TRANSPORT IN A FAST CHANGING EUROPE

VERS UN RESEAU EUROPEEN DES SYSTEMES DE TRANSPORT

by

Group Transport 2000 Plus

Presentation of the Report of the Working Group

"Transport 2000+" set up by the European Commission

On 16 February in Brussels, Mr Karel Van Miert, member of the Commission of the European Communities and responsible for transport, met, for the first time, a group of individuals given the task of examining in the medium and long term transport and communication problems within the Community with respect to the internal and external dimension of the Single Market.

This group, which has chosen to call itself the "Transport 2000+" group, is made up from the following independant experts: Mrs Nelly Smit-Kroes, former Minister of Transport to the Netherlands ; Mr Edgard Pisani, former Member of the Commission, former Minister of Agriculture and Equipment to France ; Mr Nils Wiljhelm, former Minister of Industry and Merchant Marine to Denmark ; Sir Christopher Foster, Professor and Advisor to British Telecom ; Mr Ernesto Stagni, former Professor of the University of Bologna ; Mr Horst Seefeld, former President of the Transport Committee to the European Parliament and Mr Eduardo Peña Abizanda, Director General of the Directorate General for Transport of the Commission.

Mr Verslype is responsible for the group's secretarial work and Mr Slingerland for coordination work with the services of the Commission.

The group has met nine times and has carried out interviews with 35 experts (company managers, economists, environment specialists, university professors, ...).

More than 200 experts and organisations have been consulted, in Europe (Community, countries of the EFTA, countries in Central and Eastern Europe) as well as the United States and Japan.

After one year, the group reported its findings to Mr Van Miert on 21 January 1991.

This report, which does not involve the Commission, highlights the factors arising internally and externally from the crisis which is threatening the European transport system. It underlines the urgency of establishing a common coherent and voluntary transport policy. The report also lays down recommendations and provides alternatives intended to guide decision making.

PROLOGUE

Making possible what is necessary

The Group Transport 2000 Plus was set up in December 1989 by Karel van Miert, Transport Commissioner of the European Commission. Annex 1 gives details of the members of our group.

We were given the task of compiling medium and long term definitions of the European Community's internal and external transport problems. This is part of a wider outlook taking into account the upcoming Single Market, environmental protection, technical evolution, and extension of present networks to Central and Eastern Europe.

Transport affects everyone's behavourial options, and this has been one of our basic starting points. Hence, we sought the opinions both of people involved in transport issues and problems on a daily basis, and of people who may not be so near the subject but still have important and interesting views on the development of transport in Europe. Rather than composing ex cathedra statements, we hunted out wisdom and truth, facts and figures, constraints and opportunities wherever these could be found outside our own group.

In so doing we have heard the opinions of authoritative individuals in politics, industry and the transport sector from right across Europe, inside and outside the EC. Our tools were hearings, interviews and written statements. Annex 2 lists the people we consulted; they represent a fair sample of Europe-wide opinion on transport in the future.

The results of these hearings, interviews and written statements proved a fertile base for an integral and unorthodox outlook on transport in Europe. We processed and digested a wide, rich variety of opinions. From this information we extrapolated a picture of major present and future problems, constraints, dilemma's and opportunities, as well as ideas on essential and practical directions for solutions. Our findings are contained in this document.

We are confident that our considered opinions and proposals will provide food for thought, and that our recommendations are feasible.

The report is in two parts. PART I gives our view on transport problems and the solutions we propose. PART II comprises results of consultations, i.e. the basic opinions, facts and figures behind our recommendations.

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PART I

PROBLEMS AND POLICY

CHAPTER 1

EUROPEAN TRANSPORT IN JEOPARDY

European transport: a looming crisis?

Transport is more than just another sector of the economy. A handful of figures is enough to illustrate the importance of the transport sector in the EC: around 7% of the GNP, 7% of jobs, 40% of public investment, and nearly 30% of energy consumption.

Whilst its importance is usually measured in terms of the direct contribution to the GNP, this does not take account of transport-induced activities (manufacturing and services); it also ignores transport's role in the overall functioning of a modern society.

So transport hits the core of society. It is one of the few activities which both give form to and express our turn-of-the-century European civilization. It gives a structure to space and our concept of space. It shapes and reflects our ways of life and our cultures. It contributes to economic development, whereas the economy depends on good transportation. The functioning of society, indeed its very nature, largely depend on the quality and design of the transport system. A defective system will hurt society badly.

Today, a threat hangs over European transport. According to Professor Grandjot's survey the expression **'Verkehrsinfarct'** is already common usage in Germany. This crisis has been brewing for years and it touches on the basics of the transport system. It is, of course, true that the threat is not yet experienced to the same degree throughout Europe. But, although still largely latent, the threat is apparent from a range of factors, and taken as a whole these factors are a cause for concern; if they multiply and become widespread the result could soon be a general crisis in the transport system; this in turn could affect the entire economic and social structure of the continent.

'Yes, unless...' is the widespread view

Awareness of the impending threat is by no means confined to Transport Group 2000 Plus. This became clear from comprehensive consultations in the EC and countries outside the Community. Leading international figures from the transport sector addressed our hearings. The Support Team interviewed a wide cross-section of transporters, forwarders, manufacturers, representatives of European political and financial institutions, environmental policy and pressure groups, trade unions, as well as scientists and consultants (see Annex 2).

Taken as a whole, the results of these consultations pointed unambiguously in the same direction. The message came across loud and clear: a European transport crisis can only be avoided by immediate and decisive action. The outcome of our consultations was so overwhelming that a further study of all the material collected is called for. In the meantime, this report offers an initial impression of the present transport situation in Europe as viewed by the stakeholders in and around the transportation sector. PART II elaborates on the consultations.

This chapter expands on the major aspects of the impending crisis and stresses the importance of seeing it as a political problem requiring political solutions prior to a technical response.

The framework

Demands on the European transport system have soared in the last two decades.

This occurred as part of major world economic changes: the gradual emergence of a new international division of labour, new industrial nations and new flows of exchange, plus ongoing de-localization of work and residence. Europe's economy has had to adapt to these changes and severe social crises have resulted along the way.

In developed countries, industrial production has gradually altered with heavy, energy-intensive sectors in retreat. The lighter industries which have taken over are more labour-intensive and hence provide greater added-value.

As traditional industry has declined so new, specialist high-tech sectors have taken over. With economy of scale in mind, production is increasingly concentrated away from local markets. The transport element in total production costs has visibly reduced; this in turn has spurred more transport-intensive production. An essential feature here is that overall transport costs are not included in the total bill: this has blunted awareness of the real costs of transportation. In other words, transport has become too cheap.

These external factors have been boosted by autonomous developments including ongoing integration of Europe's national economies, the opening up of the EC to other countries, and the free circulation of labour within the Community. This has led to overwhelming growth.

Finally, this growth was fueled by a number of economic, social and technical developments. The fast increasing standard of living was of major importance here, as were deregulation of air transport, a relative fall in car prices, increasing mobility, shorter working hours, the 'greying' of the population and the tourism boom.

Symptoms in general

All these developments have contributed significantly to the overall demand for transport. This has meant a sharp rise in traffic volume: passenger and freight transport rose some 70% and 50% respectively between 1970 and 1988 (see figure 10a of PART II). As of now, there is no sign of slow-down in the pace of growth.

Road and air traffic have seen the lion's share of this increased volume. There have been modest, incidental increases in oil pipeline traffic, but rail and shipping sectors are virtually stagnant.

For quite a long period existing networks proved able to absorb the boom in air and road transport, despite a significant drop in government spending on new infrastructures. However, some years ago, Europe appears to have overstepped the point beyond which any increase in traffic is counter-productive. The sum of the negative factors seems to cancel out the extra wealth, efficiency, comfort or ease which should result from the rise in traffic volume. The situation now is that these negative factors have became a very real threat to the Single Market and worse - to the very essence of EC. Quite simply, they pose a direct threat to the main objectives of the Community.

Symptoms in particular

These negative factors fall into several categories.

First comes a general deterioration in transport conditions due to inefficient use of the networks and the saturation of certain infrastructures (especially road and air). Also - albeit not so immediately noticeable - there is an ongoing increase in the nuisance caused by transport. The culprit here is not so much network saturation as the actual increase in traffic. At the same time, a number of questions arise on the capacity of the current transport system to respond to long - or even medium-term challenges. These symptoms deserve a closer look.

The deterioration of transport

Although the deterioration of transport varies depending on time and place, and the type and mode of transport, it is a general phenomenon. The main cause is saturation of the networks on the main road and rail axes in urban conglomerations, and in the air; the main symptom is congestion. Deterioration of the transport system is not restricted to a few main arteries, junctions, periods and types of transport; it is spreading further daily. Indeed, some phenomena which were once exceptional, have become a matter of daily routine, like a total traffic jam on a road or artery, delayed trains and planes, and packed-to-bursting metro compartments. Accidents, energy consumption and environmental damage tend to be most prevalent where dense traffic flows run at high speed or are locked in congestion.

Obviously, this deterioration is most marked in highly industrialised and densely populated areas. Peripheral regions and large sections of the various Member States are still relatively immune from congestion and resultant damage to the national economy: not that this provides an adequate excuse to avoid taking action where threats do exist, or for foot-dragging on policy development in those parts of the EC where the dangers are still over the horizon.

Three sectors are most affected:

(a) urban transport, both individual and collective;
(b) major roads and motorways;
(c) air transport and access routes to airports.

Ad a: The situation is most critical in the urban transport sector. Here, it is not just a matter of constraints on comfort and freedom to choose the means of transport - human safety and even freedom of movement are involved. Although urban networks are neither permanently nor totally log-jammed, congestion is a general phenomenon affecting all types of traffic and means of transport. Traffic jams - now inseparable from the urban scene - entangle cars, buses and trams indiscriminately; every rush hour sees metros, buses and trains on commuter routes saturated. Whatever the mode of transport, getting round in certain urban areas is becoming an increasingly time-consuming, difficult, uncomfortable, hazardous and stressful activity.
The quality of daily transport and individual and collective mobility in urban areas is affected.

Ad b: Congestion is a daily fact on major roads, motorways, and at important traffic intersections. Although statistics show a fall in accidents, the absolute numbers involved are still unacceptably high. In reality, the theoretically faster ride on the motorway is frequently cancelled-out by congestion. Moreover, safety conditions created to cope with fewer and slower vehicles are inadequate to deal with present conditions.
The quality of freight and passenger transportation and the economic function thereof are affected.

Ad c: Finally, delayed flights are commonplace, thanks to airport overcrowding and saturation and non-compatibility of ATC systems. Access routes to airports are plagued by the same problems as urban and road transport, and the accumulation of these factors is gradually reducing the efficiency of transport by air. The actual time airborne plus waiting time on the ground means increasingly lengthy air travel.
The quality of air transport and the interface with other transport modes are affected.

The growing nuisance factor
Congestion apart, transport is creating a number of problems which multiply apace with traffic volume. For a long time the nuisance factor was accepted, but the public concern and irritation is now even being expressed as hostility to some new infrastructures. Similarly, just as congestion

tends to negate speed benefits from technology, nuisance above a certain level tends to counteract any gains in comfort or quality of life offered by a transport system.

The most commonly cited nuisance factors here are:

(a) lack of safety;
(b) noise;
(c) traffic density;
(d) exclusion of the underprivileged;
(e) deterioration of beauty spots;
(f) pollution;
(g) social consequences.

Ad a: The safety aspect in transport is often - and wrongly - played down. It is highly relevant, particularly to road transport. Every year, 50,000 people are killed and a further 1,500,000 are injured on Europe's roads. The economic cost aside, this is totally unacceptable in human and social terms. Although figures have fallen in the long term, the annual body count is still far too high.
The quality of safety on European roads is low.

Ad b: Transport is a prime source of noise and vibration. These nuisances grow apace with traffic volume. In certain areas the levels now hinder normal work and living. Hence, instead of uniting people, transport can actually drive them apart. Indeed, it has actually transformed some residential areas into human deserts, particularly where these adjoin major urban arteries, highways, railway lines and airports.
The quality of life in dormitory towns is affected.

Ad c: Paradoxically, above a certain threshold, traffic density also hinders social relations. Very busy roads through villages and built-up areas can make trips hazardous and actually restrict free movement. This undermines the basis of a Community.
Social interchange is disrupted as is the balance between the freedom to choose when, how and via which route to travel.

Ad d: More specifically, it has to be emphasised that the general development of transport systems is matched by a rise in the number of people excluded. This may be due to economic factors and hence inadequate networks and services, or poor accessibility. This situation is most obvious in cities and suburbs. The underprivileged, including the unemployed, senior citizens and the handicapped, are hardest hit.
For certain groups the quality of mobility is affected, and their every-day options are limited in the transport context.

Ad e: There is growing awareness of damage to natural and man-made beauty spots due to indiscriminate building of railway and motorway infrastructures. People who perceive themselves victims of 'visual and auditory pollution' are increasingly vocal. Hostility is notably strong when it comes to high-speed infrastructures; these both disfigure the surroundings and offer no benefits to the people whose environment they cut across.

The effects hit the quality of the natural environment for humans, flora and fauna, as well as disturbing the balance between preservation of this environment and the rising demand for mobility.

Ad f: Air pollution caused by intensive car, lorry and air traffic is finally starting to worry those who are most exposed to it. A specific problem here is that high public awareness of pollution threats from road traffic- which people can see for themselves - does not extend to pollution by air transport. The latter is still almost the exclusive worry of pressure groups and experts.
The quality of health as such is affected.

Ad g: The family car is often a symbol of a free society. This applies even more so in Eastern Europe where mobility is considered to be a cornerstone of emancipation. The car means people can go where they wish, when they wish, contained in their own mobile 'territory', an extension of home on wheels. This attitude has a significant bearing on spending patterns. Incomes have risen steadily over the last decade, but surprisingly, expenditure on cost of living has not, and many families devote their increased disposable income to leisure and transport or a combination of the two. Hence, as families are to spend a lot more money to use the car, the rising cost of individual mobility does not have a direct effect on overall mobility. However, continuous congestion on the roads prevents the family from making what it believes to be full and proper use of its property, i.e. the car.
The quality of property and sense of freedom are both affected.

More persistent questioning
This is by no means the end of the tale. Transport related consequences raise additional questions about the future of a transport system which:
. cannot ensure safety on the roads and is hence 'user-dangerous';
. is clogged by protective fixing of the normal market and price mechanism;
. is heavily dependent on fossil fuels which are in turn vulnerable to sharp market fluctuations;
. threatens the global environment, whether it grows or stays as it is;
. seems to require an ongoing quantitative increase of the infrastructures, and hence more and more of that increasingly scarce commodity - land.

The impending crisis

These are serious problems and questions, and they may well become more so. Whatever the world economy's long and medium term growth prospects may be, we know that all economic growth leads to accelerated growth in exchanges and traffic. Hence, there is every chance that these problems will worsen in coming years; and what is now merely transport related deterioration, nuisance, and controversy, has all the makings of a crisis in the global system. The main elements of such a crisis have long been identified in theory - and some are already present in practice.

It has been shown that European transport is responsible for a long list of serious problems - problems which also interact to a high degree. This is more than a matter of congestion and nuisance, the problems also embrace the current organisation and durability of transport. These problems affect the short, medium, and long term; effective and durable solutions will only be forthcoming if the problems are examined from all their angles, and are tackled globally.

Summary of the foregoing

Infrastructural problems were the category most extensively addressed, by the people we consulted. Specifically this covered the inadequacy of existing infrastructures and networks in relation to social and economic activities, the overcrowding and saturation of new facilities even at the moment of commission, the need for new links, the choice of layouts, gauges, operating methods. But, above all, the people consulted focused on infrastructural costs, and many of them talked in terms of passing these costs directly to the users. Choices made when creating infrastructures determine the basic tendencies of the sector in line with the financial and economic investments required and the space occupied.

A second category of problems requiring extensive exploration is that of operating the infrastructures. Included here are: characteristic malfunctions and resulting loss of capacity; improvements to be implemented like driver/user information, signposted or priority routes, improvement of single-purpose roads, traffic control systems, timetable reorganisation and traffic restrictions based on time of day, area, vehicle type etc.

Transportation equipment is a favourite topic of discussion. Suffice it to say that, depending on type, it takes anything between six and twenty years from the design stage and the first engineering drawings before a new item is actually commissioned. However, the medium- and long-term decisions and choices made here, themselves depend not only on forecasts, or even 'guesstimates' of future needs, but also on today's criteria for speed, safety, environmental protection, energy conservation, increased vehicle capacity and adaptability, etc.

The problems of professional carriers are particularly closely related to those above. They need more thorough discussion, regardless of the extent they have been covered by EC harmonisation activities concerning employment, training and working conditions. Recent events including drastic job cuts on the railways due to restructuring and productivity increases, and the lack of navigators and technical ground staff in the air transport sector are further evidence of the longer-term impact of decisions taken at a given moment. Unfortunately, the unreliability of road, rail and air transport and the congestion problems in the urban sprawl prevents meaningful application of the 'zero-stock' principle based on 'Just-in-Time' transport, which has such an important influence on manufacturing and trading costs.

The safety aspect, involving all transport modes, has received considerable attention, as have its close links with the other aspects of transport operations, and with environmental aspects. Road safety is a prime topic here, with considerable overlap of requirements onto energy conservation, environmental protection and social life. Also important are air safety (incompatible air traffic control and assistance systems, congestion over major airports, especially where these are clusters together), and the risks related to the transport of dangerous substances.

Lastly but obviously, the actual approach to user requirements needs to be discussed from a totally new perspective.

On the other hand, a more detailed explanation is also needed on the demands of the general public as private, collective and public service transportation users, in urban, inter-city, inter-regional, international contexts - over and above problems like time-wasting and discomfort.

The need for a political approach

Clearly a global approach is needed. The urgency and scope of the questions raised, and the range of sectors of activity which may be affected by the answers found, do not allow the problem to be studied purely from the angle of any one sector. Transport is not an independent area; it cannot be studied and understood outside the economic, political and social entity which it is partly responsible for structuring, and by which it is itself structured.

And so, today we need a new approach to defining the problems in all their complexity and incompatibility; this approach needs to be political first and foremost - before it goes into technical detail. For far too long Member States have tried technical solutions alone on their transport problems; they should have been looking beyond the various transport modalities as such, to the potential synergy and mutual added value.

And the need for a systemic approach

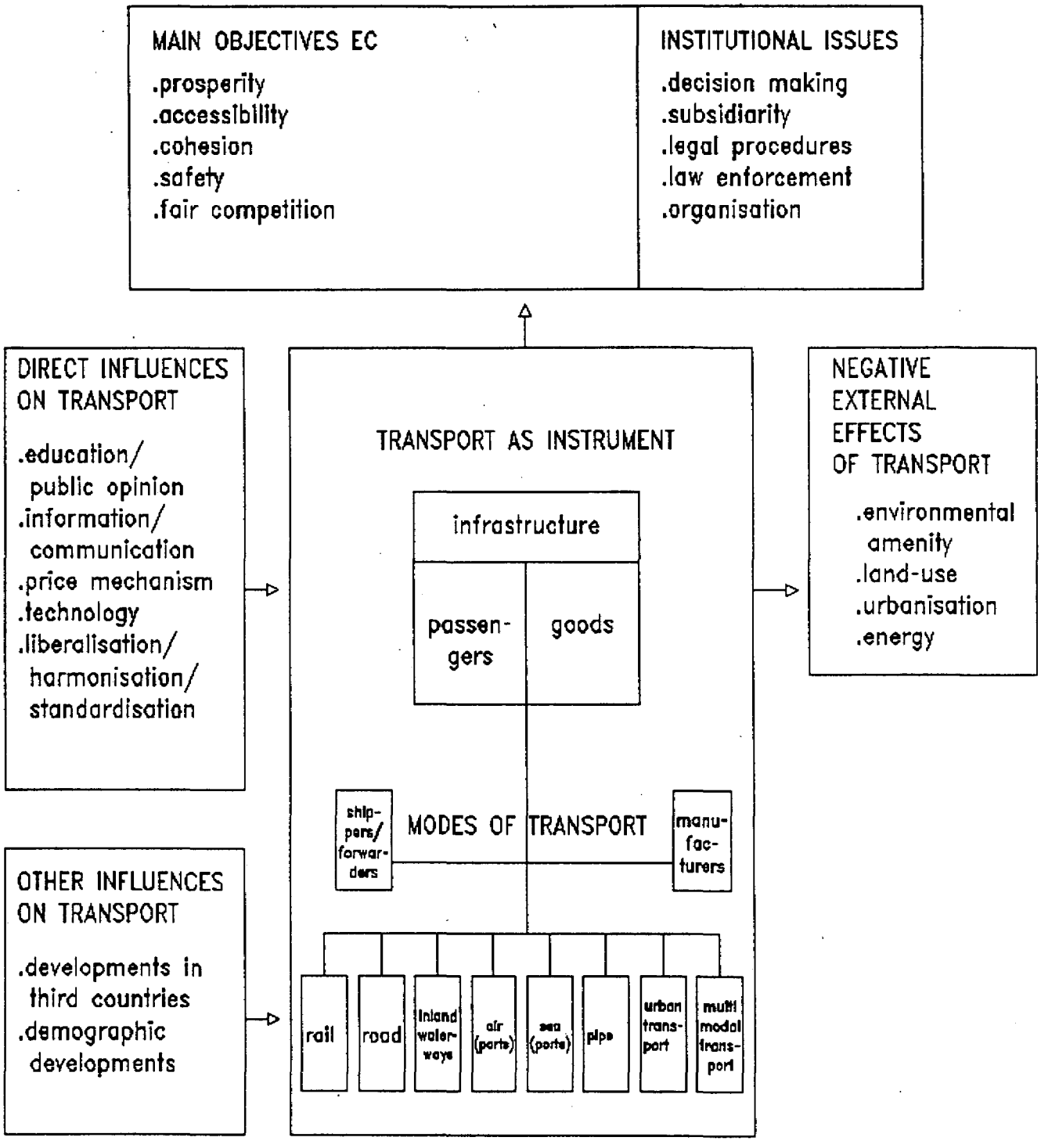
Hitherto, transport policies have been dictated by a specialised logic, specific to the transport sector. Transport policies and investments are still often determined by the narrowly conceived objectives of public and private bodies responsible for particular segments. Meaningful economic criteria have only recently been developed to show the characteristics of their marketplace. Hence, these bodies have tended to rely on engineering standards in deciding priorities. They have also been under heavy political pressure to provide or continue uneconomic services; and at the same time financial and political constraints have stopped them from doing their perceived duty to satisfy demands. Transport and transporters are influenced by changes in political and public opinion; by public and political attitudes towards competition and the desirability of harmonising national policies in the EC; by increasing scientific understanding and public perception of environmental issues; by changes in information and other technology; by the rapid development of telecommunications; by changes

in the political attitudes towards regional development within the EC, and towards better transport links with other European countries - most recently with Eastern Europe. Transport is affected by international economic shifts, by tourism and by changes in the balance of trade within Europe. There is often conflict - even in the mind of the individual- between the wish for better and faster transport and what are perceived as the negative consequences for the environment, regional and territorial development, urbanisation and energy.

Transport may not be confined within the limits of its own purposes and aims. It needs a wider outlook to ensure an adequate response to all the activities it facilitates, restricts, or prevents, be they economic, social, cultural, professional or personal. Most importantly, in no way may it be overly influenced by engineering and other technical considerations or by the imperative of any given organisation or organisations.

Absolute priority within this overall perspective must go to an analysis of the various demands affecting transport. There must be particular emphasis on the behaviour of the parties concerned and, more generally, on society and on the 'objective' needs of the economy. Nevertheless it is important to analyse the factors which determine the growth of EC-wide demand for all modes of transport; this will enable better forecasting on transport growth in the event of there being no change in policy; it will also allow prediction of the response to changes in taxation and other policies affecting transport. Still within this same perspective, it would be unrealistic to discuss transport policy while ignoring related and mutually influential policies.

Transport should be approached systemically as shown on the preceding page: it demonstrates quite simply that transport cannot, and never could, be viewed as an independent problem area.



systemic approach

CHAPTER 2

FOCUSING ON MAJOR PROBLEMS

Major areas of negative effects

This chapter focuses on the right-hand section of the diagram shown in Chapter 1, i.e. the negative external effects of transport.

It is a fact of history that most cities grew up at transport junctions, at points where roads, waterways or the sea met. Often the chosen site was a staging post, or a place where travelers and goods switched from one type of transport to another. And so, transport has helped small towns develop into cities; it has had a part in dictating territorial and regional planning and land-use.

The influence exerted by transport today is more complex than ever. Looking at the structuring effect, and especially at major infrastructures, contemporary transport policies are frequently seen to be complementary at the very least. Transport is often the designated means to bring a region out of isolation; this in itself is a tool for economic or social development and revival of underdeveloped areas and towns. In major urban areas, transport policies aim to shape the process of urbanisation, rather than form it in advance. This is particularly true of the organisation of urban transport. The degree of success varies.

Today, transport is a major contributor to energy and environmental problems. It is one of the main consumers of non-renewable fossil fuels, and is responsible for considerable nuisance and damage to the environment.

New policies, which will lead to drastic changes, are now being prepared in the energy sector. These aim to reduce consumption and spur efforts to develop alternative energy sources and/or new transport equipment.

Exhaust fumes, the greenhouse effect and other transport related pollution problems have made it imperative to find more rational ways of using energy and achieving a long-term cut in consumption.

It is no exaggeration to compare the environmental crisis to a new - but permanent - energy crisis for the transport sector.

Lastly, this section of the diagram demonstrates that treatment of the transport problem requires a shift in discussion and decision-making levels, and further that these must occur within a systemic, forward-looking perspective; this is a prerequisite for any meaningful, solidly based policy decision.

Obviously, the areas selected here are the most significant, i.e. most closely related to transport and posing the weightiest problems.

Land-use

There have always been strong links between transport and land-use: the structure of transport networks affects the organisation of space, both in terms of time and over wide geographical areas, and so contributes to local and regional economic development. The interaction is felt both through the impact of transport on regional development and via the influence of land-use patterns on the volume of transport demand, car-based shopping and leisure facilities and the separation of residential areas from the workplace. There can be little doubt that emerging land-use patterns created by present policies have contributed to the growth in mobility and car use.

The development of towns or regions, the location of industries or exchange centres (terminals), the creation of collective facilities and tourist attractions all depend on regional or local authorities' development strategies; on a national scale all rests on the political desire for balance. These strategies require the development of regional transport. So, within this context, transport plays a part in the spatial organisation and structure of an area.

However, recent decades have frequently seen the structure of transport networks actually increasing the disparity between regions. This has been done by creating or reinforcing advantages for particular locations at inter-regional level and ignoring areas which are less economically dynamic. On the local level, wide-scale scrapping of branch-lines has had the same effect. Sacrificing weak areas for economic reasons simply creates new economic headaches which are increasingly difficult to cure.

In general, without policies to offset regional imbalances, the recent priority given to development of high-speed transport (overland and air), including the new routes proposed for road or rail infrastructures, can only exacerbate the disparities - albeit creation of some major roads will help certain EC areas to emerge from isolation.

At the same time it has to be remembered that choices on land-use are not an EC responsibility. Nowadays, the Commission only intervenes to give scattered support for a small number of very limited operations, mainly via structural funds, and with very inadequate resources. The 'subsidiarity principle' is in full swing here, and the outcome is far from universally positive.

There are no grounds for expecting emergence of a Community land-use policy for a while yet, despite the importance of such a policy in creation of a European unity.

The problem is still as follows: how does the EC increase its role and resources in the area of territorial and regional planning thus ensuring that certain areas are included in the massive, Europe-wide programmes without undermining national or regional autonomy?

Without due care there could be a potential threat to EC unity here; any attempt to limit the area of study and cooperation to the immediate economic environs could create irrevocable tensions and imbalances.

Whatever the case, there can be no ignoring or overlooking of the EC's peripheral and less developed areas. Indeed, the same applies to those Central and Eastern European countries now opening up to the market economy, and suffering from severely inadequate transport facilities in the process.

On the subject of peripheral (and national) regions, one factor at the interface of land-use and transport planning requires serious attention. Decisions made to concentrate industries or other economic activities have to be viewed against these areas' possible lack of adequate transport systems. This can provoke a tendency to boost local growth by constructing the missing infrastructure in that region. This makes no sense whatsoever. A decision to form a given market cluster must logically mean that other areas are situated outside its boundaries. In no way can this be taken to mean a firm transport policy in 'lesser privileged' regions; indeed, so doing would frustrate a meaningful, Europe-wide transport policy. Those regions should count the blessings of their comparative advantages.

Urban conurbations

The transport crisis is most apparent in major urban conurbations. The problems are found equally in older centres and in all densely built-up areas and their suburbs. More and longer traffic jams are symptomatic.

There is widespread consensus that transport and travelling conditions will soon become so poor as to hamper the economic and social development of major cities. Clearly this is already the case, but the drawbacks have yet to cancel the benefits of agglomeration.

Economic problems are a favourite theme in speeches by public and private sector decision-makers. And, whether explicitly or implicitly, the stress is on transport problems faced by cities in their hub/distribution function. As it happens this is just one of many contradictions in the impending transport crisis: it so happens that interchange is just one function of cities - they are also meant to be lived in.

Moreover, land available for extending or creating new routes needs careful husbanding. A permanent solution would require adoption of crucial, immediate or short-term measures on traffic conditions, and in particular on day-to-day use of private cars.
Urban transport and traffic are affected by the weight of recent developments which have led to significant contradictions between various sector policies, and even within a given policy.

Hence, it is clear that very few habitual car users have switched to public transport, even when quantity and quality of supply have improved. There are a variety of reasons for this. Certainly there are direct complaints about public transport - lack of comfort, slowness, inadequate peak hour capacity, daytime scarcity, irregular service on non-express routes and so

forth; but as important is the phenomenon of car ownership with its associated status, free movement and relatively low operating costs after the initial purchase.

Above all, systematic car use even for short distances is due to past decade's policy on the siting of homes and the workplace. As matters stand, the car is the only real transport option for the suburban or semi-rural commuter working in the town centre or peripheral areas far from home. Cars will stay the natural choice in the absence of a far denser and more flexible public transport network; and should the decision be taken to commit the massive resources required for such a system, realisation will take a very long time indeed.

It now seems generally accepted that the cautious approach will not work in most urban areas, and that there will have to be enforced restriction of private car use. There is growing support for the road-pricing formula which would make the car user pay directly and so remove distortion between the choice of private and public transport - by reinforcing the latter. Conversely, there is only limited acceptance for the idea of solving the urban log-jam by giving collective transport priority in financing and infrastructure.

A balance has to be found. The only way to achieve this is with an overall design for urban planning and transport in densely built-up areas. The necessary restrictions on car use and parking must look beyond prohibitions or dissuasive tolls, and enable full integration of private cars in the transport system.

Finally, we draw attention to - rather than discuss - the conditions for social acceptance of such policies, for a fair deal for users who are 'objectively trapped' by private cars, and for creation of genuinely attractive alternative forms of transport.

Energy

Transport may not be the top energy-consuming sector but it still eats up a massive 30% (approx.) of EC energy budgets. It is also the sector with the highest rate of consumption growth per year as well as being the sector most heavily dependent on a non-renewable fossil fuel, namely oil.

Obviously, oil production is highly volatile and uncertain. This situation seem to have become semi-permanent since the 1973, 1979 and 1990 crises. Even if a diplomatic solution to the current Gulf crisis is forthcoming, this will have been a firm reminder never to take a guaranteed supply and falling prices - on which so many predictions were based - for granted.

The general uncertainty of supplies, both in terms of volume and pricing, has many repercussions for the progress of industrial activity and on the growth of the world economy. It has also greatly affected the transport sector. Slower growth and shifts in competitiveness and balances between producer regions will influence the volume of goods flows and passenger traffic, as well as preferred routes.

For around two decades road transport has accounted for 85% of the EC's transport sector energy consumption. Awareness of the increasing share of energy in transport costs can only help to reduce this figure.

Not surprisingly, voices are now heard calling again for a significant and lasting way to reduce the consumption of energy by transport. And this time there is an added urgency.

The many past efforts have already been counteracted by industrial development and commercial ambitions; for instance, the increase in the fuel efficiency of vehicles has been counterbalanced by the search for powerful engines and higher speeds.

Alternative energy sources are far from being ready for use and, whatever technical progress may have been made, the penetration of renewable forms of energy into the transport sector can only be extremely slow. Therefore, if consumption is to be sufficiently and permanently reduced, changes will have to be made simultaneously and in as many areas as possible.

Such a course of action will not only have economic consequences; it will also affect the functioning of our societies, and even their very structures. Success will depend on changes in society which will lead to changes in our systems of values and lifestyles.

Finally, reduced consumption would be a major factor in reducing environmental damage, bearing in mind that transport within the EC is responsible for 25% of carbon dioxide emissions and 60% of nitrous oxide emissions. Car manufacturers are conditioned to listen their customers and the market; they will certainly act if the demands on the environmental aspects of cars and lorries are sufficiently explicit.

The environment

Transport and infrastructures affect the environment to varying degrees. A distinction must therefore be drawn between:

- global effects on the general functioning of the system: the greenhouse effect (due to carbon dioxide) which experts predict will lead to climatic changes by the years 2030-2050, the use of fossil fuels and the impact on biological diversity;
- generalised effects, such as atmospheric pollution by the release of noxious gases into the atmosphere, the subsequent acidification of soil and fresh water, the consequences for human health, the occupation of the available surface area by infrastructures;
- local effects, such as noise and vibration, the working of mines and gravel pits, or the technological hazards attached to transporting chemicals.

A distinction must also be made between damage to the environment in the restricted sense, and environmental nuisance, i.e. damage to the living environment. In fact, decision-makers often choose to favour one of these aspects over another.

When formulating alternatives it is also important to take into account both the heritage value and financial cost of environmental protection in given situations.

Expectations from revised EC policies

Above all, clearer objectives and conditions of choice are crucial, no matter if it involves Community, national, or regional decision making. All short term - let alone long term - decisions on transport have inevitable consequences for the environment; these must be clearly explained and the environmental priorities selected must be clearly identified before the final decision is taken. This applies right through from the project stage.

Improved treatment for the environmental dimension of transport problems should also boost the growing preference for collective transport and railways over private cars and roads.

Whatever the case, we need an overall approach in identifying and resolving contradictions in the social and political actions of people who oppose environmentally friendly means of transport in order to protect their own personal environments.

CHAPTER 3

BASIC CONSIDERATIONS FOR A STRATEGY

Evaluation of the situation now

The preceding chapters sketch a gloomy future for transport. Generally speaking, the EC and its Member States have failed to anticipate the consequences of transport development. They are now paying the price for having postponed the development of coherent and integrated transport policies for far too long. The EC has not paid sufficient attention to transport and the impact of European's changing lifestyle as demonstrated by soaring road use at the expense of the environment. The EC failed to act in time to arrest the decline of infrastructural investment. It has been tardy in realising that road transport could develop all too easily given the relatively poor quality of the rail and inland waterway sectors. For many years the EC has lacked the courage of its convictions in failing to apply healthy and fair competition rules to the transport sector. The EC has yet to understand in full the role that transport policy plays as an instrument for adequate regional policy. The EC kept the transport markets divided by neglecting the need for harmonisation (which would have made them compatible and would have stimulated cooperation between the modes of transport), and the need for liberalisation (which would have opened the market and allowed in healthy competition and innovation).

These failures of resolution, insight and action have an impact on the Internal Market and indeed European cohesion. This the EC cannot afford. Adequate, effective and efficient transportation is a prerequisite guaranteeing the objectives of the Community.

The Member States and the EC face the task of significantly upgrading the quality of transport. This will not be easy. Firm decisions will be called for and any lack of resolve here will risk the following consequences:

- possible failure of EC transport policy due to inadequate implementation of the provisions of the Treaty of Rome;
- ongoing serious delays and financial losses for freight transport due to hold-ups at national frontiers and general congestion. Transport costs will rise and the full potential of Community resources will be significantly under-used;
- users will be unaware of external transport-related costs, these will be ignored when calculating the real cost of transport;
- there will be response failure vis-a-vis explosive growth in the number of cars, failure to meet the resulting demands on limited scope for expanding the transport infrastructure, and failure to tackle pollution-exacerbated by its multi-national effects;
- an absence of any coherent European infrastructural networks for road, rail, inland waterways and pipelines;

- different toll, road information and signposting systems etc. will become a hinderance to travel, and unacceptably high road casualties will continue;
- the low quality of rail freight transport will continue and air transport congestion will increase;
- the market mechanism will be prevented from playing its equalising role on prices and costs.
- the serious lack of broad based economic transport studies will be ongoing;
- the priority given to transport by the general public and by most governments will be less than it should be;
- GNP-related investments in transport infrastructure will remain weak despite the strongest ever development of goods and service flows as compared with economic growth.

This is by no means a complete list, even so it provides a clear picture of political negligence on the transport front, and an almost total lack of any future-oriented transport policy.

Confrontation with a reappraisal process

We are facing a reappraisal of transport in the EC, if not in Europe as a whole. Agreements have to be made on a number of subjects including the way Europe handles major capital investments, safety, amenities, energy, congestion, accessability, collective and freight transport, goods transport.

Backed by the outcome of the consultations, the Group Transport 200 Plus is convinced that this view is widely shared. Decisions must be taken soon on the new principal outlines for a coherent Pan-European transport policy. The challenge is to develop a masterplan on European transport, containing an overall vision on what should be achieved, and how it should be achieved.

However, there is the matter of the right criteria to guide us safely through this reappraisal process towards a European policy. One thing is certain, the *criteria must be political*. So far in this document, we have used the result of the consultations (see PART II) to demonstrate that the transport crisis is indeed political and not technical. Hence, an adequate solution demands political criteria to steer through the reappraisal process which in turn must produce the main principles and recommendations for a European transport policy.

Quality is crucial in transport

A preliminary statement is required before we go into political criteria. All parties concerned with transport now face the task of defining the *quality of transport* in Europe in the next century. It is the quality that counts. Failure to understand this will leave us stuck on a too low level of political aspiration.

Quality is not self-generating. The quality of transport in the future will depend primarily on the political values that we intend pursuing and on the administrative norms we use to maintain and enforce them. And let there be no doubt that enforcement is essential.

So, the masterplan should first of all set out a clear vision on the values and norms, i.e. the desired quality characteristics of a European transport system. This is an essential systemic approach to find the strategic variables (see next chapter) on the basis of which it is necessary and possible to act.

Quality responds to three values

In the first instance quality is a matter of setting the required value and prescribing the norms to achieve it. In practice opinions will vary due to the moral implications of this type of value-setting. We are on political not technical ground here.

Any phenomenon involving quality must demonstrate three values:
. use (efficiency and effectiveness);
. appreciation (valuation and satisfaction);
. the future (survival).

We will now apply this formula to transport.

The value of use

A transport system has a value of use if it is **efficient** (a maximum result at the lowest cost) and **effective** (it reaches its targets). The main thing is to find and agree on the proper norms to fulfil these values. A set of norms, drawn from the results of the consultations and recommended by the Group Transport 2000 Plus are shown below. It is not designed to be exhaustive, nor does it reflect a hierarchical order. It is simply meant as a stimulant for further discussion, a basis for principles (see next chapter), and as a firm reminder that maintenance of values depends on thinking in terms of norms.

Norms for efficiency
A coherent and compatible EC transport system will only be efficient if the following conditions are met:
. all the costs (procedural, infrastructural, environmental, social, etc) caused by the modes (road, rail, inland waterway etc) are known and charged to users;
. as a matter of principle the Member States actually stop subsidies to weak operating modes, EC legislation establishes criteria for grants at source for the occasionally inevitable need to support weaker passenger and goods transport operations,;
. the transport system is financed by user taxes and charges;
. deregulation and fiscal harmonisation is implemented for all modes of transport before January 1993;
. construction of infrastructure aims at filling the international gaps-

rather than smoothing congestion peaks. No to do so means national roads and railways which will be idle for most of the day - a waste of cash and space in any language;
. unrestricted cabotage is introduced for all modes of transport throughout the EC;
. fair competition is maintained between modes of transport, without distortion by public preference for a given mode; promotion of inter-modal synergy.

Norms for effectiveness
Conditions for a coherent and compatible EC-transport system are as follows:
. the EC transport system contributes to achievement of the free internal market and helps Europe towards a network-economy;
. resources (private/public capital, energy, space, subsidies) are used cost-effectively;
. the transport system is based on meeting market and consumer needs;
. monopolies are abolished and established EC-competition rules are fully applied in the market, where necessary supplemented by new rules of competition adapted to the deregulated and liberalised market;
. liberalisation and required harmonisation of the transport market to be given equal priority but without linkage of the two issues;
. high standard rules for environmental protection covering all modes of transport are established at EC level;
. transport is not used as an instrument of regional policy pushing local priorities;
. multi-modal (combined) transport sites are established adjacent to mono-modal routes, through creation of high-tech terminals;
. institutional apparatus and legal procedures are more flexible and faster in meeting the necessary democratic standard as current in Member States;
. public and private initiatives evolve into partnerships;
. solutions are found for the infrastructure bottlenecks outside the EC which hamper access/transit;
. there is maximum possible furtherance of research and technological innovation.

The value of appreciation

The value of appreciation involves valuation and satisfaction, it breaks down into several segments, the most important being:
. freedom of choice;
. social contacts;
. safety and security;
. a proper relation between price and quality;
. comfort, cleanliness and adequate facilities;
. liability;
. speed and reliability.

In terms of norms:
. a coherent and compatible EC-transport system meets the value of freedom of choice if the user of the system, whether an individual, a

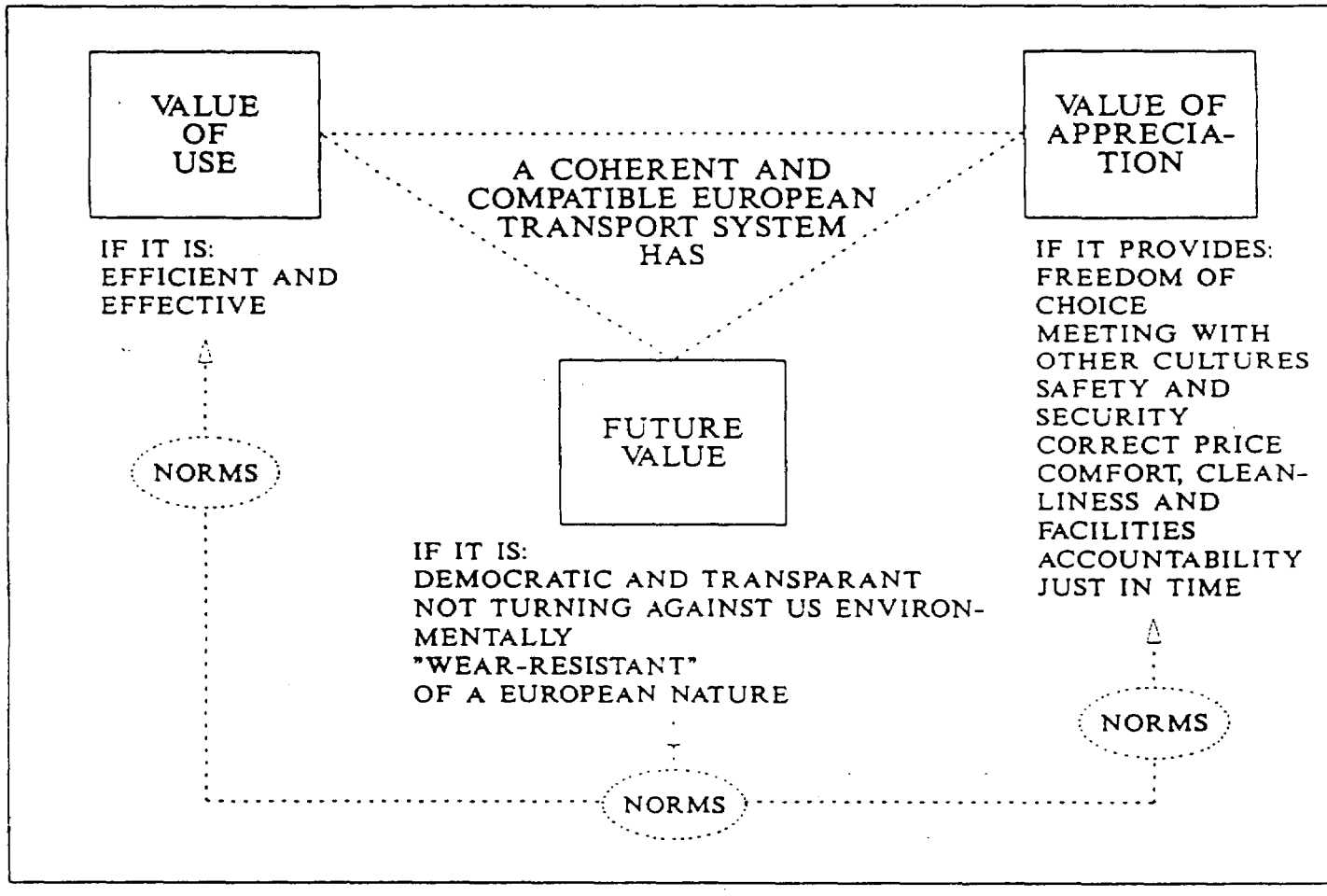
forwarder or a shipper, is free to be transported and/or choose the most suitable mode;
- it meets the value of social contacts only when there are no physical and legal borders;
- it meets the value of safety and security:
  - if casualty figures drop considerably,
  - when a single-solution is implemented for an EC-wide philosophy on speed limits;
  - if everyone can drive throughout the EC without getting harassed, assaulted or having their vehicle stolen, or travel by train without fear of assault;
  - when major car-parks are safe and secure;
- it meets the value of price/quality if the components of the price are in a reasonable proportion to investments and other costs of the enterprise without being rigged by subsidies; the price/quality value is also met if the result of external costs charged by users are returned to the sector: without this people cannot judge the correct price/quality ratio;
- the value of comfort, cleanliness and facilities is met when roads, public transport and airports are clean, with adequate refreshment and recuperation facilities, sufficient no-smoking areas, facilities for the use of portable computers, telephones and fax equipment etc;
- it responds to the value of liability if equal standards are introduced throughout the transport modes;
- it meets the 'Just-in-Time' value if the passengers and goods are delivered on the spot at the agreed time.

The value of future

There are four parts to the value. Firstly, a coherent and compatible EC-transport system has the value of future if it has democratic and flexible decision making procedures; this applies to Council and Commission levels and in enabling the European Parliament to play an increasingly important role; third countries must also enjoy the same treatment, so making the mutual markets transparent and compatible.

Secondly, a coherent and compatible EC-transport system will have the value of future if the negative effects of the system neither contradict its own objectives, nor frustrate essential characteristics of human life. We must have the will to be known for what we have preserved, not for having built a self-destructive boomerang. In plain terms this means cutting the environmental damage to the absolute minimum. There a four specifics here:
- NOx and CO2 emissions responsible for acid rain and greenhouse effect;
- exhaustion of scarce energy;
- disasters caused by transport of hazardous materials;
- severance of land by new infrastructure.

What is demanded is a range of norms enabling our children and grandchildren to stay mobile and healthy and happy. Three such norms are:
- it is essential that driving time in urban areas is not largely spent searching for a parking space;


VALUE OF USE
VALUE OF APPRECIA-TION
A COHERENT AND COMPATIBLE EUROPEAN TRANSPORT SYSTEM HAS
IF IT IS:
EFFICIENT AND EFFECTIVE
IF IT PROVIDES:
FREEDOM OF CHOICE
MEETING WITH OTHER CULTURES
SAFETY AND SECURITY
CORRECT PRICE
COMFORT, CLEAN-LINESS AND FACILITIES
ACCOUNTABILITY
JUST IN TIME
NORMS
FUTURE VALUE
IF IT IS:
DEMOCRATIC AND TRANSPARANT
NOT TURNING AGAINST US ENVIRON-MENTALLY
"WEAR-RESISTANT"
OF A EUROPEAN NATURE
NORMS
NORMS

. high-tech and combined transport to ensure lorries do not travel (half)-empty;
. all modes to observe the same, high standards of safety.

Thirdly, the system has value of future if it can absorb wear and pressure over a long period. The norm here must ensure that investments in infrastructure are viewed against European-wide interests.

Fourthly, the system has value of future if there is an added value of a European nature. Everything we consider changing must be seen in a European context. This implies a norm whereby an idea is out of order unless placed in a European context.

The scheme shows the conceptual framework on values and norms.

Freedom and its limits

Altogether, these paragraphs on (political) values and (administrative) norms aim to clarify one simple idea: the freedom that we enjoy in Europe is not without limits. The quest for freedom of choice and growth and for liberalisation of movement of goods, persons and services, must occasionally be subordinated to the need for balance between unconditional freedom, and establishment of safeguards to countervail undesired effects of this freedom.

When we say that transport should be free we mean the free working of the market mechanism and its competitive powers as instruments for establishing non-artificial market conditions with normal costs and prices. Where this freedom can actually hurt people - and this is sometimes the case - a countervailing power is needed. This does not mean a curtailment of free transport market mechanism, it is simply a matter of common-sense limits on any negative external effects of that freedom. Quite simply there has to be a proper balance between freedom and excess in transport. Let us clarify this with a number of examples.

As regards pollution, the principle of free market transport implies that rather than banning or limiting car or truck use we concentrate on setting damage limitation/countervailing rules; this may involve setting high standards for emissions and safety, heavier excise duties and taxes, or promotion of R&D aimed at 'cleaner' vehicles. And so, transport - by no means the only culprit for acid rain, global heating and so on - pays its debts to nature, as should other sectors including manufacturing and agriculture. The route to economic growth, aided by an upgrading of the transport system, hits its limit as soon as this growth starts to absorb the planet's resources and re-invests nothing more than garbage.

This outlook also has major implications for regional policy. Pursuit of free transport goals in line with the market mechanism could be severely disrupted by regionalism. Obviously it is a good thing for transport to benefit the regions, but this should not be taken as a norm in the sense that transport policy is subordinated to regional development. Transport policy is not a regional panacea.

A third implication of the principle in practice relates to 'damages' paid to possible victims of free market transport. The subsidies which artificially depress transport costs throughout Europe are nothing more nor less than a curse. All modes of transport should operate at actual costs. If this means that some people cannot afford to take the bus anymore, then we should concentrate on solving this specific problem, perhaps by giving direct support to these people.

Naturally, there are exemptions. We cite two. Operating at actual costs cannot be maintained under all circumstances. It is crucial that people are 'pushed' out of their cars and 'pulled' into public transport. Restricting their freedom of choice is not the answer, we should be offering attractive and exciting alternatives by a massive upgrading of capacity and quality in the public sector. This will require massive investment to match - costs which cannot be covered by the price of a ticket. Hence, some forms of public transport may have to be subsidised. If upgrading of the total public transport system - no matter the cost - is the only way to solve the urban transport problem, then that is the way it has to be. Zurich is among the cities which have taken this route.

Another good example in this respect is combined transport. As we frequently heard during the consultation process, this is so important that it warrants almost unlimited funds for infrastructure and terminals to countervail the severe damage created by unrestricted growth in road haulage.

The principles and recommendations in the next chapter are founded on the statements on values and norms given above. The Group Transport 2000 Plus hopes and trusts that these will provide the Commission with basic political ingredients it needs to find that vital balance between 'liberalisé et organisé'. The call for balance and immediate action in chapter 4, is largely based on the input of the many and various outside interests consulted (see PART II).

CHAPTER 4

TOWARDS A EUROPEAN TRANSPORT STRATEGY

Introduction

The fundamental problems of the coming decades are described in the previous chapters. Without the correct measures they can easily evolve into serious crises in many cities and airports, and along many major inter-urban axes. Some of these crises could actually paralyse the system, slow down economic growth, provoke serious social tensions, increase threats to the environment, damage the balance in central and peripheral regions, and make the building of Europe even more difficult. Airports, railways, roads and urban centres all face increased traffic which has outstripped growth in infrastructural capacity; and this has happened just when the installation of new infrastructures is facing record objective and psycho-sociological opposition.

The answer to the threat is a new Pan-European transport policy. In principle Member States should be able to solve their own transport problems; and they have tried to do just that; they invested and they have adopted policies without which congestion and pollution would be much worse. However, experience suggests that the pace at which purely local priorities overtake European considerations accelerates as one descends the various levels of government.

In our opinion the role of the EC in transport policy follows mainly from two considerations:

(a) Firstly there is the Treaty of Rome requirement for fair and effective competition throughout the EC. In the opinion of our Group, this is inconsistent with any slow-down or congestion along inter-urban routes or in urban conglomerations which is serious enough to actually hinder trade. This applies as much to movement of the people involved as to goods flows. As we understand the principle of subsidiarity, maintenance and improvement of national transport systems to avoid any restraint on trade, remains the primary responsibility of individual Member States; but it is the EC's task to set appropriate standards and to ensure it has powers of action if and when Member States persistently fall below that level.

(b) It is the EC's task to establish environmental pollution standards for transport, both at the micro-level of determining vehicle emissions and insofar as it is necessary to curb growth of transport in the interests of acceptable limits for overall atmospheric pollution.
Considering the very broad scope of transport and its impact on every day life, a good balance is essential between the various options available. The Group also believes it is self-evident that the necessary EC decisions and regulations, and their relation to the policy objectives recommended

in this report, should be established in a plan of action which includes definite measures to be taken in the short and long term, and furthermore that this action plan should be adopted by EC Transport Ministers after appropriate consultations.

This chapter does not contain the special action plan, but it does give several political choices which are a logical outcome of the story line of the previous chapters.

Dilemma and options

Looking at the many problems and angles, and being aware of the many constraints, including a rapid and adequate solution, it's clear that the EC is faced with a serious policy dilemma. Three options present themselves:

(a) The continuation of present policies, if only because of financing shortfalls, plus the heated political objections there would be to stricter measures. However:
- there is the rapid spread of congestion and saturation of the traffic system - especially road/rail and not just in urban concentrations. And it is a similar story in the air;
- negative impact on environment, safety and energy consumption would become intolerable;
- problem solving will become more difficult at a later date ;
- worrying economic consequences as the lack of an adequate transport system would ruin the even more sophisticated systems of subcontracting, assembly, specialisation etc; this would weaken our competitive position and have a downward effect on economic growth;

(b) The intensification of the existing policies, increasing heavily infrastructure investment etc. in order to alleviate the congestion problems as much as possible. However:
- this would lead to even stronger conflicts of interest and political opposition;
- the available means for investment would be insufficient;
- the transport problems would not really be solved and the negative effects would increase steeply;
- the growing demand for more and more infrastructure will certainly reach the borders of rural planning, lack of space will prevent more infrastructural works;
- it would imply a very heavy burden on the economy and economic development;
- above all, the effect on the environment of unconstrained transport growth, whatever the mode and given present technology, could result in undesirable, even politically intolerable levels of atmospheric pollution.

(c) The design and implementation of a clear set of new policy guidelines for the short, medium and long term. These could focus on policy coherence between Member States, better cooperation, especially on infrastructures, plus integration of policies for the various transport

modes to avoid double expenditures and pollution, etc. To realise this there will have to be a total change in transport mode preferences away from unlimited private car and road haulage growth towards public and multi-modal freight transport. This will not happen automatically and a 'push-pull' approach is needed including financial incentives (these need to be economically justifiable in the long term).

We recommend a firm choice for (c) the design and implementation of a clear set of new policy guidelines as a new strategy for transport in and around Europe.

Basic material for those guidelines is set out below. Controlling and hence solving the transport problem requires a set of principles, derived from the foregoing chapter on political values and norms. Their value and acceptance should be beyond doubt and discussion, and based on them we make recommendations to be transformed into definite actions by the European Commission.

We describe the principles and recommendations following the headings of the diagram on the previous page. However, not all principles are covered by recommendations.

Principles and recommendations

MAIN OBJECTIVES OF THE EUROPEAN COMMUNITY

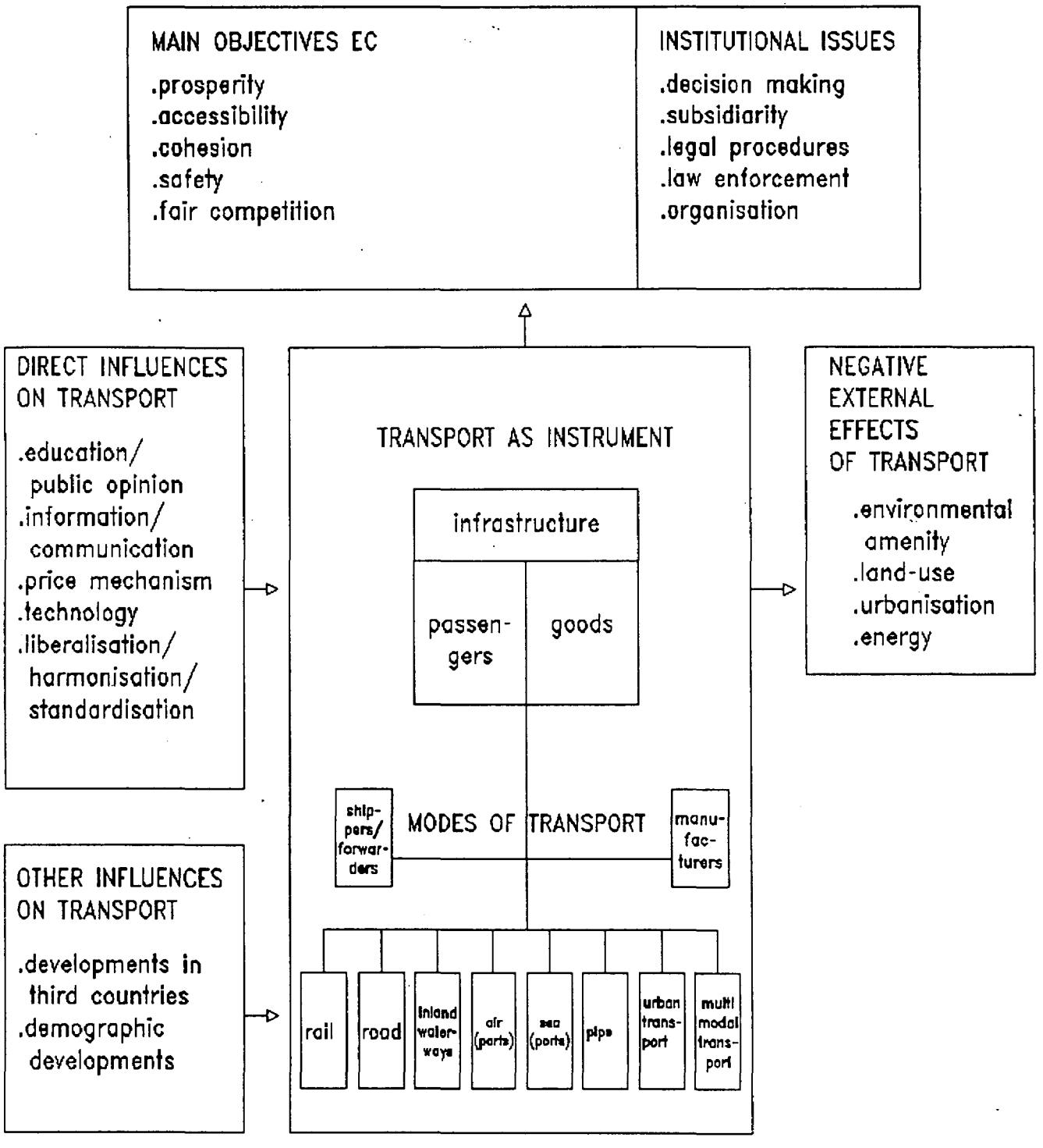
Principles

1. The main objectives of the EC (prosperity, accessibility, cohesion, safety, fair competition) are the basis for a European transport strategy which implies:
   - the striving for economic growth with good working conditions in the context of a livable and safe society;
   - the principle of subsidiarity in the context of cohesion;
   - the free flow of persons, goods and services in the context of accessibility, mobility and free choice of transport;
   - competitiveness in the context of comparative advantage and fair tariffs and charges.

2. As a sector in its own right on a level with other areas of economic activity, transport is covered by the various general policies of the Community, including those on competition policy. Obviously, sector specifics are taken into account here.

3. Transport is not viewed in isolation, but is closely linked with policies including those covering the environment, energy and safety. This ensures an integral approach.

4. Mobility and free choice of modes of transport, accessibility and cohesion are basic and essential rights. If exercise of these rights has negative effects, countervailing measures will be sought prior to any curbs.



systemic approach

5. The White Paper on the Internal Market aims at keeping Europe competitive in the world market. Transport policy contributes here.

Recommendations

Fair competition: Competition rules should fully apply to all the modes of transport. However, exemptions and differentiations are desirable if specific market circumstances so require. However, in no way may they restrict free competition.

Comparative advantage: We should respect the comparative advantages of all transport modes, of certain economic areas and centres of the EC, and of certain infrastructural networks.

Tariffs and charges: Composition of tariffs and charges should reflect the different components of the relevant cost factors.

Adapting of competition rules: Whilst elaborating on the foregoing recommendation, ongoing developments call for a warning. The ongoing growth of the transport companies and the different forms of cooperation that will be developed in the next decade, must not be hampered by failure to meet new situations with traditional rules of competition. These may be adapted to the deregulated market so as to cope with new forms of cooperation like maritime consortia, airline mergers and transborder railway agreements. The EC should be aware that the prohibition of new forms of cooperation and concentration of (transport) companies, based on the non-adapted competition rules can do severe harm to the development of the common market. The EC must remain competitive, especially towards third countries. The industry must be given time to adapt itself to the new legislative regime.
With an eye to efficient and fair interconnection between transport companies (whatever the modes), where technically feasible, consideration should be given to defining an offence of unequal access; this means that an operator offends by discriminating against others in granting access to his infrastructure and facilities. Such unequal access may take the form of price discrimination or discrimination in the quality of service provided.

Transport as an instrument for regional development: Although the removal of national frontiers within Europe will change the position of certain regions, European transport policy could also be an instrument to open up and link peripheral regions. This use of the instrument must take into consideration primarily the main objectives of the transport policy. Transport policy should not be used as the sole or chief instrument for regional development. It is enough that transport policy can benefit development under certain circumstances.

Safety: Drastic measures should be taken to reduce the rate of 50,000 dead and 1,500,000 injured on European roads every year. Technical measures will not be enough (re-furbished infrastructures, automated radar systems ensuring distance between cars etc). Driver attitudes will also have to be taken into account, (e.g. avoidance of alcohol, drugs and stress). Air and railway safety attitudes are model for the road situation:

1,000 passenger casualties in the air per week would provoke an uprising, on the roads it is ignored - and that is unacceptable. Under the principle of subsidiarity, the prime responsibility for safety remains with national and local authorities. Nevertheless given the volume of travelers and freight on EC axis routes, it is reasonable that the Community should have the power to set safety standards for these major axes and receive regular safety/accident statistics where volume merits. Persistent high accident rates at a given site should justify the EC negotiating with the local authorities for action on behalf of all the nationals involved. And, if there is no significant improvement, the EC should be able to employ reserve powers of intervention to secure any necessary action. This might involve more appropriate speed limits.

INSTITUTIONAL ISSUES

Principles

6. The transport system is a sector of European economy and subject to economic legislation at the same time it makes a substantial contribution to the further development of the EC. Hence EC administration ensures a degree of regulation at a variety of levels.
   In this respect the principle of subsidiarity is the pivotal and all pervasive principle governing the division of powers between the different layers of administration. Subsidiarity means more than a top-bottom style of administration, in which the higher layer of administration transfers its competence to a lower one. Subsidiarity also implies that in the best interests of the Community as a whole, specific tasks or parts thereof are handled at EC level, which replaces national authority. Subsidiarity does not make the Commission an executive body and its role is confined to setting standards and using incentives and sanctions to implement and enforce them.

7. The institutional, legal and organisational basis of the European transport system answers to the highest political, social and managerial demands. Rather than creating new institutions the emphasis lies on upgrading the quality of, and cooperation between, the relevant EC services and institutions, and on boosting cooperation with existing institutions in the EC network.

Recommendations

Subsidiarity:
The principle of subsidiarity should be defined and applied (case by case) as fully as possible. This principle must be clarified every time a decision is issued at EC level so that EC, national, regional or local government strata can all manage their own problems within their own competence. We are not going to elaborate on significance of this at the national, local or private sector level. In this report we confine ourselves to specifying the role of the EC as under this principle. As far as the EC level is concerned we recommend three instruments of intervention:

. setting of standards in areas including the environment, energy, safety, (anti-congestion) traffic management and fair competition;
. giving incentives to encourage other levels to implement the standards via fiscal and other temporary financial instruments, promotional campaigns, communication strategy, R&D programmes etc.;
. imposing adequate sanctions to maintain standards.

Wherever possible these instruments are detailed in recommendations made in this chapter.

Institutional, legal and organisational structures within the EC:

a. Cooperation Commission/Council:

. transport must be a substantial element in the further development of the EC. Its importance should therefore be reflected in institutional relations, particularly between Commission and Council. This means that the Council should change its decision making practice by an immediate end to routine delays caused by rejection of proposals or denying the competence of the Commission. The Council should be alert to the fact that all transport matters hit the core of community life and so demand immediate decisions.

b. Position of the European Parliament:

. the 'cooperation procedure' requires that the European Parliament should be consulted on all transport issues. In practice this does not always occur. In the legislative procedures the EP should enjoy similar status to any other parliament in a democratic society. A strengthened role for the EP should be laid down in the Treaty.

c. Position of the Council:

. the various transport-related proposals in the Internal Market 1992 White Paper, should be decided upon within the time limits set. This should include all the further proposals for liberalisation and harmonisation of the transport market, which are in line with the concept of the Internal Market. Any measures for the harmonisation of transport taxation and subsidisation, and notably unrestricted cabotage for all modes of transport, should be decided on before the end of 1992. The Council should not see its credibility slip away.

d. Position of the Commission and its services:

. extra coherence in European transport decisions requires a completely new decision making approach. The Community's core role must be definition of the strategic orientations, prior to focus on regulation. Community institutions need to be better equipped to make policies and regulations out of orientational thinking. The quality of the EC administration, including DG VII, should be upgraded. More horizontal coordination is also needed between the work of the Commission and the DGs which are involved/connected with any part of a coherent and integrated transport policy, notably in the field of competition and environmental protection.

e. External relations:

. clear and mutually profitable relations should be established with other, often older, international transport-related organisations (e.g. ICAO, ECAC, IMO, CCR, ECE, ECMT). All activity/legislative overlap to be

avoided. The Commission should take the initiative in building up a network of outside contacts. The external competence of the Commission should be scrutinized against the background of subsidiarity.

f. Community task force:
. in order to implement the recommendations of this report the Commission should establish high quality, interdisciplinary task forces. We already have a good example how the Commission organised itself and set up the White Paper for the Internal Market. This success deserves repetition.

DIRECT INFLUENCES ON TRANSPORT

Principles

8. A coherent and consistent approach to costing transport policy and the provision, maintenance and improvement of transport infrastructure, is be applied in all EC countries. Economic principles for this to be as follows:
   Such costs may be divided into two parts. First there are the costs internal to the various bodies providing or operating transport infrastructures and services; these are comparatively easy to calculate, although there are often tricky issues of cost allocation requiring the benefit of sound economic principles.
   Greater difficulty arises with the calculation of the second category of external costs arising from congestion, accidents, air, noise and other pollution, damage to communities etc. As far as possible the Group believes that the culprit should pay although there may be alternative routes to an efficient solution. Even if these external costs cannot be charged or directly allocated, they should still be included in evaluation of specific solutions. Right now there are major differences in what users pay towards given transport modes, and this creates undue competition.

9. Energetic pursuit of liberalisation, deregulation of the transport market and the opening up of monopolies to free competition, as foreseen in the Internal Market '92 White Paper and related proposals is implemented. The many restrictions on cabotage are scrapped permanently. Although the transport market needs to be freed of unnecessary regulation, harmonisation is also required, particularly as regards technical standards, and fiscal or social measures essential for effective competition, environmental protection and safety in the transport sector.

10. Pragmatism rules on public or private financing investment. This is particularly applicable to infrastructures where major budget deficits more than halved state spending in the EC in the period 1974 -1984. The priority is to get sufficient funds, without worrying too much whether the source is public or private.

11. Deeper, enhanced and boosted transport, political and systemic research are maintained. Not merely via increased spending by Member States but also by concentrating multi-disciplinary research power. The limited time available is used to implement the necessary studies into technologies, traffic organisation and development of infrastructures. Procrastination is totally unacceptable, there is already a serious risk of being too late, despite the pressure of demand for the different modes of private and public transport.

12. Member States collect statistics necessary for the implementation of EC transport policy. In particular regarding:
    . competition including equal access at points of interconnection;
    . provision of sufficient infrastructure to avoid congestion on designated European transport axes and the urban energy nodes where these join;
    . the achievement of European standards of environmental protection/ safety.

    As far as possible these statistics are submitted in a common format and to a required standard. Consultation will ensure they are adequate for the designated purposes of EC transport policy. The statistics are an important input into the research urged in principle 11. The preferred standard format also applies when Member States respond to the specific requirement to compile and revise annual traffic forecasts per mode, region and indeed every link and urban area from start to finish of the designated inter-urban axes and nodes.

13. A communication strategy is seen as indispensable in getting sufficient support from public opinion and political parties for the policies to be proposed. A thorough and effective presentation of problems and solutions is made to stakeholders and the general public.

Recommendations

Transparency and imputation of transport costs: Public transport suppliers and private monopoly suppliers should publish their tariffs and charges. These should not be discriminatory. And relevant marginal costs of providing particular services should also be visible. Wherever possible, ways must found to calculate and charge for the external costs of transport. The obligation to pay for external and internal costs generated should apply not only to transport but equally to other sectors - agriculture, manufacturing, electrical production etc.
Overriding arguments for a subsidy should be transparent and vetted by the EC to ensure minimum interference with competition and free market forces. In general this means that any subsidy should be at the source, i.e. the individual user rather than the transport product. New rules may be needed here, if so, they should also be implemented.
As an exception to the general rule we recommend the subsidising of specific transport interests, such as short distance public transport and infrastructural requirements in the area of long-term, economically justifiable multimodal transport.

Financing by public and private sectors: The required investment level for transport and infrastructure is likely to exceed public financing capacities of the EC and the Member States. Hence, investment must be tackled with a mix of public and private funding.

Excise duties and taxes: Fiscal harmonisation should be decided on at European level, well before 1st January 1993, this goes for excise duties, motor vehicle tax and tolls.

The need for prospective policies: On transport matters we need to think in terms of a general system which sets the limits of its sub-systems and stresses their interrelationships rather than their components. This systemic approach should help to pose pertinent questions and so identify the strategic variables on which we should and can act.

Forecasting alone has ceased to be the only viable treatment for the crisis. Transport problems, including the pending crisis, demand an overall systemic response formulated within a long-term perspective. Hence, the Group believes that the Commission must start up a permanent anticipatory function as an aid to development of European transport strategies. This makes it important to give decision-makers at all levels terms of reference for action, which they can call their own. Prospective thinking should go beyond economic disciplines to historical and retrospective approaches and a comprehensive analysis of bonds linking the players involved. And so, the Group is against the set up of any 'ad hoc' research centre or department within or outside the administrative system; instead we recommend that the Commission creates a 'network-system' of prospective studies and analyses to establish a coherent evaluation process. These evaluations could occur via outside observation.
All measures for the short or long term should be integrated in an action plan decided on by the Transport Commissioner or other EC institutions. This action plan should comprise an integral analysis of cost-effectiveness and might take into account a scenario-approach.
This plan should not only be used to steer the near-future policy, but also be directed at making the public aware of the role of transport in economic growth and society as a whole.

Technological development (R&D): Although considerable work is going on within existing R&D programmes (e.g. the DRIVE programme on information technology), there is a need for much more technological development, including telematics. R&D activity is vital in creating solutions for adequate traffic management systems, for improved efficiency and use of the existing infrastructure, for vehicles and safety, for solutions to environmental problems and energy use (clean engines, clean fuel, electrical cars etc). Further R&D topics should be the improvement of combined transport systems for passengers and goods, the creation of fundamentally new approaches to transport and customs procedures. Finally adequate travel- and routing information systems should be developed, providing people on the move with static and dynamic information (e.g. timetables and news updates on the traffic situation).

Centres of excellence: Elaborating on the previous item we recommend the creation of centres of excellence to deal with a) prospective studies and analyses oriented towards elaborating alternative strategies, b) a permanent concentrated partnership with relevant Commission departments and the administrative arms of the Member States, plus stakeholder organisations, c) developing of both tendency scenarios (based on hypotheses postulating a continuation of already known tendencies) and disruption scenarios, which are more likely to anticipate emerging tensions or abrupt modifications, evaluation of their effects on the various levels of society, d) working on research programmes like DRIVE and more integrated research programmes, e) and, above all, concentrating top research, education and consultancy resources on the logistics of distribution in practice and in theory.

Ongoing liberalisation: Liberalisation, deregulation of the transport market and opening up monopolies to competition should be pursued energetically. The many current restrictions on cabotage should be scrapped for good.

Ongoing harmonisation/standardisation: This must be given equal priority to liberalisation (but without linkage) in order to make the market compatible, in and outside the EC.

Flexible timing for work, education, shopping and recreation: factories, offices, shops, educational institutes, cultural, sporting and recreational facilities should all be encouraged to ease rush hour congestion by flexible opening and closing times. They should also look at a less traditional structuring of their services, this in turn suggests consideration of a new approach to labour relations. National legislation and regulation should be adopted. We believe the principle of subsidiarity implies that these aims are a matter for national and local authorities, except insofar as any legislation or regulation restricts flexibility.

Public attitude and communication: A change of attitude is a prerequisite for the success of a new transport policy. People will have to undergo a radical change in their thinking and behaviour towards transport, including private car use and freight flows. No policy can materialise without broad-based popular and political support. This makes EC and national level communication programmes indispensable. Stakeholders and the public need a thorough and effective presentation of problems and proposed solutions.

TRANSPORT AS AN INSTRUMENT

Principles

14. Transport and infrastructure are split. Hence, the need for an integrated approach with an EC transport policy and an EC infrastructure policy being developed in tandem.

15. The development of long-term economically justifiable forms of intermodal transport (goods and passengers) occurs as a matter of the utmost urgency. As well as a shift from one type to another, intermodal here also means a good combination of transport within the same mode, but on different levels; examples are good relations between delivery services in urban areas, commuter trains and intercity rail services. The new, highly sophisticated approaches to logistics and distribution are making it very clear, very fast, that multimodal transport systems offer interesting present and future solutions; simultaneously they avoid, or at least reduce, the negative effects of the present emphasis on road transport.

16. The upgrading of specific modes of transport is considered in terms of their added value to another mode. Finding a new balance between existing modes is more important than working at a new spectacular mode offering no added value to the existing modes. Transport is viewed as a system with multiple interactions.

Recommendations

European transport axes: There is an urgent need for a common viewpoint on a system of major axes for the transport modes, ports, harbours, multimodal terminals and telematics; and not just in the EC, but also linking up with the transit countries of Scandinavia and Eastern Europe. The viewpoint will need to be founded on main streams of goods and passengers, bearing in mind that transport policy does not necessarily imply response to regional development.
It should be up to the EC to designate axes like inter-urban corridors, the nodes of urban areas where they meet up, and major infrastructural aspects of ports, harbours, terminals and telematics. The reason being that the EC has the power to set standards for tolerable levels of speed, capacity, maintenance, safety, noise and other environmental pollution. etc. The EC will need incentives to stimulate implementation of these standards by Member States. These might be financing construction of an obviously European infrastructure from a European Infrastructure Fund (dealt with at the end of this chapter). To coin a phrase,'he who designates, pays'. The EC will also need sanctions to enforce implementation of these standards.
The changing military situation in Europe offers potential for effective use of the military infrastructure for civilian purposes, examples are pipelines, airports, airspace and terminals.

Upgrading European railway systems; Present international cooperation between railway corporations is still defective, this is something they themselves must sort out. A harmonised, standardised and integrated European railway system is still a long way off - and this is a problem calling for EC action without delay. With this in mind, it is time to abolish the old state-bound monopolies.
The infrastructure should be accessible for new operators alongside the existing railway corporations: it is a matter of equal rights for any operator to use a standardised European rail network and pay the same prices as other transporters. To that end the EC's proposed split of operation

and use of the infrastructure should be carried through. Railways should operate under market conditions on the basis of quality and flexibility. Efficiency and service to passengers and forwarders should be improved and enhanced.

A general concept for a network of lines and terminals, exclusively for freight should be developed and implemented/constructed as soon as possible. As railways in the west of the Community carry the heaviest freight volume (see figures 1 and 1a of PART II), and given the need for considerable upgrading of combined transport, construction of this network should start in the Benelux, France and Germany. Sufficient capacity for goods transport on the existing tracks should be guaranteed in the rest of Europe, inside and outside the EC.
The HST network must be established as soon as possible, with the stress on long distance routes which the comparative advantage for this mode.

Intermodal transport (passengers and freight): The marketplace demands new systems of passenger and freight transport. Entrepreneurs offering transport services are being encouraged to develop door-to-door delivery systems which implies finding the ultimate balance between the existing transport modes. The development of all forms of intermodal transport which are economically justifiable in the long-term, requires new intermodal passengers and freight terminals. Combined transport (rail/road/inland waterway) and other intermodal forms should be promoted at EC and Member State level. On one hand intermodality can be promoted by private sector creation of logistical systems and terminal facilities in the Member States. Infrastructural investments will be needed to help finance the start up costs of this type of transport. On the other hand there has to be a change in attitude by passengers, forwarders and shippers towards the advantages of a chain of transport modes. Achieving this demands an active communication strategy. Special attention is also needed for the abolition of the actual restrictive regulations and protective (tariff) measures suffered by road-rail and road-inland waterway combined freight transportation.

Intermodalism and sea transport: Intermodal sea transport (i.e. containers by sea, road, rail, inland waterway) is by far the most effective and progressive system of transport. There are no limits on capacity and environmental problems are minimal. A select group (chain) of European mainports/hub centres should be established, with excellent hinterland connections and a suprastructure facilitating intermodal transport. All restrictions on sea-cabotage must be abolished immediately. Subsidies to EC ship owners should also be abolished. Port fees should recoup the cost of services given, but should not be used to subsidise other port activities.

Revival of coastal transport: The potential of coastal transport deserves vigourous enhancement. This goes particularly for long-haul routes and a rapid response to the needs of Eastern Europe. Upgrading of the main west-east road and rail routes is a priority but will take too long to achieve. By improving coastal transport and the suprastructure of the seaports in Eastern Europe, combined with ro-ro facilities, we can keep pace with soaring demand and enhance the market share for this mode of transport. The same applies to Mediterranean ports. Port conditions and

labour relations also deserve special attention, notably in this same area. The EC should encourage temporary measures to improve the market share of coastal transport, these measures to include the creation of a chain of harbours of European interest.

Improving air transport: Member States should not be permitted to stand in the way of free competition between airlines. Small national airlines and regional airlines should have easy access to the market. Privatisation of European airlines should have attention. Standard criteria for operator certificates and route licences should be established before 1st July 1992. All carriers should have equal access to any route to which they have obtained a licence. State aid should be abolished. There should be standard rules for the entire commercial air sector, including freight and charter traffic. Incentives should be created for airlines to invest in modern, environmentally-friendly technology. Handling procedures and infrastructures - especially for air cargo - should be improved.

Upgrading air traffic control: An expansion of capacity in European airspace is required. Ways to achieve this include investment in state-of-the-art technology including Air Traffic Control Systems, and restructuring of European airspace. Plans for the reorganisation of European air traffic control should be implemented sooner and more thoroughly than proposed. Top priorities here are concentration of the present 42 control centres, compatibility of over 20 techniques, and satellite communications. Possibilities offered by recent changes in the East/West balance could open the door for use of some of the 50% of European airspace used by the military. The EC should take the initiative to solve this problem right away, as recommended under the principle of subsidiarity (setting standards, giving incentives and intervening with sanctions).

Public transport: The shift from private to public transport is hampered by under-pricing of roads, inefficient use of infrastructure (e.g. lack of special lanes for buses and taxis), defective land-use/traffic planning (e.g. lack of location and parking policy), plus the fact that public/collective transport is neither reliable nor comfortable. This is particularly likely in congested areas. The right balance will never come about while people pay less than the real price for road use. And as long as that is the case congestion will not be reduced to economically efficient and socially acceptable levels. A further condition will be significant subsidising of public transport for some time to come. Fares will not be enough to finance major new public transport construction. For the time being it will have to be subsidised by the state - particularly on short-haul routes. Without public money the mode switch will simply not occur. An effective public transport sector will need expansion on the surface and underground - parallel with intensified traffic restrictions (the push-and-pull approach). The choice of measures to be adopted and the phasing of changes are likely to raise highly sensitive local political issues. Solving these will demand local knowledge and good judgement.

An effective role for the EC, one which will stay clear of management tasks, should be limited to providing incentives for the appropriate national authorities. A logical consequence of designating given transport axes and nodes as being of European interest will be that the relevant urban

areas should maintain traffic speeds above (i.e. keep congestion below) EC standards. Where national or local government fail to live up to this, EC sanctions should have the necessary effect.
And thus, incentives on the one hand (new alternatives and subsidies) and pressure (pricing and sanctions) on the other, should achieve the necessary shift from private to public transport.

NEGATIVE EXTERNAL EFFECTS OF TRANSPORT

Principles

17. Transport melds with the natural environment given that infrastructure modifies the landscape and pollution seriously contributes to the deterioration of the biosphere. As a major consumer, the transport sector is increasingly concerned about risks and future supply of energy resources. Moreover, energy consumption expressed by tonne or traveller-kilometre differs from one mode to the next. In addition to the short-term yield calculation, the transport sector is concerned with a better organisation within Europe.

Recommendations

The environment: There needs to be a clear, integrated and convincing policy on transport and environmental issues. 'Integrated' here means that the policy not only refers to technological approaches but also takes into account measures such as avoiding and influencing mobility, shifts in transport modes, etc., to countervail possible negative effects of free transport.
As far as the technological approach is concerned, a set of high-standard rules to protect the environment (emissions, noise, clean engines, energy consumption, etc.) must be implemented as soon as possible. Transport being just one of the menaces to the environment, other culprits like agriculture, manufacturing and electricity production, should follow suit with similar measures. Each sector should take action independently, without waiting for the others to follow. The EC Services should work out the details of this recommendation as soon as possible.
The environmental standards should be set in the light of relevant research; this should help establish how soon, and how far harmful emissions must be reduced. A balance needs to be struck between the environmental imperative and ramifications for economic growth. Any policy introducing environmental improvements more quickly than actually necessary, with a severely reduced GNP as a result, would be just as damaging as the too-little-too-late approach.

Reduction of traffic congestion in urban agglomerations: As stated above, the competent authorities must implement a wide variety of infrastructural and traffic steering measures including banning traffic from city centres, parking restrictions, car-pooling, park and ride facilities, flexible urban transport systems comprising trains, buses and taxis. In this respect go-

vernments should promote covenants between the competent authorities at the various administrative levels so as to concentrate public powers on a level above that of the local authorities. The EC should play the role of promoting and encouraging effective policies by national competent authorities in the Member States without getting entangled in the day-to-day management.

Land-use: The physical planning of industrial and residential locations should relate to issues of transport (mobility, accessibility and negative effects). Industries should be located near rail or waterways, offices and educational institutes near public transport routes. Special lanes should be created for buses, taxi's, and goods vehicles. The EC should take the initiative to implement effective policies by-and-in the Member States without getting involved in day-to-day management.

OTHER INFLUENCES ON TRANSPORT

Principles

18. Relations with third countries have become an important political issue and will increase growth-potential for the EC transport system as a whole. This makes an active policy towards third countries a top priority. EC transport systems can only function properly when they are integrated into those of the surrounding world.

Recommendations

The European Communities and 'third' countries: Negotiations with the transit-countries Austria, Switzerland and Yugoslavia should be concluded rapidly. The result should take into account equal status of the participants and identical infrastructural and financial opportunities.
In particular, the links with Eastern Europe need urgent development, this in view of the dilapidation and mediocrity of the present infrastructures, and the political imperative of rapid economic development in these countries. A massive aid programme on the scale of the Marshall Plan may be needed to prevent these countries starting their transport policy where the EC left off a quarter century ago. Links with the USSR and Far East also imply a significant role for these countries in road, rail and coastal traffic.
In no way should a 'fortress Europe' attitude be allowed to sour EC relations with the United States and countries of the Far East. The Community is in business to provide for 'bridges' for the rest of the world - not walls.
It is crucial that the future transport policy maintains European competitiveness vis-a-vis third countries. Therefore, EC legislation should not artificially increase the costs of European transport. Prices should reflect relevant costs, especially in relation with third countries.

How do we pay for this policy?

Most of the recommendations above will have financial benefits in terms of reduced pollution and congestion, more efficient transport, better use of infrastructure etc. These benefits will be reached by setting standards and maintaining EC policy via incentives and sanctions.

However, this will not be enough to finance the whole set of recommendations. Many will require additional funding, notably for infrastructures. Any lack of financial instruments will stop the proposed policy getting off the ground.

The financial instruments can be put to work in two ways:
- mobility behaviour can be steered by charging; here the instrument is used to influence consumer/user attitudes, making the public aware that a) mobility costs money, and that private, public and freight transport have been too cheap for too long, and b) that the environment is not a bottomless garbage dump, and that there have to be limits on energy consumption.
- secondly, cash is fed into funds which cover transport related expenses (N.B. these funds are not to be used to cover national financial deficits).

Awareness and steering via financial instruments

The facts are not encouraging. In Italy for instance, doubled diesel prices and a 25% rise in tolls within four years, have had no effect whatsoever on the 6% annual growth in road haulage. Transport is a social phenomenon with such deep-rooted characteristics that it needs an economic depression to halt mobility. Economic growth or even stability enables people to pay for transport, whatever the price. Hence, increasing charges has proved a weak instrument in changing mobility behaviour. It would take a really drastic increase in the financial burden to effect change.

Nevertheless, if well designed and properly applied, financial measures are both feasible and advisable, if only to set straight the perverse transport/-costs/behaviour ratios. Two principles should apply:
- payment in proportion to the distance travelled, the term for this is variabilisation;
- payment in relation to place and time of travel, i.e. road-pricing.

Variabilisation: we recommend a considerable increase in the variable costs of transport (levying on excise duties), with a parallel cut in fixed costs (motor vehicle tax, etc.), and other taxes, so that there is no change in the overall fiscal burden. Only when people are confronted with a considerable increase in the costs of more mobility, will there be an incentive to change. They should be directly confronted with the link - more kilometres equal much higher costs. This will influence user attitudes, as well as being fiscally neutral so that overall transport costs will not be affected.

The question is whether this should be done at a single stroke, for instance by tripling actual variable costs overnight (and cutting other costs by the same amount). Another option is staged increases of variable costs, perhaps by 10% a year for 15 years. According to Professor Von

Weizsäcker [1] this would mean a nominal quadrupling of costs but a threefold increase in real terms.
Overnight, or phased? The fiscal burden would be the same for both. But the single-step approach might well prove too complex so long tax systems vary between Member States. Slow and steady tax reform promises to be the best instrument for real change in the course of development, to our attitudes, technology and our infrastructures. Gradual introduction of higher taxes on petrol and on other scarce natural commodities, matched by parallel cuts on other taxes, sounds to us like an attractive and socially acceptable strategy.
The gradual 10% p.a. increase over a period of 15 years should be guaranteed by a covenant between the parties making the decision.
There would also be considerable benefits over and above the present situation of heavy energy consumption by transport and a slow but steady shift of profitability from energy and pollution intensive sectors to more efficient, clean and high-tech sectors. Parties carrying out capital investment (e.g. the auto industry) would soon see the growing benefits and yield potential from efficient, clean methods. Finally, this instrument implies the principle of territoriality, this is fair to users, easy to levy and not fraud-prone.
Hence, the Group Transport 2000 Plus recommends the gradual raising of prices per unit of energy consumption (fossil fuel, electricity etc.) for all modes of transport in the EC, this to be matched by a pro rata decrease in motor vehicle tax, so guaranteeing the best possible balance in overall transport costs.

Road-pricing: As the last resort, Member States should introduce a set of road-pricing instruments, systems which charge road users in relation to place and/or time of travelling. Examples are:
- tolls on specific roads, tunnels or bridges,
- rush-hour windscreen stickers (however, these are fraud-prone, costly to implement and demand considerable enforcement),
- sophisticated electronic monitoring devices on roads corresponding to in-car systems, these identify trespassers at given places/times, and charge the driver electronically, with a cost differentiation between 'cleaner' and polluting vehicles, high-low cost roads, prime-time and quiet periods, single occupant/car pooling, private cars and buses, transport for hire and reward, and transport for own account (with an eye to empty runs), etc.

> *We should use variabilisation and road-pricing as means to stop indiscriminate 'hitting the road' and promote a shift to conscious selection of time, route and type of transport.*

But what should happen to the income from road-pricing, should it be fed into the treasury or used to upgrade the transport sector? Our Group is of the firm opinion that all monies collected from the transport sector should be spent in that sector, specifically to give users a major improvement in price/quality ratio. This means eliminating congestion, improved

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[1]) Ernst U. von Weizsäcker, Erdpolitik, Ökologische Realpolitik an der Schwelle zum Jahrhundert der Umwelt, p. 77, Darmstadt 1990.

safety and environmental factors, offering meaningful alternatives in the form of better public transport and implementation of multimodal (freight) transport instead of private cars and road haulage.

Financing as feeding instrument for a European Infrastructure Fund
In all probability tax reform as a financial steering instrument will not bring more money in the treasuries of Member States. There will be no effect on national income levels, nor on overall taxes paid by travellers/-transporters. The sole aim here is to change attitudes and re-establish a realistic link between transport/cost/behaviour. But, if the transport system is going to be upgraded, where will the money come from?

What is needed is an autonomous source to supply these inevitable expenses especially for the infrastructure and related aspects (ports, harbours, terminals, telematics) with an EC dimension.

We therefore recommend the establishment of a European Infrastructure Fund. This Fund should be fed by at least 1 ECU cent per unit of energy consumption (fossil fuel, electricity, etc.) for each mode of transport in the Member States, indexed to annual increase in variable costs.
This is primarily meant as a simple instrument for immediate financing of construction and maintenance (by Member States) of the EC infrastructure axes: road, rail, inland waterways, pipelines, terminals, ports and harbours. It should also finance study and research through a network of centres of excellence. Its final aim is to keep Europe's transport system competitive.

We estimate that the total revenues of the 1 ECU cent levy will be several billions ECUs. From the EC private car drivers the Fund will collect an estimated 1 billion ECUs, on the basis of a modest contribution averaging some 10 ECUs a year. The terms of reference of this report do not allow for assessment of benefits of the improved infrastructure for the car users.

It should be made possible for non-EC states, notably our immediate neighbours, to participate in the Fund under the same conditions.
By guaranteeing the traveller/transporter that this money will go entirely to upgrading transport acceptance for the levy should be achieved. Charging and giving no visible improvement in the price/quality ratio would be quite unacceptable. Travellers/transporters must be convinced in practice that their financial contribution really makes a difference.

Rejection of these recommendations compels delivery of alternatives
With the exception of fiscal harmonisation, all recommendations in this paragraph can be implemented. Member States only have to accept the principle of variabilisation and road-pricing, and agree to cooperate on the European Infrastructure Fund by transferring the 1 ECU cent per energy unit to the Fund.

Moreover, establishment of this European Infrastructure Fund in no way discharges the EC from the obligation to finance transport from the general EC-budget, e.g. the European Development Fund.

Even so, we will not be surprised if our recommendations are greeted by a storm of protest. It should be clearly understood that they are precisely designed to provoke a serious discussion on the financing aspects (steering and feeding) of a European transport policy. If our recommendations are not accepted the Commission will have to formulate adequate alternatives.

In conclusion

European transport faces a serious impending crisis. All the indicators point to this occurring when the Single Market is operational and at a time when there will be a massive increase in the movement of goods and services between the European Community and Eastern Europe. In all likelihood the crisis will paralyse the system, and slow down economic progress, provoke serious social tension, increase damage to the environment and destroy the balance in the central and peripheral regions of the continent. The process of building a unified Europe will set be back severely. Airports, rail systems, roads and urban centres have all faced a traffic growth at a rate far outstripping the increase in infrastructural capacity; this at a time when the installation of new infrastructure confronts record objective and psycho-sociological constraints. Looking beyond the socio/economic and political effects of the impending crisis, we note the following:

- we are not implementing the transport policy as foreseen in the Treaty of Rome, and the result is a failure;
- there is a serious lack of studies on global transport economics, whether by official bodies, universities or the private sector;
- transport is not given due merit by public opinion or (most) government thinking;
- investments in transport infrastructure compared with GNP are at a record low - this at a time when development of exchange traffic is at its highest ever compared to economic growth.

Adequate perception and solution of transport problems requires two separate levels of analysis, these involve differing approaches and disciplines:

- all modes of transport must be considered collectively in that they are necessarily complementary and mutually competitive; this transport situation must be considered as a multiple interaction system;
- the transport system must be considered both as a European economic sector, subject to economic legislation, and as a service supplier, with the strength of the entire economy depending on its performance and coherence (hence the administration must ensure a degree of regulation at various levels).

Lack of effective inter-sector coordination and of systematic and strict management of potential in each sector means that the European transport system now offers productivity reserves which can and must be used to defer the effects of the impending crisis; and this must occur without any further delay. However, the growth in traffic is such that this optimisation will not be enough to answer the foreseeable needs of the economy and society. The limited time available must therefore be used to launch the necessary studies in three areas of progress: technology, traffic organisa-

tion and development of infrastructures. Procrastination has been so grave that despite the pressure of the demand, the different modes of private and public transport are at risk of reacting too late. Action is imperative, now.

Research and prospective studies in this field should be developed at the level of the system itself.

The experience of recent years has shown that no one has been able to gain clear awareness of the cost of transport as such, nor of the financial effort required to develop necessary infrastructures and equipment.

Everything must be done to ensure that the true price is always charged and paid for transport - everywhere. If not, demand will develop artificially and destroy any chance of solving the impending traffic crisis.

Although transport organisation has to be designed for local, regional, national, Community situations, the EC still has a major role to play in the search for, and implementation, of solutions. Not only does the ongoing principle of subsidiarity allow for significant exceptions in the transport field, but the far-flung nature of transport requires the same rules and practices everywhere.

This harmonisation also requires joint study of transport problems previously considered regional or local matters. Transporters and passengers across Europe, whether on main or secondary routes, have to know that the same rules apply and that the same services are available.

In the necessary development of a European transport system, four considerations must be taken into account and merit special mention: environment, energy consumption, regional policies and society.

Transport must integrate ecology as the key dimension of its rationale; the simple reason being that infrastructures modify the landscape and the resulting pollution seriously contributes to the deterioration of the biosphere.

Transport must be more concerned about the rarity value and uncertainty of the energy resource; it is a major energy consumer and energy consumption ratio per tonne- or traveller-kilometre differs widely from one mode to another.

Looking beyond short-term profitability, transport must be concerned with better European territorial and regional planning; the reason being that transport itself substantially modifies human geography by altering the distribution of activities within a given area.

Transport must take social demand into greater consideration. Trying to enforce sole-supplier logic is outdated. It is a fact that peoples' day-to-day quality of life is linked to the quality and convenience of travel.

These four elements call for financial and regulatory intervention by government, applying common, EC-wide standards.
The implementation of a good European transport system demands the efforts not only of all local, regional, national and EC authorities, but also of all categories of transporters. And without public opinion on our side, nothing meaningful can be accomplished. But without adequate information the public will adopt contradictory positions on the environment, regional policies, costs of investments, and pricing. The most widespread efforts possible must be made to inform and consult public opinion, helping it to become a positive player in the implementation of the transport system Europe so desperately needs. Only public opinion can demand and permit that politicians achieve what they must achieve.

One proviso

Anyone reading our report will appreciate that it did not come about without lively debate. Indeed, all members of the Group, of whatever political persuasion, were anxious that all relevant issues should be aired, discussed and considered without reservation. Notably sensible topics here included proper instruments for fair competition, subsidies and influencing the modal-split.

In most cases we arrived at a meaningful compromise. However, there was one exception, namely transport financing when shared European considerations are at stake: should funding be at the European or national level?

The majority of Group agreed that transport policy with a shared European dimension demanded an adequate financing instrument at the Brussels level. Hence the recommended establishment of a European Infrastructure Fund.

Even so, readers should note that one member of the Group,
Sir Christopher Foster, favours such financing being in the control of national governments, duly provided with the instruments required to raise funds needed for infrastructure of a European nature.

PART II

OPINIONS, FACTS AND FIGURES

Introduction

This part of the report summarises results of the consultations, i.e. the official hearings of leading figures from the transport world organised by the Group Transport 2000 Plus, consultation by members of the Group personally, interviews and written statements involving more than 200 people from EC and non-EC countries, consulted by the Group's support-team (see annex 2).

For the sake of total clarity, the following aspects should be borne in mind when reading PART II:

- problems are enumerated and solutions are suggested by European citizens who are directly or indirectly involved in day-to-day transport matters;
- these people have been asked to communicate their personal opinions and feelings on European transport problems and to offer their solutions;
- so, PART II is a mainly qualitative description of the situation as perceived by a number of individuals, with links to transport;
- little quantitative data is given, and there is no pretense at an academic approach. PART II gives a general idea of how responsible people think about what is going on in transport;
- we used the commitment and drive of PART II to work out a set of policy proposals on our own account, these are elaborated in PART I, mainly in chapter 4.

The consultations produced an enormous wealth of information and expertise, both in quantitative and qualitative terms. We received what can only be described as an urgent call for fair competition and the upgrading of the competitiveness of the European transport system, not only between transport modes within the EC, but also with third countries. Clearly indicated was the need for immediate establishment of a coherent transport policy; this to cover not just the traditional issues like infrastructure, liberalisation and harmonisation, but also constraints like congestion, environmental damage and energy consumption.

The impressive array of opinions covers the whole transport system. In order to deal this full justice, we have conceptualised the outcome of the consultations in six sub-systems. The corresponding scheme is shown on the adjacent page.

INTERNAL TRANSPORT SYSTEM

Transport as an instrument

Transport is the bloodstream of society. Transport has a vital function in our daily life. One of its chief characteristics is that people and goods are moved in different ways and by different techniques - modes of transport, to use the jargon. Each mode is a world of its own. And each mode requires its own approach as detailed later in PART II.

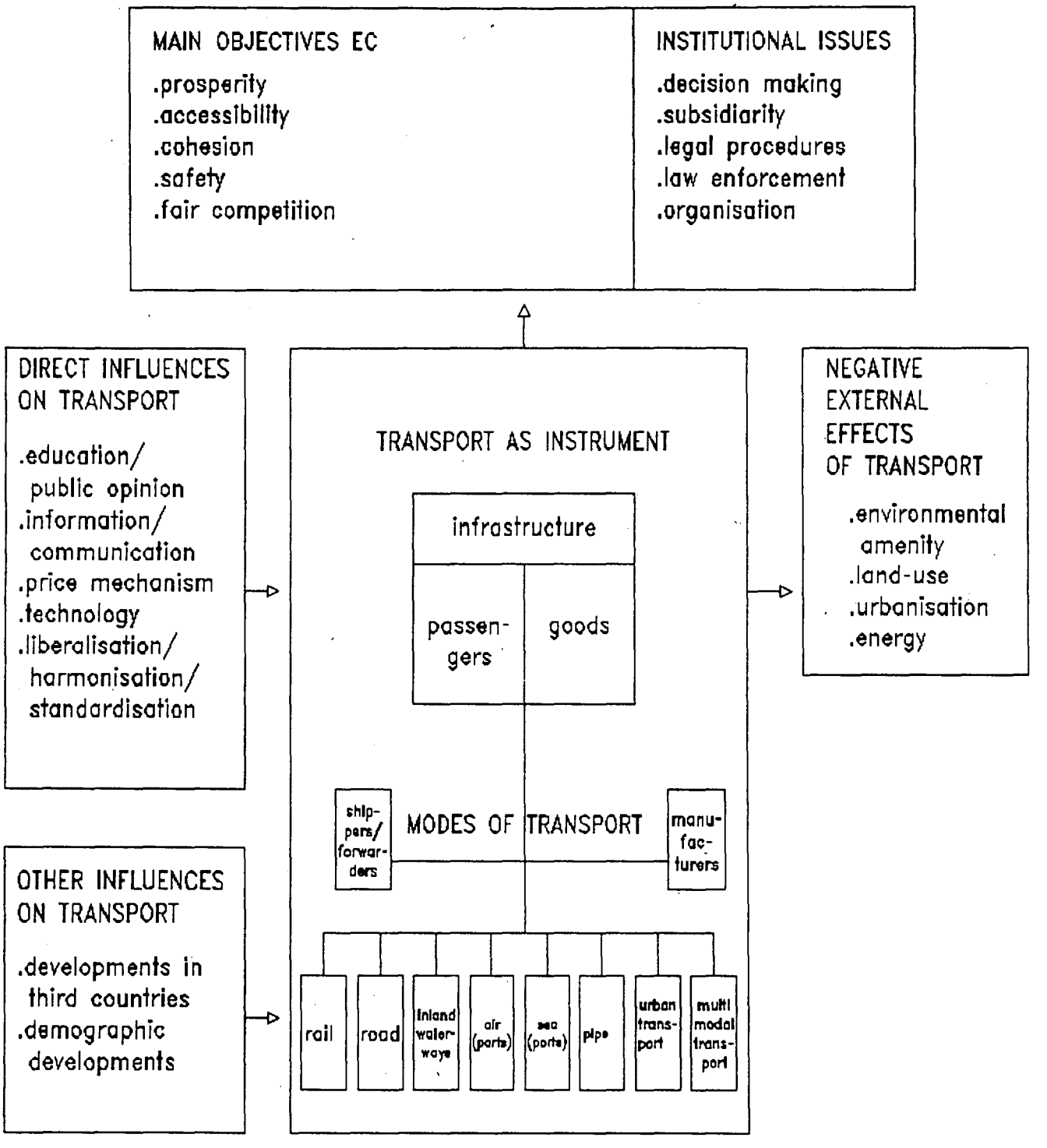
Notwithstanding the need for a different approach, PART II will also demonstrate that general principles apply indiscriminately to all modes of transport. And here is in fact the core of PART II and indeed of the entire report.

Infrastructure

Missing links: The European Round Table has provided us with studies on missing links in European infrastructure and with figures showing the decline in investments in infrastructure all over Europe. This decline, added to the fact that thinking in terms of infrastructure is still national-bound, raises the problem of financing major efforts on European scale in the near future. The report of the European Round Table focuses mainly on rail and road systems, but from the consultations it became clear that the same decline in investment applies to airports and the water related transport modes: the inland waterways, the harbour infrastructure and the specific airport and harbour hinterland connections. These are important factors in ensuring further development of the water modality - which is frequently referred to as deserving a larger share in the modal split- and of the proper functioning of airports and harbours.

Defective use: Another problem put forward in consultation, is that existing infrastructure is not fully used, or that a better division between the different modes of transport is needed. The current road capacity could be enlarged with proper use of traffic guidance and steering methods. Congestion on highways is a prime target for technological solutions; this in turn calls for a new generation of infrastructure, and cars and buses with telematic equipment. Another possibility mooted is the creation of special lanes for lorries, buses, taxis, plus car pooling. Although the rail capacity in Europe will enlarge due to construction projects, many people are convinced that better use of the European rail infrastructure should start with a reorganisation of the railway companies with free access to all tracks for all national rail companies and third parties. Capacity on inland waterways is way under-used; better solutions for the shippers via the intermodal road/water and the rail/water combination would boost use here. In North-West Europe in particular (see figure 1), the congested roads can gain from the shift towards water. However, shippers and forwarders need to change their attitudes towards transport by barge, e.g. by planning it into their Just-in-Time concepts.

Highly congested areas: The main stream of traffic and goods transport occurs in the area between London and Milan. Within that area, 80% of intra-EC road freight moves around in a rectangle contained by Benelux,


MAIN OBJECTIVES EC
.prosperity
.accessibility
.cohesion
.safety
.fair competition
INSTITUTIONAL ISSUES
.decision making
.subsidiarity
.legal procedures
.law enforcement
.organisation
DIRECT INFLUENCES ON TRANSPORT
.education/ public opinion
.information/ communication
.price mechanism
.technology
.liberalisation/ harmonisation/ standardisation
TRANSPORT AS INSTRUMENT
infrastructure
passen-gers
goods
ship-pers/ forwar-ders
MODES OF TRANSPORT
manu-fac-turers
rail
road
inland water-ways
air (ports)
sea (ports)
pipe
urban trans-port
multi modal trans-port
NEGATIVE EXTERNAL EFFECTS OF TRANSPORT
.environmental amenity
.land-use
.urbanisation
.energy
OTHER INFLUENCES ON TRANSPORT
.developments in third countries
.demographic developments

Western Germany, Northern France and the Southern UK (see figures 1, 1a, 1b and 1c). With the aim of relieving congestion here, the people we consulted recommended creation of special rail tracks, exclusively for freight.

Financing: The Member States alone can no longer cope with the problem of financing and related input. At the same time, Brussels only has limited infrastructure funds and the development of private funding is still in its early infancy. As we frequently heard during consultations, financing of the infrastructure should be a well balanced mix of public (a European Infrastructure Fund) and private funds. In particular, serious consideration should go to the idea of an EIF. Whatever the case, the Commission ought to have certain funds available for support and incentives on bridging the missing links. In some of the interviews it was stressed that the EC should also invest in infrastructure which - although not on EC territory - has an important economic value to the EC. The transit countries and Eastern Europe were mentioned as examples.

Planning: A common outlook is needed on the planning of future European axes. Currently, European axes comprise linked national systems and infrastructural planning is mainly on a national basis. The idea for a European master plan on transport was proposed during consultations, implying a truly European view on the major infrastructural axes (road, rail, inland waterway, pipes), to be developed and financed by the EC. Such a plan ought to define all the major European goods and passengers streams, including the required main ports (sea and air), hubs and spokes; it would form the planning base for the requested infrastructure, whilst taking into account the situation of peripheral countries.
A two-level integration is needed in any concept for the main European axes. Initially there has to be integration of infrastructural planning for the various modes of transport; secondly, it is important that consultation takes place between the EC and the neighbour states. Also considered important is that planning be synchronised between the different layers of the national administration.

The transport of passengers
People are moved as passengers or drive their own cars. They take the bus, train or plane to work, to go on holidays or simply make social calls. We are constantly on the move as commuter, tourist, on business or leisure. We use transport as an indispensable instrument in our daily life.

The car: The car is the most popular means of transportation (see figure 2). Most interviewees believed that no politician would ever question the right to drive a car. More than once we heard the expression 'one car one vote'.

Automobility will further increase in the next decade, in Northern Europe by 70%, in Southern Europe by 300% - 500% and in Eastern Europe by 1000%.
The environmentalists among those consulted strongly supported curbs on the life-threatening increase in car use. From the ecological angle, the ideal order of transportation would be, pedestrian, bicycle, public trans-

SUMMARY OF KEY TRANSPORT PROBLEMS

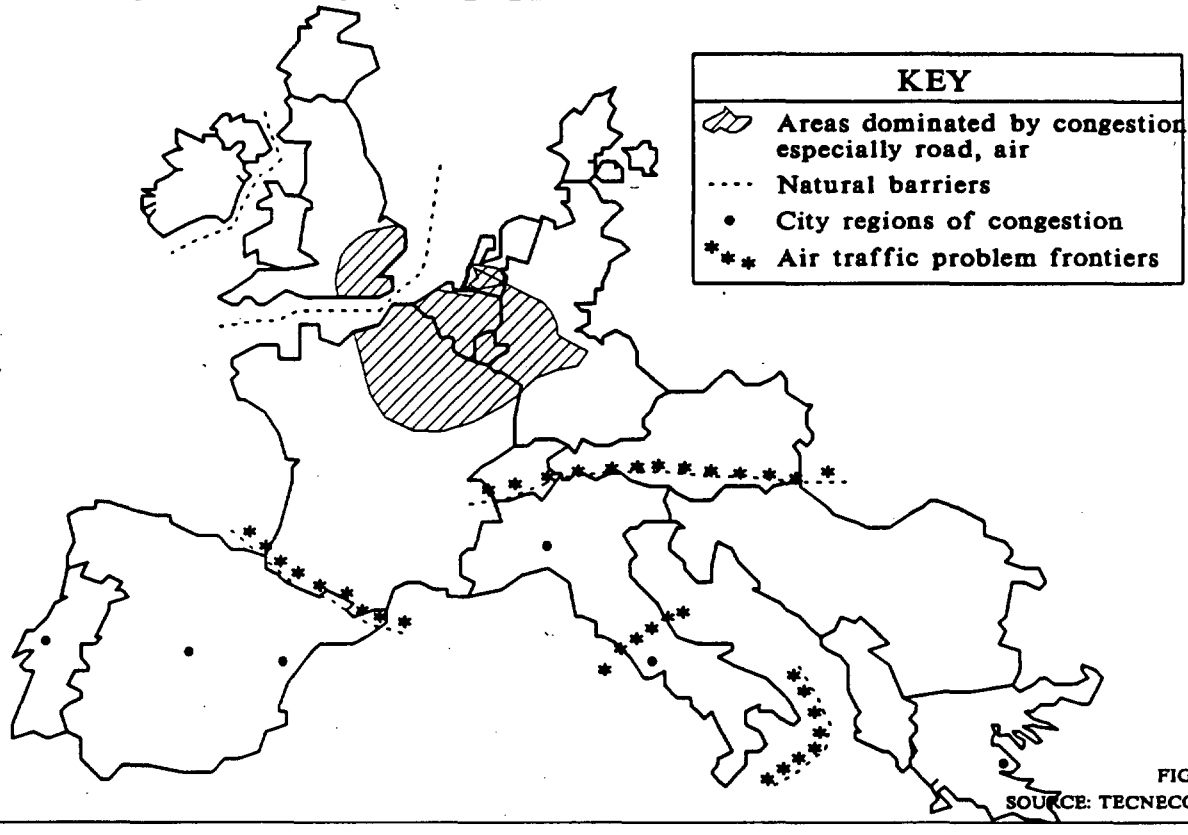


FIG. 1
SOURCE: TECNECON

port, private car, truck, plane. In reality the last three have the highest increase rates. Supply creates demand, so this development could be steered in a positive direction by a construction ban on new road infrastructure. The most stringent ecological principles call for a whole battery of extra curbs on car use including total weekend, night time and city-centre bans. Car-free areas and times are also put forward as means to reduce automobility. An opposite viewpoint has it that European population growth is already stabilising and will soon hit point zero - hence no further extension of the infrastructure is needed.

Commuting: With the population concentrated in and around major urban areas, commuter transportation continues to be a chronic problem. We have been informed that there is a disturbing split between what people think about transport and what they actually do in this respect. In the densely populated areas where commuter traffic jams roads at peak hours, a large majority of the population are potential users of public transport (pilot studies say around 60%). All the same, as individuals they still prefer their own cars. And, once again, our respondents asked: how do we deal with the principle of free choice on the one hand and the utmost necessity of limiting the mobility of private cars on the other? It is also quite clear that in practice public transport is a poor second to your own four wheels. People only seem willing to change to public transport if there is a direct saving on travel time, plus accessability, comfort, etc. The actual price of transport alone is not a significant criterion.
Adequate education, information and communication on growing transport problems is one route to creating a positive attitude towards public transport. This can be complemented by a push strategy from the authorities, car bans in city centres being the most successful tool.

Car pooling: The Transport Management Associations in the United States were mentioned as an example of how car pooling and company transportation can be better organised. These TMAs are non-profit organisations acting as broker between differing demands for transportation. Some US states encouraged car pooling by special legislation which dedicates one driving lane to cars carrying at least two persons (this rule created a new job opportunity for students: paid co-travellers).

Tourism/recreation: A frequently made distinction in travel is that between work/education and leisure. The first may have possibilities for a switch from car by public transport; but the overwhelming reaction in consultations was that it would be almost impossible to affect the same change for leisure travel, the great exception being holiday flights. This behaviour relates to extra leisure time in line with shorter working hours, early retirement, and higher life expectancy; it is responsible for a large part of the rise in transport. Tourism is on the increase and the distance that people travel on holiday grows apace. To avoid heavily congested holiday axes, the various Member States should coordinate their holiday spreading schemes. It was suggested that the Member States promote domestic tourism to save unnecessary travel.
The lack of similarity in roads, trains, infrastructure, speed limits, traffic information, signposting, regulations etc. puzzles the average car driver but has until now not hampered cross border mass tourism.

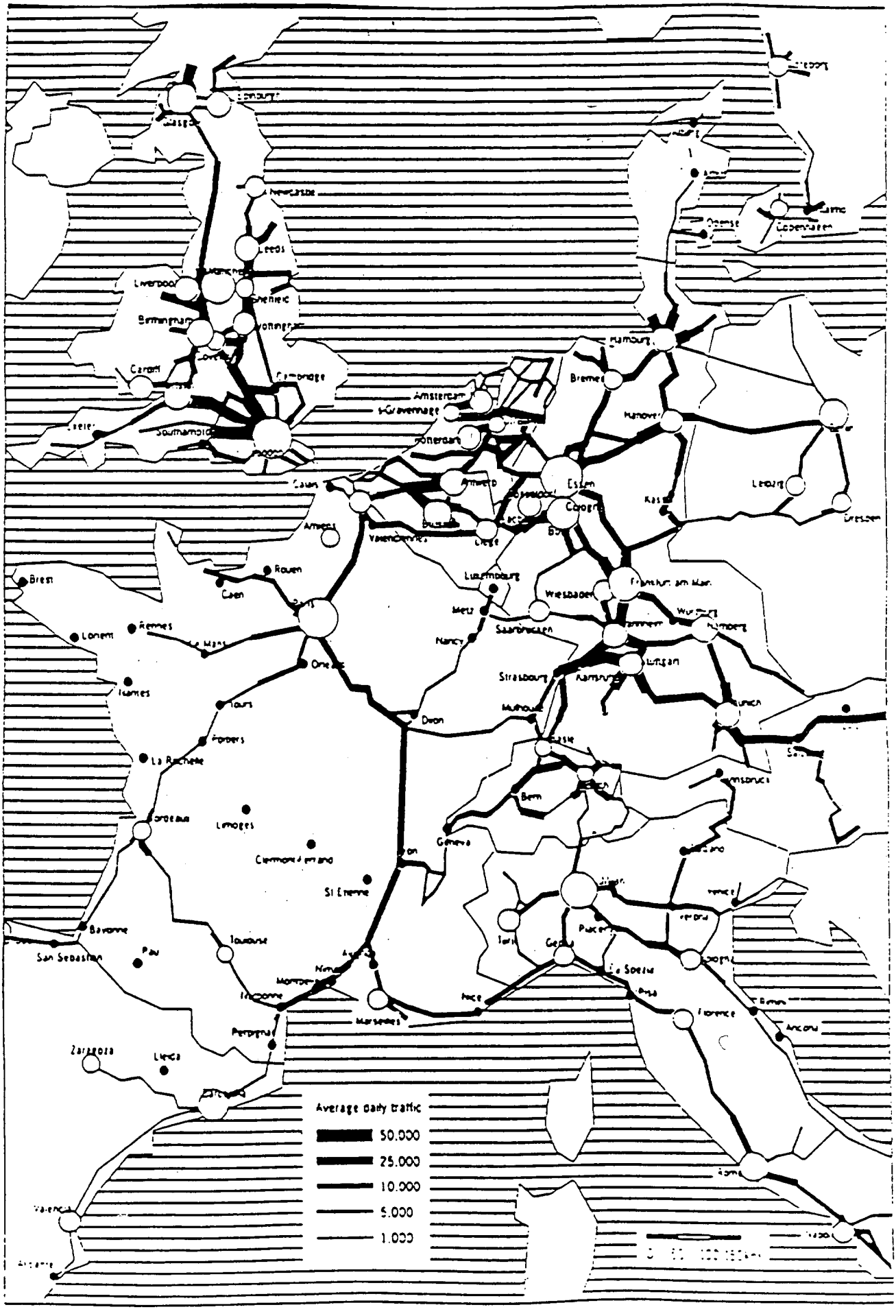


Fig. 1a

Freight transport

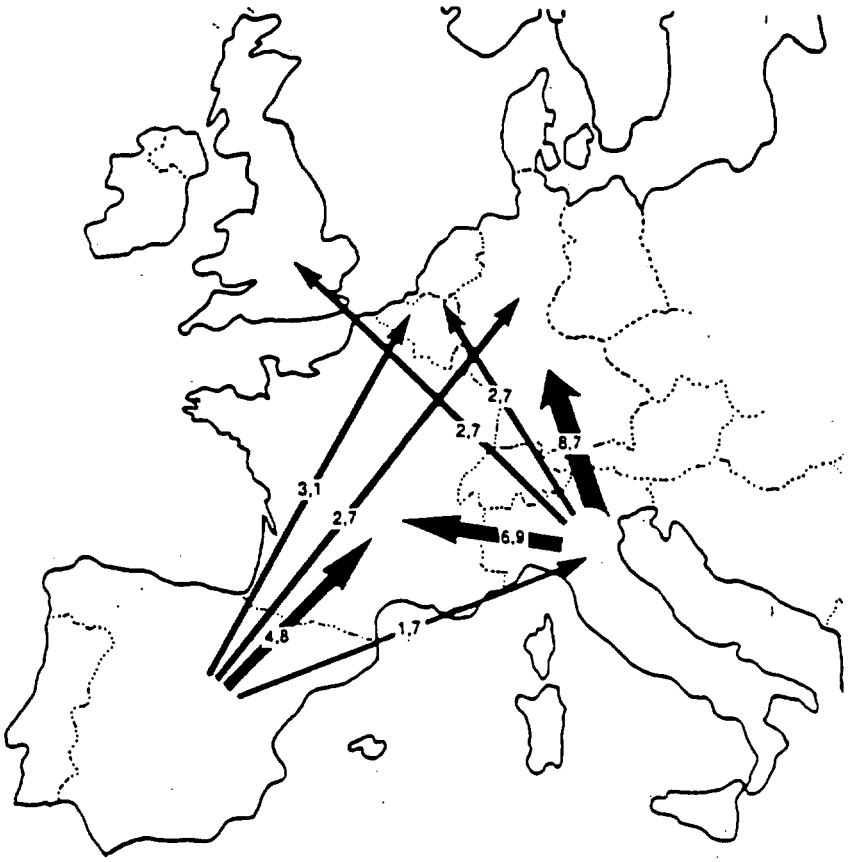
Road trains: Most seaports, inland waterways and pipelines networks are designed and realised specifically for movement of freight. Road, rail and air modes are chiefly built for passengers. The daily traffic congestion on the main axes and in the urban areas prompted suggestions for infrastructures dedicated exclusively to freight transportation by road and/or rail. Special lanes or corridors could be designated for heavy and high capacity vehicles, e.g. 'road trains' stretching 25-30 metres and weighing some 60-80 tons.

Standards and regulations: Freight transport has a bad image. Market demands larger containers, swap-bodies etc. are hampered by differing national legislation. This is a major nuisance for the transport industry which is concerned that developments elsewhere in the world are stymied by Europe's rich variety of national rules and regulations. Introduction of the new 45 foot container was mentioned, this is rapidly gaining popularity in US - Far East, trade. Alas, it is 12 cms too long for European roads.

Speed: The average transport time is a key factor in the freight sector. Not that the transport time of a given modality is so crucial, so much as that for the entire logistic chain. Hence the increasing mention of sea transport as a viable alternative to movement by road. Truckers step on the accelerator but loading/unloading, border formalities etc are a far greater influence on average driving time than speed on the road. It is claimed that European truckers achieve the same average speed as stage coaches in the last century: about 20 km/h.
This makes coastal transportation by feeder ships an increasingly attractive alternative to overland freighting. The maximum speed of today's ships is 23 to 24 knots (42-44 km/h). On certain routes this is quite competitive.

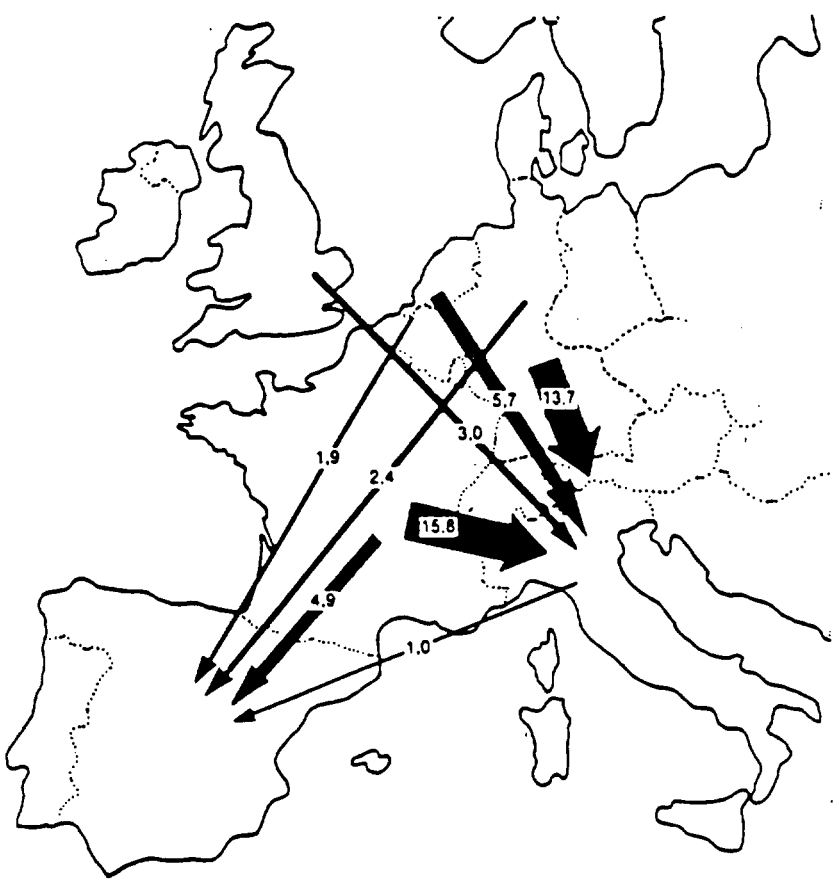
Modal split: The price factor plays an essential role in the transport of goods. The very competitive and highly flexible road haulage market, plus the fact that the infrastructure costs are not fully charged to the user, means that transport by road is usually more cost-effective than other modes. This, and a severe lack of quality in transport by rail and inland waterways, gave road haulage the opportunity to develop into such a overwhelming and dominant force in inland transport. Seventy percent of long distance road haulage takes place over distances of no more than 200 km. There is a general belief that a better utilisation of the advantages of other modes is possible; examples are long distance rail traffic, combined transport and inland navigation or coastal traffic. The modal-split is out of balance. And certainly if we closely followed the opinions of our interviewees, the sector will be forced to change the modal-split. The balance can only be restored by offering high quality in the alternative modes of transport. A fundamental change in attitude on the part of both the transporters and their customers will only come about if the end-users in the markets for which they produce/transport are willing to pay higher prices for environmentally-friendly methods of transport. Most people consulted said this was over-idealistic; greater impact is expected from price increases as a result of the internalisation of external costs.

Les trafics de marchandises Sud-Nord
(hors produits pétroliers ; en millions de tonnes)



Source : Transcee, 1986.

Les trafics de marchandises Nord-Sud
(hors produits pétroliers ; en millions de tonnes)



Source : Transcee/OEST, 1986

Fig. 1b

Air cargo: Air cargo is a rapidly developing market and is likely to gain as time progresses, albeit substantial problems still have to be solved. Products with a high added value, like consumer and business electronics, flowers and perishables (fish, fruit and vegetables) are ideal cargoes, but mostly on intercontinental flights. European air cargo business is mostly concentrated on routes between North-West Europe, the United Kingdom, Scandinavia and Southern Europe (see figure 6).
The ever shorter life cycle for consumer and business electronics (a new model walkman can be on the market within six months) demands very fast and reliable world-wide distribution. Consumers want the latest models as soon as possible.
It was particulary interesting to hear about North American manufacturers' preference for having goods transported to a West European airport and then trucked to destinations in West and East Europe. Adding up all the delays related to the clearance of the goods at airports, trucking is faster.

Shippers: Shippers and forwarders are directly dependent on good and Just-in-Time transport. In general they do not care by what mode of transport the goods are carried. All they want is a reliable transport system for the most reasonable price. From these interviewees in particular came the outcry for the abolition of unfair competition and dominant positions in the transport sector as a whole.

Manufacturers: The question is whether legislation should force manufacturers to produce according to specific standards needed to avoid environmental damages. Until now manufacturers have been unable to unite sufficiently, on a voluntary basis, to produce high standard environmental-friendly vehicles. And if manufacturers of cars, lorries, buses, trains, plains and ships cannot accept their responsibility without coercion, high standards will have to be set on a European level.

Modes of transport

There was one school of comment in the results of our survey which said: 'Don't rush about frantically trying to invent some new spectacular mode of transport'. Adequate transport technologies and techniques are readily to hand. It is better organisation that we need. Using several separate transport modes lacks fundamental balance; the solution - certainly to some transport problems - lies in the combination of the modes. Whenever a problem arises we tend to make two mistakes:

- we forget to look beyond the boundary of a specific mode and
- we solve our transport problem with technical rather than organisational means.

Time and time again we heard that the challenge of a future transport policy lies in the managerial approach to balancing the existing modes by simultaneously organising transport and cutting the constraints on it. This should produce an extensive logistical chain from producers to consumers, and a multimodal transport system of goods and passengers - which needs to be applied as widely as possible. Rigid force is not the answer to mending the modal split; good transport alternatives are needed. At the same time the attitude of transporters and transport users should be focused on cutting constraints on transport.

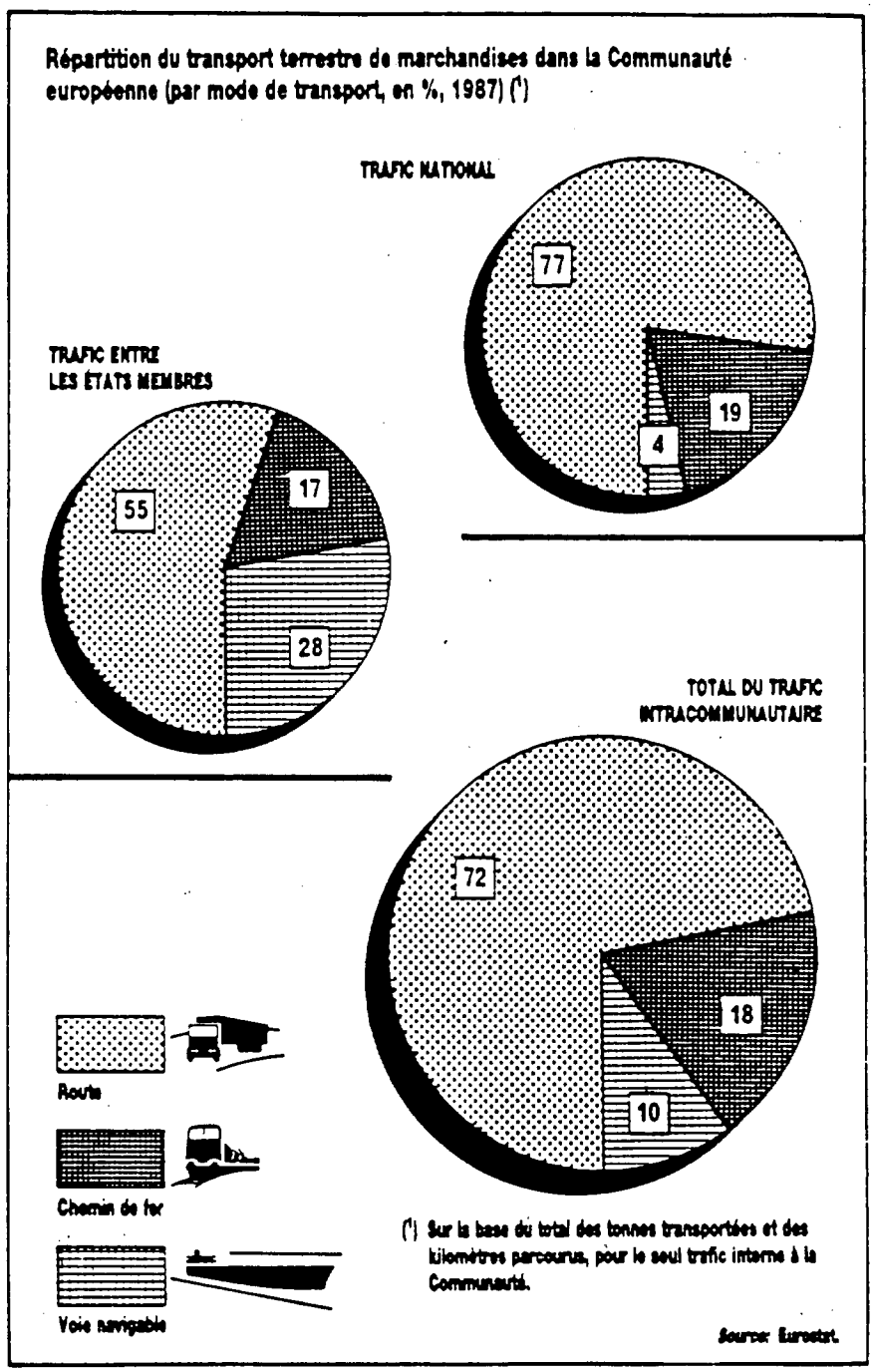

Répartition du transport terrestre de marchandises dans la Communauté européenne (par mode de transport, en %, 1987) (1)
TRAFIC NATIONAL
77
19
4
TRAFIC ENTRE LES ÉTATS MEMBRES
55
17
28
TOTAL DU TRAFIC INTRACOMMUNAUTAIRE
72
18
10
Route
Chemin de fer
Voie navigable
(1) Sur la base du total des tonnes transportées et des kilomètres parcourus, pour le seul trafic interne à la Communauté.
Source: Eurostat.

Fig. 1c

Road

Almost every interviewee touched upon the topic of road transport. This is hardly surprising since almost 75% percent of all inland traffic is by road.

Transport of goods by road is still hampered by restrictions on cabotage, empty runs (30-40%) and a lack of fiscal, technical and social harmonisation (see figures 3, 3a and 3b). There are equal legal constraints on passengers services. The growth of non-scheduled coach services appears to parallel the growth of road freight.

Road traffic causes too much pollution - atmospheric, noise and visual. On the other hand, cars and trucks form an essential element in transport: 'Without road transport we can't cope.' It was questioned whether much attention should be paid to the limitation of road freight traffic. Seventy percent of cross-border road freight travels less than 200 km. However, there is still no viable alternative on these short-hauls, and as long as this remains the case freight and passenger transport by road will go on increasing. Many interviewees believed in technical improvements and high legal standards to protect the environment by cutting pollution and congestion. On road safety, preventative harmonisation measures should be taken.

Road transport growth is expected to soar in Eastern Europe. Reasons include the obsolete and over-burdened rail infrastructure. Interviewees who addressed this topic expressed concern about the trend. East European heavy goods vehicles are often slower, sub-standard and far greater polluters than western equivalents. A firm check must be kept on possible unfair competition by Eastern European operators.

Economic growth and the opening up of former communist countries will not be the only factors increasing road transport. Changed distribution concepts will also contribute, for example demands for more frequent deliveries.

The transit countries Switzerland and Austria are discouraging road transport and promoting the train. Their deliberate refusal to let road transport pass through their countries has resulted in many long blockades at the border - with high losses for the trucking companies. But public opinion in these countries is set against the transit volume, notably in the Tirol; protests have included sit-downs on transit routes.

Yugoslavia - the drawbridge between Greece and the rest of the Community - seeks substantial financial contributions from Brussels for its inadequate road and rail infrastructure. No solution has yet been found for this situation.

Increased road transport will also mean more transit traffic through France and Germany, for example.

Rail

Railways do not operate to free market principles. Apart from a few exceptions - like HST - railways run at a serious loss and there is an investment shortfall for new infrastructures. At present there is insufficient infrastructural capacity (heavy congestion around London and Madrid, and for freight in The Netherlands, Belgium, Germany and parts of France). Moreover, the EC has no integrated infrastructure for a railway system. Furthermore, the infrastructures are still closed to competition (international transport and cabotage).

CAR SHARE IN TOTAL MOBILITY OF TRAIN, BUS AND CAR 1987

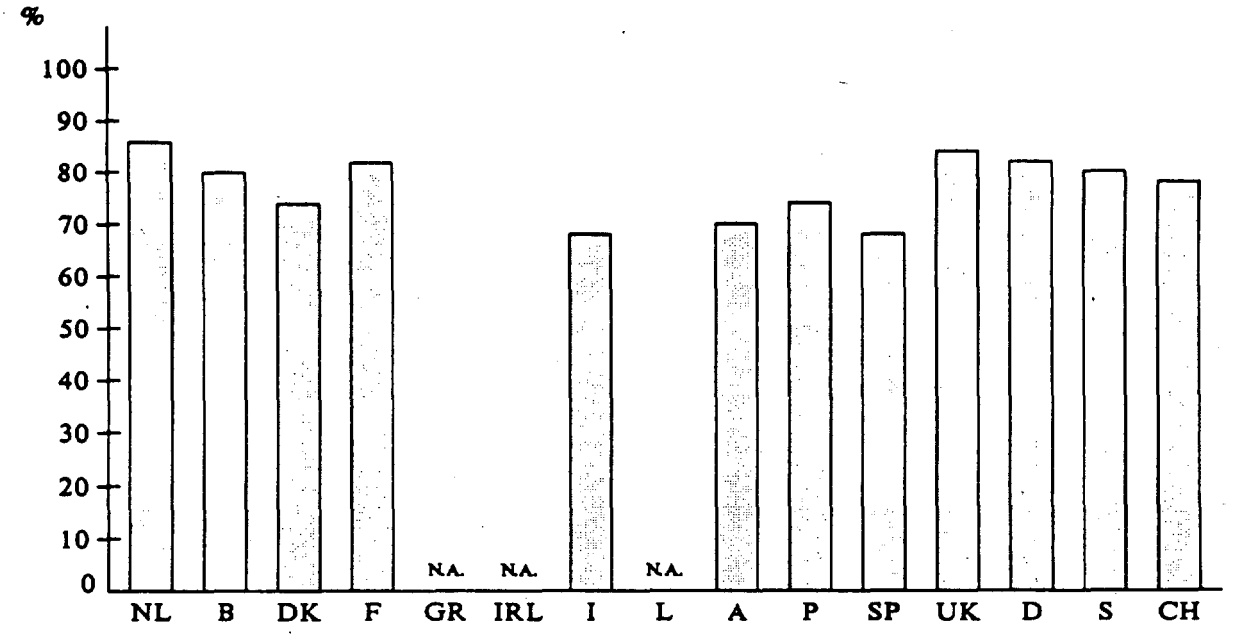
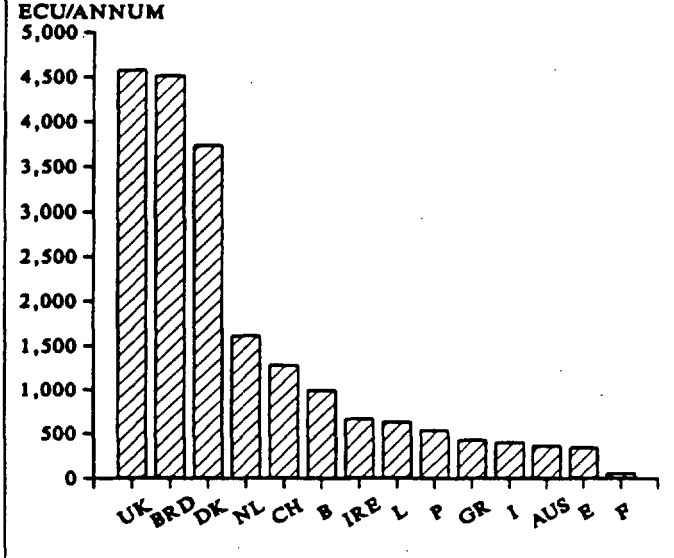
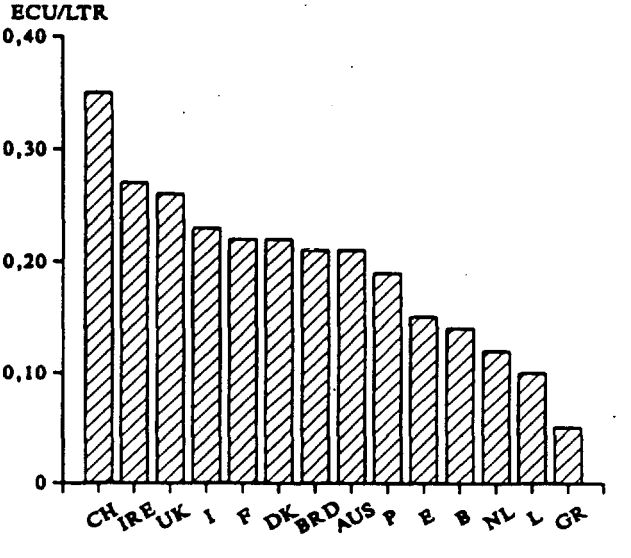


FIG. 2

TAXATION IN EUROPE: FISCAL HARMONISATION IS LACKING



A. ROAD TAX FOR 38T VAN (JULY 1989)



B. FOSSIL FUEL TAX (JULY 1989)

FIG. 3
SOURCE: BDG

On the subject of railways, we were told of a whole complex of compatibility problems: track gauge (Spain, Finland, Soviet Union), loading gauge, electric power supply systems, braking and signalling systems. Many respondents touched on government's role in national railway companies. Privatisation was frequently mentioned as a possible solution for the lack of quality and flexibility suffered by most European railways' services. Such a course would certainly require a long period of adaptation.

Strong links exist between national railways and manufacturers of trains. This may be strictly a domestic affair or involve a second country. It is a situation not designed to foster greater harmonisation and a European attitude to railway policy. The research and development of fast trains, possibly even more sophisticated than the existing HST, is particularly difficult when international cooperation is lacking.

Occasional mention was made of malfunctioning of companies and railway infrastructure due to sheer age - some were formed as much as 150 years ago in times when there was little competition and countries cherished their railways largely for considerations of defense. Close links with the state prevented railway corporations from becoming free-market operators. It is now time for railways to operate independently from national politics.

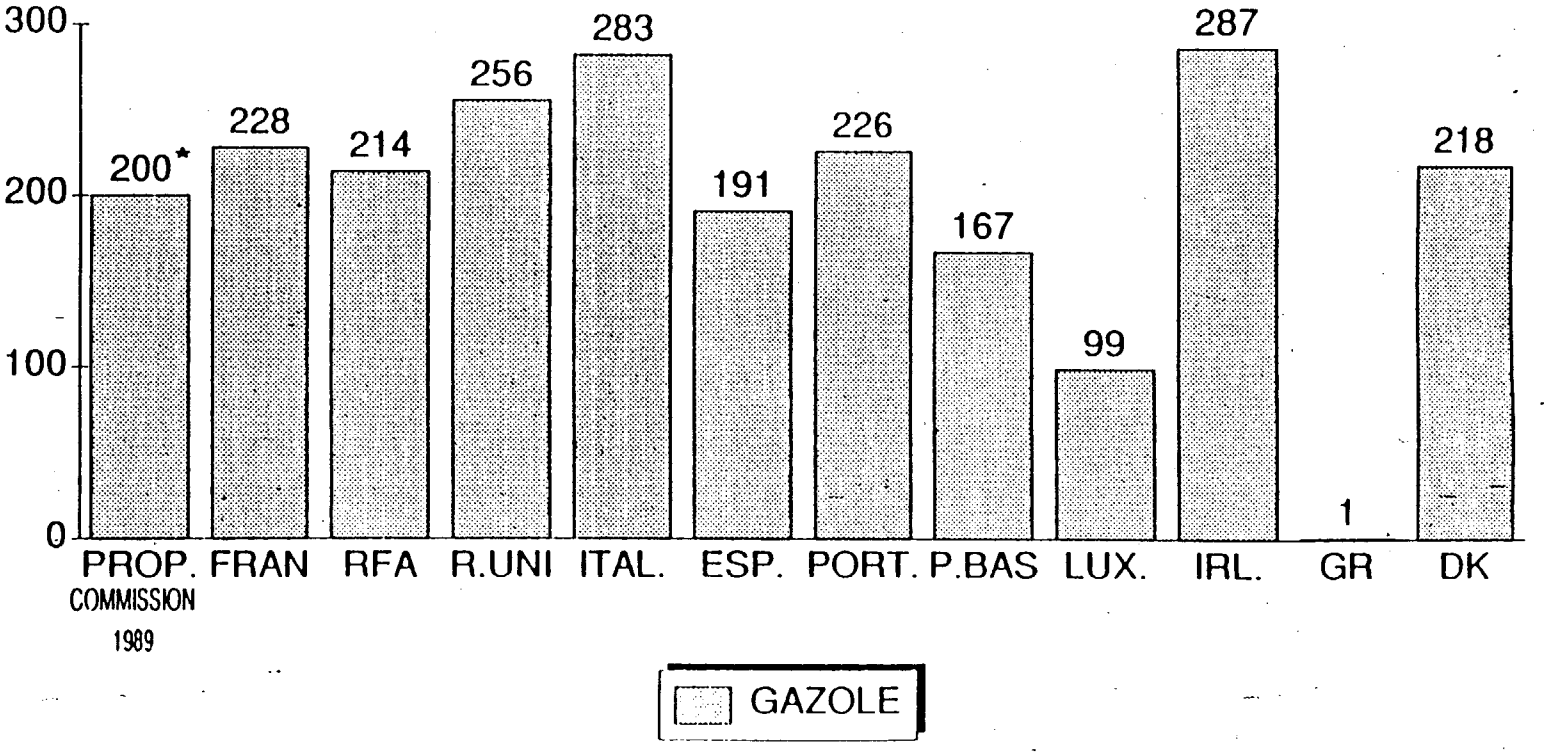
Cross-border rail transport could be improved by better cooperation between the railways. The respondents often cited the lack of cooperation between railway corporations as a crucial element of the whole transport system - and top of the priority solution list. Some respondents wanted a European railway company.

Sweden has two separate companies, one for the rail infrastructure and one for the rolling stock and operations. It was suggested that copying experiments such as these would introduce real competition. Many interviewees think that this would improve service and quality and reduce costs. The proposition of the European Commission in that respect must be implemented as soon as possible.

Most interviewees in North-West Europe agree that rail transport could offer a good alternative for both passengers and freight. In Italy, Spain, Portugal and Greece the interviewees were very sceptical about the actual role of rail transport. Too slow, too expensive, inflexible and not reliable was their opinion on trains in the south of Europe. Rail transport should be improved especially in these countries. In general, France and Switzerland are rail-minded countries, we could learn from their experience.

A comparison has been made between the transportation of containers by rail in the US and in Europe. As US railways have no restrictions on maximum weight, height and length of the trains, it is possible to operate dedicated double stack-trains with capacities up to 560 TEUs. These trains are 2.8 km long. The United States rail network is 95 % used for freight and only for 5 % for passenger transportation. The maximum number of containers on a European train is 80 TEU. Hence, any cost comparison between Europe and the US is negative for Europe: 35 $ cents per km in Europe against 15 $ cents in the US.

HARMONISATION EUROPEENNE DES DROITS D'ACCISES
SURLES PRODUITS PETROLIERS
(Accises au 1/1/1990)



* 205 maximum/195 minimum

Fig. 3a

Large worldwide transporters who use rail extensively in the US, do not do the same in Europe. Apart from the higher costs this is mainly due to the fragmented organisation of European railways.

Inland waterways

Transport by inland waterways does not play a role in all EC Member States. It is notable in Belgium, Germany, France and The Netherlands all of which have inland navigation on canals and rivers. The capacity of existing European waterways, e.g. the Rhine, is not fully utilised.
There are also still some missing links in the infrastructure, e.g. between Belgium and the Seine region and between the Rhine and the Rhône.

All the same, a small part of this sector is highly regulated and protected. Systems like 'tour de role' and fixed tariffs are not in line with the Treaty. This segment must conform to free market practice and solutions will have to be found at EC level as soon as possible.

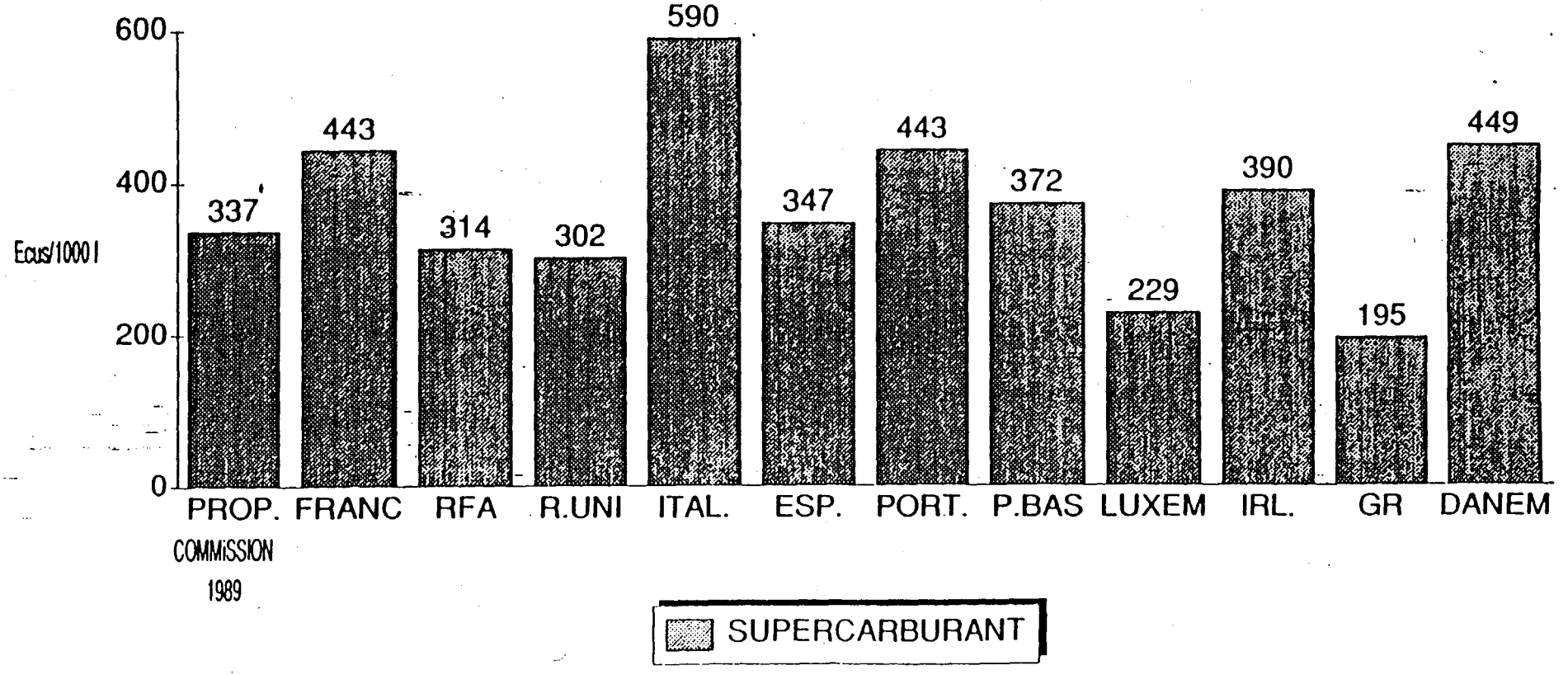
Notably, inland waterways are used for mass transport. The large number of containers carried by barges, especially on the Rhine and between Antwerp and Rotterdam, show that this type of cargo is well suited to inland waterways, particularly on longer hauls (> 100 km).

The inland waterways of Eastern Europe have suffered years of neglect. Inland navigation plays a subordinate role in this part of the world. Promotion of this transport mode to and from Eastern Europe will require several improvements, e.g. the connection between the Mittellandkanal and the Elbe. Even so, comprehensive upgrading will require a whole range of additional investments. The impact of Rhine-Main-Danube-Channel opening on East-West transport will largely depend on investments in the supra-structure along the (e.g. Hungarian) section Danube. The tariffs for locks are also cited as an obstacle in themselves and for optimal use of the Rhine-Main-Danube-Channel.

Air(ports)

A large number of respondents drew our attention to the low level of the infrastructure axes to airports, the lack of capacity of the airports, the highly complicated system of safety in European airspace, the failing connection between air- and rail transport and the low level of convenience at airports.
The situation at and around our European airports is highly vulnerable. The constant growth of air transport (see figures 4 and 5) increases the following problems every single day:
A highly regulated and therefore too costly market: Europe's air tariffs are the highest in the world. This is said to result from the highly regulated market in which national carriers are over-integrated with national administrations. Since 1986, when air traffic was liberalised between the United Kingdom and Ireland, the number of passengers has increased by 5 million, the tariffs have decreased with 20% to 40% and three more airports have been built.
Liberalised air traffic in Europe would have a massive impact on the smaller carriers. It has been suggested that flag carriers will do all they

HARMONISATION EUROPEENNE DES DROITS D'ACCISES
SUR LES PRIX PETROLIERS
(accises au 1/1/1990)



* Minimum

Fig. 3b

can to stop the smaller companies getting a bigger market share. To protect their own market share the national companies will not compete with other smaller and regional companies. Full and fair competition in this sector will only come with total privatisation of all European airlines. History has shown that government intervention always leads to unfair competition.

A lack of capacity on the ground and in the air: Air transport is mainly concentrated in North-west Europe (see figures 6 and 7). In Europe non-scheduled air travel is closer to 50% of the scheduled volume as compared to the worldwide average of around 10%. This adds particular pressure to the problem of congestion. Notably, air cargo is a growing market (see figure 4). This growth causes problems, particularly at and around airports; handling procedures and airport infrastructure should be improved to meet the demands of this booming market.

A completely outdated air traffic control system: It has been said that air traffic control is disastrous. Air traffic control depends too much on the national administrations and they work with different systems. In Europe there are 42 air traffic control centres compared to 6 in the USA. The European centres operate with 22 different air control systems. It has been suggested that there is a need for one body and one system for air space control. Military airspace can be used effectively for civilian purposes.

The general public's growing awareness of noisy, polluting and energy-consuming aircraft: A solution for these problems is imperative, also taking into account the balance between long-haul trains and short-haul planes. A specific problem in this respect is the absence of correct and sufficient data.

Sea(ports) and coastal transport (figures 8 and 8a)
There is a lack of harmonisation on a set of high standards; this applies both to environmental protection and safety. A specific problem is the lack of statistical data, notably concerning environmental effects of sea transport. Moreover, there is still no acceptable level of liberalisation. Cabotage is also inevitable in this sector, particularly with respect to development of coastal traffic. This mode of transport needs to be upgraded in the internal market; it is a fact that Mediterranean ports lack substantial suprastructure for coastal transport and suffer from poor general conditions. Serious consideration also needs to be given to the labour forces. Today's sea traffic can be highly reliable and precise with sailings scheduled to the minute rather than the hour. It has been stated on several occasions that inland waterways and coastal traffic can form an important chain in the Just-in-Time delivery of goods. Here it is the reliability rather than speed which counts. Inland waterways and coastal traffic combined with improved materials management could help make transport cleaner and more economic with energy. Japan and Taiwan have conducted several promising experiments in this field.

GROWTH IN WORLD AIR FREIGHT

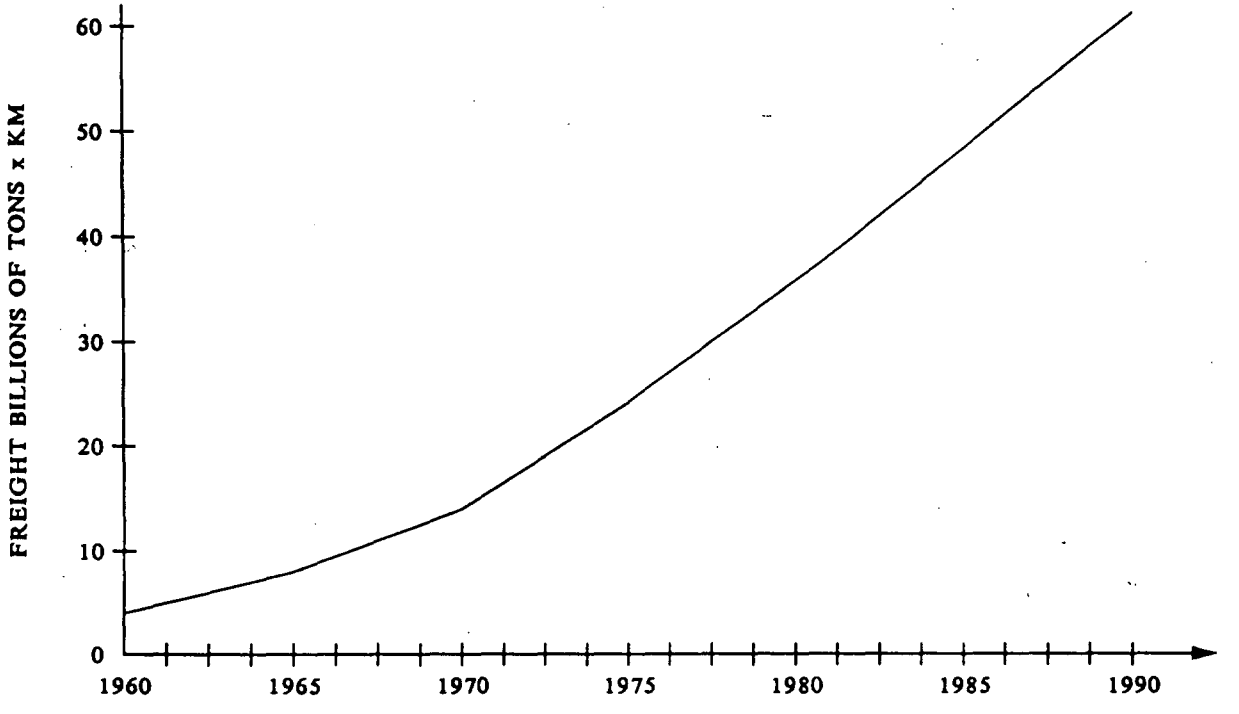


FIG. 4

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GROWTH IN AIRPORT PASSENGER TRAFFIC

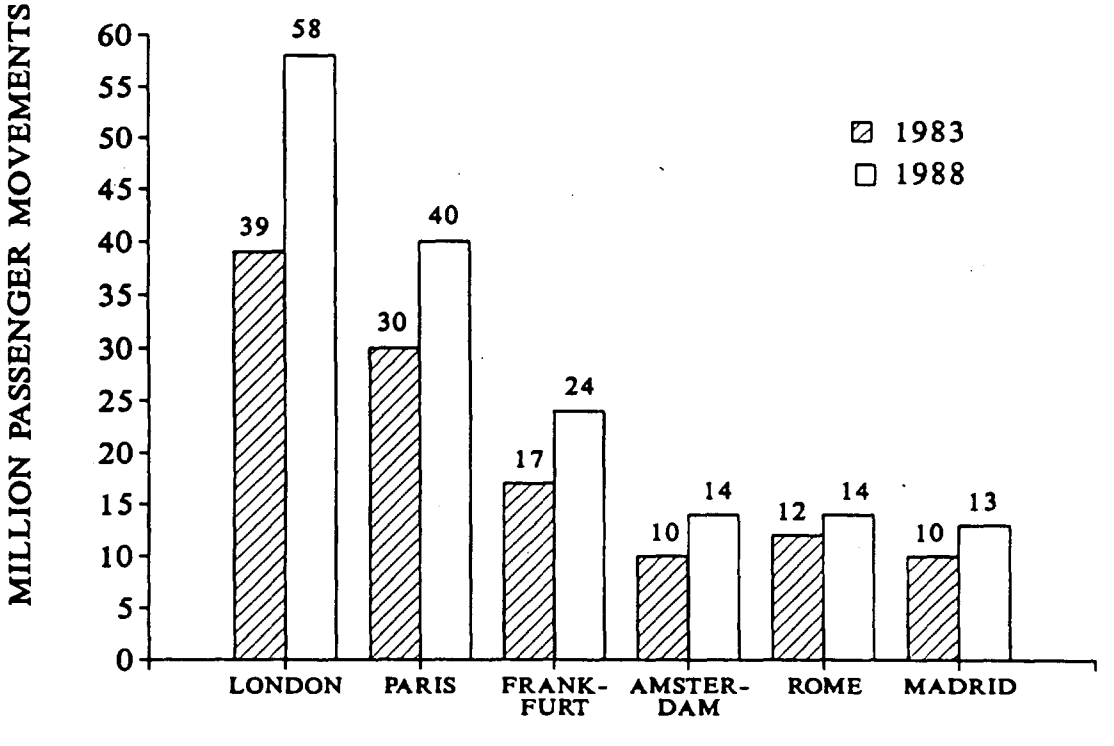


FIG. 5

SOURCE: BASED ON ICAO: AIRPORT TRAFFIC 1983 AND 1988

On the short term coastal traffic can play a very important role in transport to and from Eastern Europe. The lack of road and rail capacity in these countries make enormous investments and projects for the coming years unavoidable.

Relatively small investments in the suprastructure of some East European ports could improve the transport potential between East and West. Within the framework of the internal market we should seek a pragmatic solution for the principle of the port of destination and port of entry. The same counts for air transport. New forms of maritime cooperation require a fresh look at application of competition rules.
Further harmonisation is needed in the field of environmental and nautical standards for the European seaports. There should be transparency both in subsidies and costs. These measures are needed to avoid unfair competition. Handling procedures should also be improved, as should infrastructure connections with the different modes of transport (terminals, 'Hinterland'-connections). Quality standards for seaports are necessary in the internal market especially if multimodal and coastal traffic have to be upgraded in the balance of modes of transport.

There are a number of very strong environmental and energy saving arguments in favour of sea transport as an alternative to road haulage. An example given was the amount of fuel needed to transport 40 foot containers from North Europe to Algeciras. This would cost a 4,000 TEU vessel 232 litres of heavy fuel and a truck almost five times as much (1,200 litres of diesel).

Pipeline
Relaxation between East and West will probably cut troop movements in both NATO and the Warsaw pact. This means that more military infrastructure can be utilised for civilian purposes. In Europe there is an extensive NATO pipeline-network which is already used for civilian transport. It has been said that the civilian use of this network can be extended.

Urban transport
Public transport in large metropolitan areas has not yet achieved its full potential. The shift from private car to public transport can be encouraged by a more efficient and comfortable transport system. So far we have failed to experiment with systems like San Francisco's BART which proved such an excellent alternative to commuting by car. Residential areas within reach of the BART system have been upgraded because of the easy access to the city. A problem in major European cities is that an efficient and comfortable public transport system still cannot operate on a healthy economic basis.
The fact that most passenger traffic (circa 60%) occurs within a 6 km radius has hardly received any attention at all at EC level. Some interviewees criticise this. In terms of social costs, urban transport could well merit EC attention in view of the macro economic effects on society as a whole. This question deserves and requires new consideration. Public investments, subsidies etc. make urban transport very expensive. It is a

MAIN EUROPEAN SCHEDULED AIR TRAFFIC ROUTES 1988
TOTAL FREIGHT TRAFFIC (MILLIONS TONS)

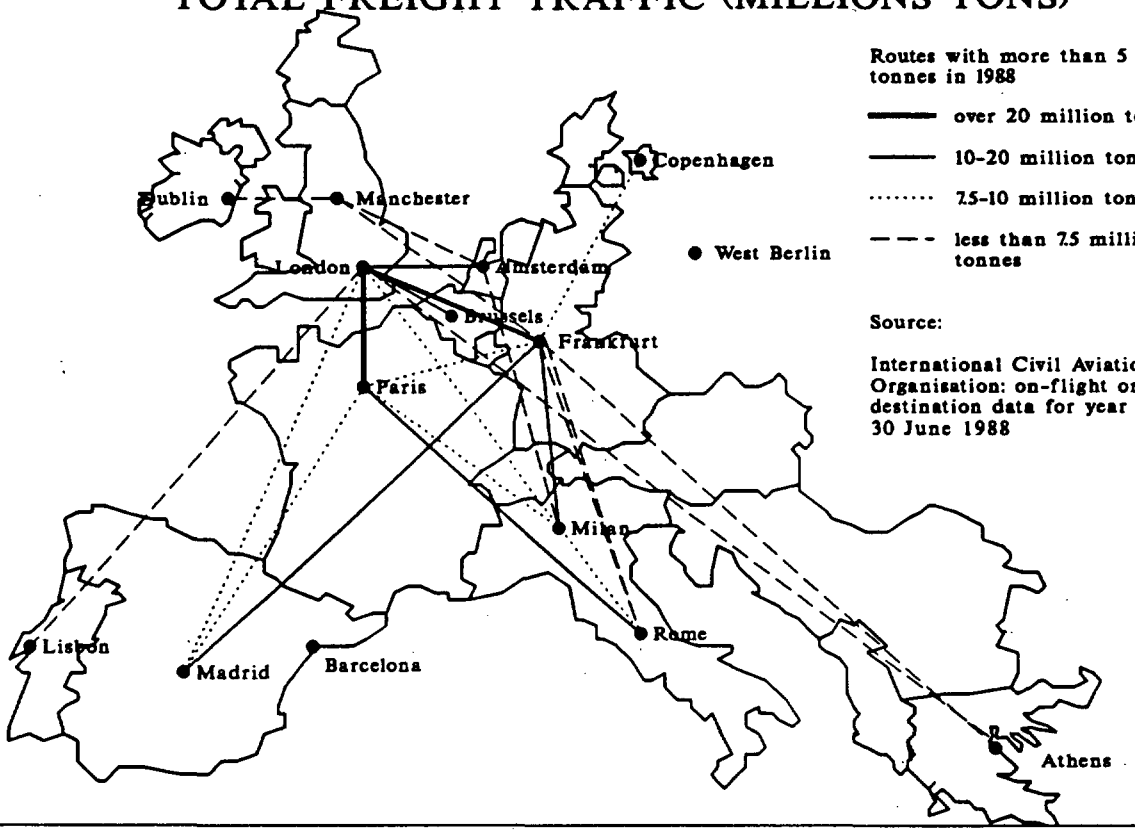


FIG. 6

MAIN EUROPEAN SCHEDULED AIR TRAFFIC ROUTES 1988
TOTAL NUMBER OF PASSENGERS

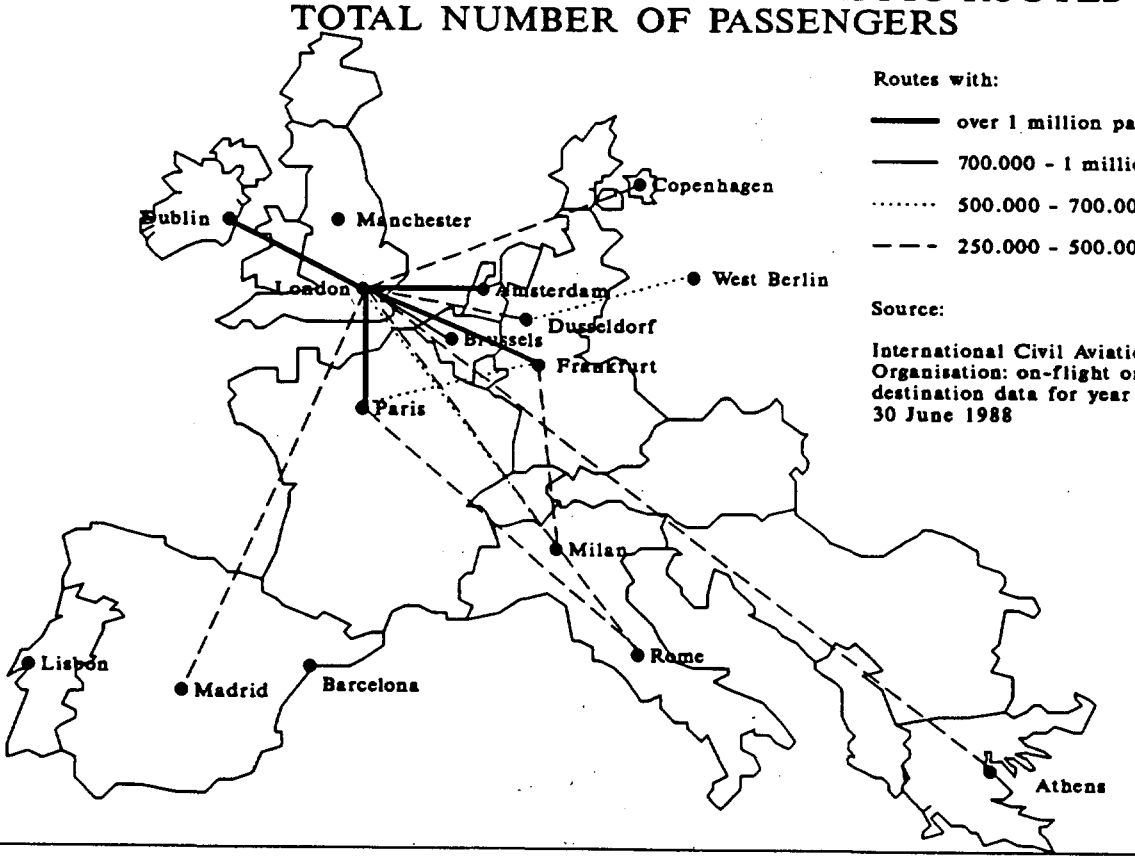


FIG. 7

heavy burden on the local and even national budget. A metro system can never run on purely commercial principles. It will always have to be subsidised and should therefore be considered above the local level, perhaps even the EC level if European issues are at stake. There is a conflicting opinion which says that public transport should always be a local political objective requiring local management.

It has been suggested that a distinction should be made between collective transport (of employees, school children and students) and public transport. Not all collective transport should be identical with public transport. Another way of looking at this was the suggestion that employers be obliged to offer free transport services for their employees.

The train: It is generally believed that the High Speed Train will mean major competition for airlines on the short and medium routes (max. 600 km). For example, on the Paris-Lyon TGV line one third of all passengers have shifted to the TGV from another mode. An additional one-third would previously not have travelled at all. Extension of Japan: Shinkansen HST has increased its market share on medium-haul routes such as that between Fukuoka and Kagoshima, to the cost of the airlines. Previously this had only been the case on long-haul routes such as between Hokkaido and the Kanto area of Honshu.

One drawback cited is that the HST is exclusively an inter-city service. Support is needed from relatively fast 'urban area' trains, making more frequent stops and offering competitive services between stations. HST would travel at 300 km/h whereas an 'urban area' train would run at 180-200 km/h. This would affect at least those locations where the community structure has spread out into numerous urban areas. The corresponding rail transport system would need efficient and viable connecting traffic arrangements at the stations. It is not the maximum speed that counts but the average travel time.

Better connections to and from the stations are also needed. There is an increased role here for taxis, but other forms of public and private transport should also be considered. Flexible solutions are called for. The individual in his car must be offered more incentives to change to the train including facilities like park and ride, service/maintenance garages, car rental services directly linked to the station.

The bus: Buses are believed to be a potentially flexible and cost-effective method of public transport, offering many advantages over rail (which requires high volumes and specific market conditions which exist in relatively few places). However, the great disadvantage of the bus is that it must share roads with other vehicles. Therefore it was suggested that greater use should be made of bus lanes and greater efforts should be made to make them effective. Pollution caused by buses is said to be a great disadvantage but several countries have already had promising experiences with electric buses.
On certain connections it is reasonable to develop line cab and minibus systems. Unlike the normal forms of public transport, they would be based on a booking system, follow a rough time table, and a flexibly defined route.

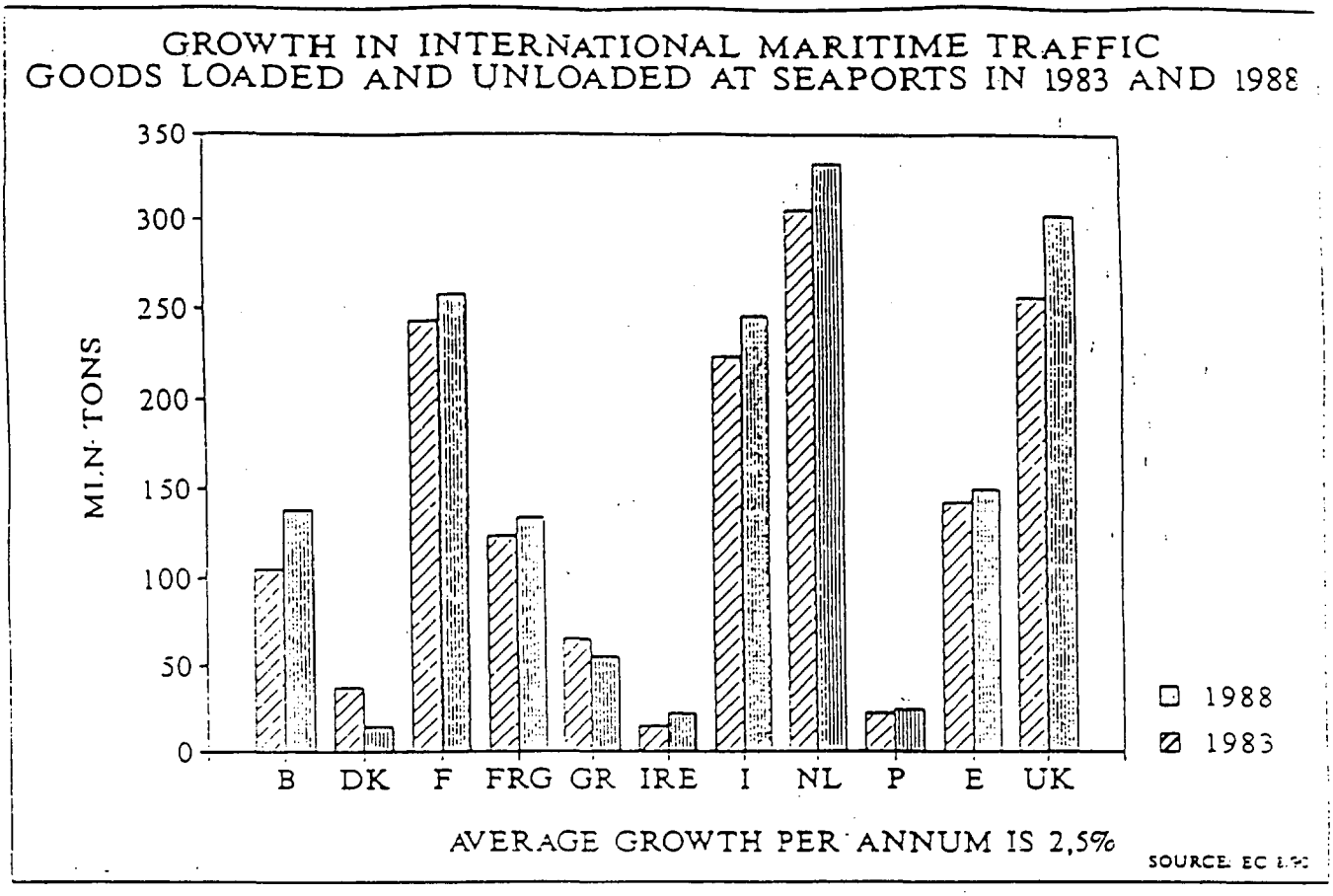
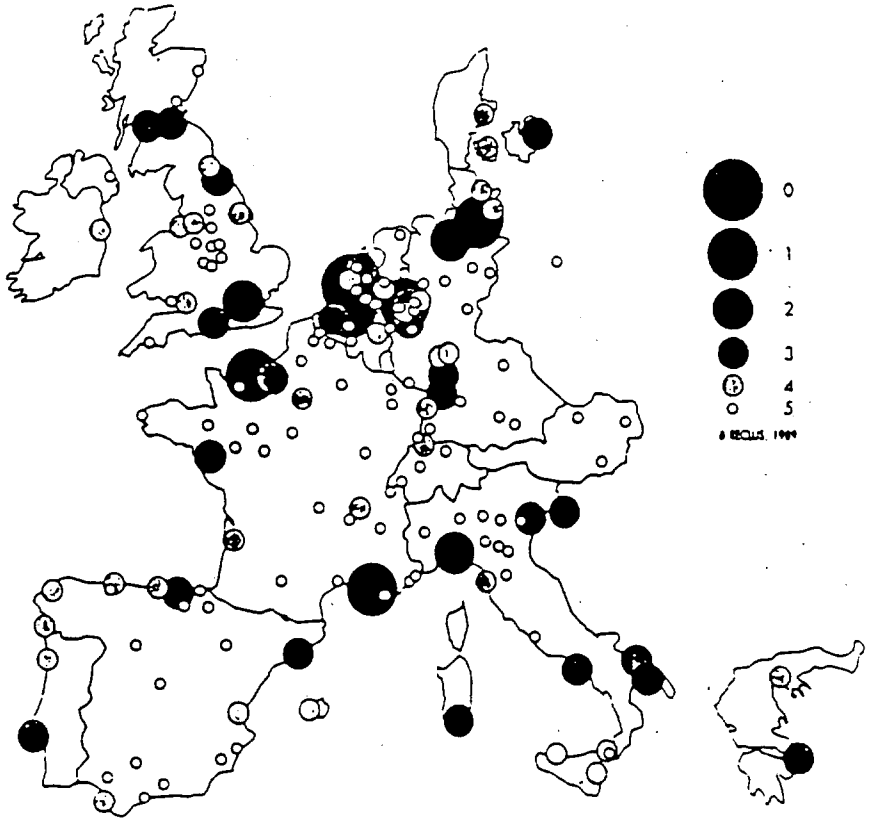


Fig. 8



LES PRINCIPAUX PORTS EUROPEENS

Fig. 8a

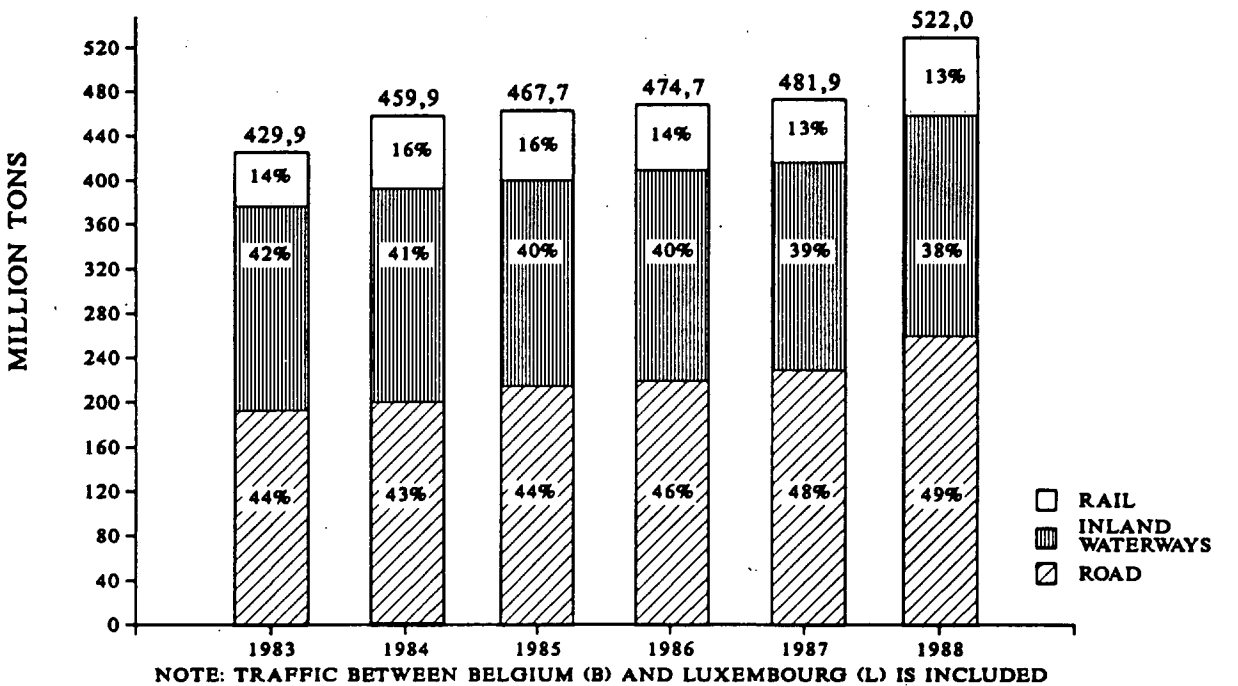
Taxi: The role of the taxi in avoiding traffic jams should and could be enlarged. The following remarks are of specific interest although certainly not valid for all the European countries. Taxi services are often insufficient, especially in bad weather and during peak hours. Quality must improve and there should be better links with public transport. In most countries taxis are far too expensive due to permit systems which both hinder competition and are felt to contrary to the customer's best interests. The permit systems should be abolished, or at least drastically adapted, the number of cabs should be increased, including part time services, and the competition must be sound.

Social aspects: Public transport should offer better quality, especially as regards the minimal service/care merited by the elderly, disadvantaged and disabled. The demographic phenomenon of a 'greying' society is expected to accelerate in the coming years. Unless the fast growing number of elderly people are taken into consideration, we will have allowed a major problem to develop, and one which will hit us in the near future. The disadvantaged cannot be excluded from mobility: this calls for adequate pricing. The disabled have the right to move freely through Europe: this calls for dedicated management and adequate technology.
The labour conditions in the transport sector are an important factor in transport policy with regard to safety, job security and fair competition. An extra impetus is needed for ongoing harmonisation of qualifications and working time per mode.

Multimodal transport
If we optimise the combination of transport modes in a multimodal transport chain, the entire transport system will be put on a higher organisational level, making it more effective and efficient. This in turn will have a positive effect on our main transport constraints.
Road transport is said to have a too big a share in the modal split (both in million tonnage as well as in million kms (see figures 9, 10, 10a and 10b). The growth rates of the different modes show a constant rise in road transport and a fluctuating growth for inland waterways and rail (see figure 11).
Some interviewees viewed this development in the context of the ongoing annual decline in investment for road transport and inland waterways (see figures 12 and 12a).
More generally, we have been informed that the development of a realistic and effective form of multimodal transport cannot be left to the entrepreneurs within the modes. Without active input from shippers and forwarders, combined or multimodal transport will not get off the ground.
Handling procedures at terminals are far from perfect. Waiting hours are still too long. Investments are needed to make combined transport more competitive in terms of both service and price.
We have been told that the development of multimodal freight transport is slowing down due to widespread misconceptions on the calculated effects: some people claim that there will only be a modest few tons shifting from road to train or waterway transport - giving a probable growth rate of not more than 20% for combined transport. Whilst true, this is irrelevant. As we have already stated, the aim of multimodal freight transport, is not shifting tonnage to another mode; its primary purpose is confined to

ANNUAL INTERNATIONAL INTRA EUR-12

TONNAGE FLOWS BY MODE OF TRANSPORT



NOTE: TRAFFIC BETWEEN BELGIUM (B) AND LUXEMBOURG (L) IS INCLUDED

FIG. 9

SOURCE: EUROPE TRANSPORT, ANNUAL REPORT 1989; ANALYSIS AND FORECASTS 1989

reducing volume (of containers or trailers) and curbing the environmental damage caused by road transport.
In the consultations there was also the warning that combined transport is not the solution for all the transport problems. Combined transport is only profitable for long-haul transportation. Obviously, the break-even point varies depending on the cost prices of the different modalities, but currently it is around the 500 km. The lion's share of the goods transportation occurs at much shorter distances, i.e. under 200 km.

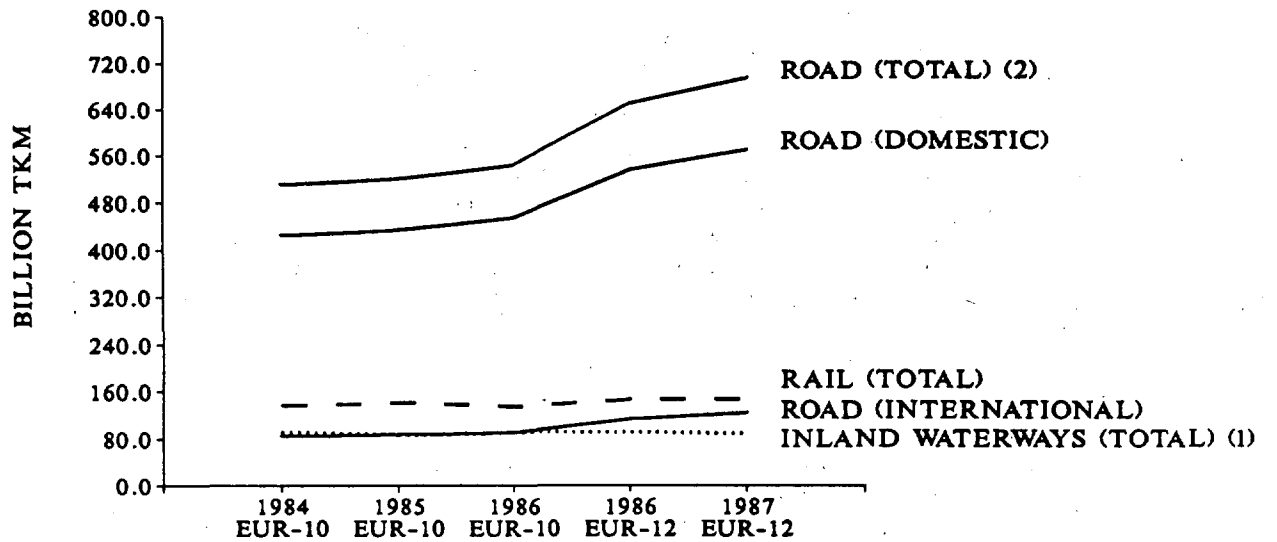
By far the least developed aspect at present is a combination of transport modes for passengers. We should avoid trying to upgrade the quality of one or two modes separately, without giving consideration to the added value of balancing the opportunities of a variety of modes. The absence of administrative and managerial attention to multimodal transport, and the repeatedly partial and technical approach are the fundamental problems to be solved.

THE EXTERNAL ENVIRONMENT OF THE TRANSPORT SYSTEM

The negative external effects of transport

Environmental amenity
Environmental conditions are deteriorating rapidly. Polluted waters, acid rain and global heating due to the greenhouse effect take their toll of the amenity. Transport contributes to this considerably (see figure 13, there are no specific data on pollution of sea and inland waterways).
The consultations made clear that the transport sector should accept and understand its responsibility to society, and act accordingly. A defensive attitude is out. The correct response will be to meet the challenges actively and offensively. Any shirking of a fundamental change in attitude here would make the public hostile to mobility.
A specific concern is that Member States will take the wrong course in trying to solve the congestion of urban areas - namely constructing new infrastructures: many feel that this will simply exacerbate and compound the problems.
Judging by the less environmentally damaging cars gradually coming on the market, manufacturers appear to understand their specific responsibility towards society. But, as previously stated, there is still no sign of radical progress in this respect - not least due to a failure to establish higher standards. A set of high standard rules to protect the environment should be implemented for emissions, noise, clean engines, clean fuels, energy consumption etc.
The interviews in Austria stressed that this country has some of the strictest emission legislation of Europe. Three-way catalysts have been mandatory on cars since 1987; and the 1989-1992 programme is to bring all the motorbikes and other motorised bicycles under strict emission regulations, with maximum permissable levels for all types. Two-wheelers represent just 15 % of vehicles on the road but account for 26% of the HC (hydrocarbons) emission: how very strange it is that Austria is the only European country to set maximum limits. The United States' rigid regulations on emissions cover trucks up to 3.5 tonnes; European standards are lower but a further tightening is foreseen.

TRANSPORT BY MODE



(1) EUR-5 (D, F, NL, B, L)

(2) INCLUDES BILATERAL AND CROSS-TRADE MOVEMENTS UNDER COMMUNITY QUOTA AUTHORISATION

NOTE: DOES NOT INCLUDE "EXTRA-EC" OR "TRANSIT-EC" MOVEMENTS

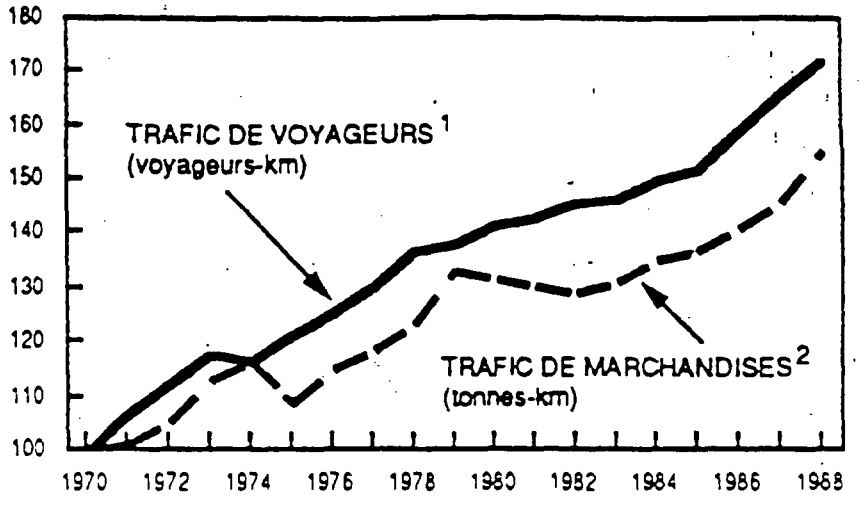
FIG. 10

SOURCE: EUROPE TRANSPORT: ANALYSIS AND FORECASTS 1989

A possible solution: The Eco Bonus system developed in Switzerland is presented as an alternative for the current transport policy. This instrument could be used to get a grip on sharply increasing mobility as well as steering us towards a more positive split for the public transport. The Eco Bonus system respects sensible car use, unlike conventional systems which act as stimulants in that the more you drive, the better value you get from your high fixed costs (road tax, depreciation). Transport should be treated as a luxury which can no longer be maintained in its current form due to the environmental effects. The principle of the Eco Bonus system is that everybody causes traffic. This may be as a car driver or public transport user, or indirectly as a consumer of (transported) products. The principle of 'the user pays', is strictly applied. The system comprises a levy on all oil-based fuel products equal to the selling price. In practice this means a doubling of fuel prices. Income from this levy feeds a fund to reimburse the individual users. Everyone gets an equal payout from the fund, including people who do not drive cars. Industry passes this levy on to the end users via price adjustments. The public gets higher prices which are then compensated. This also motivates industry to produce without generating transport, or with minimal transport (competitive advantage). Figure 14 shows the Eco Bonus system in operation; funding input comes from the car drivers, output is equally divided among the public. Environmentally-friendly transport becomes the cost-effective option.
The amusing paradox of this system is that the car driver finances it, but also profits if kilometres driven stay below a given level. There is an obvious incentive to switch to another form of transport and to avoid unnecessary travel. For the car owner who manages to keep below 50% of the average driving performance, the system is actually profitable.
One of the problems if a single country would decide to install this system would be the fuel tourism generating effects. This could be restricted by changing the basis of the levy from fuel to distance. The vehicles should have some kind of a tachograph to register the distance travelled.

Land-use and urbanisation
It was frequently noted that bad physical planning is a major cause of urban congestion. For more than twenty years sites and estates have been located without the slightest consideration of potential traffic and transport problems. The outcome is that many places in Europe suffer from unnecessary car and truck traffic. Here is one more problem which can only be solved by managerial decision-making at all levels, i.e. European, national, regional and local.
Physical planning has a direct effect on the way we use our land, build our (sub)urban areas and guide daily traffic flows. Haphazard location policy on housing and industry has massive negative effects on passenger and freight transport. Albeit there is no question of transport prevailing over physical planning or vice versa, there is a growing awareness of their close inter-relation and of the fact that physical planning has a larger role to play in steering and regulating transport. The environmental pressure groups take a more radical view that physical planning should not be allowed to generate very large traffic volumes. Hence a call was made for a ban on construction of shopping complexes on the outskirts of large cities, in that bad public transport boosts car use. The building of

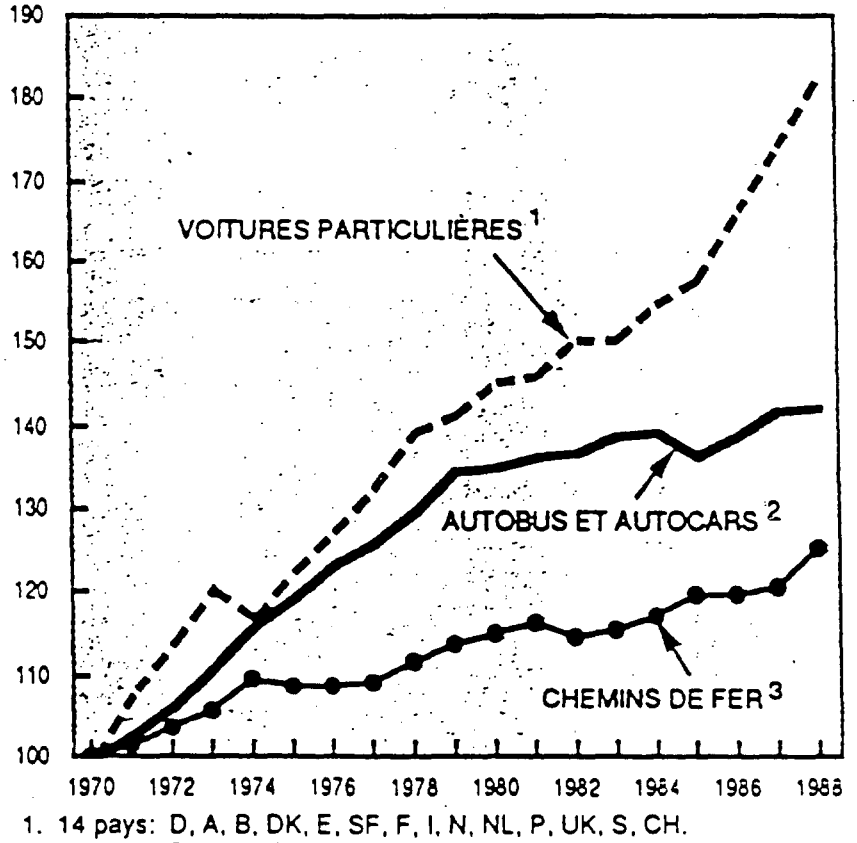
TENDANCES DES TRAFICS DE VOYAGEURS
ET DE MARCHANDISES
1970 = 100



1. 17 pays: D, A, B, DK, E, SF, F, GR, I, N, NL, P, UK, S, CH, TR, YU.
2. 16 pays: D, A, B, DK, E, SF, F, I, L, N, NL, UK, S, CH, TR, YU.

Fig. 10a

TENDANCES DU TRAFIC DE VOYAGEURS
1970 = 100
(voyageurs-kilomètres)



1. 14 pays: D, A, B, DK, E, SF, F, I, N, NL, P, UK, S, CH.
2. 16 pays: D, A , B, DK, E, SF, F, GR, I, N, NL, P, UK, S, CH, YU.
3. Tous les pays de la CEMT.

Fig. 10b

large office blocks in the suburbs is also a nuisance for society. Office construction should be confined to locations with adequate and appropriate public transport services. Industry should be located near rail and inland waterway connections.

Energy
In addition to the aspect of amenity, many respondents are disturbed by energy use. Transport's share in total EC energy consumption has grown from 20% to 30% in recent years - the main reason being the increase in road transport (see figures 15 and 15a).

On one hand we are rapidly exhausting our scarce resources and on the other we rely too heavily on fossil fuels. Events in the summer of 1990 highlighted these problems. Unless R&D, technology and innovation are re-aligned on new sources of energy for transport (sun, electricity, alcohol), EC-transport will stagger from one crisis to the next. This warning was accompanied by proposed solutions in the form of vehicle consumption norms agreed between governments and the automotive industry. Without steering by government here, and left to its own devices, the industry is likely to be tardy in producing reasonable solutions. It was mentioned that an ongoing study in Austria is looking at the feasibility of cars running 100 km on no more than 3 litres of fuel, by the year 2000. Some peoples' reaction was that if such a technical possibility actually exists, government should enact legislation to ensure introduction without delay. This outlook has direct linkage between the environment and the priorities of the car makers.

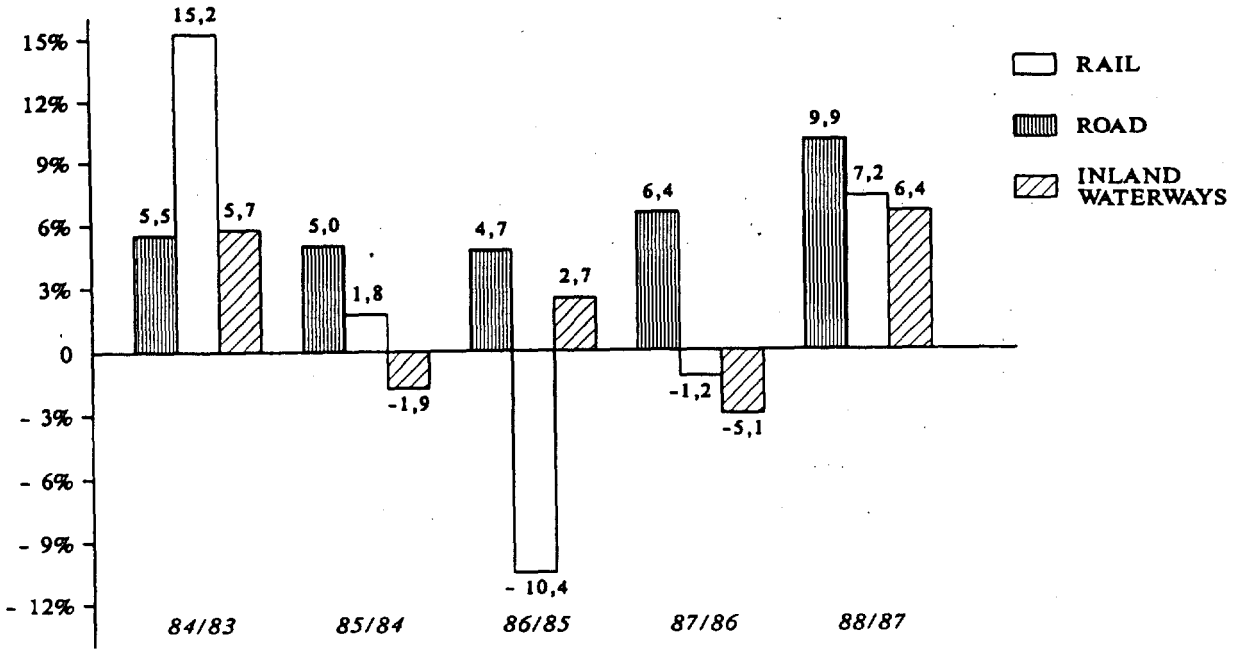
We were told that we live in an 'energy careless society'. This was illustrated by remarks that the energy cost per tonne/kms for freight by truck is at least four times greater by than by rail, and five times greater than transport by sea. Long-haul flights use five times (or over) more specific energy per passenger kilometre than the rail and/or sea equivalents. Based on the 1½ persons-per-car-system accepted throughout the western world, a short car trip uses at least three times more energy than public transport.

Direct influences on transport

Education and public opinion
Decision makers on transport issues are increasingly aware of public opinion. Compared to nuclear energy and cruise missiles, there has been low public interest for transport issues. With the growing threat to daily life implicit in transport problems, the situation is changing. Hence, local people in the Tirol put up barricades against (freight)traffic. In a direct reaction to this outburst, the Austrian government banned truck traffic at night.

In more general terms, interviewees said that public opinion should be better harnessed to realise objectives. Attitudes need to be changed; so, for example young people need to understand the negative aspects; not having a car on their 18th birthday never killed anyone. Furthermore it is

ANNUAL GROWTH RATES - INTERNATIONAL INTRA EUR-12 TONNAGE FLOWS (%)



NOTE: TRAFFIC BETWEEN B AND L IS INCLUDED

FIG. 11

SOURCE: EUROPE TRANSPORT: ANNUAL REPORT 1989

TRAFFIC DEVELOPMENTS AND ANNUAL INVESTMENTS (1975 = 100)

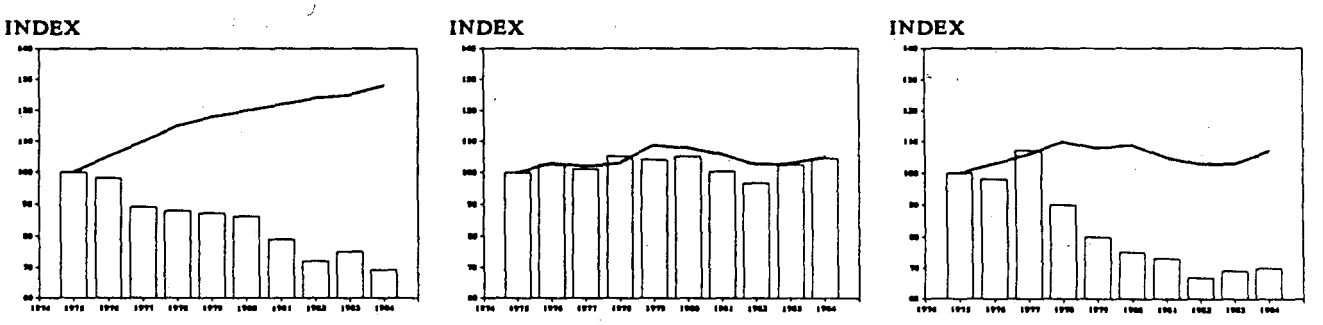


FIG. 12

SOURCE: ECMT (1987)

stated that if we should succeed in a common attitude where people have the same norms and values on transport, it would be easier to take certain unpopular measures. A comparison can be made with the visible effects achieved on public attitude via educational programmes in schools.

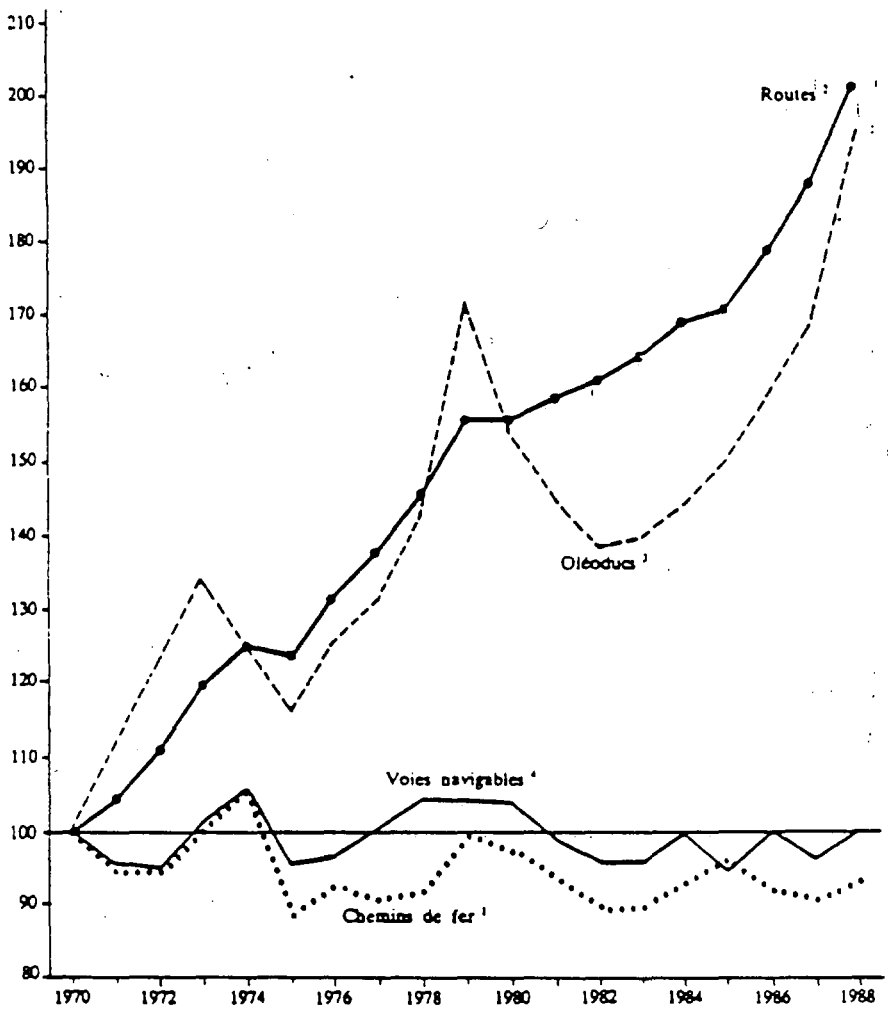
Information (telecommunications)
Despite the rapid pace and volume of developments in telecommunications/-telematics, we will confine ourselves here to the widely accepted role of telecommunications in boosting transport efficiency.
The benefits recognised here include better use of the capacity of the infrastructure networks, reduction of empty-legs, faster customs procedures, etc.

However, respondents are worried by lack of compatibility - including systems under development. There is very considerable demand for standardisation. In the future, this should improve interfacing between the various systems used at ports, airports, customs etc.

Price mechanism
A vital financial aspect is that of costs caused by infrastructure users. The usual question here is to what extent the taxpayer should foot the bill, or to put it more clearly: what share of the total costs should be paid by the user of a given infrastructure, and how much should be supplemented by the state? To our surprise we found a high degree of unanimity on the user paying the relevant total costs (for all modes, including ports and telecommunications).

There are still no universally accepted norms for calculating the total external costs. There is ongoing research in several countries to identify the right components of the external costs and to establish who among the responsible parties should pay - and for how much. Hitherto we have been 'subsidising' free mobility and the free choice of modality. It is also stated that the private sector is shifting certain costs to the public purse in the realisation of transport generating concepts like Just-in-Time and 'zero stock'. Road freight tariffs are considered too low, and this is seen as a motive for the trend towards national mega-distribution centres which are replacing regional warehousing.
Most countries' road taxes do not cover the actual cost of constructing and maintaining an adequate road infrastructure. And it is certainly true that in most European countries, the end user does not pay the real costs involved. The externalisation of costs should also restore fairer competition between the various modes, and so lead to a new balance.
There is broad acceptance for charging negative external effects to the originator. There is absolute agreement that this should apply to all modes. The problems arise when one tries to calculate these external effects. The standpoint is crucial here. A socially responsible approach would mean including not only the cost of constructing and maintaining the infrastructure - but also the overall effects of safety measures, not forgetting secondary aspects like costs arising from time loss due to speed restrictions. From an environmental point of view, all the damage caused by any form of pollution (noise, air, visual) should be charged to the originator.

Evolution globale du trafic marchandises en Europe
(tonnes-kilomètres ; 1970 = 100)



1. Tous les pays de la Conférence européenne des ministres des Transports.
2. 16 pays : D, A, B, DK, E, SF, F, I, L, N, NL, UK, S, CH, TR, YU.
3. 11 pays : D, A, B, E, F, I, NL, UK, CH, TR, YU.
4. 11 pays : D, A, B, SF, F, I, L, NL, UK, CH, YU.

Fig. 12a

The deterioration of a natural site caused by the building of a newer and safer infrastructure also has to be taken into account. Real transport costs must be made accessible and visible (transparent).

Some attempts have been made to define the external costs. A major problem is that one cannot simply introduce the techniques of economic theory as a decision making instrument. Cost optimisation does not automatically mean policy optimisation. In a cost benefit analysis, the social costs and the costs of a given project are expressed in monetary terms. In road safety for example, the loss of human lives, the medical care of the injured, damage to property and recourse to the rescue and legal services can well be the main, though not the only, expenditures. And how does one measure the cost of human life?

Most studies only offer qualitative statements. The easiest way out is to raise taxes on road vehicle fuel and claim that this is done for environmental reasons. However, there have been serious attempts to define the costs. A 1986 German study estimates social costs of road traffic at between DM 68 and DM 77 billion for what was then the BRD. This amount does not include costs for the vehicles and the fuel which works out at between DM 0.20 and DM 0.22 per km. (see figure 16).

Another problem is the method of levying the external costs. The method must be clear and simple. The situation varies from member state to member state. In Denmark, the level of tax on cars now takes account of most external effects - and still puts money in the treasury.

Creating an internal transport market without calculating the external costs will be problematic to say the least. According to the opinions of the interviewees this subject requires top priority. At present, however, we understand that Denmark and the UK still have objections to fiscal harmonisation.

Road-pricing is mooted as a direct formula to calculate the costs of infrastructure to the users. Nobody we consulted opposed the principle that one should pay for use of the infrastructure. Indeed we were pleasantly surprised that respondents from quite different backgrounds were in favour of the principle of road-pricing.
Yet another aspect is the method used to collect the true cost of using the infrastructure. Sophisticated electronic equipment raises questions of privacy and possible fraud. In general, however, there were no objections to a simple levy system for variable costs.

Technology and research
Technological developments are necessary to improve the potential of the existing infrastructure and vehicles. It will not be easy to convince the manufacturers and general public on this - not least because of the higher costs involved. Many people consulted doubted whether strong shift in public opinion would achieve a voluntary shift by manufacturers. Public debate on speed limits and their enforcement in Europe was cited in evidence.

SHARE OF EMISSION SOURCES

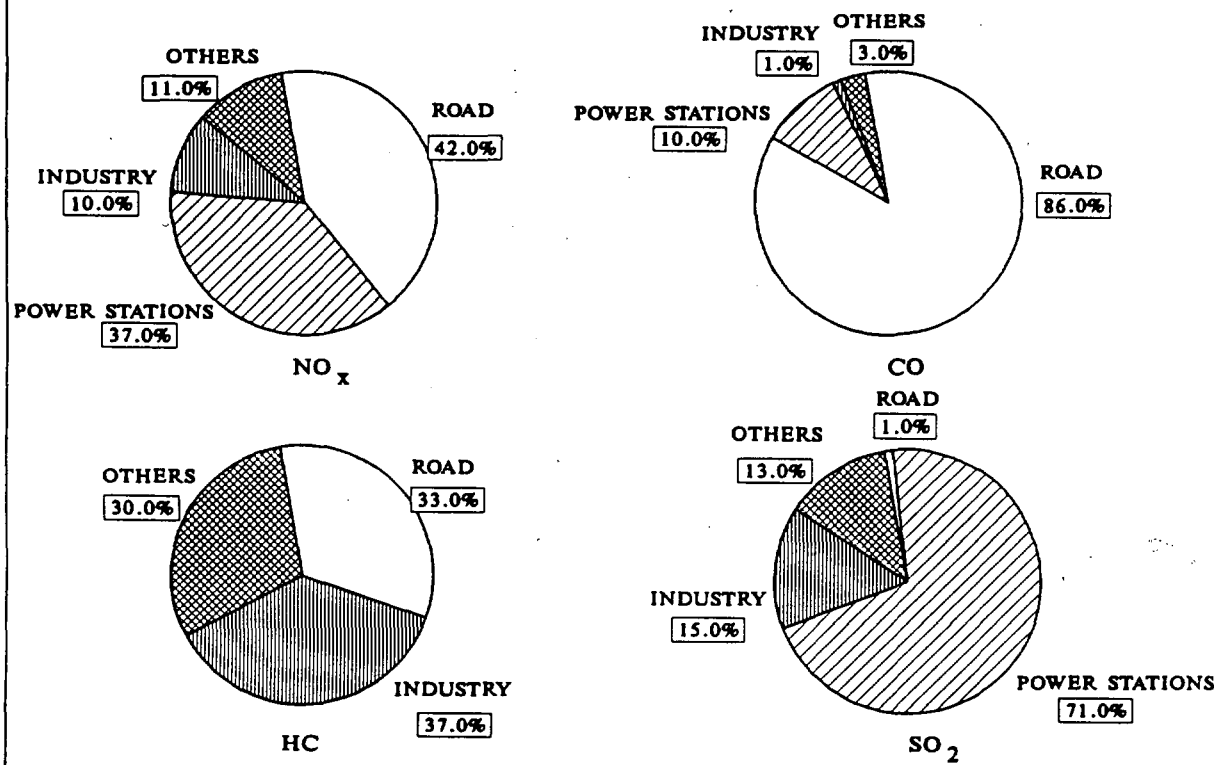


FIG. 13

SOURCE: HOLMAN (1987)

THE WAY THE ECO BONUS SYSTEM FUNCTIONS

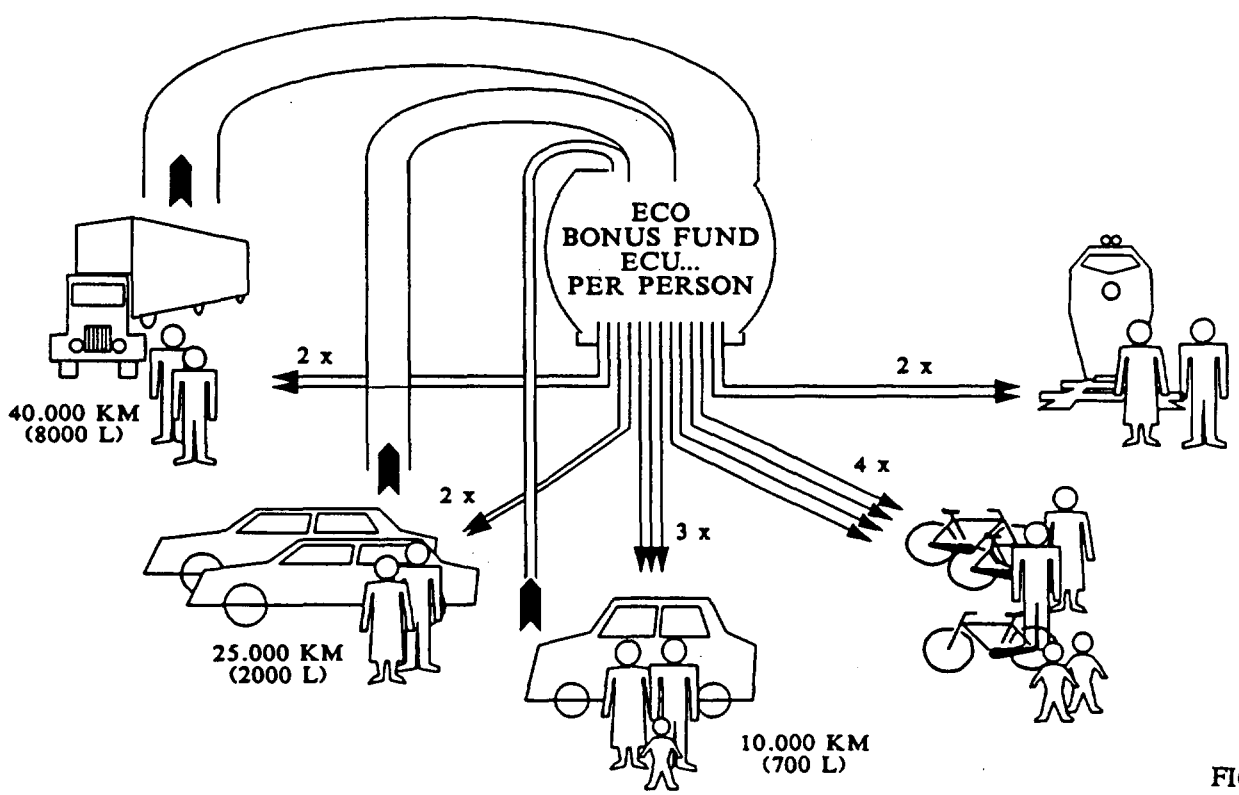


FIG. 14

Automation in cars, infrastructure and goods-handling is developing rapidly. However, the pace of the necessary standardisation is still too slow, according to some interviewees. We were given to understand that technological innovation has lagged significantly in the transport sector. Indeed, until now it has been a virtual underdeveloped area; the chief cause being a fundamental lack of incentives thanks to the fact that transport is so heavily protected by regulations and subsidies.

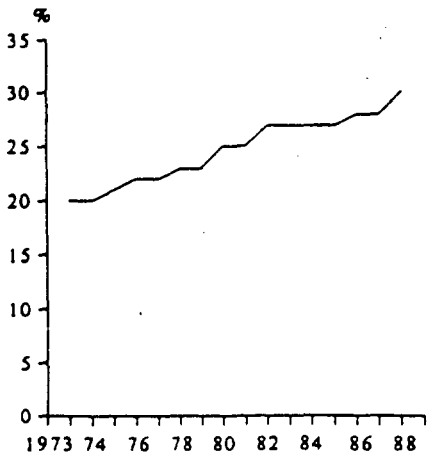
More funds should be made available to harness technological innovation for the protection of the environment (clean engines, clean fuel, electrical cars etc.).

Closely related to the above is the severe lack of efficient R&D aimed at anticipating and overcoming these problems, and boosting the rate of technological progress. As previously stated, Europe has been blinkered by the idea of growth in terms of transport volume, for far too long. Calculations focused on tonnage to be moved, rather than goods flows, frequencies, values of goods, pollution rates etc. The track record is anything but innovative in this respect.
Despite the impressive sums spent on R&D, programmes will have to be more closely tailored to the objectives and needs of the future EC transport policy. Both economic and technological topics must be included. There is a call for more insight into the sources and methods of steering of goods flows. There is no shortage of quantitative models on transportation in Europe, but the general consensus has it that we lack a good theory explaining generation of flows and the necessary steering mechanisms. This kind of research is needed to answer questions on future infrastructure bottlenecks, investment planning, location of terminals etc.

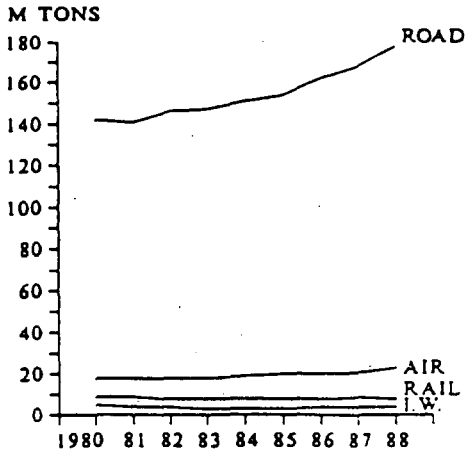
Transport is an important consumer of fossil fuel. There is a general feeling that nothing was learned from the oil crises of the seventies. The search for alternative sources and energy saving systems is still nowhere near intensive enough. The current Gulf crisis has a positive effect on the initiation of new research programmes.

Harmonisation/liberalisation
Unresolved discussions on matters of principle have long hampered development of transport policy. This is mentioned several times in PART II. The vicious circle around the liberalisation and harmonisation controversy is the worst example of this. The opposed positions are: that a reasonable level of harmonisation is imperative before any liberalisation measure can be taken; and, that liberalisation must continue unabated without any linkage with measures of harmonisation. Small wonder that Europe has waited so long for a meaningful transport policy.
A celebrated ruling by the European Court (case 13/83; Parliament vs. Council) quite clearly states that harmonisation may not be linked to liberalisation measures. Some legal experts are of the opinion that this line can also be found in other rulings by the Court. As far as the Group Transport 2000 Plus is concerned, we go along with the result of the consultations, and consider an end to this discussion as crucial to the further development of Community transport policy. Liberalisation of the transport market must be given equal priority with the necessary harmo-

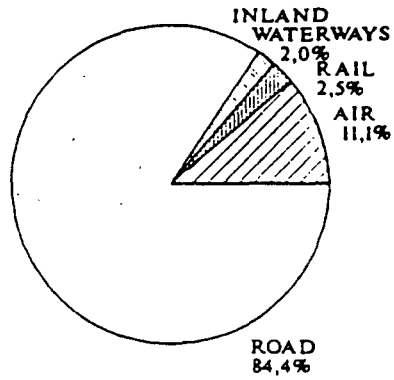
ENERGY AND TRANSPORT



A SHARE OF TRANSPORT IN FINAL ENERGY CONSUMPTION (1973-1980: EUR-10 1980-1988: EUR-12)



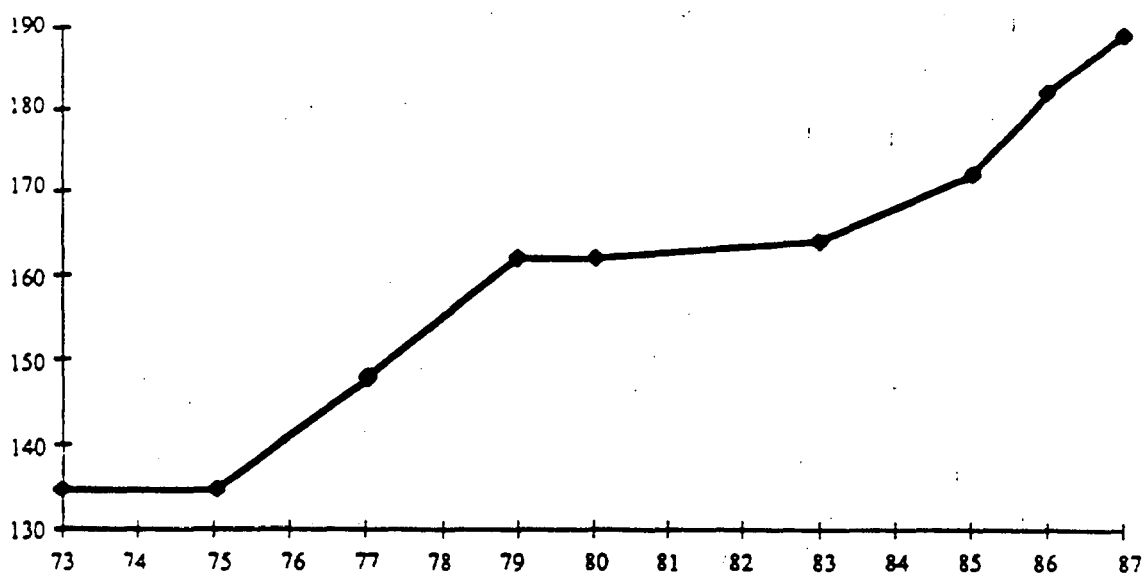
B ENERGY CONSUMPTION BY MODE OF TRANSPORT IN EUR-12



C MODAL SPLIT FOR ENERGY CONSUMPTION IN EUR-12 (1988)

FIG. 15

SOURCE: EC 8/90



Les consommations pétrolières des transports dans la CEE à 12
Unités : Millions de TEP par an ; Source : EUROSTAT

	1973	1980	1987
CEE	31	42	55
FRANCE	28	39	52

Part des transports dans les usages energétiques finaux du pétrole en France et en Europe
(Unités : % ; Source : EUROSTAT)

Fig. 15a

nisation. And there must be no question of linkage of the two issues; they are equally important. The decision making machinery must be set in action. In plain language this means that all measures of liberalisation and harmonisation as in the European Commission's 1985 White Paper, and all the measures in line with the concept of the internal market which have been proposed since then, must be decided on within the time schedule provided, i.e. before the end of 1992. This is the first priority. If it is not realised we shall lose credibility in the eyes of the outside world. And we will richly deserve to do so.

Let us be clear on this: our interviewees also expressed an unambiguous need for inter-market compatibility. To take an example, as matters stand a Belgian operator wanting to move freight by inland waterways between two points in West Germany will be hindered by, among other things, tariff restrictions. And if he wanted to go to Eastern Europe he would face a different package of navigation regulations. Obviously, whatever the mode of transport, a whole range of differing national legal and administrative provisions and regulations are waiting to be melded into a cohesive, logical whole. The internal market as such is not the final transport policy development; markets have to be made compatible inside and outside the Community.

A considerable amount of technical, social and fiscal harmonisation (e.g. see figure 3) remains to be done. It is a long list and this is not the place to detail it in full. To take just a few money and time wasting examples - alongside the continuing hurdle of customs regulations - non-compatibility is still rampant in weights and measures, railway gauges, hazardous load transport and refrigerated goods.

It is unlikely that the EC will have realised an appropriate level of liberalisation by 1992. However, a crucial element in this already priority area, is freedom of cabotage. Quite simply, there will be no internal market without unrestricted cabotage for all modes of transport.

Other influences on transport

Developments in third countries

Our consultations included sources from the USA, the Far East, third countries, Eastern Europe and EFTA. All our informants expressed strong warnings on the creation of a 'fortress Europe'. A comprehensive European transport policy must include open frontiers allowing a free flow of transport to and from other parts of the world.

The Americans are particularly unsure on an overall approach to a single Europe. They think that Europe still has a strong need for decision-making on intercontinental transport issues. This needs to be fast, efficient and executed by one European body without prolonged consultations with Member States. There should be no limits in any given transport mode for any kinds of joint-venture between Europe and companies based elsewhere. Most of the international industries in the Far East will be looking at Europe-wide product distribution centres. The availability of a main port with good terminal facilities to all parts of Europe will be of great importance here.

In addition to presenting massive transport markets for Europe and new transit potential to Japan, the astonishing pace at which frontiers to Eastern Europe are opening up also exposes awesome arrears in infrastructure. If the old Eastern block is to catch up with Western Europe, huge investments will be needed to create an infrastructure and up-to-date forms of transport. It is not easy to predict the impact on Eastern European economies of the ongoing privatisation and cooperation with privately-owned modes in the West and elsewhere.

Demographic developments

Three aspects puzzle the respondents. a) When does Europe's population stop growing, and what effects will this have on the economy and transport? b) How do we deal with immigration from countries outside the EC, e.g. from North Africa? c) What will be the effect on transport if large numbers of Western Europeans decide to take their vacations in the cheaper countries of Eastern Europe, and if large numbers from the East decide to have a look around in Western Europe?

Transport and the EC's main objectives

The main objectives as set out in this paragraph come from our interviewees. Not all of them relate directly to the objectives of the Treaty of Rome. However, the interviewees regard them as vital points for consideration in relation to Community transport policy.

Looking more closely at their objectives, one sees that an item like prosperity, including growth and welfare, is closely related to the EC Treaty objective of the standard of living. The fair competition objective is covered directly by the Treaty, as are the rights of mobility, free choice of transport and accessibility. The safety objective is reflected in the transport section of the Treaty (particularly article 75 paragraph 1 sub c). Other objectives expressed to us were introduced by the last modification of the Treaty; these include cohesion and environmental protection, to which interviewees referred directly. The objectives as mentioned in this paragraph form a necessary frame of reference and give the opportunity to see whether or not the actual transport policy, and any negative effects thereof, jeopardises the objectives of the Treaty.

Prosperity

Growth in transport is considered highly unlikely in regions where there is decline (as is shown in figure 17). Added to this, economic developments are often related to transport growth. Although this parallel is not invariably true, we note that in recent years transport has grown at twice the rate of the GNP.

The growth of mobility will be tremendous. Automobility will show a growth of 70% in Western Europe, 500% in Southern Europe and perhaps 1000% in Eastern Europe (see figures 18, 19, 20, 21 and 22). Intensified commercial and industrial contacts with the EFTA countries and - in the long run - also with Eastern European countries, will probably overrule

SOCIAL COSTS IN RELATION TO TRANSPORT MODALITIES (IN %)

SOCIAL COSTS	AIR	RAIL	INLAND WATERWAYS	ROAD	TOTAL
AIR POLLUTION	2	4	3	91	100
NOISE POLLUTION	26	10	0	64	100
LAND COVERAGE	1	7	1	91	100
CONSTRUCTION/ MAINTENANCE	2	37	5	56	100
ACCIDENTS/ CASUALTIES	1	1	0	98	100
TOTAL IN BILLION DM/YEAR	2	14	2	68-77	85-99

FIG. 16

SOURCE: FRAUENHOFER INSTITUTE KARLSRUHE

this predicted growth in the transport sector. The circulation of goods, people and services will increase. Economic growth will go hand in hand with growth of mobility.

The EC attitude towards this growth is not based - as has been said innumerable times in our consultations - on the full acceptance of growth as point of departure in policy making procedures; people are more worried about an attitude which would tend to restrict that economic growth and mobility artificially. Freedom of mobility is seen as a basic right, but the negative effects of growth and mobility should be avoided. We urgently need to solve the imminent problems of congestion, lack of accessibility, environmental damage, (lack of) road safety etc.

This is precisely our dilemma; at the same time as being the point of departure, growth must not create constraints which endanger our welfare, prosperity and standard of living.
For this reason we must have the courage to give the Community a new transport policy, based on new, if need be unorthodox thinking. And we must do so without delay.

Accessibility
Access to-and-from urban areas and economic centres has become clogged. The principle of unhindered accessibility appears to be a dead letter, notably in and around major (sub)urban concentrations. Traffic congestion frustrates the proper functioning of the various forms of transport and, above all, the daily business of every European citizen and entrepreneur. The costs of this frustration can only be estimated. Mobility is further on the increase and adjustment of the infrastructure is slowing down. We risk clogging the arteries of the overall EC transport system, in the short or medium-term.

Vast sums of money are being wasted daily in the congested areas. This represents an unacceptable burden on the budgets of the Member States and of the European Community itself. Hence, there is no avoiding action/measures at EC level; and Community competence in this respect may not be allowed to create ineffective management. Therefore, as many interviewees stressed, vital EC action can only occur with strict observance of the subsidiarity principle.

Cohesion
Another aspect of accessibility is the lack of sufficient infrastructure on the periphery of the Community. The resulting bottle neck and average 5% higher transport costs are regarded as a serious constraint by companies operating in these regions. Inter-regional cohesion has become a main objective of the Treaty. GNP growth in inner central regions is almost twice that in the outer periphery. A more equal share in welfare and prosperity greatly depends on the state of accessibility and mobility. Some people rate transport high as a means of attaining the objective of cohesion. Others have serious doubts on using this instrument to improve the infrastructure of peripheral regions. As well as being uncertain of its effect on the accessibility, they also warn of the potential negative

impact on the aim of an integrated transport policy. Whatever the case, transport can play a vital role in the opening up and development of peripheral regions.

Safety

Transport safety, especially on roads, railways and in the air, was dealt with in detail during consultations, with frequent mention of high road casualties figures (see figure 23).

There are three basic aspects of safety:

- traffic; traffic flows should proceed according to meaningful rules on speed limits, alcohol use, vehicle requirements etc.;
- hazardous loads; a complex subject in its own right and deserving special attention;
- crime; notably prevention of car theft, assaults/robberies on trains and railway stations etc.

The road infrastructure used to be unsuitable for modern vehicles. It has gradually been improved via construction of motorways designed to meet the demands of such traffic, whilst guaranteeing a certain level of safety. However, older urban and rural networks still lag behind, and without substantial investment it is difficult to upgrade them to the necessary safety level.

On the railways, safety is integrated right from the design stage of the entire range of operating equipment. The same applies for aviation. The logical conclusion is that the same legislative rigidity on safety criteria should be applied to the road transport sector.

And, more generally, a set of stringent standards are necessary for all the three levels of traffic and transport safety as a prerequisite to quality. At the same time we should promote safety by a fundamental change in attitude by both transporters and users.

Fair competition

We collected a vast amount of criticism on the subject of market economy and subsidies; criticism in the sense that protective measures by Member States have completely ruled out the proper functioning of the market mechanism in transport. Once again, it would be going way beyond the parameters of PART II to elaborate on the various aspects. Hence, we shall confine ourselves to the most crucial statements gathered during consultations. A defective market mechanism is seen as a chief culprit preventing the proper functioning of the transport market. We have to solve this situation within the EC, with particular respect to 1992. A true market economy has eluded the transport sector ever since 1957. The causes are systematic and traditional. We must summon up the resolve and courage to overcome them. We still grant state-monopolies, subsidies and tariff restrictions although we know that they mean a steady rigging of the transport system. We pay a high price for this - depriving ourselves of the benefits of fair competition and cooperation between the modes of transport. We have lost sight of the principle of comparative advantage. The resulting gradual decrease of quality of the transport market as a whole was taken for granted.

Also from the viewpoint of fair competition, market conditions are still distorted by rules on time spent behind the wheel and resting. This is especially so when criteria are not adequately laid down in Community legislation, including minimum standards for control and law enforcement. As is well known, the result is that rules such as these are regularly flouted, and legal sanctions vary between Member-States. This lack of cohesion is also prevalent as regards other modes of transport.

Measures are therefore required in all modes of transport. Social legislation should be further approximated for each mode of transport. The system of subsidising freight and passenger transport conform to market principles; the only exceptions to be subsidising at source. Moreover, all forms of subsidy or restriction on tariffs should be abolished. Tariff cartels in the different modes of transport should be abolished. The traditional competition rules of the Treaty should be applied to the fullest extent possible and, if necessary, adapted to new forms of cooperation developed - and to be further developed - as a consequence of the deregulated and liberalised market. Furthermore, the market should be transparent both for the transporter and the transport user. Among other things this means that:

- tariffs are calculated in a fair relation to various costs components in the total transport product;
- all available transport services, tariffs and charges are made clear to the user, on demand and without exception.

A proper functioning of the market based on fair and open competition will certainly bring about a new balance in the modal-split. This is sure to cause some confusion in the market. Hence, under application of competition rules, as mentioned above, special legislation will be needed to guarantee a period of grace, allowing the transport sector time to adapt to the new legislative regime.

Institutional, legal and organisational problems

Most interviewees stressed the necessity of a sound basis for policy making. A well-oiled decision making apparatus is a prerequisite for sound policy making. Any transport policy ignoring the institutional, legal and organisational aspects, development of which would be highly defective. With this in mind, the report now summarises the concerns expressed by the interviewees.

Decision making

Many of those consulted hold the view that development of an EC transport policy has been hampered by the policy makers themselves. The EC has lacked any long-term integrated, coherent planning or policy on transport since 1957. Transport policy such as it is cannot cope adequately with a whole range of issues which are fundamentally different from those in the late fifties - issues which now threaten a serious crisis in the transport market.

PROSPECTS FOR ECONOMIC GROWTH

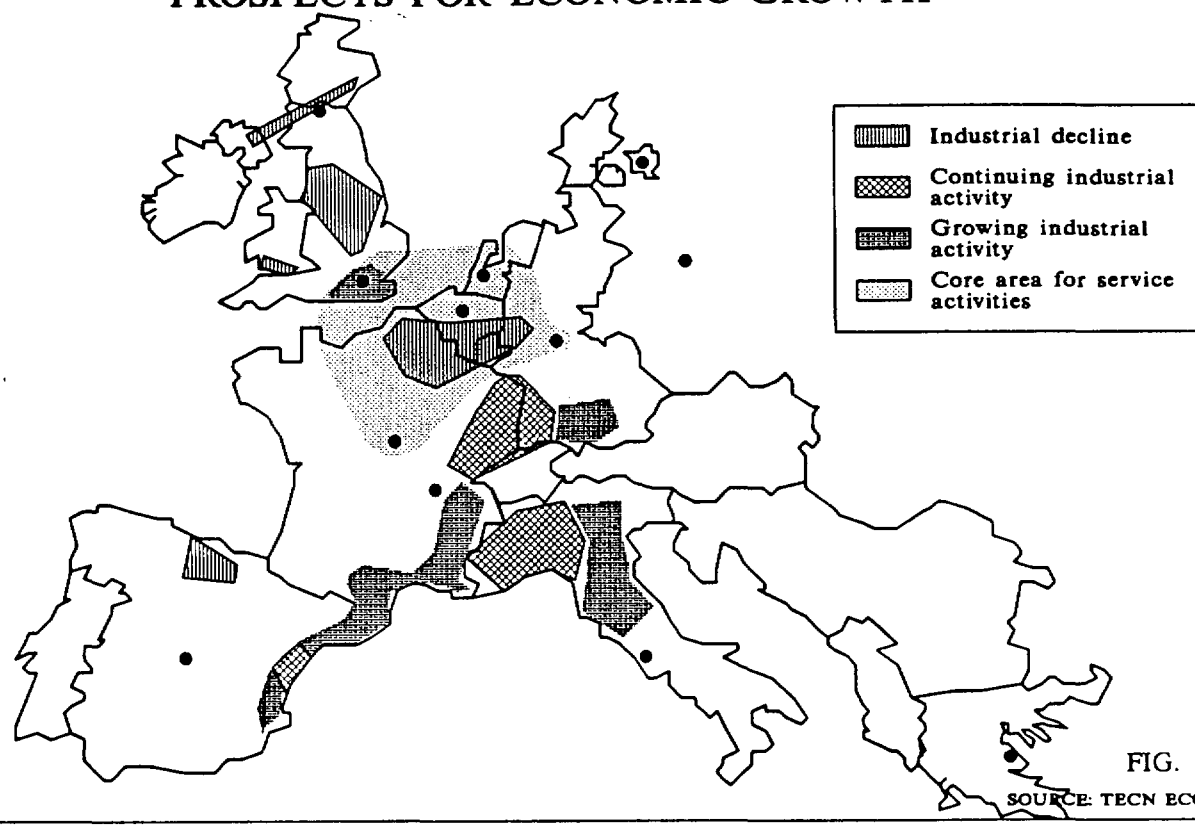


FIG. 17

SOURCE: TECN ECON

FORECAST OF THE DEVELOPMENT OF TOTAL FREIGHT TRANSPORT IN EUROPE

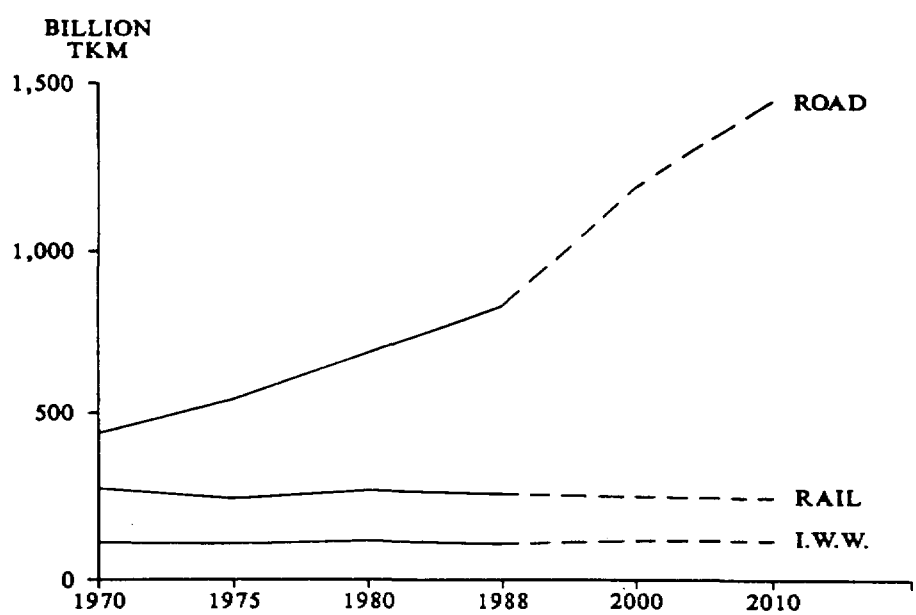


FIG. 18

SOURCE: ECMT/C&L

According to the Treaty of Rome, common transport policy should have been implemented by the end of 1969, i.e before the transition period ended. The Council of European Ministers for Transport failed in this. In the meantime, the European Court of Justice has stressed that the main principles of the Treaty - such as non-discrimination, free circulation of goods and persons, fair competition - are fully applicable both to inland transport and sea and air transport. Even so, these judgments have done little to accelerate the process of decision-making within the Community.

Almost fifteen years after the end of the transition period, the Court of Justice issued its celebrated ruling of 22nd May 1985 (case 13/83; Parliament vs. Council). This said that neither the Council nor any other party involved had been able to give a clear outlook on common transport policy. And, in the opinion of many respondents, this has been the case ever since. They state that there is no coherent policy whatsoever, and that this is due to institutional, legal and organisational shortcomings.

The Single Act will only give a partial answer to the transport problems which will continue to face us after 1st January 1993. This modification of the Treaty is not more than a new impulse to come closer to the concept of the common market - including a common transport market- but it is definitely not the answer to the threat of an imminent crisis. The first action required is a decision on all the issues mentioned in the Commission's 1985 White Paper, and on all further proposals for liberalisation and harmonisation of the transport market which are in line with the concept of the Single Market.

No matter how great the backlog of decisions to be taken by end 1992, i.e. within the time schedule of the Single Market, a coherent transport policy must still be established without delay in order to cope with the present situation and the all-too-clear crisis on the horizon. The Council or any other Community institution should take the immediate initiative on this. The interviewees are of the opinion that the Council is not the only party to blame for the poor record on policy making. The Commission itself fails to demonstrate enough discipline within the scope of its tasks and objectives as stipulated by the Treaty. Rules and principles are not always applied to the fullest extent possible, due to - for example - differences of opinion between the Commission's services on important issues; these include applicability of the competition rules (articles 85 and 86), and the legal basis for the development of transport policy with third countries (articles 75 jo. 84 vs. article 113). As long as such differences remain unresolved, the Commission's proposals for new legislation remain basically defective in that respect.

Furthermore, it should be noted that there have been striking examples in the recent past, when the European Parliament has not been consulted, whereas transport issues were clearly at stake in the pertinent drafts for legislation. We understood that there is no standard rule on Parliament being consulted under the 'cooperation procedure'. And so, as long as this remains the case, Parliament can be overlooked whenever transport issues are dealt with directly or indirectly. The same applies should the Parliament wish to amend proposals for legislation. The Council can easily over-

GROWTH IN WORLD AIR PASSENGER TRAFFIC
BILLIONS OF PASSENGERS - KILOMETRES

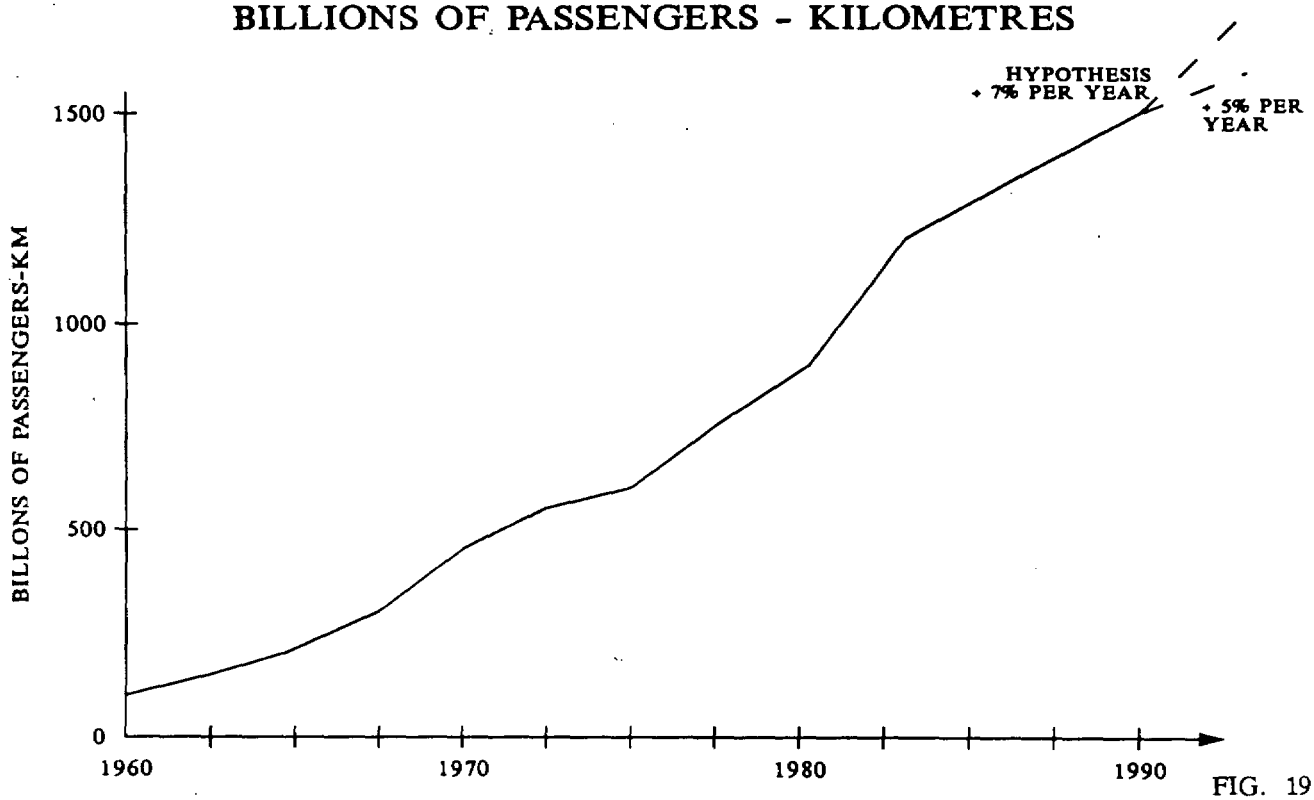
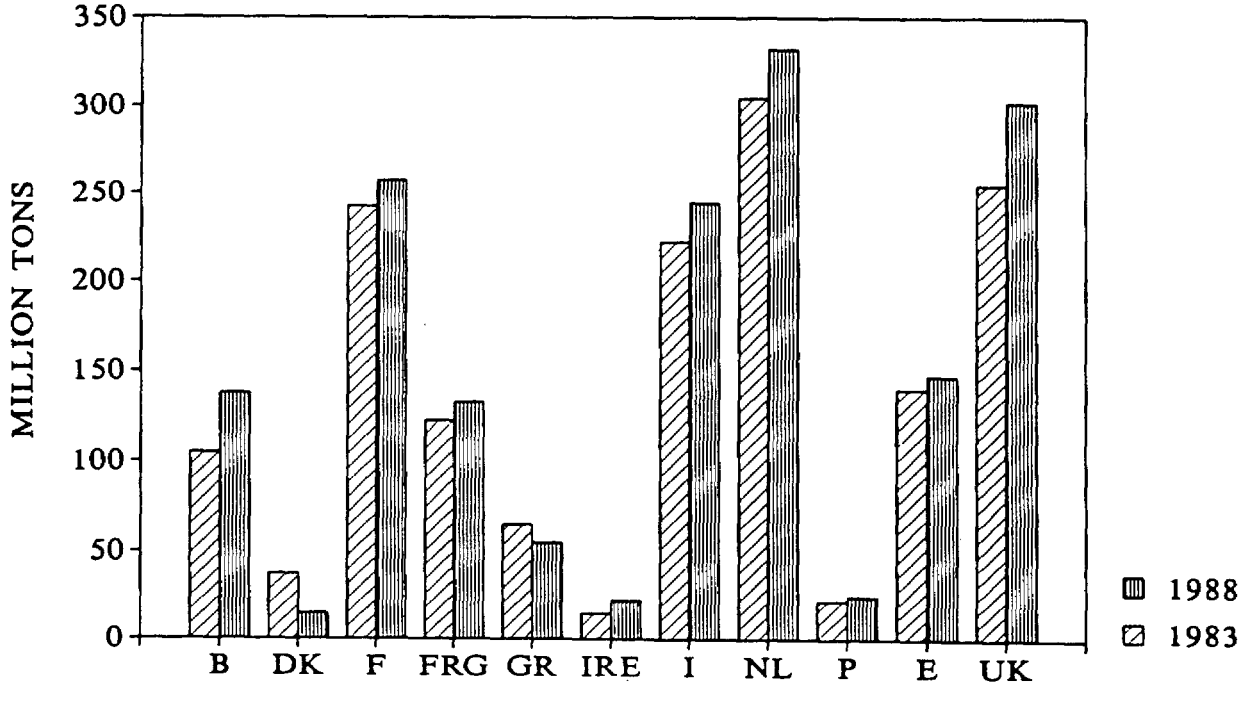


FIG. 19

SOURCE: ICAO

GROWTH IN INTERNATIONAL MARITIME TRAFFIC GOODS LOADED AND UNLOADED AT SEAPORTS IN 1983 AND 1988



AVERAGE GROWTH PER ANNUM IS 2,5%

FIG.20

SOURCE: EC 8/90

ride Parliament. Hence, a reinforced role of Parliament should be laid down in the Treaty.

Futhermore, as previously stated, there has been an obvious lack of proper EC legislation to fill the gap between the general and specific rules on transport (competition rules, environmental protection, external competence etc.). Some people consulted are of the opinion that the transport chapter of the 1957 Treaty offers an inadequate base. Basic rules and principles are needed to meet the present circumstances and demands for a new transport policy. There is a need to modify the Treaty, notably in the field of the voting procedures (ending of the majority rule on fiscal and social matters), exceptions to the competition rules, infrastructure, safety, etc. Others are of the opinion that the present chapter provides a sufficient legal basis for decision making. In their opinion a modification of the Treaty is unnecessary. However, notwithstanding these opinions, a deregulated market means an overall need for a proper legal basis, especially for environmental protection and new competition rules. A modification in this sense will give sufficient minimum legal basis to decide upon a coherent policy.

Subsidiarity
What we heard in consultations made clear that the principle of subsidiarity is not fully applied. It should be used to the fullest extent possible. Even so, there are matters which can only be dealt with on EC level. For example the planning of European transport main axes. It has been understood from the interviewees that this principle will soon be defined and inserted in the Treaty. Subsidiarity is an all pervasive principle that should be applied and clarified each time a decision is made in Brussels.

Organisation
From an organisational point of view we received statements that in the arena of competition between the Services of the Commission, the Directorate-General VII plays a very weak role. It is said to have a considerable lack of expert personnel and other resources necessary to design and develop a long-term transport policy and to maintain fruitful cooperation with other DG's.
The preparatory legislative work is highly politicised at the level of the working groups; national interests prevail and discussions reflect almost exactly the opinions within the Council. Contributions by the parties directly concerned are not always integrated to the fullest extent possible. Pressure or lobby groups are exert differing influences and do not contribute to the balance of interests. The whole legislative procedure should be of a more open and democratic character. This also means that more attention should be paid to the principle of subsidiarity. As a standard rule, each time EC legislation is decided upon, the consequences of subsidiarity should be consciously taken into account.

Also in the relation to other, often older organisations (e.g. ICAO, ECAC, IMO, CCR, ECE, ECMT), the EC should play a more active role in the field of transport. It has been made perfectly clear in our consultations that there is still the danger of overlap in activities or legislation. Syner-

FORECASTS FOR FLOWS OF GOODS FROM AND TO FORMER GDR AND COMECON COUNTRIES

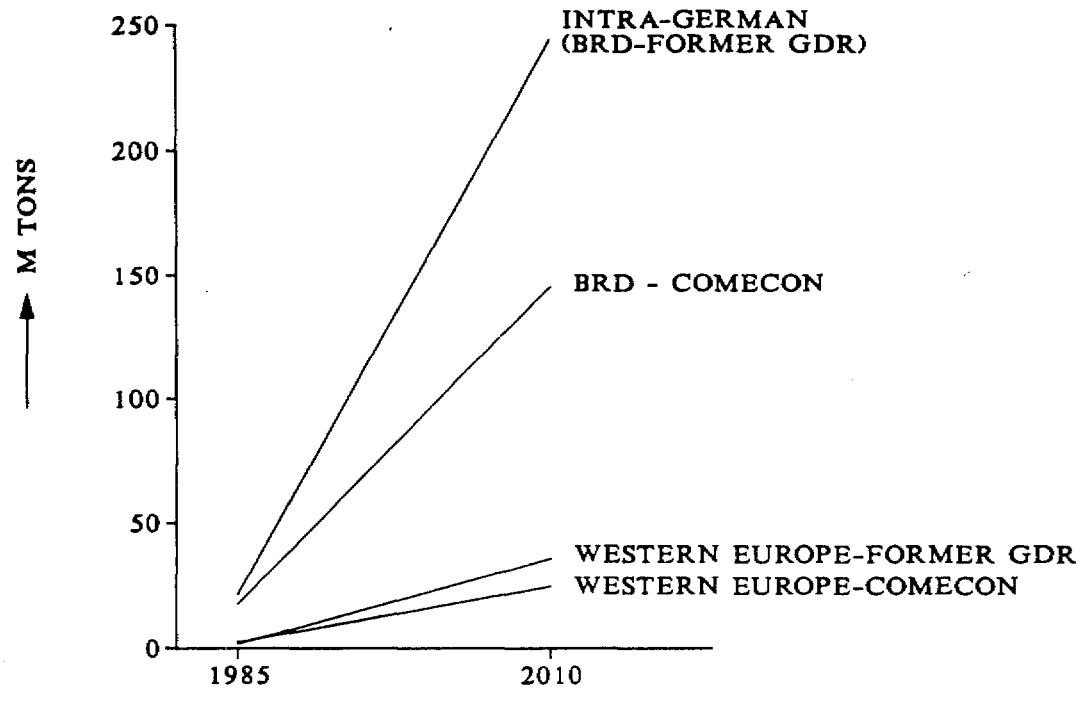


FIG. 21

SOURCE: INTERVIEWS BUNDESMINISTERIUM FUER VERKEHR, BONN

FREIGHT TRANSPORT
19 ECMT COUNTRIES

DOMESTIC + INTERNATIONAL, IN BILLION TKM

	1970	1975	1980	1988	2000	2010	Modal split %	Growth till 2010
Railways	274	244	269	257	251	247	14%	-4%
Road	439	543	687	830	1189	1442	79%	74%
Inland w.w.	113	108	118	109	117	118	7%	8%
TOTAL	826	895	1074	1196	1557	1807		51%

(Modal split and growth based on 1990)

FIG. 22

SOURCE: ECMT

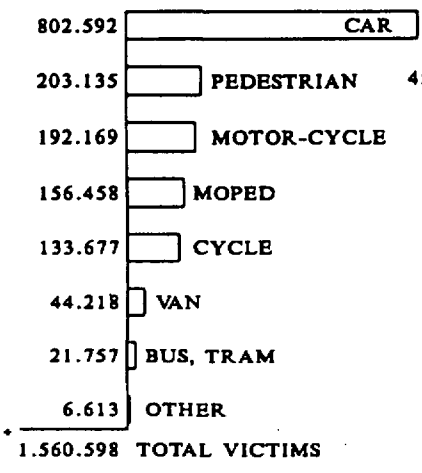
gy should be the key word so that undue competition and waste of energy can be diminished between these organisations as much as possible. Relations could be more fruitful if they are transparent and based on a clear repartition of competence and working field. The European Commission should take the initiative to build up a network of cooperation with these organisations. And last but not least the external competence of the Commission and the Council, and the position of DG VII in that respect, must be clarified, notably within the framework of the principle of subsidiarity.

Law enforcement

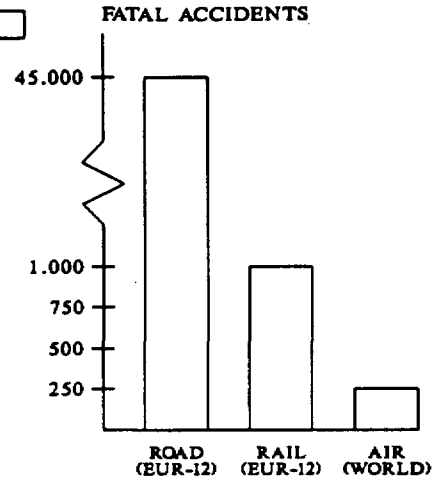
Transport rules are not properly upheld. This also goes for competition and environmental rules that are applicable in the transport sector. There are too many differences in law enforcement techniques and standards in the Member States. For example in some states low fines are imposed for the infringement of driving and rest hours by road hauliers whereas other Member States for the same infringements merit high fines or even jail. Given sharp competetion in the transport sector, this can easily lead to distortion of the market.

Our interviewees deeply regret the lack of attention given to this delicate subject, especially where law enforcement of environmental and competition rules are concerned. The more the common market integrates, the more undue competition will become a genuine hindrance for the transport sector. Law enforcement has always belonged to the competence of Member States. However, looking to the further development of the internal market and an increase of competition that can be expected, and, without touching upon the traditional jurisdiction of the national authorities, a fundamental change in attitude in the Community towards law enforcement has to be realised. This requires the most urgent consideration.

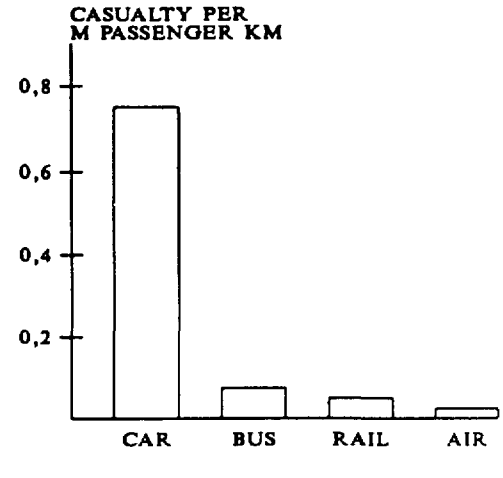
SAFETY AND TRANSPORT



A TRAFFIC CASUALTIES BY MEANS OF TRANSPORT IN EUR-12 (1982)



B DEATHS IN TRANSPORT (1986)



C ACCIDENTS IN TRAFFIC OF PERSONS (BRD-1988)

FIG. 23

SOURCE: A: EUROSTAT '83, B: EUROSTAT ('88), IATA ('90), C: LUFTHANSA ('89)

ANNEX 1

THE GROUP TRANSPORT 2000 PLUS

Mr Edgard Pisani (co-chair)
former Member of the European Commission

Mrs Neelie Smit-Kroes (co-chair)
former Minister of Transport in the Netherlands

Mr Ernesto Stagni
former Professor at the University of Bologna

Mr Horst Seefeld
former Chairman of the committee on Transport and Tourism of the European Parliament

Mr Nils Wilhjelm
Former Minister of Industry in Denmark

Professor Sir Christopher Foster
Advisor to British Telecom

Mr Eduardo Peña
General Director of Transport of the European Commission

ANNEX 2

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Air Transport Association of America (ATA)	Wash'ton D.C., USA
Mr K. Aiura Chairman Mitsui O.S.K. Lines Ltd.	Tokyo, Japan
Prof. Y. Akatsuka University of Tokyo	Tokyo, Japan
Mr Allemann Hupac S.A.	Chiasso, Switzerland
Mr J.L. Alonso CAT España / Renault	Madrid, Spain
Mr R. Altissimo Secretary of the Italian Liberal Party	Rome, Italy
Mr R. Amaral Chairman Committee on Transport and Tourism European Parliament	Oporto, Portugal
Mr G. Andesson Minister for Transport and Communications	Stockholm, Sweden
Mr J. Appleby Department of Transport	Dublin, Ireland
BEUC Bureau Europeenne des Unions de Consommateur	Brussels, Belgium
Mr M. Bailey Editor Travel Business Analyst	Hong Kong
Mr H. de Bailliencourt Conseiller transport international	Rouen, France

Mr J.V. Baptista — Lisbon, Portugal
Vice-president Sonae Investimentos
Former Minister for Transport

Prof. S. Barret — Dublin, Ireland
Professor Economy of Transport, Trinity College

Dr U. Bauermeister — Hamburg, Germany
Regierungsdirektor für Hafen, Schiffart und Verkehr

Mr R. Beger — Brussels, Belgium
Secr.-general Comité de Liaison de la Constr. Autom.

Mr M. Berlioz — Paris, France
French National Railway Corporation (SNCF)

Mr R. den Besten — Schiphol, The Netherlands
Director Amsterdam Schiphol Airport

Mr F. Biancheri — Paris, France
Prometheus Europe

Mr M. Bishop — Derby, Great Britain
Chairman Airlines of Britain Ltd

Mr G. Bisignani — Rome, Italy
Managing Director Alitalia

Mr A. H. Bleijenberg — Delft, The Netherlands
President European Fedederation for Transport and Environment

Mr M. Booth — London, Great Britain
Director of Airport Strategy

Prof. Bonnafous — Lyon, France
University of Lyon

Mr P. Borgeaud — Zurich, Switzerland
President VORORT Swiss Fedederation of Commerce and Industry

Mr Borgia — Italy
Planning Director Italian Highways

Prof. Borlenghi — Turin, Italy
Professor of Economic Geography, University of Turin

Mr J. Bouley — Paris, France
General Secretary of the International Railway Union

Mr J. Bourdillon — Paris La Défense, France
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Mr B.K. Burns Divisional Managing Director Exel Logistics	Bedford, Great Britain
Mr C. Carsten Stiftung Warentest	Berlin, Germany
Mr R. Casamayor Journalist 'El Pais'	Madrid, Spain
Prof. F.A. Castro Instituto Superior Tecnico	Lisbon, Portugal
Mr Stig Christensen Ministry of Finance	Copenhagen, Denmark
Mr K.E. Christesen Chairman Foreningen af Danske Eksportvognmaend	Padborg, Denmark
Mr J.M. Cleere Honorary Secretary Irish Port Authorities Association	Dublin, Ireland
Mr W.C.E.H. de Clercq Member of the European Parliament, Minister of State	Gent, Belgium
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Mr J. Costet President-Director French National Railway Corporation (SNCF)	Paris, France
Prof. H. de Croo Member of the European Parliament, former Minister	Brakel, Belgium
Mr A. Dedithakis Former Minister of Shipping	Piraeus, Greece

Department of Transport	Washington D.C., USA
Sir Andrew Derbyshire President RMJM	London, Great Britain
Mr H.M.M. Dietz Member of the Board of DAF lorries	Eindhoven, The Netherlands
Mr T. Dilling Director Maersk Group	Copenhagen, Denmark
Mr C. Dini President Metropolitana Milano	Milan, Italy
Prof. G. Dioguardi University of Bari	Bari, Italy
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