterrani), were discussed. A total of twenty-eight debates held in twenty different cities allowed a full coverage of the questions at stake.

The location and date of the debates are the following:

Chamber of Commerce of Andorra, June 26 2007
Chamber of Commerce of Perpignan, June 28 2007
Chamber of Commerce of Mallorca, July 19 2007
Chamber of Commerce of Castelló, 27 September 2007
Chamber of Commerce of Girona, October 9 2007
Chamber of Commerce of Alcoi, November 8 2007
Chamber of Commerce of Alacant, November 22 2007
Chamber of Commerce of Eivissa and Formentera, November 28 2007
Chamber of Commerce of Manresa, February 19 2008
Chamber of Commerce of Reus, February 20 2008
Chamber of Commerce of Tarragona, February 20 2008
Chamber of Commerce of Valls, February 20 2008
Chamber of Commerce of Palamós, March 7 2008
Chamber of Commerce of Sant Feliu de Guíxols, March 7 2008
Official Association of Industrial Engineers of Catalonia, Barcelona, March 31 2008
Gandia, April 17 2008
Chamber of Commerce of Menorca, April 22 2008
Chamber of Commerce of Barcelona, April 29 2008
Chamber of Commerce of Terrassa, May 5 2008
Chamber of Commerce of Sabadell, June 3 2008
Official Association of Industrial Engineers of the Community of Valencia, València, June 26 2008
Chamber of Commerce of Tortosa, October 7 2008
Chamber of Commerce of Lleida (Lérida), October 14 2008
Chamber of Commerce of Barcelona in Osona, Vic, November 13 2008
Telecommunications Sector Debate, November 18 2008
Sagunt, November 21 2008
Official Association of Economists of Valencia, València, November 24 2008
Chamber of Commerce of Tàrrega, December 2 2008
Official Association of Economists of Catalonia, Barcelona, December 16 2008
Trade Unions of the Euram, January 21 2009

1. THEMATIC CONCLUSIONS

ON DEMOGRAPHIC ISSUES

Economic growth in the Euram over recent years has been due more to an increase in the employed population in sectors of low added value than to improved productivity. Between 1998 and 2008, the Euram population increased by 2,400,000 inhabitants (an increase of 22%) and the number of jobs by 2.1 million (50%). But growth is not welcome everywhere: while in Alcoi, Tortosa or Manresa population increase is regarded as beneficial to economic development, in certain places, such as Menorca or Andorra, such accelerated growth may generate diseconomies, due to the lack of available land or simply because their (tourism) development model is based on low densities. Economy-driven immigration enhances economic growth, especially when it includes a high percentage of individuals with talent and business initiative; it has, however, many drawbacks, including social integration problems. Spain ranks second in the European Union, next to Germany, in the number of foreign residents (around 4,600,000 people, 10% of the population). Approximately 13% of the Euram population aare now foreigners, most of them attracted to fill job vacancies generated during the period of strong growth (3.5% GDP per year) between 1997 and 2007 in sectors of medium and low productivity. However, a significant number of Euram immigrants have been attracted by the climate and quality of life of the region; about one in every five immigrants to the Euram is from another EU-25 nation, and in some places the proportion stands at one in every three, similar to the level found in the American Sunbelt. This attractiveness leads most experts to believe that the Euram will continue to grow even though Spain as a whole or Europe may maintain stable populations.

The Mediterranean Arc Euroregion, particularly its coastal areas, are highly attractive from the residential point of view, and many of them will continue to undergo demographic growth. The influx of middle and high-income population, characterised by greater work flexibility, will increase, while the demand for unskilled jobs will tend to drop. Land-use planning and control to preserve the quality of the environment and the creation of an open milieu favourable to luring talent is a key strategy for the future economic development of the Euram.

ON INDUSTRY

The industrial sector accounts for 20.7% of the economy and 19.2% of employed people in the Euram. The sector has more weight in Catalonia and the Community of Valencia (22% and 18% respectively) and far less impact in the Balearic Isles (7%). It is characterised by the presence of some multinational firms attracted during the eighties and nineties but it essentially consists of a broad network of small and medium-sized family firms in mature sectors. They are sometimes constituting sectoral clusters:Castelló (ceramics), Vall del Vinalopó (footwear), Ibi and Onil (toys), La Sénia (furniture), Osona (agri-food), Anoia (tanning) and Maresme and Alcoi (textiles). Some foreign firms attracted to Euram as from the eighties by cheap labour are now delocating to other countries where salaries and labour-related expenditures are lower. To fight this trend, the public sector is attempting to create the conditions for the development of new high-added-value industrial activities, especially in domains such as biotechnology, renewable energy and others related to services to firms.

The relocation of some major multinational industrial firms may be inevitable; nonetheless, de-industrialisation of the territory must be avoided. The industrial tissue, based on technologically mature small and medium-sized firm sectors should be maintained through innovation and internationalisation. On the other hand, it is necessary to maintain the competitiveness of existing production and improve logistics to ensure the efficient supply of present markets.

ON AGRICULTURE AND LIVESTOCK-RAISING

Agriculture accounts for 1.9% of Euram's GDP (1.4% in Catalonia, 2% in the Community of Valencia and 1% on the Balearic Isles) and employs 2.1% of the active population. Nevertheless, the agro-food industry is of considerable importance in the Euram, producing 15% of Spanish food exports and hosting some of the largest food production, transformation and distribution firms of Spain (Corporació de Guissona, Tarradellas, Mercadona and others). The wholesale market at Saint-Charles, Perpignan, is Europe's main distribution centre of fruits and vegetables. Over the last thirty years, the amount of land devoted to agrarian activities has remained practically stable at around 1.5 million hectares. And while on the coastal strips, from Tortosa southwards, and in Lleida fruit and vegetables constitute the main produce, the Mediterranean triad (nuts, oil and wine), often linked to protected designations of origin (PDO) and protected geographical indications (PGI), plays an important role inland, in northern Euram and on the Balearics. Livestock-raising is especially important in inland Catalonia, where it constitutes a highly developed industry in the regions of Osona, La Garrotxa and La Segarra.

The sector has been increasing its profitability thanks, in general, to improvements in irrigation techniques, specialisation in ecologically-grown products, the adoption of PDO quality certificates, improved commercialisation channels and the intensification of transformation processes. The weight of the sector will remain, however, marginal. While agriculture may still increase its importance in areas, such as Lleida and Osona, where it enjoys a strong tradition, elsewhere, notably in areas such as Castelló or Tarragona, where it is subject to major urban development pressure, it will only survive through subsidies. These will probably be based, more and more, on landscape preservation criteria.

Agricultural land in the Euram will decrease in area, with rural population essentially maintained by subsidies based on landscape and tourism criteria. However, some agricultural products, mostly those linked to protected designations of origin may still be competitive. The agro-industry, using local and external inputs, could on the other hand extend their market through improved

commercialisation processes and become an even more important economic sector for the Euram.

ON TOURISM

With 60 million visitors per year, Spain ranks second only to France as the world’s leading tourism destination. Half of the tourists visiting Spain visit also its Euram regions (Catalonia hosts 15 million tourists per year, 10 million the Balearic Isles and 5 million the Community of Valencia). Capitals such as Barcelona, Valencia and Palma have successfully pursued a tourism model based not only on leisure but also on business, education and health. Resorts that formerly attracted mostly ‘sun-and-sea’ tourism, like Alacant, Tarragona and Mallorca, have now diversified and modernised their tourism infrastructure and upgraded their clientele. The port of Barcelona is the Mediterranean’s number-one stopover for cruise ships: its annual passenger turnover amounts to 2.8 million people (2007 figures), 57% of whom are cruise passengers, and the figure is increasing by over 10% per year. This is roughly half the 3 million cruise passengers using Euram ports over the year. At present, tourism is the economic sector enjoying the highest growth rates: according to the World Tourism Organisation, by 2020 the number of annual visitors to Europe could rise from the present 400 million to some 700 million. The Euram can expect at least to maintain its present share. The large-scale hotel operators based on the region and financed by local capital, such as Sol Meliá, Barceló, NH and Tryp, have intensified their internationalisation policies in recent years and should contribute to maintaining thetourism sector as a major driving force behind the tertiarisation of the economy. However, the recent trend towards diversification and, in particular, towards new formulae linked with health, education and business requires more specialised services, a greater use of new technologies and the emergence of small and medium-sized firms, with deep local roots, to provide the required complementary services.

The Euram is expected to maintain its strong position in the tourism sector, which should become one of the main driving forces behind the tertiarisation of its economy. It is expected to evolve towards the provision of additional services related to education and training, health and wellbeing, sport and leisure and cultural and business activities.

ON CONSTRUCTION

At the end of 2008, construction provided employment for 12% of the Euram active population (15% on the Balearics, 13% in the Community of Valencia and 11% in Catalonia). In 2007, the contribution of construction to the GDP stood at around 10.6%. Due to the current recession in the sector, which affects housing and commercial buildings in particular and public works to a lesser extent, its unemployment rate has risen from 5% to 15%. In 2004, Spain’s six leading building firms (ACS, Ferrovial, FCC, Acciona, Sacyr and OHL) had a joint turnover of around 35 billion euros. The threefold increase with respect to 1999 is to a great extent due to a process of business diversification towards other economic sectors whose economic cycles differ from the construction one, such as concessions and infrastructure management, which account now, in many cases for up to 50% of their business turnover. Most of these major firms are immersed in a process of growing internationalisation and some of them are amongst the leading infrastructure management companies of the world.

After the present downturn, the construction sector should slowly recover in the Euram, although growing at a slower pace than in the past decade. Major firms in the sector will continue their process of diversification and internationalisation, investing resources in research and innovation to constitute a sector of excellence in the economy.

ON INTRA-EURAM COMMERCIAL AND PROFESSIONAL LINKS

Economic relations between the different territories that comprise the Euram are very intense. Catalonia and the Community of Valencia constitute each other's main customers and commercial suppliers; the Balearics' main trade customer is Catalonia and their main commercial suppliers are Catalonia in the first place and the Community of Valencia in the second; the main customer and supplier of Murcia is the Community of Valencia. The modest commercial and professional relations between Languedoc and Catalonia could be expected to substantially expand once the TGV links Barcelona and Perpignan. In spite of such strong relations, the Euram labour market is relatively fragmented as Euram professionals are reluctant to move elsewhere within Euram territory or even within their own region in search of better job opportunities. Young people leave home ten years later than in the rest of Europe; furthermore, the general nature of Euram university education does not favour student mobility. The entrepreneurial spirit is low, even among students at the best of Barcelona's business schools, such as IESE and ESADE. The Erasmus and Seneca programmes are changing young people's notions of personal mobility and territorial rooting, though only very gradually.

The mobility of both individuals and firms in the Euram should substantially increase over the next twenty years in order to exploit the comparative advantages of each territory and to stimulate the dynamism of the economy.

ON THE MOBILITY OF PASSENGERS AND GOODS

The mobility of passengers and goods should continue to increase, in the coming years, in line with the economy, although the pace will be different for passengers and goods and for local, regional and international travel. The impact of information and communication technologies has reduced certain forms of travel, although the overall effect has been the creation of greater social and economic relations and the generation of a greater demand for passenger and goods transport. In 1981, of every 100 individuals living in Greater Barcelona 28 worked outside his or her home town. By 2001 this percentage had risen to 47% and the PITC (Pla d'Infrastructures de Transport de Catalunya) forecasts that this figure will stabilise at around 60% by 2026. While urban commuting may eventually stabilised, urban trips motivated by factors other than work and medium to long-distance travel will increase and become more variable throughout the day and the territory, while international and intercontinental travel may undergo exponential growth. Goods transport will also increase in tune with the pace of economic growth, despite the process of de-industrialisation in the Euram and Europe as a whole and the increasing dominance of the services sector. Intercontinental travel to and from Europe, to Asia and other emerging economies in particular, will continue to grow at a high pace, in particular if the Euram becomes a major logistic gateway for Europe. Given the probability that investment in transport infrastructure will remain at the current level or even decrease slightly, it is foreseeable that congestion will increase, particularly on roads and in ports and airports, thereby providing incentives for forms of optimised exploitation and new models of fare charging, which will lead to self-management of the demand as well as selective improvement of the capacity of transport infrastructures.

Passenger and goods mobility will continue to increase in accordance with the pace of economic growth. The highest growth levels should be observed in the longest links, in particular if Euram becomes one of Europe's main logistic gateways. Despite expected improvements in the operation of transport infrastructure, insufficient investment in new construction and maintenance could easily lead to severe congestion levels in some sections of the transport network.

ON AIRPORTS

The advent of low-cost companies has led to a sharp rise in air traffic, linked above all to the increase in tourism, which has particularly benefited a number of regional airports. Air traffic in the Euram rose from 56 million passengers in 2000 to 87 million in 2007 (40% of them domestic). In 2007, Barcelona handled around 33 million passengers, Palma 23 million and Alacant 9 million. Girona airport is the one whose traffic has increased the most since 2000 (+644%), followed by Valencia's (+162%). Boeing and Airbus concur that, once the recession is over, international air traffic will undergo a sustained growth of 5% per annum on average over the next twenty years. The 'Open Sky' agreement between the US and the EU will liberalise the regulation framework currently applied to transoceanic air traffic and it is anticipated that it will increase links between American and European airports, point-to-point connections in particular. The extension of Barcelona Airport (T-Sud and T-Satèl·lit) will provide a global annual capacity of 70 million passengers. Control of Spanair has been transferred from the Scandinavian carrier SAS to a group of investors headed by Catalana d'Iniciatives i Turisme de Barcelona, who may be joined by other investors from the Euram and the rest of Spain, thereby increasing the number of intercontinental flights to and from Barcelona and Palma. Spanish airports are managed by a public entity, AENA, which acts on a nationwide basis. While Barcelona has lost competitiveness due to centralised management, as a result of which it loses out to Madrid in terms of intercontinental flights, the remaining Euram airports value positively a model that redistributes the resources generated by airports as a whole. Independently from AENA, the Castelló provincial government (Diputació) is currently developing a new tourism-oriented airport in Benicàssim and the Generalitat (Autonomous Government) of Catalonia is doing likewise in Alguaire (Lleida). If agreement is reached with Andorra, it is anticipated that the Seu d'Urgell airport, presently not operational, will be remodelled and put back into exploitation. Furthermore, the Generalitat de Catalunya plans to develop a network of aerodromes and heliports to provide services of general interest (emergencies, health, civil defence, etc.) that could be used by general aviation.

The current capacity of the Euram airport system, taking planned extensions into account, is globally sufficient in the short and medium terms. The present management model of Spanish airports should be extended to admit the participation of local and regional authorities in regulatory aspects, and private firms in commercial management and exploitation. This would allow Euram airports to provide a more extensive choice of destinations and greater flight frequencies.

ON LOGISTICS

All major Mediterranean ports are currently undergoing extensions with the aim of increasing their share of the Far East traffic entering Europe, which is still mostly handled through the North Sea port even though its final destination is closer to the southern ports. The efficient handling of goods in ports and logistic platforms and high-performance transport links with the hinterland are essential conditions for the competitiveness of the Mediterranean maritime front of the EU and the development of a more balanced and sustainable transport system. In this regard logistics is a key sector for the Euram to attract new flows and generate economic activity linked to distribution and to enhance the competitiveness of its industrial structure (by way of an example, the logistical costs of the agri-food sector account for almost 60% of the retail price of its products) Important investments are underway to support logistic activities in the Euram: The Community of Valencia is currently developing a network of six intermodal logistic platforms of between 100 and 200 hectares, and logistic areas linked to the ports of Valencia, Sagunt and Castelló. In Catalonia Cimalsa is developing eight logistic facilities or CIMs (Centres Integrals de Mercaderies – Integral Goods Centres) of around 100 hectares each , of which four are already in operation (La Selva, El Vallès, Bages and Lleida) and two further ones are being built. In the Pyrenées Orientales, the Plataforma Multimodal Pirineus-Mediterrània coordinates the joint management of goods using the port of Port-Vendres, Perpignan airport, the 400-hectare fruit and vegetable distribution centre in Saint-Charles and the logistic stations of Le Boulou (road) and Cerbère (rail). Most developments are public-private partnerships, some of them with a wide scope: Abertis, Port de Barcelona and Cimalsa have recently set up a public-private consortium with broad ambitions. The Euram is, however, a densely populated territory on a relatively narrow coastal strip where the availability of land plots of the substantial size required for logistic platforms at moderate prices is much lower than in other areas of Spain or in the South of France. The construction of extensive facilities in the best locations is thus difficult to envisage. This opens up some possibilities for the hinterland: Zaragoza is currently developing Plaza, which with a surface area of around 1,300 hectares should become Europe's largest logistic precinct.

Logistics is a critical sector for Euram, not only to enhance the competitiveness of its industrial and agricultural production, but also to attract new activities notably through the generation of added value to transit goods from intercontinental trade. The development of the sector should contribute to the necessary improvement of the performance of the logistic chains using EU southern ports and lead to a more balanced and sustainable transport system for Europe. The difficulties to devote large pieces of land to logistics near the coast is forcing the creation of networked structures of smaller logistic platforms incorporating major hinterland logistic precincts such as Plaza in Zaragoza. Such networked management system supported by public-private partnership formulae, may endow the Mediterranean Arc Euroregion with the capacity to compete on an international scale.

ON PORTS

ValenciaPort (the ports of Valencia, Sagunt and Gandia) leads container traffic in the Western Mediterranean with 3.3 MTEU transported between January and November 2008 (+18% compared to 2007, with transhipment traffic on the increase) and 55.3 MTm of goods, and anticipates reaching 4 MTEU and 68 MTm in 2015. By November 2008 the port of Barcelona had handled 2.4 MTEU (+0.32% compared to 2007) and 48.3 MTm and anticipates reaching 4.5 MTEU and 85 MTm in 2015. Tarragona and Castelló handled 30.3 MTm (-9.4%) and 12.5 MTm (+3.3%) respectively, consisting basically of energy products linked to their respective petrochemical plants, though showing a tendency to diversify their support activity to regional industry (export of food products, ceramics, etc.). The port of Alacant handled 2.65 MTm (-23%). Activity at the remaining commercial ports of the Euram (Palamós, Vilanova i la Geltrú, Sant Carles de la Ràpita and Gandia) is very low and although plans are under way to establish short-sea shipping routes there, in the short term it seems unlikely that they will play a prominent role in Euram. All major ports in the Mediterranean basin are currently undergoing extensions or planning them with the purpose of coping with an increasing international trade and expanding their hinterlands. As mentioned before most Asian imports to Europe (over 75%) currently enter the continent through ports in Northern Europe. At present, Antwerp is the port handling the highest volume of Asian goods with destination in the South of Europe. In order to become a major maritime gateway to the EU, the Euram ports should improve their efficiency and the service offered by their hinterland connections and their logistic operators. In any case, the off-centre location of Barcelona and Valencia as regards the Suez-Gibraltar route will limit their attraction capacity, especially in the case of large-capacity vessels that make few stopovers.

While other competitive hubs like Algeciras or TangerMed are better located geographically on the Suez-Gibraltar route, the ports of Barcelona-Tarragona and Valencia-Sagunt still offer excellent opportunities to become maritime gateways for Southern Europe. However, to compete at the European and, in particular, at the world scale, they should coordinate their action in logistics and hinterland connections and in global marketing. Whilst competition among Euram ports is healthy, in some cases, such as Barcelona and Tarragona, joint planning should be encouraged.

ON THE TRANSPORT OF GOODS BY RAIL

The transport of goods imported from outside Europe will increase greatly in forthcoming years, due in part to the growing deindustrialisation of the continent. Extra-European freight will mostly be channelled through major ports, which will increasingly be the focal points of long-distance freight transport corridors that could offer competitive rail services. , The Betuwe Line from Rotterdam to its central European hinterland is an example of the specialised services that could help divert traffic to rail. If the Euram is to become the Mediterranean’s logistic gateway of Europe, the Mediterranean corridor to Central Europe should be able to accommodate far greater flows of goods. The provision of competitive rail services might contribute to reduce the pressure on motorways. The FERRMED project proposes a railway corridor along the Mediterranean Arc ports to Central and Northern Europe able to provide the reliability, speed and prices that could induce a modal shift in this major corridor stretching from Algeciras to Stockholm (3,500 km) via the Spanish ports, the Rhône Valley, Hamburg, Copenhagen and Malmö. Despite public support, railways play a modest role in goods transport in the corridor, and only through some capacity improvements, notably to separate passengers and freight transport and through better management (and coordination of the type proposed by FERRMED) will they be able to enhance their position in the Euram.

Rail service improvements, which would include investments in infrastructure, but also coordination and management, might increase railway’s share of the freight transport market. The major corridor in the Euram that links the Mediterranean ports to Central Europe, with high volumes and concentrated origins and destinations, offers a good opportunity for dedicated rail freight services that could be very competitive.

ON HIGH-SPEED PASSENGER TRAINS

In the space of a few years, the Spanish high-speed train network has become one of the most developed in the world, together with those of France and Japan. There are many new sections being built across the Iberian peninsula and, following the inauguration of the Barcelona-Madrid line in 2008, it is expected that, by 2012, the four Catalan provincial capitals will be connected to Zaragoza, Madrid and Perpignan. The stretch from Perpignan to Montpellier (which is already linked to the North) may not, however, enjoy high-speed standards until after 2020. In the Community of Valencia, the three provincial capitals will be both interlinked and connected to Madrid by the AVE (Alta Velocidad Española) train in five years. The continuity of the high-speed Mediterranean corridor that would be ensured with a new Tarragona-Castelló section is not scheduled yet, although the Ministry has expressed interest in conducting informative studies soon. The delays are mostly due to political and institutional issues and to the difficulty of inserting a new line into a corridor, which is densely populated. For the time being, the construction of a new rail link between L'Hospitalet de l'Infant and La Secuita will eliminate the last remaining single-line stretch on the route. This should allow trains adapted to gauge change to reduce present travelling time by some 50 minutes. If demand for rail travel in the corridor evolves in line with what has been observed in the Madrid-Andalusia and Madrid-Catalonia high-speed services, rail traffic may greatly increase, and exert a considerable influence on relations between the cities of the Euram. Furthermore, good high-speed train connections at airports may allow a better planning and management of multimodal transport in the Euram and establish a more efficient airport system.

High-speed train services in the Mediterranean corridor could be more competitive than in other Iberian corridors, given its high demographic density and the strong economic relations between its cities. They may also play an important role in the integration of Euram airports.

ON THE MOTORWAY AND TRUNK ROAD NETWORK

The long distance road corridors of the Euram comprise essentially the Eix Mediterrani (upgraded AP-7 // A-7) along the coast, the Eix de l'Ebre (AP-2 to be upgraded in the mid-term) // A-2) linking Zaragoza, Barcelona and continuing to France, the route from Valencia to Zaragoza (A-23) and the route from the Community of Valencia to Madrid (A-3 // A-31). Road capacity in these corridors has already difficulties in fulfilling demand needs in many sections, notably around metropolitan areas and where long distance traffic converges, as in trans-border areas. Particularly during peak tourism seasons some motorway and trunk road sections reach congestion levels that are unacceptable in the context of quality tourism. Rail alternatives to road capacity increase may only partially mitigate the situation. Improved suburban rail services could reduce the pressure on the busiest roads in metropolitan areas, but most transport demand both for passengers and goods is, in practice, captive of private vehicles and lorries. Environmental and funding problems are the main obstacles to expand road network capacity. Environmental issues are high in the political agenda and many road projects become only feasible after a consensus is reached among key stakeholders. This requires a careful analysis of the impact of the different alternatives and a thorough consultation process. Funding problems can be solved through user charges where there is sufficient traffic and construction costs are normal (e.g. major works are not needed). For some strategic projects, such as trans-border regions, affordable tolls are often unable to cover the investment and maintenance of the section, which typical natural barriers make expensive to build. Some cross-section compensations in the tolls applied to the motorway network may be thus needed. This may raise some problems when it is operated by private concessionaires, but the situation in the Euram, where there are free sections alongside the toll motorway network makes efficient management of the road system practically impossible. On the other hand, the fact that all the best performing motorways are tolled is a handicap for the Euram's companies in relation to regions where practically all roads are free. But even within the Euram, the situations diverge substantially, as unit charges vary greatly from one motorway to another and respond essentially to the particular situation of each concessionaire, which has been negotiating its tariffs and concession life following public requests (for instance to increase the number of lanes). This piecemeal approach has inexorably brought about a system lacking rationality and, at the end of the day, a poor exploitation of its capacity.

Economic logic suggests the introduction of a comprehensive and demand-lead system of tolls to manage traffic more efficiently. In some cities, such as London or Stockholm, intelligent charging is applied, that takes into account an application area, the kind of highway, the time of day and the type of vehicle to regulate everyday mobility. Variable charges are also applied in some interurban motorways in order to better distribute traffic at peak times. This possibility should be explored in the Euram, where traffic peaks (often in relation to holiday trips) are particularly strong and could be smoothen by such measures for better overall performance. The global applicability of intelligent tolls to the network offers, however, many practical difficulties, for instance related to possible compensation to private partners for strategies that are not maximising their revenues or regarding the use of the income generated by the additional tolls. Despite the logical reluctance to accept this concept, coming both from areas with the greatest concentration of tolled motorways, such as Sabadell and Terrassa that request free roads, or from areas, like Alcoi, which have suffered from severe accessibility deficits, elsewhere, such as in Castelló, Gandia, Tarragona, Girona, Barcelona and Valencia, such an initiative should be explored, alongside the construction of necessary new infrastructure, as a way to improve traffic management and optimise the efficiency of the road and motorway network.

The basic network of Euram motorways must be completed if it is to meet growing mobility needs. The motorway network toll system must be reformulated in order for it to become a more efficient traffic management instrument. In the mid term, a comprehensive demand-lead user charging system to optimise the global efficiency of the system should be explored.

ON THE BASIC ROAD NETWORK

The basic Euram road network, though relatively dense, presents very heterogeneous technical characteristics (including stretches of heavily used trunk roads with only two lanes, four-lane high ways with intersections at the same level and, in some cases, crossing dense urban areas using them for their local needs, etc.). Avoidable congestion and accidents are the immediate consequence of this situation.

Many sections of the basic road network need to be upgraded in order to eliminate bottlenecks and dangerous crossings and to segregate long and medium-distance traffic from local traffic in order to eliminate congestion and accidents.

ON THE LOCAL AND REGIONAL ROAD NETWORK

The basic Euram local and regional road network suffers from a major investment deficit and the absence of specific planning and investment programmes. The local road network in the most densely populated areas has to cope with volumes of traffic that should be channelled through motorways and trunk roads of far greater capacity. The resulting congestion not only affects private cars. Pedestrians and cyclist cannot safely share the right of way and it is often impossible to grant public transport the priority that would allow it to be more competitive and profitable. Some experiences, although still uncommon, are successfully dealing wit the problem: In Alacant and Valencia, the introduction of Vies Parc (park highways) has contributed to improve road safety and to develop non-motorised transport. The Territorial Plans for Menorca and Mallorca recognise the concept of landscape or tourist routes, which has materialised in the form of a careful rehabilitation of a number of local and regional routes running through attractive landscapes to ensure an environmentally friendly integration. The law of landscape conservation, management and planning, enacted by the Generalitat de Catalunya in 2005, stipulates the need to improve the landscape of road accesses to urban nuclei. The Diputació (Provincial Council) of Barcelona is currently engaged in operations to better integrate local roads in the urban settings they cross.

Local and regional roads in the Euram have suffered from poor planning and lack of investment for several decades. A specific preferential treatment is needed to

upgrade them so they can cope with their service needs and, in particular, to foster their multipurpose function. Each section should be adapted to the requirements of its different road users (private vehicles, public transport, agricultural machinery, cyclists, pedestrians…) and, especially when they cross urban areas, to ensure its safely integration.

ON PUBLIC TRANSPORT AND METROPOLITAN MOBILITY

In Barcelona, Valencia and Palma the suburban train service is currently undergoing modernisation and several metro and tram lines are being built anew or extended. Barcelona's Metro Line 9 will be the longest in Europe and its cost will be similar to the investment made in the Madrid-Barcelona AVE. Alacant and Tarragona are seeking ways to articulate mobility in their respective metropolitan areas, which are complex and bipolarised, with hybrid train-tram formulae. Castelló and Andorra are exploring the possibilities of medium-capacity collective public transport halfway between the tram and the bus (BRT). This system, which requires the introduction of platforms and lane sections reserved for high-speed bus services (sometimes with high-capacity articulated buses) is a flexible, inexpensive solution for metropolitan areas with medium to low demand or for dense corridors, but needs a high-performance operation (comfortable and fast vehicles, reliable timetables with high frequency services, coordination with other mass transport services, etc.). It could be quickly implemented in several locations in the Euram. But, to foster the use of public transport, new urban mobility management techniques must also be introduced. Fare integration, in particular, can attract new users to public transport, but it may be quite expensive for the authorities. Still the whole of Catalonia should benefit from fare integration by 2012. The use of cleaner vehicles should also be encouraged, especially in some metropolitan areas in the region suffering from severe pollution problems during certain periods of the year, but again there are cost considerations to be taken into account.

Urban mobility policies should be directed to provide adequate mobility to all citizens while controlling traffic congestion. Integrated urban transport planning and operation, involving traffic and parking management, prioritisation of public transport and support of non-motorised means are accepted measures in most Euram cities. They usually contemplate focused investments in some road infrastructures to increase their capacity and safety, in new or upgraded public transport means, and in new environmentally friendly vehicles. But more attention should be paid to "soft" measures, such as better operation of bus services, fare integration, information to public transport users, cyclist and pedestrian facilities, etc. and actions to induce a more rational use of the private vehicle, such as area-wide parking regulation and the creation of pedestrian zones, without excluding

the possible use of tolling systems like those being used in London or Stockholm. However, most of these measures may involve additional expenditure for the public sector that must be taken into account.

ON WATER SUPPLY

The Ministry of the Environment's water programme contemplates the construction of desalination plants as a means to increase Catalonia's water supply by 70 hm^3 per year and by 200 hm^3 per year in the Community of Valencia. On the Balearics, such plants are already in operation in Palma, Eivissa and Ciutadella. The Agència Catalana de l'Aigua (Catalan Water Board) plans to build a desalination plant at Cunit. The execution of large-scale interbasin transfers is highly problematical due to opposition on the part of both society and the media. Water rates do not yet cover the real cost of the complete water cycle. The demand for household water shows a tendency to level out at 150 litres per inhabitant/day, while agricultural and industrial needs have diminished in relation to production, thereby increasing efficiency.

The short-term solution to the water supply problem in the Euram lies in the construction of desalination plants and the inter-connection of river basins, simultaneously with the establishment of better tariff systems and other policies that would encourage water savings. In the medium and long terms, new interbasin transfers, including from areas outside the Euram (i.e. Rhône basin) may still prove to be necessary.

ON ENERGY SUPPLY

The Generalitat de Catalunya’s Pla de l’Energia (Energy Plan) contemplates the progressive closure of Catalan nuclear power stations when they reach the end of their useful life. In order to offset the consequent loss of productive capacity, it is estimated that at least ten new combined-cycle stations will have to be built. It is anticipated that by 2015 the current power of renewable sources of energy will have been increased by two and a half times, thereby attaining a quota of 8%. The objective of the PIE (Pla d’Infrastructures Estratègiques) 2004-2010 of the Generalitat Valenciana is to attain energy self-sufficiency through the construction of new combined-cycle stations and by fostering renewable energy (sixty-five eolic parks, biomass, solar energy, etc.). The Balearic Islands anticipate putting an end to their problems of electricity supply through the construction of interconnections with the peninsular networks. In May 2008, France and Spain finally reached an agreement over the construction of a partially buried MAT high-tension line in the Pyrenées Orientales, after months of political and social debate.

In order to rapidly diminish dependence on oil, current production of nuclear energy should be maintained while encouraging the production of electricity from renewable energy sources: wind in particular and, to a lesser degree, solar. The improvement and interconnection of electricity networks is indispensable in order to balance demand and supply that strongly fluctuate in time and space.

ON TELECOMMUNICATIONS

The Euram network of optical fibre reaches large metropolitan areas and a number of centres of economic activity, but it does not extend to most of the territory due to the business strategy of telecoms operators and/or the lack of sufficient returns from investments in branching out the trunk network. The authorities are not expected to become internet service providers, even in those places where private operators do not show any interest, because the telecommunications market is a liberalised one. The competitiveness of the Spanish market is low due to the particularities of the privatisation process in Spain (for example, the structural separation between service providers and infrastructure operators was not enforced as it was in most EU countries), which lead torelatively higher prices and lower quality of service. The authorities are studying public-private formulae of cooperation to develop technological infrastructures to serve areas that are not properly supplied by the private initiative, notably the public construction of infrastructures and their consequent transfer to third parties (neutral operators). As the future of computer services to firms and private users lies in total externalisation (remote system management), high-capacity infrastructures of data transmission and storage will become essential for business competitiveness and all Euram regions should be endowed with them.

The extension of high-capacity telecommunication networks throughout the Euram territory may be progressively achieved by grouping potential users together to reach the critical mass needed to ensure profitable service provision on the part of operators and by constructing public infrastructures in those places where private initiative is not interested in doing so.

ON TERRITORIAL ORGANISATION

The Euroregió de l'Arc Mediterrani is divided between three states, several autonomous communities, ten or so provinces and departments, approximately one hundred *comarques*[*] and around 2,000 municipal districts. Territorial, institutional and administrative fragmentation is an obstacle for the definition of strategies and for the implementation of coordinated infrastructure policies at all levels (between municipal districts, between *comarques*, between autonomous communities and between states).

The present territorial organisation of the Euram involves a great number of jurisdictions and a complex distribution of responsibilities and resources between administrations. This introduces rigidities and inefficiencies in the public sector: on the one hand it hinders the attainment of scale economies in the supply of public services and, on the other, the difficulties of reaching consensus under very different political agendas often create insurmountable obstacles to carry out major strategic projects. A solution that allows efficient actions at the Euroregion level should be found in the short term.

[*] *Comarca* (plural *comarques*): a small administrative district encompassing a number of municipalities.

ON GOVERNANCE

Investments in infrastructures have currently reached a historical maximum in Spain and the Euram (however, over 50% of them is in high-speed passenger trains). It is unlikely that this level will be maintained in the future. The increase in the cost of state pensions and in health, unemployment and dependency benefits in general may, in the mid and long terms, restrict government capacity to invest in productive infrastructures or in research and development, unless structural reform is introduced. On the other hand, difficulties involved in executing infrastructures in the most densely populated areas of the Euram, due to the magnitude of their impact on society, which is systematically utilised by opposition movements; the high costs of expropriation and compensatory and palliative measures; and to the concomitant need for difficult negotiations with institutions and private citizens, might lead the authorities to invest in projects that, while technically and politically viable, generate relatively few benefits for society. When there is a dearth of public money and governments have their indebtedness capacity severely restricted, it is crucial that resources be assigned to investments with high socio-economic benefit and lower environmental costs.

When it comes to planning and managing infrastructures, public authorities should apply objective, transparent criteria, based on social, economic and environmental evaluations that constitute a reasonable departure point for negotiation and political decision-making. The likelihood is that private involvement in funding and operating infrastructures will increase and that this will generate the need to conduct more systematic evaluation processes of public investment.

2. Synthesis of results

a) Conclusions on socio-economic issues

b) Conclusions on infrastructures

CONCLUSIONS ON SOCIO-ECONOMIC ISSUES

In accordance with opinions expressed by participants in the Euram Infrastructures White Paper debate, the conclusions reached on socio-economic issues may be summarised as follows:

- The Mediterranean Arc Euroregion, particularly its coastal areas, are highly attractive from the residential point of view, and many of them will continue to undergo demographic growth. The influx of middle and high-income population, characterised by greater work flexibility, will increase, while the demand for unskilled jobs will tend to drop. Land-use planning and control to preserve the quality of the environment and the creation of an open milieu favourable to luring talent is a key strategy for the future economic development of the Euram.

- The relocation of some major multinational industrial firms may be inevitable; nonetheless, de-industrialisation of the territory must be avoided. The industrial tissue, based on technologically mature small and medium-sized firm sectors should be maintained through innovation and internationalisation. On the other hand, it is necessary to maintain the competitiveness of existing production and improve logistics to ensure the efficient supply of present markets.

- Agricultural land in the Euram will decrease in area, with rural population essentially maintained by subsidies based on landscape and tourism criteria. However, some agricultural products, mostly those linked to protected designations of origin may still be competitive. The agro-industry, using local and external inputs, could on the other hand extend their market through improved commercialisation processes and become an even more important economic sector for the Euram.

- The Euram is expected to maintain its strong position in the tourism sector, which should become one of the main driving forces behind the tertiarisation of its economy. It is expected to evolve towards the provision of additional services related to education and training, health and wellbeing, sport and leisure and cultural and business activities.

- After the present downturn, the construction sector should slowly recover in the Euram, although growing at a slower pace than in the past decade. Major firms in the sector will continue their process of diversification and internationalisation, investing resources in research and innovation to constitute a sector of excellence in the economy.

- The mobility of both individuals and firms in the Euram should substantially increase over the next twenty years in order to exploit the comparative advantages of each territory and to stimulate the dynamism of the economy.

- Passenger and goods mobility will continue to increase in accordance with the pace of economic growth. The highest growth levels should be observed in the longest links, in particular if Euram becomes one of Europe's main logistic gateways. Despite expected improvements in the operation of transport infrastructure, insufficient investment in new construction and maintenance could easily lead to severe congestion levels in some sections of the transport network.

- The present territorial organisation of the Euram involves a great number of jurisdictions and a complex distribution of responsibilities and resources between administrations. This introduces rigidities and inefficiencies in the public sector: on the one hand it hinders the attainment of scale economies in the supply of public services and, on the other, the difficulties of reaching consensus under very different political agendas often create insurmountable obstacles to carry out major strategic projects. A solution that allows efficient actions at the Euroregion level should be found in the short term.

- When it comes to planning and managing infrastructures, public authorities should apply objective, transparent criteria, based on social, economic and environmental evaluations that constitute a reasonable departure point for negotiation and political decision-making. The likelihood is that private involvement in funding and operating infrastructures will increase and that this will generate the need to conduct more systematic evaluation processes of public investment.

CONCLUSIONS ON INFRASTRUCTURES

Participants agreed on most of the preliminary conclusions presented. Only the subjects of airport management and water supply were partially amended. In accordance with opinions expressed by participants, conclusions reached on infrastructures may be summarised as follows:

- The current capacity of the Euram airport system, taking planned extensions into account, is globally sufficient in the short and medium terms. The present management model of Spanish airports should be extended to admit the participation of local and regional authorities in regulatory aspects, and private firms in commercial management and exploitation. This would allow Euram airports to provide a more extensive choice of destinations and greater flight frequencies.

- Logistics is a critical sector for Euram, not only to enhance the competitiveness of its industrial and agricultural production, but also to attract new activities notably through the generation of added value to transit goods from intercontinental trade. The development of the sector should contribute to the necessary improvement of the performance of the logistic chains using EU southern ports and lead to a more balanced and sustainable transport system for Europe. Difficulties to devote large pieces of land to logistics near the coast are forcing the creation of networked structures of smaller logistic platforms incorporating major hinterland logistic precincts such as Plaza in Zaragoza. Such networked management system supported by public-private partnership formulae, may endow the Mediterranean Arc Euroregion with the capacity to compete on an international scale.

- While other competitive hubs like Algeciras or TangerMed are better located geographically on the Suez-Gibraltar route, the ports of Barcelona-Tarragona and Valencia-Sagunt still offer excellent opportunities to become maritime gateways for Southern Europe. However, to compete at the European and, in particular, at the world scale, they should coordinate their action in logistics and hinterland connections and in global marketing. Whilst competition among Euram ports is healthy, in some cases, such as Barcelona and Tarragona, joint planning should be encouraged.

- Rail service improvements, which would include investments in infrastructure, but also coordination and management, might increase railway’s share of the freight transport market. The major corridor in the Euram that links the Mediterranean ports to Central Europe, with high volumes and concentrated origins and destinations, offers a good opportunity for dedicated rail freight services that could be very competitive.

- High-speed train services in the Mediterranean corridor could be more competitive than in other Iberian corridors, given its high demographic density and the strong economic relations between its cities. They may also play an important role in the integration of Euram airports.

- The basic network of Euram motorways must be completed if it is to meet growing mobility needs. The motorway network toll system must be reformulated in order for it to become a more efficient traffic management instrument. In the mid term, a comprehensive demand-lead user charging system to optimise the global efficiency of the system should be explored.

• Many sections of the basic road network need to be upgraded in order to eliminate bottlenecks and dangerous crossings and to segregate long and medium-distance traffic from local traffic in order to eliminate congestion and accidents.

• Local and regional roads in the Euram have suffered from poor planning and lack of investment for several decades. A specific preferential treatment is needed to upgrade them so they can cope with their service needs and, in particular, to foster their multipurpose function. Each section should be adapted to the requirements of its different road users (private vehicles, public transport, agricultural machinery, cyclists, pedestrians…) and, especially when they cross urban areas, to ensure its safely integration.

• Urban mobility policies should be directed to provide adequate mobility to all citizens while controlling traffic congestion. Integrated urban transport planning and operation, involving traffic and parking management, prioritisation of public transport and support of non-motorised means are accepted measures in most Euram cities. They usually contemplate focused investments in some road infrastructures to increase their capacity and safety, in new or upgraded public transport means, and in new environmentally friendly vehicles. But more attention should be paid to “soft” measures, such as better operation of bus services, fare integration, information to public transport users, cyclist and pedestrian facilities, etc. and actions to induce a more rational use of the private vehicle, such as area-wide parking regulation and the creation of pedestrian zones, without excluding the possible use of tolling systems like those being used in London or Stockholm. However, most of these measures may involve additional expenditure for the public sector that must be taken into account.

• The short-term solution to the water supply problem in the Euram lies in the construction of desalination plants and the inter-connection of river basins, simultaneously with the establishment of better tariff systems and other policies that would encourage water savings. In the medium and long terms, new interbasin transfers, including from areas outside the Euram (i.e. Rhône basin) may still prove to be necessary.

• In order to rapidly diminish dependence on oil, current production of nuclear energy should be maintained while encouraging the production of electricity from renewable energy sources: wind in particular and, to a lesser degree, solar. The improvement and interconnection of electricity networks is indispensable in order to balance demand and supply that strongly fluctuate in time and space.

• The extension of high-capacity telecommunication networks throughout the Euram territory may be progressively achieved by grouping potential users together to reach the critical mass needed to ensure profitable service provision on the part of operators and by constructing public infrastructures in those places where private initiative is not interested in doing so.