EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT

VOLUME I

26th Annual Report-1979

TRANSPORT AND THE ACTIVITY OF THE CONFERENCE

ECMT

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The European Conference of Ministers of Transport (ECMT) was instituted by a Protocol signed at Brussels on 17th October 1953. It comprises the Ministers of Transport of the following 19 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom and Yugoslavia (associated countries: Australia, Canada, Japan, United States).

The purposes of the ECMT are:

- *to take whatever measures may be necessary to achieve, at general or regional level, the maximum use and most rational development of European inland transport of international importance;*
- *to co-ordinate and promote the activities of International Organisations concerned with European inland transport (rail, road, navigable ways), taking into account the work of supranational authorities in this field.*

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GENERAL ACTIVITY

TWENTY-SIXTH ANNUAL REPORT OF THE ECMT

[CM(80)4]

Chapter I

STRUCTURES AND PROCEEDINGS OF THE CONFERENCE

The year 1979 saw the Conference in process of giving practical effect to the Resolution adopted at the 47th Session of the Council of Ministers on 31st May and 1st June, 1978 in Brussels, calling for the reorganisation of the ECMT's activities and working structures.

As pointed out in the previous annual report, this reform has changed the ways in which problems are tackled and, as the Ministers wished, has also meant that major policy issues are dealt with from the most practical angle possible.

The different sections of this report describe progress made in these two main aspects of the reform.

1. The proceedings of the Conference:

The Council of Ministers held two sessions in 1979: the first (49th Session) in Belgrade on 30th and 31st May, and the second (50th Session) in Paris on 23rd November.

The **Officers of the Council** in 1979 were the Yugoslav Minister, President of his country's Federal Transport and Communications Committee (Chairman), the Minister of Transport of the Federal Republic of Germany (First Vice-Chairman) and the Minister of Communications of Finland (Second Vice-Chairman).

The **Committee of Deputies** held seven sessions: 11th January, 10th and 11th April, 29th May, 21st June, 23rd and 24th October, 22nd November, 17th and 18th December.

The session of 21st June was held in Hamburg at the same time as the "IVA 1979" International Exhibition which was of the greatest interest to the ECMT. The reason why seven sessions were held in 1979 instead of the usual six was simply that the Conference wished to hold the Autumn Session of the Council of Ministers at an earlier date than in previous years so as to make it easier to organise the work and schedule the Conference's activities during the first half of the following year.

By and large, the sessions of the Committee of Deputies were longer than before because one of the main objectives of the structural reform was to ensure that the Committee should fully exercise the role assigned to it under the Conference's Protocol.

The **Steering Committee**, comprising the Delegations for Belgium, Yugoslavia, Germany, Finland, Austria and Denmark, met four times in 1979. The United States Delegation also took part in the Committee's work as representative of the Associate Members.

This new ECMT unit held its meetings either immediately after the sessions of the Council of Ministers or just prior to the two main sessions held by the Committee of Deputies for the purpose of making thorough preparations for the Ministerial discussions.

The arrangement of the meetings in this way enables the Committee to perform its role which involves, in particular, submitting proposals to the Committee of Deputies for action on decisions taken by the Ministers with respect to the development of ECMT activities and assessing whether the work done by the various units and working groups is consistent with the tasks specifically assigned to them and, more generally, with the implementation of the Organisation's programme of activities laid down by the Council of Ministers.

In accordance with its terms of reference, the Steering Committee also studied matters relating to operational conditions within the Conference and with regard to the ECMT's relations with other international organisations concerned with transport problems.

2. *ECMT structures*

As indicated in the previous annual report, the Conference has retained only three Standing Committees, preferring to tackle problems by means of the more flexible and functional procedure of using specific or ad hoc working groups which are kept in existence only as long as the particular studies last. It was also planned that consideration of some subjects could simply be assigned to a rapporteur without having to set up a working group.

The following are the three Committees retained on a permanent basis:

- the Committee for Road Traffic, Signs and Signals;
- the Road Safety Committee;
- the Economic Research Committee.

In addition to these Committees it was decided under the structural reform, as indicated in the 1978 Report, to establish a fourth standing body, namely the Urban Transport Co-ordinating Group which, restricted in membership, is not a working group in the strict sense. Its main purpose is to formulate proposals concerning the work to be pursued by the ECMT in connection with urban and regional transport with due regard to the activities of other governmental international organisations and possibly on a co-operative basis with them.

Similarly, there is one other permanent body, the so-called Annual Report Drafting Group under the Chairmanship of the Secretary-General, which is responsible for the presentation of transport statistics at the European level in the report and for identifying developments and trends in this sector and the reasons for them.

The following ad hoc groups were active during 1979:

- Combined Transport Group;
- The Group appointed to study problems relating to freight traffic in transit;
- The Group known as "Group 80" (1) appointed to study investment and trunk lines of communication in Europe which has taken a practical approach and also, under the relevant provisions of the Protocol, has set up a restricted group to investigate problems arising in connection with transalpine routes;
- The Group appointed to study investment planning methods and criteria;
- The high-speed transport group;
- The Group appointed to study trends in inland waterway fleet capacity and the market situation;
- The Group appointed to examine adjustments to the ECMT multilateral quota for international transport of goods by road;
- The Group appointed to study urban transport financing.

Aside from the activities of these groups, a single rapporteur was assigned the task of working with delegations to draw up a report for the discussion held on **transport and energy** at the Session of the Council of Ministers on 23rd November, 1979. This procedure was adopted in order to obtain the necessary material very quickly so that the discussion began by the Ministers in Belgrade on 30th and 31st May could be pursued in greater depth.

In short, the new structures and working methods have lived up to expectations insofar as the aim to align the Conference's activities on the practical aspects of the problems to be tackled is concerned.

(1) So-called because the Group's findings are to be submitted to the May 1980 Session of the Council of Ministers.

Chapter II

ECMT ACTIVITIES

Since the working structures have been geared to the problems to be tackled, the tasks of the ad hoc groups listed in the second section of Chapter I already give some idea of the Conference's centres of interest.

However, such a list gives no more than an outline of the situation with respect to the work completed or in hand during 1979. This picture needs to be filled out and a description is also required of future action planned by the ECMT.

Although the major problems specific to the various individual modes are not overlooked, the Conference generally seeks to deal with matters relating to the organisation of surface transport in Europe through an overall multimodal approach. The need for such an approach is becoming increasingly clear.

It was in this spirit that work was initiated on the problems presented by **freight transport in transit** which were examined by the Council of Ministers at its Belgrade Session. The difficulties experienced in meeting traffic requirements, particularly the serious problems that some countries may have to deal with in trying to cope with a higher volume of transit traffic, have meant that consideration must not only be given to ways of adjusting infrastructures but also to every routing possibility that may be offered in terms of the capacities of each mode.

All countries, even those having to contend with the implications for themselves, are in complete agreement that it is both desirable and necessary to ensure a smooth flow of traffic, a view that gains weight in the light of the present and prospective growth in international trade. What is also involved in a more general context is due consideration for the principles governing the free movement of goods which are, of course, recognised in international agreements.

As matters stand, however, a number of obstacles have to be overcome, notably as regards ways and means of financing the infrastructures required, contributions by users to the costs they engender, and the consideration that must be given to environmental protection and regional development.

The Ministers gave particular attention to this matter at the Council's Session in Belgrade and adopted a Resolution setting out guidelines for action and measures to be considered as a means of overcoming the difficulties and, indeed, obstacles which exist.

The chapter of this report dealing with transit problems examines developments in all aspects which merit attention and shows how the ECMT has approached them and how it proposes to deal with matters requiring further consideration.

There is indeed no simple solution to the problems involved or, at any rate, no solution that can be adopted easily, so they must continue to be given the closest attention.

Consideration of these issues of prime importance in shaping a transport policy designed to ensure a smooth flow of transit traffic will be a feature, in particular, of the current study assigned to «Group 80» on **investment and trunk lines of communication in Europe**, so that the May 1980 Session of the Council in Bonn may be provided with a basis for study both of the difficulties impeding flows of international traffic and of the steps to be taken to overcome them.

From available forecasts it can be assumed that, barring major disturbances of a political or economic nature, the overall volume of passenger and freight traffic will continue to increase in the immediate future. It is therefore necessary to ascertain how transport capacities will cater for this growth in demand, particularly as regards the extent to which the infrastructures will be able to cope with the traffic.

In short, what is involved is an extremely broad study to examine, in a very general way, every aspect of the process of tailoring infrastructures to the requirements of international traffic. The aim is to take stock of all the physical constraints and every kind of obstacle or difficulty that interferes with the routing of traffic, of the measures already in hand to remove such constraints and of what needs to be done to prepare solutions for the future.

All the options will certainly now be influenced by the present and future **energy** situation and how that affects the transport sector.

The fact that transport is an activity with two main operative inputs, i.e. labour and energy, explains the extent to which it may be affected by the situation with respect to energy sources and availability and by present and future decisions in this area.

The energy situation is in fact one of the concerns of our time that is fundamental to all the problems involved in the economic and social development of our societies both because of the international dimensions of the energy problem and because of all the factors and effects which have to be taken into account in individual national economies.

The uncertainty prevailing as regards both the general situation and the particular conditions of future supplies of oil products does not make it any easier to see what choices should be made in a general or sectoral context.

In this connection, the share of transport in the use of available energy depends on the overall policy that may be adopted in this field.

Some of the factors involved in shaping this policy are of particular importance to the future of the sector. Examples are the technological development of alternative sources of energy and their real potential and all the technological modifications to vehicles, especially cars, designed to reduce their consumption of oil-based energy. Although developments in this field cannot wholly be controlled by those responsible for transport policy, the transport sector is very directly concerned by their effects on its operational conditions.

On the other hand, steps can be taken at the latter level, to the extent that ways and means are available, by introducing a whole series of regulatory or incentive measures, with particular reference to market organisation, the utilisation of resources and modes, and traffic engineering, so as to create the right conditions for reducing energy consumption.

It is with the above considerations in mind that the ECMT Council of Ministers has kept two goals in view in tackling this question:

- to keep close watch on how the energy problem develops so as to be able to draw the right conclusions as regards transport organisation at the appropriate time;
- to act in all transport areas where energy-saving measures can be taken.

The discussions on "Energy and Transport" held at the sessions of the Council of Ministers in Belgrade and again in Paris last December by no means covered all the issues involved.

The Council therefore decided that these matters should continue to be included in the Conference's programme of work and specified, moreover, the points of which attention should be focused, as will be seen in the relevant chapter of this report.

Energy problems have provided additional justification for the very long-standing interest shown by the Conference in the promotion of **combined transport**. Moreover, the work retains the intrinsic value in its contribution to the objective of optimum utilisation of resources and transport capacities with complementarity in the use of the different modes, which should continue to be one of the objectives in mind.

Indeed, the present scope for investment, financial resources being what they are and in view of the concerns felt and reactions voiced with regard to land-use planning and environmental protection, imply that increasing attention must, in any case, be given to the potentialities of combined transport.

The Council of Ministers will be discussing this matter at its late-1980 session on the basis of a report drawn up by the Committee of Deputies in accordance with the instructions given by the Council of Ministers at its December 1978 session.

In view of the findings of the study made on the subject and set out in the 1978 Annual Report (they covered traffic between Europe and the Middle East and the relevant operating conditions and indeed transport trends relating to all countries around the Mediterranean, and also, more generally, all the changes that will affect traffic volume and routes as world economic patterns change) the terms of reference of the Combined Transport Group have been broadened to include the study of container and roll-on/roll-off transport.

This approach will enable the ECMT to take into account in its activities, without going outside its province, matters which may concern surface transport in the light of trends in **maritime transport.**

In the same spirit, i.e. to enable the ECMT to voice its views on matters which have to be taken into account in its work programme while by no means seeking to intervene in fields outside its sphere, the Conference intends to concern itself with **air transport** problems.

Here its scope for action is limited in terms of both the area in which it can act and the forms such action might take.

In the light of the above considerations the Conference plans to organise a Round Table in 1980 for researchers and representatives of the governments and organisations of firms concerned to consider the subject in an objective way with no thought of policy-making in mind. Needless to say, the European Civil Aviation Conference (ECAC), the International Union of Railways (UIC) and several organisations representing the motor industry are expected to make noteworthy contributions within the context of the study.

The procedure adopted should make it possible, on the basis of free and open discussion, to identify a number of pertinent factors for the organisation of surface transport, especially passenger transport.

This question of the share of passenger transport requirements met by the different modes was one of the subjects covered by the studies carried out a few years ago in the context of "Project 33" have already drawn comment from the various modes of transport concerned. It is also true that the situation has since changed considerably, especially as regards the shares of the different modes, so it would be advisable to take stock of how matters now stand.

While seeking to adopt a general and intermodal approach to problems, the ECMT continues to look into specific aspects or the situation of a given mode of transport.

Thus, in continuation of earlier studies in this field, it is planned to submit to the May 1980 Session of the Council of Ministers a report on **inland waterway transport** covering problems relating to trends in fleet capacity and the market situation.

The Conference also continues to be concerned with the situation of the **railways** which are still finding it very difficult to balance their operations. By and large it seems inadvisable to reopen all the "philosophical" questions of the railways' public service obligations and commercial growth since all the factors involved are now well known.

The ECMT considers it will be more useful to take stock of the situation regarding the application by the networks of weel-defined principles established or decisions taken either by the Conference itself or by other international organisations, especially the European Economic Community, and has made provision for this in its programme of work.

Apart from the questions of principle that have just been mentioned, however, there are certain specific aspects concerning the role and place of railways in the transport system that need to be examined. Although these will normally come up in the framework of the intermodal approach which the ECMT has decided to adopt, the fact remains that some of them can be covered only by a study concerned specifically and directly with the railways and the organisation of rail transport.

Thus, in 1979 the Conference again studied the problem of harmonization of railway costing procedures, a problem that is difficult to settle given the present situation of the railways in the various countries. Such harmonization is in fact bound up with the introduction of international through rates and fares, which are so important to the future competitveness of the railways, and the related problem of how revenues are to be shared among them. However, there is reason to assume that one step in the right direction would be to study specific matters having definite operational effects such as:

- the development of joint measures for marketing and sales promotion;
- the development of forms of co-operation on "partial" markets (on the lines of Interfrigo or Intercontainer).

With a view to ascertaining the most advantageous courses of action in the light of the above considerations, the Council of Ministers decided that it would look into these matters during 1980 with the help of the UIC and identify which subjects should be studied by the ECMT.

It should also be pointed out that the steps taken by the ECMT with a view to introducing **summer-time** and procedures for bringing it in all the Member countries is likewise aimed at improving the railways' operating conditions by alignment of dates with those dosen for the change of time tables.

It must also be borne in mind that, with due allowance for measures essential to the harmonization of the terms of competition, the ECMT still adheres to the principle of freedom of access to the market and does not intend to propose any deliberate intermodal traffic allocation policy.

Nevertheless, progress towards liberalisation is impeded not only because the right conditions for harmonization of access to markets are far from materialising but also because a number of factors highlighted by the transit study and the 1980 Group's present work are retarding progress, one reason being the road traffic problems, caused by the vehicles using the roads in certain countries.

In this connection, the ECMT is nonetheless continuing to try to find ways and means of raising the multilateral quotas for goods transport by road which it introduced some years ago. A number of countries are far from satisfied with the size of the quota, some feel it is too small to adequately cater for the current volumes of international road transport, whilst others do not wish to see the scheme extended further. There is also the point of view expressed by those on the perimeter of the ECMT area, that the quota allocated to them should take account of the problems of the length of hauls involved in their case.

The November 1979 Session of the Council of Ministers was unable to reach agreement on either raising the level of the quota or reallocating the number of licences.

In view of the importance of this matter and its very practical nature in the context of the ECMT's activities, it was decided that consideration of the question should be resumed at the meeting of the Council of Ministers in May 1980.

"ECMT in its work gives considerable attention, not only to transport factors, but also to requirements that transport must satisfy if it is to contribute to the harmonious development of policies designed to attain the goals of our societies, for example environmental protection and land-use planning concerns.

This concern of the Conference is particularly evident in relation to travel in urban areas, as will be seen in the chapter on **urban transport**. Many studies have been carried out in this field but we are far from finding answers to all the problems involved in the growth of urbanisation.

Concern about the energy situation has made it even more important to focus attention on the organisation of urban transport in view of the high proportion of energy consumption accounted for by the use of private cars in towns.

The Conference considers that it has a direct part to play in this field; and it intends also to contribute effectively to related work in other fora whilst seeking to avoid duplication of effort. The task of the Group set up to consider urban transport problems is precisely to chart the avenues that Conference action might take since, in any event, it cannot possibly remain an onlooker in a matter where Ministers of Transport inevitably have some degree of responsibility; and where direct local or regional responsibility is involved, international exchange of information via the Conference can help to promote solutions.

It was with the above considerations in mind that the ECMT co-operated with the OECD in organising the Seminar on Urban Transport and the Environment, held in July 1979, and to liaising especially with OCDE in its work on urban problems.

The ECMT will continue its activities on urban transport and has already identified a whole series of studies in its future programme of work. These studies essentially seek to assess and define (i) ways in which urban public transport can be tailored to the requirements of the public with due regard to costs and (ii) measures relating to traffic which will help to promote public transport. Consideration will also be given to the important matter of effectively integrating the organisation of transport into urban planning.

All these studies will be backed up by scientific research.

The chapter in this annual report dealing with **road traffic** and **road safety** also show how the ECMT has continued to take effective action in all the relevant fields, since this is an area in which the work done by the Conference has produced particularly positive results, but in which sustained effort remains necessary.

The provisions already laid down in the International Conventions on Road Traffic Signs and Signals will need to be supplemented and improved in the light of experience and the effects of trends in the volume and characteristics of traffic.

There are still some accident situations in which the factors involved have by no means been fully determined as in the case of accidents at night or in poor visibility. The influence of alcohol or drugs on driver behaviour also needs to be investigated in greater depth. The increased use of certain types of vehicle, such as high-powered two-wheel vehicles, requires that the effects be studied from the road safety angle.

As already indicated in the previous annual report, road safety problems concerning children and young people were on the agenda for both sessions of the Council of Ministers in 1979, essentially to enable the Conference to add its voice to the arguments that had prompted the United Nations to declare 1979 the "International Year of the Child".

The action taken by the Conference in this connection is described in the chapter dealing with road safety.

From a more general angle, however, as already pointed out in the previous annual report, it seems that the promotion of road safety now essentially depends on what is done – and how well it succeeds – by way of instructing and training road users, making them aware of the dangers and helping them behave safety on the roads.

The ECMT accordingly attaches particular importance to the new joint conference whose organisation in co-operation with the Council of Europe for late 1980 now seems feasible.

It should also be added that this change of approach as regards objectives and working methods has concerned not only ECMT activities involved directly in preparing the Ministers' decisions but also, as will later be seen, the "Research" sector in which activities are made to relate very specifically to matters of transport policy.

In short, the aim of the Conference is to be alive to contemporary problems and the reform of its working structures should ensure that it will always be in phase with these problems and will tackle them in good time.

Chapter III

EXTERNAL RELATIONS

As already apparent from the two previous chapters, the ECMT's policy of action is conceived with two considerations in mind:

- the first relates to the work it does on defining policy orientations and ways and means of putting those policies into practice;
- the second is the concern to organise its activities in the light of those of both intergovernmental and non-governmental organisations which deal with similar subjects and whose work runs parallel to or supplements its own.

It can easily be seen from the work programmes of other international organisations concerned with surface transport in Europe and from the studies carried out by them that all the inter-governmental organisations are working along very similar lines. The non-governmental organisations keep a very close watch on the work done by these organisations, try to throw some light on the problems they have to deal with and support them in activities that, to them, seem to be moving in the right direction.

Under the terms of its Protocol, the ECMT is required to play a co-ordinating role among the various intergovernmental bodies with respect to the organisation of surface transport in Europe.

This function has not been easy to perform since it is difficult to interfere in the activities of organisations which, in the light of their objectives, have progressively developed their action in the transport field on the basis of the responsibilities they believe to be theirs. By definition, each organisation is independent in its prerogatives and in defining its role. It is difficult to limit any organisation's scope for action since each has a geographical area of activity and its own institutionalised legal personality and powers.

Indeed, if it is to fill the role falling to it by virtue of its Protocol, the ECMT's essential purpose should be to act as a stimulator of and contributor to the work of "sister" organisations.

Its function as a stimulator has been excercised on many occasions and the record is there for all to see. In transmitting the results of its work to other organisations, often to be further developed by them, the Conference has also done much to draw attention to problems and to further the implementation of positive decisions.

Institutional relations with the European Economic Community and its Commission, giving this institution direct access to meetings of the ECMT Council of Ministers and Committee of Deputies, were established in 1975. In 1979 the ECMT acquired the status of observer at meetings of the Economic Commission for Europe. And as a result of the changes made in the organisation and working structures of the ECMT, the two above-mentioned organisations – and others too – now have every opportunity to be associated with its work.

In short, it is one of the aims of the ECMT to seek all possible means of establishing constructive relations with international organisations, with a view to mutual benefit.

Under the heading of these special relations established by the ECMT with international organisations falls the hearing that the **Council of Europe** is kind enough to give to the Conference's work. Thus, in accordance with established twoyearly practice, Mr. Zelic, Minister of Transport of the FSR of Yugoslavia, acting in his capacity as Chairman of the ECMT, has reported to the Parliamentary Assembly of the Council of Europe on the activities of the Conference for the years 1977 and 1978.

The results of this hearing were submitted to the ECMT Council of Ministers at its session on 23rd November, 1979. The Council took particular note of the terms of the Resolution adopted in this connection by the Assembly which will be taken into account in the Conference's further work.

The preceding chapters have shown that the ECMT has already complied with the wishes expressed by the Assembly, as illustrated in particular by its co-operation with the European Civil Aviation Conference (ECAC) with a view to examining the effects of trends in the organisation of air transport on surface transport operations.

Similarly, the Conference has responded to the Assembly's concerns with regard to trunk communications in Europe and the aspects of their organisation relevant to regional planning. This has already been pointed out where reference is made to the study by the 1980 Group whose work has included, in particular, an examination of the Council of Europe Report 4096.

The Conference did not have occasion this year to participate in the work of the **Conference of European Ministers responsible for Regional Planning** (CEMAT) which did not meet in 1979. However, the ECMT Secretariat did not fail to keep informed of developments at the meetings held by the CEMAT's Committee of Senior Officials to prepare its new Conference in 1980. The ECMT is also prepared to organise a further joint Seminar with the CEMAT on transport and regional planning like that held in 1977. This Seminar might focus on matters of concern to the two Organisations with respect to the development of European transport arteries and their possible effects on regional planning.

The ECMT is also prepared to take part in the **European Conference of Ministers responsible for Local and Regional Authorities** when this body holds a further meeting.

Stress should also be laid on the way co-ordinated activities have been organised with the OECD, as illustrated by the above-mentioned Seminar on Urban Transport and the Environment, the point being that the two Organisations are both interested in the environment, road safety and urban transport.

Two other fields in which the two Organisations need to maintain working relations are the maritime transport aspects of the ECMT's work on combined transport, and the transport implications of energy problems.

It was in this spirit of co-operation, moreover, that the Director of the OECD's "Interfutures" project delivered an introductory address at the ECMT's Eighth International Symposium, which was held in Istanbul from 24th to 28th September, 1979. The presentation of those aspects of this study which relate to transport was wholly consistent with the main lines of the topics discussed at the Symposium under the general heading "Transport and the challenge of structural change".

Contacts between the Secretariats and the activities of the ECMT and the OECD Liaison Committees have provided, and will continue to provide, a broad basis for establishing positive linkages in terms of the two Organisation's respective objectives which, in the last analysis, are the same.

The above-mentioned Organisations are not the only ones with whom the ECMT maintains close relations. Others include the Central Commission for Navigation of the Rhine (CCNR), the European Civil Aviation Conference (ECAC) and the Institute of Air Transport (IAT) (of which incidentally it is a member). It also takes due heed of the views of non-governmental organisations representing transport operators, workers and users. In accordance with the usual practice, these organisations were invited to stake their opinions on the activities of the Conference to the Officers of the Council of Ministers on 22nd November, 1979, i.e. the day before the Council meeting.

This hearing at the highest policy-making level is particularly important, since it ensures that the views expressed by the non-governmental organisations reach all the Conference's working bodies where they can be turned to account. In this connection, the ECMT would like to lay particular stress on the support it has always received from **"Prévention Routière Internationale"** in carrying out its activities.

Neither has the Conference refused to hear the views of the non-governmental organisations when reports are being prepared for submission to the Council of Ministers. This has already been done on a number of occasions but it needs to be further developed.

One way of summing up the approach taken by the ECMT in organising its external relations might possibly be to say that the Conference, whilst hearing in mind its attributions and the means at its disposal, is eager to make whatever contribution it can and is open to any suggestions which might be forthcoming.

What is important is not to seek at all costs to define the fields of action specific to each Organisation but to ensure that the combined effort results from the reciprocal assessment of the contribution that each can make towards the achievement of joint objectives.

Part II

ECMT ACTIVITIES IN PARTICULAR FIELDS

Chapter I

ORGANISATION OF TRANSPORT

1. Transit problems

The reasons why the Council of Ministers chose problems connected with freight transport in transit as the topic for general discussion at its Belgrade Session were given in the 25th Annual Report. This report also set out the terms of reference of the ad hoc Group specifically appointed to prepare this discussion and described the way it went about fulfilling its mandate.

Keeping to the schedule laid down, the Group submitted its well-documented report, supporting Annexes and a draft Resolution to the Ministers' Spring 1979 Session. The introduction to the report first sketches in the background to the problem and draws attention to its multilateral character which is directly attributable to the fact that any single transit journey involves at least three countries, i.e. the countries of origin, transit and destination. The report subsequently shows, moreover, how the basic pattern of geographical positions can, in the case of international freight transport, give rise to what sometimes amounts to very divergent interests.

It then examines the concept of "transit" from various angles (customs regulations, foreign trade, transport economics, etc.) and defines the term for the purpose of the study in hand. In order to get a clearer picture of the volume, trends and structure of transit traffic, more particularly in the context of international trade, the Group collected a series of factual data which are also set out and analysed in the report.

Then, taking up the essential points in its terms of reference, the Group examined the present situation and relevant problems as regards transit traffic. Generally speaking, it can be said that these problems affect the rail and inland waterway sectors to a lesser extent since network capacities for these two modes are on the whole quite adequate. On the other hand, it is common knowledge that the road transport sector experiences a number of major difficulties largely attributable to what are, on the face of it, two divergent sets of interests, i.e. those of the countries of origin and destination which are trading together and, in principle, decide on the mode of transport, and those of the transit countries which suffer all the consequences of the use – if not congestion – of their infrastructure, traffic hazards and environmental disamenities. It is largely as a result of these negative factors that a number of countries have found it advisable to impose restrictions on transit traffic by road in the form of quotas and licences.

However, in addition to these quota systems, some countries levy charges on transit traffic. Such charges are either specific to this traffic or apply to all road traffic in the country in question under general tax regulations. The object of the charges is partly to ensure that the traffic bears both the costs of infrastructural wear and tear and the external costs entailed by the movement of vehicles.

The last section of the report examines ways of alleviating current problems and seeks to map out a solution based on multilateral co-operation among the European countries, pointing out that such co-operation should be in the framework of a joint transport policy aimed at meeting both economic and trade requirements by taking account of all possibilities offered by the various transport modes and techniques.

The report accordingly concludes that the long-term solution to transit problems is to be found in the context of a general transport policy which should essentially be shaped and implemented on the following basis:

- compliance with the principle of users' freedom of choice and of open competition among modes in the light of cost and quality of service offered and in a context precluding all factors distorting access to the market;

– an equitable allocation of the costs involved in the use of infrastructures among the different modes of transport, based as far as possible on common rules and principles applicable throughout Europe;

– compliance with the principle that there be no discrimination among international carriers on the basis of nationality or between international and national carriers;

– optimum use of available capacities and, by way of a multimodal approach, full utilisation of the possibilities offered by combined transport;

– due regard for energy conservation and environmental protection constraints.

The report also considers a series of short-term economic or technical measures, but Member countries could reach no consensus on their value or possible application owing to the fact that the effects of such measures would differ considerably according to the situation to which they would apply in the various countries.

The Resolution adopted by the Ministers lays down definitive orientations for future action by the Conference as regards the problems examined and makes particular reference to the following points:

a) formulation of common rules and principles for the allocation of infrastructure costs;

b) arrangements for financing infrastructure investment;

c) ways of improving the utilisation of existing infrastructure capacities;

d) in conjunction with the work concerning the above subjects, further work on liberalisation and on the reducing of distortions of competition with a view to facilitating international freight transport".

When giving consideration to the follow-up action to be taken on this Resolution, the Committee of Deputies took the view that points (b) and (c) above are already being dealt with on a preliminary basis in the context of the work undertaken by the "1980 Group" (see chapter II). However, it appointed two separate ad hoc Groups to examine the issues covered by points (a) and (d) respectively. These groups, which will work closely together and in liaison with the EEC Commission and the United Nations Economic Commission for Europe, are to start work in Spring 1980.

2. *Combined transport*

As pointed out in the previous annual report, within the context of the structural reform during the year of its 25th anniversary, the ECMT has retained a specialised group to deal with the various problems involved in the operation and development of combined transport.

This Group, which regularly takes stock of the general situation within its province at two-yearly intervals, has received a mandate from the Council of Ministers to include a number of particular points in the new phase of its work.

In the light of this mandate and the deadline for the preparation of its next report – to be submitted to the Ministers in Autumn 1980 – the Group held a meeting in late 1979 to ascertain the detailed subject matter to be dealt with in the report and make the necessary arrangements for completing the work involved.

Following the previously established pattern, the report will include an analysis of recent trends and prospective developments in the various forms of combined transport (containers, piggyback, roll-on/roll-off traffic, barge carriers and palletised transport) based on available statistics. Particular attention will be given to the topical problem of combined transport routes between Europe and the Middle East/North Africa.

The report will then deal with infrastructural problems caused by capacity or gauge difficulties – with particular reference to road and rail trunk communications – and certain matters relating to the location and equipment of terminals.

Close attention will also be paid to problems specific to the operation of combined transport, especially those arising in connection with the harmonization of operating techniques and rolling stock, as well as the international organisation of piggy-back traffic. Lastly, the study will cover a number of specific issues such as experiments with traffic structures, financial support for investment and tax relief granted with a view to promoting combined transport during the take-off stage, as well as matters relating specifically to the use of the techniques in question for own-account transport.

Owing to the very nature of combined transport, the ECMT has always endeavoured to work closely with other international organisations, both governmental and non-governmental, the former notably including the OECD which has responsibilities in connection with the shipping and seaports link in the combined transport chain, the United Nations Economic Commission for Europe which traditionally handles a broad range of administrative and commercial problems with a view to promoting the continuous transport chain by removing obstacles and facilitating such traffic in other ways, and the EEC which has established its own market regulations for certain forms of combined transport. These three organisations are all directly associated with the Group's work.

However, in keeping with its customary procedure which has proved effective in the past, the Group intends to organise a consultative meeting with the various non-governmental organisations concerned. In order to ensure that this meeting is as productive as possible, it will be held when the report has been given its provisional shape, i.e. towards mid-1980, so that the document to be submitted to the Council of Ministers may offer a balanced presentation of all the views, concerns and suggestions of the various circles involved in combined transport operations in one form or another.

3. *Investment*

Under the two-year work programme drawn up at the time of the ECMT's 25th anniversary at the Council's May 1978 Session in Brussels, the Ministers of Transport adopted the subject: "Investment and trunk lines of communication in Europe" for a general discussion to be held at their Spring 1980 Session.

This subject was chosen because it is a basic matter of concern in transport policymaking in the present-day economic and social context; it hardly needs saying that transport infrastructures and the relevant investment measures are in fact the basis for the efficient operation of the transport system. While this system has to be continuously and discerningly adjusted to the expanding demand entailed by greater personal mobility and the development of economic activities with their ever-closer interdependence across the breadth of Europe, the fact remains that infrastructural investment is undoubtedly accompanied by indirect negative effects whose impact on the quality of life is being felt more and more by the public concerned. The events associated with the succession of oil price shocks in recent years have not only given a certain degree of topically to a problem which – like the problem of transport investment policy – has always been a very broad and many-sided one, but have also resulted in additional constraints that are now part of a new reality which has to be taken into account when shaping this policy. In short, the problems to be dealt with in the present economic climate, especially where international trunk communications are concerned, arise in different forms and on a different scale from those of the past, so that other conditions and factors have emerged and have to be faced when decisions are taken.

In the light of these considerations, the Conference itself has fully realised the importance assumed by the problems now involved in any infrastructural investment project, since the reports and studies it has prepared in recent years – especially those on traffic conditions for surface transport to the Middle East and on transit traffic– have shown that any potential improvements in the organisation of international surface transport in Europe still depend to a large extent on what can be done to solve the very real difficulties affecting traffic flows which are to be found at certain points, along certain sections or, in some cases, along the whole length of main arteries in Europe.

In line with the Conference's new working procedures, which were described in detail in the 25th Annual Report and have already proved their worth on a number of occasions, the Committee of Deputies appointed an ad hoc Group specifically to prepare background material for the Ministers' general discussion on the subject chosen on the basis of the above considerations.

This Group, called for the sake of simplicity the "1980 Group", opened up a broad field of activity once it was set up towards the end of 1978 and quickly singled out two centres of interest:

- the first relates to the identification of "pinchpoints" in international transport infrastructures which are due to the technical characteristics of routes, their structural features whereby particular obstacles on them are passed, or the conditions under which the various modes operate;
- the second relates to the various aspects and factors which, in the current political, economic and social context, govern the decision-making process as regards infrastructural investment; what this in fact amounts to is a brief analysis of a whole range of parameters, and possibly constraints, specific to the transport sector or outside it which have to be taken into account, especially where investment of international interest is concerned, and help to make such decision-making so complex in the present situation.

During the initial stage of its work, which partly involved the collection of factual data, the ad hoc Group was able to draw very heavily on the specific practical work undertaken by an ECMT restricted group set up early in 1979 to study existing and foreseeable problems in connection with traffic flow conditions on the main routes crossing the Alps, the major barriers to surface transport in Europe.

Aside from linking up its own activity with the work on transalpine routes, the "1980 Group" has also kept in very close touch with the services of the EEC Commission which were associated with every phase of the study undertaken, thus making it possible to ensure valuable liaison with those carrying out a similar study within the Commission concerning bottlenecks located in Member States of the European Communities.

It may be pointed out in passing that, in setting up this Restricted Group, le Committee of Deputies availed itself of a facility under Article 8 of the ECMT Protocol which had previously been used primarily to co-ordinate plans drawn up by different countries so as to ensure the continuity of infrastructural projects for the various modes of transport between neighbouring countries and to synchronize their implementation as far as possible.

In contrast with the approach adopted by the earlier groups, the new Restricted Group's work was deliberately set in a multimodal context on a broader regional basis.

Thus, its task was to provide detailed and wholly factual data for assessing the main transalpine routes in terms of capacity characteristics, present and future volume of traffic, any information on existing or foreseeable inadequacies in services provided and on projects for improvements – either in hand or planned – in the transport infrastructure investment programmes of the various governments concerned.

In conjunction with the analysis of "pinchpoints" in a region where the topography gives rise to particularly difficult infrastructural problems, the Restricted Group also examined the prospects for very large-scale transalpine projects which would require at least 20 years to complete and, owing to their considerable impact – not only from the financial standpoint – would call for the setting and co-ordination of priorities. This latter point may well give rise to a special meeting at ministerial level within the Conference in the near future.

Lastly, the situation of ECMT countries which are neither members of the European Communities nor located in the alpine regions were analysed on the basis of a survey conducted directly among the countries concerned by the ECMT Secretariat.

Without anticipating the final outcome of the study, it can already be stressed that the concept of a "bottleneck" itself gives rise to difficulties for any international assessment, primarily owing to the lack of any objective, universal and practical criterion. It therefore appears that the various countries will have to be left to identify bottlenecks by reference to their own studies and operating conditions.

However that may be, it should be pointed out that the overall capacity of international routes does not depend solely on the infrastructure's technical characteristics but, as already indicated above, is strongly influenced by inadequacies affecting the operation and organisation of transport.

Thus, the ad hoc Group intentionally included in its work not only infrastructure investment possibilities but also any improvement in traffic flows possible through short-term measures relating to transport operations. Such measures usually cost less, moreover, since they allow existing infrastructures to be used to greater advantage.

It should be noted that this category of measure very often relates to the border formalities for international traffic.

In preparing the analytical part of its work covering factors governing investment policy, the ad hoc Group found it advisable to allocate the basic studies among several Delegations, which therefore acted as "rapporteurs" for particular points, or among groups of experts. This approach was therefore adopted for detailed examination of the various factors the Group considered should be taken into consideration in this part of its study. These factors may be summarised as follows:

- Traffic forecasts

Even if transport demand is not regarded as the only basic criterion for decisions concerning the infrastructures to be constructed and the dimensions they are to be given, it will continue to be important as an indispensable economic compoent in decision-taking. Accordingly, the Group included in its work a summary of the conclusions to be drawn from the international forecasting studies carried out in Europe, notably in the shape of the findings of the "Project 33" study in the passenger transport sector and those of a similar study on freight transport undertaken by the EEC Commission.

• Evaluation procedures and criteria for investment in transport infrastructure

This subject was covered in a study carried out by a Group of Experts specifically set up for this purpose and whose work was analysed briefly in the previous annual report. In the meantime, the Group has produced a well-documented report dealing in depth with the difficult problem of investment criteria. This report, whose main conclusions will be set out in the "1980 Group's" report, may be presented in full, possibly in conjunction with other basic studies, in a separate publication which will no doubt be of interest not only to specialists but to all those involved in investment decisions relating to transport infrastructures.

The report in question will, moreover, have the merit of including a list of the most important terms used in this highly technical field, together with explanatory notes in English, French and German, with a view to promoting better understanding among national experts engaged in the exchange of information and experience in this field.

• Energy problems

Short-term energy saving measures apply more to fields unconnected with infrastructures, but with the general situation developing as it is, energy considerations must also now be included in any decision-making relating to investment. The approaches, research and orientations developed in this connection in the various Member countries are summarised in the report in course of preparation.

• Regional planning and development

While the elimination of bottlenecks is regarded as a major criterion in the present context, indirect effects must be taken into consideration, even as just a secondary criterion, either to throw full light on the choices to be made or to control the external structural effects once an infrastructural decision has been taken. A special study has been devoted to these aspects which are, moreover, a subject on which the ECMT and the Conference of European Ministers responsible for Regional Planning maintain close contact.

• Environmental and landscape protection

Large infrastructure projects generally have detrimental effects on the environment and landscape which often take a long time to put right.

In contrast with the approach adopted by most bodies dealing with this problem, the ad hoc Group has focussed on the effects that had to be taken into consideration not from the standpoint of the use of vehicles but in terms of the construction and operation of infrastructures.

This approach no doubt gives a certain novelty to this part of the work but also clearly brings out the conflict of objectives which is to be found whenever the two sides of the "quality of life" concept are examined: on the one hand, the material prosperity and increasing mobility of the public and, on the other, the need to protect nature and the environment from their consequences.

• Planning and implementation of new investment projects

This chapter will deal with the time interval between the first stage in planning a major infrastructural project and its entry into service. In this connection, the fact that the public's attitude towards major projects is more critical than before has induced the responsible authorities to seek a dialogue with the citizens concerned. However, this democratisation of the planning process is accompanied by difficulties which may sometimes call into question the implementation of the project itself.

• New technologies

Previous annual reports of the Conference have regularly described the progress of work by a group of experts appointed to keep track of research and experiments in connection with new technologies and their application to transport systems, especially as regards high-speed transport. A summary of the state of the art, medium-term prospects and, more generally, the potential offered by technological progress as a means of making better use of transport infrastructures, has been included in the ad hoc Group's work.

• Financing problems

This final section of the study will no doubt be developed in conjunction with other work the Conference will be required to undertake, probably in co-operation with other international organisations. Suffice it to say

that a preliminary analysis will be made of a number of particular problems involved in the international financing of transport infrastructures, and the different models that can be used for this type of financing described.

These lines of thought and orientations covered by the ad hoc Group's work are therefore to provide the basis for the general discussion to be undertaken by the Ministers of Transport at their Spring 1980 Session in Bonn.

4. Transport and energy

Although the problems relating to the energy situation have not in fact gone unheeded in the ECMT's work and have of course been an ever-present matter of concern, they have not been the subject of specific studies by the Conference in the past few years but tended to be implicitly taken into account in its various spheres of activity where they have clearly played a decisive role in the preparation of policy actions such as those relating to the promotion of combined transport, speed limits on roads and traffic engineering in built-up areas.

This indirect line of approach changed radically after the Council of Ministers' May 1979 Session in Belgrade where the United States Secretary of Transportation made an important statement on co-operation with respect to research and development in the field of automobile technology with a view to improved energy conservation. This statement at once gave rise to an animated discussion in which the Ministers of Transport gave forceful expression to their deep-seated concern about the energy situation and prospects and stressed how important it was that the Conference should immediately undertake a direct study of this problem.

In order to comply with the Council's wishes, the Committee of Deputies took rapid steps to organise the relevant work which, in an exploratory phase, was to be based on an exchange of information and experience concerning the measures taken or planned in the various countries, with due consideration for studies and research, either completed or in hand, and for questions of competence.

As a report on the above-mentioned factors was to be submitted to the Council's Autumn Session, the studies had to be carried out within a very tight time schedule. It therefore seemed advisable to assign the task to a single rapporteur who would be responsible for preparing the necessary survey and drawing up a summary report on the basis of the data supplied by countries or obtained from other sources.

It may be noted, moreover, that the use of a single delegation as rapporteur – in this case the French Delegation – is a method recommended under the 1978 reform of working structures in accordance with the principles and procedures set out in detail in the previous annual report.

The report drawn up on the above lines was submitted to the 50th Session of the Council of Ministers and served as the basis for a general discussion on energy conservation in the transport sector. In brief, this report consists of three parts:

The first seeks to give an accurately documented account of how the transport sector stands in relation to energy consumption as a whole (especially consumption of oil-based energy on which it is more highly dependent) and to highlight the constraints on this sector whose activity is simply a product of the different economic and social activities which, though they influence it, are outside its control. This fact tends to some extent to suggest that it is difficult to go beyond a certain point in conserving energy in the transport sector without curtailing economic activity in general.

The second part consists of a summary of the various country reports on measures taken or planned with a view to making energy savings in the transport sector which primarily include:

- restraints, such as fuel rationing, traffic bans on certain pays, introduction or lowering of speed limits;
- incentives, mainly by means of taxation, prices policy and energy conservation agreements;
- persuasive and educational measures to alert public opinion or certain categories of transport users to the energy problem;
- transport policy measures, such as road investment, urban or public transport services;
- advanced technology projects, especially those designed to reduce vehicle fuel consumption or develop alternative fuels.

In the light of the measures listed above it can broadly be seen that, while all European countries are affected by the succession of oil supply and price shocks, they have not all been affected with equal intensity or

to the same extent, the reason being the differences in the situations of the various countries as regards not only energy resources but also monetary effects, since the escalating price of oil paid for in dollars has been offset for some countries by the rise in certain national currencies against the dollar.

This being so, while the European countries as a whole do not out of hand reject the possible need to ration motor fuel, they consider that such a step should be taken only as a last resort and accordingly prefer more liberal options based on incentives or educational measures. The reports sent in by the various countries also show a marked interest in policies to promote public passenger transport systems with a view to increasing their efficiency and appeal, essentially by stepping up frequency, improving comfort and introducing tariff structures that will attract passengers, especially during off-peak periods.

Special attention should be drawn to the major research developments, particularly in countries with motor industries, since it would seem that the response to the oil challenge is to be found – if not immediately , at least in the medium and longer-term – in a technological breakthrough along two lines: the development of vehicles which consume less fuel and the production of alternative fuels partly or wholly replacing oil products.

Lastly, the third part of the report consists of a tentative general appraisal in four sections: energy conservation achievements since 1973, the prospects in this connection to 1985, the basic options available to policy-makers, and the harmonization of measures.

It should be pointed out that the efforts made to conserve energy since the first so-called "oil crisis" in 1973 have so far been mainly focussed on sectors other than transport. A number of countries have taken steps to develop nuclear energy, reinstate coal for power generation and economise on heating or lighting. Accordingly, the measures taken or planned in the transport sector cannot be regarded as a general response to the world energy situation but are more marginal and fragmentary in character, notwithstanding the fact that they would be more effective if better harmonized at European level. This is particularly true in the case of motor fuel taxes which, in a free market context, would seem to be fundamental to any attempt to influence both consumers and car-makers. The harmonization of such taxation in terms of both structure and level therefore appears to be one of the essential matters requiring international co-operation which now confront Member countries.

To sum up, this report, which deliberately avoided any precise recommendations, was planned as a preliminary ECMT approach which would have to be pursued and developed in greater depth in future years in the light of trends in the field under consideration.

Following the general discussion held on the basis of this highly commended report, the Council of Ministers decided, in view of the importance and lasting nature of the energy problem, to reconsider the matter periodically, in principle once a year. For the purpose of preparing this review, it decided to set up an ad hoc Group under the Chairmanship of the French Delegation to keep track of developments in this field and to submit a carefully documented report in about a year's time, together with a series of recommendations relating to all aspects helpful in shaping as highly co-ordinated a policy line as possible. With this in view, the Council of Ministers made a number of suggestions concerning the lines along which the work should be continued within the ECMT. The ad hoc Group was accordingly set up and began its work early in 1980.

Chapter II

SPECIFIC PROBLEMS

A. URBAN AND REGIONAL TRANSPORT

The 25th Annual Report of the ECMT gave an account of the changes made in the structural organisation of the work of the Conference, especially as regards urban transport. Although the former Urban Transport Committee has been disbanded, its replacement by the Urban Transport Co-ordinating Group – whose membership and terms of reference were set out in the above-mentioned report – enabled the Conference to continue the work in hand, notably the study on the financing and subsidisation of urban public transport and the report on paratransit and unconventional transport. This new working structure also enabled the Conference to determine ways and means of co-operating with the OECD, a particular example being the organisation of the Seminar on Urban Transport and the Environment which was held from 10th to 12th July, 1979.

In accordance with its terms of reference, the Urban Transport Co-ordinating Group, with due regard to the work already in hand in the ECMT, examined possible further action on the conclusions of the seminar by both the OECD and the ECMT, and the main directions that the Conference's work should take and the topics it should consider. The Group's proposals were designed to avoid duplication of effort and to ensure greater efficiency in the work done on urban transport international fora by the countries concerned.

What, in fact, the Group did was to submit a series of suggestions for studies that might be undertaken by the ECMT. They covered the following subjects:

1. Trends in the use of public transport in various types of towns;
2. The interaction between transport and land-use;
3. Traffic restraint in certain urban areas;
4. The use of energy in urban transport: new technologies;
5. Comparison between the cost of private and public transport.

As regards the first study, which will follow up the Report on Subsidisation of Urban Public Transport (approved at the Belgrade meeting of the Council of Ministers and reviewed below), it was decided to engage a consultant to work directly with the Secretariat in preparing a preliminary report to be based on in-depth discussions by an ECMT ad hoc group. The aim is in fact to try to take stock of the situation and draw the necessary conclusions from the results of the activities undertaken with a view to ensuring that public transport supply is geared to demand in terms of both volume and quality of service.

Although no action has as yet been taken with respect to the other four points, it is expected that working groups or rapporteurs will be appointed during 1980 and 1981 in conjunction with the work planned in the field of economic research, so that the subjects can be adequately developed on the basis of the scientific research required.

The Report on Subsidisation of Urban Public Transport was prepared by a small group of rapporteurs who worked over a period of several months under the chairmanship of a United Kingdom researcher. A final version was submitted to the Belgrade Session of the Council of Ministers in June.

The report concentrates on operating subsidies rather than capital subsidies. This is partly because the incidence of capital subsidies is, by its very nature, uneven and thus trends in the use of such subsidies are not clear.

The report summarises information about how different countries finance subsidies, primarily by a variety of local and national taxes, and notes that, while central government frequently provide funds for capital subsidies, local authorities play a greater part in the provision of operating subsidies.

Having noted that the objectives of subsidies fall into two broads categories – (I) the improvement of the urban environment and making the best use of existing resources, (II) the meeting of specific transport needs – the report goes on to reach the following major conclusions, i.e. that:

1) subsidies and costs increased over the years 1965-77 in all countries studied and barring counter measures are likely to go on rising;

2) subsidies help to sustain public transport but other factors such as traffic restraint may be more important in getting people to use public transport in preference to their cars;

3) subsidies may tend to encourage higher costs and lower efficiency;

4) further studies are needed to:

a.- understand better the public transport trends in different countries;
b.- know more about the effect of subsidies and how to control them; and
c.- clarify:
– the role of traffic restraint in encouraging use of public transport; and
– the relationship between public transport and land use.

Finally, it should be noted that the report demonstrates that the subject of urban transport embraces a wide range of environmental, regional planning and social considerations, in addition to strictly transport factors.

A Resolution submitted with the report was approved by the Council of Ministers and the full text of both is given in Volume II (1979): Resolutions and Reports approved by the Council of Ministers.

A report on paratransit and unconventional transport was submitted to the Council at its Autumn 1979 Session. It reviewed the studies completed by a working group set up in 1977 to study paratransit and unconventional public transport systems and the conclusions reached by ECMT Round Table 40. This Report was submitted to the Council of Ministers for the information it provided about a number of experiments in various countries, and the lessons that might be learned from these as regards:

a) the value of paratransit or unconventional transport systems in the organisation of public transport; and
b) the problems involved in their use.

The difficulty in tackling this problem was largely bound up with the fact that there is as yet no satisfactory definition of paratransit or unconventional transport, the only relevant criterion being that they cover all forms of transport not included under the heading of regular services using conventional modes. This conceptual difficulty explains why the case studies are so varied, although they all have the same purpose, namely to find an efficient way of meeting passenger transport requirements either for populations in areas inadequately served by conventional public transport or for categories of users for whom access to public transport raises its own special problems as, for example, in the case of handicapped persons.

A report like this cannot possibly include every scheme in every country – not even every ECMT country – so a limited number of 19 case studies were selected as examples. These case studies concern different operating systems or special vehicles such as:

– small vehicles;
– taxis;
– shared taxis;
– systems using variable routing on demand;
– new kinds of urban operation;
– dual purpose services: for example postbuses;
– services operated by volunteers;
– community buses;
– voluntary car services;
– car pooling and lift-giving in private cars;
– services for special groups.

In approving this report, the Council of Ministers recommended that the ECMT should organise a further wide-ranging exchange of information on the subject so that it could be further considered by the institutions of

the Conference in two or three years' time when the results of the experiments could be assessed and openings for the use of paratransit identified.

Since this is an area where their responsibility is involved, the Ministers of Transport of ECMT Member countries mean to keep a close watch of all aspects of the organisation of urban transport for the results can help them to influence the choices made with respect to the provision of passenger transport facilities in large conurbations. Here, the ECMT clearly provides the right forum for the open presentation and assessment of existing or projected shemes to ensure the best possible conditions for passenger services.

As announced in the previous annual report, a joint OECD-ECMT Seminar on Urban Transport and the Environment was held in July 1979 when three days were devoted to meetings attended by some 300 specialists.

The least costly methods of improving urban transport were considered on the first day, notably in the shape of two reports dealing respectively with traffic in residential areas and the roles of walking and cycling in towns.

The second day was given over the consideration of techniques answering the problem of improving the quality of life through better transport services in low-density areas and large cities. Particular attention was given to a report on paratransit submitted by the ECMT Secretariat which followed up earlier work on the subject by an ECMT Round Table. Two other documents submitted by the ECMT dealt with urban transport pricing problems and financing mechanisms.

Finally, during the third day, participants tried to see what conclusions could be drawn from the various case studies which were submitted in conjunction with the above-mentioned reports and which concerned, in particular, eight medium or large-sized towns, namely Ankara, Brussels, Gothenburg, Groningen, Oporto, Ottawa-Carleton, Osaka and Paris.

The seminar also examined problems connected with the energy and land resources required by transport. In particular, a study of the transport system used in Curitiba (Brazil) highlighted the land-use factors which have to be taken into account in all urban transport measures.

B. ROAD TRAFFIC, SIGNS AND SIGNALS

In accordance with its standing terms of reference, the Committee for Road Traffic, Signs and Signals continued its work of furthering the standardization of road traffic regulations, signs and signals, a process fundamental to the improvement of road safety in ECMT Member countries.

A number of studies led to decisions by the Council of Ministers in the following fields (the texts are given in Volume II (Resolutions and reports approved by the Council of Ministers).

1. Adoption of a standardized parking disc

Some countries are in fact using a parking disc which shows the time of arrival and the mandatory end of permitted parking time, while others make use of a disc showing only the time of arrival. This situation has led to difficulties for drivers travelling abroad.

To overcome these difficulties, the ECMT recommended the adoption of a standardized disc similar to that used in Germany, i.e. showing only the time of arrival. The advantage of this type of disc is that it can be used wherever parking time is restricted, even outside disc-parking zones.

The introduction of this uniform disc means of course that some countries will have to change their domestic regulations and existing road signs, since permitted parking time will have to be shown on road signs in all cases.

As these countries must be given sufficient time to adjust their regulations, the ECMT has recommended that the uniform disc be adopted in all Member countries not later than 1st January, 1982.

2. Vehicle lights used in built-up areas at night

The advantages and drawbacks of using sidelights or dipped-beam headlights has been investigated very thouroughly. Moreover, it was considered that differing regulations from country to country created difficulties for drivers travelling abroad and was detrimental to road safety.

It was finally deemed advisable to make the use of dipped-beam headlights compulsory in built-up areas on the following grounds:

a) Harmonization of the regulations on this point is of great importance for drivers travelling abroad and they indeed find it difficult to understand why such rules should differ from one country to another.

b) It is hazardous to let the choice between side-lights and dipped-beam headlights depend on the brightness of road lighting since drivers appraise this subjectively and, very often, differently. The consequence is that, at a given point, some drivers use dipped-beam headlights whilst others use side-lights only. This "mixture" is the worst arrangement, notably for pedestrians, as in this case they have much difficulty in distinguishing between moving and stationary vehicles.
What is more, road lighting is not always consistently the same and it is not reasonable to expect drivers to keep on switching over from one type of vehicle lighting to another.
On road safety grounds, it is accordingly important to choose, and prescribe, the use of either side-lights or dipped-beam headlights alone.

c) The reflex reflectors and other reflective devices that some countries prescribe or recommend for visibility of vehicles (e.g. long vehicles, bicycles, etc.) are not really effective unless lit by dipped-beam headlights.
Furthermore, at intersection where there is little visibility, vehicles approaching the crossroad can give quicker warning of their presence with dipped-beam headlights.

d) The risks, if any, of other drivers being dazzled by dipped-beam headlights can be very much reduced by regularly checking that lights are correctly adjusted.

e) No available statistics show a clear relationship between accidents and the use of either sidelights or dipped-beam headlights, notably because of the difficulty of pointing to one of the several factors which often underly a road accident. However, experience in several countries which have made dipped-beam headlights compulsory for some years proves that this measure has certainly had no ill-effects on road safety.

To give governments enough time to amend their national legislation and ensure that drivers are correctly informed about this matter, it was decided that the use of dipped-beam headlights in built-up areas should be made compulsory not later than 1st January, 1982.

3. Adoption of special rules for certain tunnels and design of an appropriate sign

The Convention on Road Traffic lays down only one special rule for tunnel traffic, namely the ban on "standing and parking".

There are many tunnels in Member countries however, notably those used by drivers from abroad, where an accident could have very serious consequences. This especially applies to mountain areas.

In order to minimise the risks of accidents in tunnels, it has been found advisable to lay down some special rules and create an "informative" sign to notify drivers that they are entering a tunnel where these special rules must be complied with.

The following special regulations are applicable to tunnels indicated by the special sign:

i) All drivers are forbidden:
   a) to reverse
   b) to make a U-turn
   c) to stop or park a vehicle except at places indicated for the purpose.

ii) Even if the tunnel is lighted the driver must switch on his headlights and not just his sidelights.

iii) The driver must switch off the engine in the event of prolonged stoppage of the vehicle.

It should be pointed out that Member countries are free to decide whether or not to introduce this sign and the special rules in their national legislation. They are also free to decide which tunnels should be signed in this way.

- Signs applicable to certain lanes

The Vienna Convention on Road Signs and Signals specifies that, while road signs are in principle applicable over the whole width of the carriageway, their scope may be limited to one or more lanes defined by

longitudinal markings. However, it does not clearly specify how drivers shall be informed that a given sign applies only to a particular lane, although in some cases it is useful and even necessary to inform users about regulations or hazards concerning specific lanes.

Experience shows that overhead signs (or gantry signs) are best suited for the purpose. Unfortunately, besides being expensive, this arrangement is not always feasible and may not be practicable because of the site. Provision must therefore also be made for "panel" signing.

To achieve the desired object, the ECMT considered that the Convention should be amended as follows:

"All signs shall apply to the drivers for whom they are intended over the whole width of the carriageway open to traffic. However, signs may be made to apply to only one or to several lanes of the carriageway when lanes are defined by longitudinal markings".

In this case:

– the sign, if necessary with the addition of a vertical arrow, shall be placed above the lane concerned; or
– a sign shall be placed on the edge of the carriageway.

Models of informative or instructional signs applicable to one or more lanes on a multi-lane carriageway, for traffic moving in the same direction were adopted (see Volume II).

• Light signals for alternate two-way flow lanes

The system of lights signals over traffic lanes – as provided for under the Convention on Road Signs and Signals – makes no provision for a "transition" phase between the green light (arrow pointing downwards) and the red (red cross).

As some countries wished to introduce an intermediate phase of this kind, efforts were made to find a uniform arrangement for all the countries intending to do this. The ECMT has accordingly adopted the following provisions:

When a Member country deems it necessary to introduce an "intermediate" or "transition" signal for the light signals mentioned in Article 23, § 11 of the Convention on Road Signs and Signals, it should be in the following form:

A yellow or white arrow pointing diagonally downwards, to the left or to the right, or two such arrows, one pointing in each direction. Flashing lights can also be used for this arrow.

The legal meaning of this arrow is as follows:

It means that the lane is about to be closed to traffic and that road-users on that lane must move over to the lane indicated by the arrow.

The ECMT also took steps to ascertain the extent to which the Recommendation on parking facilities for handicapped persons, adopted on 6th December, 1977, has been or will be put into effect. This recommendation specified that the facilities granted by Member countries to their own nationals should be extended to nationals of other Member countries not later than 1st January, 1980.

A survey has shown that most countries have already extended such facilities to handicapped persons from abroad, while others are in the process of drafting amendments to their legislation for this purpose. By and large, it can therefore be said that the Recommendation will be put into effect by early January 1980.

Lastly, as already indicated, it should be borne in mind that the various measures adopted by the ECMT are progressively incorporated into the legislation of Member countries and, as for earlier measures, will be submitted to the United Nations Economic Commission for Europe with a view to their inclusion in the Conventions on Road Traffic Signs and Signals.

C. ROAD SAFETY

During the period covered by this report the ECMT's work on road safety was shaped largely with reference to the fact that the United Nations had declared 1979 to be "the International Year of the Child". It was Conference's interest in the problems of children and young people and in the status and protection to be given to them in present-day society.

A note setting out the activities undertaken in connection with young people by the ECMT or under its sponsorship was accordingly submitted to the Council of Ministers at its Belgrade Session. This note consists of two parts, the first dealing more specifically with road safety and the second covering other activities which mainly relate to public transport.

The part concerned with road safety examines the following five spheres of action:

- road safety education in schools, which has been the subject of two special conferences jointly organised with the Council of Europe and will be discussed separately below;
- the organisation and operation of school patrols;
- road safety problems concerning two-wheeled vehicles, which is still a matter of current concern not only because two-wheeled vehicles have made a come-back but also owing to the particularly high risks to which users are exposed;
- the carriage of young people in motor vehicles;
- lastly, an international poster competition conducted jointly with the "Prévention Routière Internationale" with a view to urging motorists to show the necessary caution with respect to children when driving in built-up areas.

Although they do not come under the present chapter heading, mention may be made in passing of the other activities reviewed in the second part of the above-mentioned note, namely a recommendation for the purpose of harmonizing the age limits for children's reduced fares for international rail services in Europe, and the observation that a considerable number of the measures adopted by the Council of Ministers in December 1978 to facilitate the transport of handicapped persons also apply to children suffering from some physical or mental disability. It may finally be pointed out that most of the reports drawn up by the ECMT on the various aspects of urban transport mention the conditions governing travel by children whose essential needs for personal mobility are catered for by public transport.

As regards the steps taken more specifically with respect to the road safety of young people, a resolution with respect to the road safety of young people, a resolution was submitted to the Autumn 1979 Session of the Council which set out the main lines of the measures that seem desirable for the future or whose effectiveness now at any rate seems to be established.

These measures cover a number of spheres of action which are set out in turn in the Resolution, namely:

- appropriate environmental adjustments to suit children's perceptive capacity and their psychological and biological development;
- the major role to be played by parents in developing the child's sense of responsibility as a road user;
- road safety education as part of school curricula, and the content and methods of such education;
- a number of specific problems relating to safety on the way to and from school;
- lastly, safety campaigns, notably calling for caution on the part of drivers and the various road users as regards children in view of their impulsiveness and often unexpected reactions which are aspects of their personal behaviour.

In conjunction with the various points concerning the road safety education of children, stress should be laid on the fundamental importance that the ECMT has long attached to training and the basic role that the school can and must play so as to ensure that children and young people acquire the knowledge and behaviour patterns that will enable them gradually to behave with full responsibility in road traffic.

It was with this in mind that, as already indicated above, the ECMT organised two conferences jointly with the Council of Europe which were attended by government experts representing both transport and national education authorities.

As the last of these conferences already dates back to 1971 the ECMT considered that the time had come to plan a new meeting with the aim of taking stock of the situation, setting the problem in its present context and giving fresh impetus to the work on road safety training for young people. Unfortunately, for the reasons given in the previous annual report, this conference could not be organised during the International Year of the Child as the Council of Europe authorities concerned were unable to go ahead with the project in 1979 mainly owing to budgetary considerations.

However, as a result of the ECMT's repeated and resolute approaches and the attention given to the matter by the Executive Committee, it proved possible to reconsider this questions on a positive basis so that it now seems

to be established that a third conference will be held towards the end of 1980. The preparatory work, carried out by a mixed group of experts, has helped to shape a programme which does not merely cover the matters of concern to Ministers of Transport but enables the conference to be dovetailed into a broader Council of Europe activity aimed at preparing young people for working life.

Aside from these activities designed to protect young people, the ECMT Council of Ministers adopted a Resolution at its Belgrade Session concerning the measures required to improve road traffic at night. It should be pointed out in this connection that both the rising proportion of accidents occurring at night and their increasing severity have been a matter of concern to the Council for several years. A report on this subject was indeed submitted to it in 1977 but it contained the admission that, as the knowledge available at that time did not really provide an adequate basis for defining measures that would effectively improve safety at night, further enquiries would have to be made.

At the request of the Conference, the OECD undertook the relevant scientific research and the results were conveyed to the ECMT early in 1979.

This work, together with a number of recommendations on the same subject issued by the "Prévention Routière Internationale", enabled the Road Safety Committee to draw useful conclusions and formulate provisions which can now help towards the desired improvements.

Briefly, there are two kinds of measure:

– those aimed at reducing the impact of external factors; and

– those aimed at reducing the impact of behavioural factors.

All the proposed provisions are set out in detail in Volume II (see document CM (79) 8).

Lastly, at its Autumn Session, the Council of Ministers noted – as is customary each year – a statistical report on recent trends in road accidents which showed that, after very substantial reductions in both the number and severity of accidents in 1974 and 1975, a further slight decrease was recorded in the number of casualties in the period 1976-1978 despite increases in both the total number of vehicles on the road and traffic volume. Nevertheless, the overall total of road accidents is still very high since the 18 ECMT Member countries recorded some 71,600 deaths and 2 million injured in 1978 for a total of 100,200,000 motor vehicles.

D. ACTIVITIES OF THE EUROFIMA COMPANY

Report to the governments that are parties to the Eurofima convention (Financial Year 1979)

Summary

EUROFIMA stepped up its activity in line with the growing needs of the shareholding railways, many of which were prompted by the worsening oil crisis to increase their capital investment.

Financing operations amounted to the equivalent of approximately Sw. Frs.925 million, as compared with Sw. Frs.694 million in 1978 when the figures were in fact considerably affected by exchange rate fluctuations. These funds were used to purchase new rolling stock and re-finance earlier transactions on much more advantageous terms.

By and large, the capital markets, boosted by high levels of liquidity, were frequently unstable in 1979 due to persistent uncertainty about future interest rates, whose upward trend could not be halted.

The capital resources obtained by EUROFIMA were used to finance, for the ten shareholding railways of the Company 116 electric locomotives, 5 diesel locomotives, 40 trainsets, 6 trailers for electric trainsets, 393 passenger coaches and 2,105 wagons (including 1,710 bogie wagons).

On the financial side, the Company's results were satisfactory. Total assets on the balance sheet at the end of 1979 amounted to Sw. Frs. 5,365 million (as compared with Sw. Frs.4,878 million at the end of 1978 and Sw. Frs.4,651 million at the end of 1977). The 1979 surplus available for distribution, i.e. Sw. Frs. 18.5 million (Sw. Frs. 18.3 million in 1978), will be sufficient to cover the statutory dividend to shareholders and the necessary allocation to the Company's reserves.

FINANCING RESOURCES

LOANS:

Six **public loans** were issued on the international market and on the German, Swiss, Luxembourg and Austrian markets. The terms were as follows:

Nominal Amount	*Interest Rate* %	*Maturity* years
DM. 100 million (February)	6.50	10
Sw. Frs.70 million (April)	3.75	15
Yen 10 billion (April)	6.50	7
L. Frs.500 million (July)	8.50	10
Sw.Frs. 50 million (October)	4.25	15
S.350 million (December)	8.00	15

Four **private loans** were issued on the following terms:

Nominal Amount	*Interest Rate* %	*Maturity* years
US $ 40 million (July)	9.25	7
US $ 40 million (September)	floating	10
DM.100 million (October)	7.00	5
DM. 40 million (October)	7.375	8

Long and medium-term loans and credits

Loans and credits amounting to Sw.Frs.294 million and DM.11 million were obtained.

Own funds

The Company contributed Sw.Frs.11 million from its own funds to supplement those listed above.

ROLLING STOCK FINANCED

The rolling stock financed in the course of the financial year under review is listed below:

German Federal Railways (DB)

3 2,000-kW diesel locomotives
44 3,620-kW electric locomotives

French State Railways (SNCF)

68 4,600-kW electric locomotives
76 passenger coaches
55 bogie wagons

Italian State Railways (FS)

180 passenger coaches
1,052 bogie wagons

Belgian State Railways (SNCB)

4 four-car electric trainsets
13 two-car electric trainsets
51 passenger coaches

Netherlands Railways (NS)

15 two-car electric trainsets

Spanish State Railways (RENFE)

5 three-car electric trainsets
6 trailers for electric trainsets
288 bogie wagons

Yugoslav Railways (JZ)

1 three-car diesel trainset
24 passenger coaches
78 non-bogie wagons
260 bogie wagons

Austrian Federal Railways (OeBB)

4 5,200-kW electric locomotives
2 three-car electric trainsets
62 passenger coaches
215 non-bogie wagons
55 bogie wagons

Portuguese Railways (CP)

2 2,200-kW diesel locomotives

Swedish Railways (SJ)

102 non-bogie wagons.

JOINT ORDERS

A survey is under way to determine the scope for further joint orders for standard freight rolling stock.

Chapter III

ECONOMIC RESEARCH AND DOCUMENTATION

1. Since 1967, the ECMT has been engaged in transport economics research activities in order to provide Ministers with objective data in the light of which to reach their policy decisions.

This activity has been gradually amplified and put on a more systematic basis. Its main features are, first, the organisation of two-yearly Symposia bringing together some 300 participants (from academic, government and business circles, besides representatives of the trade press and of international organisations concerned with transport) to discuss a general topic; secondly, Round Table meetings at which 15 or 20 people, chosen for their special qualifications, carry out expert studies on specific subjects relating to transport economics.

The choice of subjects to be discussed rests with the Economic Research Committee, to whom it also falls under the guidance of the Committee of Deputies, to ensure general consistency and pay due regard to areas where general transport policy needs further refinement.

2. In 1979, the Economic Research Committee held one session in the course of which it considered the ECMT's research activities since the last session in 1978 together with those then being planned. The proceedings were concerned, in particular, with the following matters:

- drawing conclusions from Round Tables;
- taking note of the results of the Regional Round Table held in Finland in September 1978;
- deciding on how the Symposium to be held in Instanbul in September 1979 should be organised and, for this purpose, appointing plenary session chairmen and panel chairmen and members;
- finalising the programme of Round Tables for 1980 and supervising the relevant preparations;
  - Round Table 49: "Competititve position and future of inland waterway transports";
  - Round Table 50: "Economics of transport - Prospects and orientation";
  - Round Table 51: "'Social service' transport: transport for elderly and handicapped persons";
  - Round Table 52: "Transport and Energy";
  - Round Table 53: "The working conditions of professional drivers: Effects on productivity and road safety";
- implementing the wishes of the policy-making bodies of the Conference that research should be more closely related to topical policy issues; this led the Committee to make very swift arrangements for a Round Table (52) on "Transport and Energy", to throw a clearer scientific light on this current topic and thereby facilitate the work of the ECMT bodies concurrently dealing with the policy aspects of very similar problems;
- establishing the main lines of the ECMT's scientific research programme for the next few years.

With a view to clarifying the choice of topics to be dealt with, the Committee decided to organise a Special Round Table (50) to compare the views held on this matter by representatives of governments and institutes engaged in transport research. The task of the Round Table was to ascertain the main lines of research in transport economics and identify these subjects holding the greatest interest for the ECMT. In the light of the findings of this Round Table, the Economic Research Committee will submit proposals for the new ECMT research programme for the approval of the Committee of Deputies.

The Economic Research Committee also assessed progress made with the integrated documentation system by reference to the lines of action laid down by the Committee of Deputies.

3. At the invitation of the Turkish Delegation, the **Eighth International Symposium on theory and practice in transport economics** was held in Istanbul from 24th to 28th September, 1979. Symposia are organised every other year by the ECMT with the object of stimulating general discussion of an aspect of transport economics which is of both topical and future interest.

About 400 people attended: representatives of governments, government departments, universities, research bodies and consultancies, transport operators, workers and users' organisations and other international organisations.

The general topic chosen for this symposium: "Transport and the Challenge of Structural Change", was divided into three sub-topics:

- Sub-topic 1: Changing patterns of economic activity, trade and freight transport:
  a.- Redistribution of economic activity and trade; transit and infrastructure (Rapporteur: Professor Kuiler, the Netherlands);
  b.- Combined transport; technical, economic and commercial aspects (Rapporteurs: Mr. Callou and Mr. Schwartz, France);
- Sub-topic 2: Decentralisation and regional development (passengers and freight):
  a.- Transport systems and regional development: countries with highly-industrialised economies (Rapporteur: Dr. Meier, Switzerland);
  b.-Transport systems and regional development: countries with less-industrialised economies (Rapporteurs: Dr. Giannopoulos, Greece and Professor Lamer, Yugoslavia);
- Sub-topic 3: Behavioural changes:
  a.- Passenger transport: mobility and lifestyle (Rapporteurs: Mr. Brög, Germany and Professor Schuster, Austria);
  b.-Freight transport: shippers and forwarding agents (Rapporteurs: Mr. Baxter and Mr: Allera, United Kingdom).

The symposium opened with addresses by Mr: Ongüt, Minister of Communications of the Turkish Government, and Mr: Zelic, President of the Federal Transport and Communications Committee of Yugoslavia and Chairman of the ECMT: Mr. Ongüt also presided over the symposium's closing session. The work of the symposium began with a statement on the economic situation in Turkey with particular reference to transport. This was followed by a general introduction by Professor Lesourne, Director of the OECD "Interfutures" Project, on the subject: "Long-term trends in structural change and their influence on transport".

The working procedures were exactly the same as those adopted for the previous symposium, i.e. topics were first discussed in plenary session and then in a panel restricted to a few specialists.

The symposium was a complete success in terms of the work done and results achieved and also from the standpoint of the welcome offered to participants and of all the attendant social activities.

Enhanced as they were by the excellent practical arrangements and the hospitality extended by the host country, the discussions confirmed that the theme of the symposium was a true reflection of widespread concern. Everybody present acquired a wealth of ideas and information, since the specialists and university representatives were able to compare notes on progress in transport economics, while politicians and administrators obtained a clearer picture of the value of research.

The main conclusions reached at the symposium were as follows:

a) First, the participants tried to find an answer to the huge question mark hanging over any attempt to forecast the future: will the advanced industrialised societies be capable of adapting their economic, social and political structures to the pressures generated by the profound changes the future will bring?

The structural transformation of the world economy seems likely to be accompanied by an intensification of trade flows and changes in the location of production units. It was important to recognise the fact that slower growth does not necessarily mean a corresponding decline in the rate of development of transport, especially international transport.

As transport both reflects economic development and is a factor of change, economic analysis will be pointless unless it is sufficiently detailed.

This is true both for international trade and for interregional trade; the nature of the problems does not differ fundamentally, international specialisation being combined with regional specialisation. The relationship between world change and change within a country goes deeper than might appear at first sight. Analysis of the gulf separating developed and developing countries may throw light on that between backward and growth regions and vice-versa.

b) The Istanbul Symposium showed the need for a combined effort for forward thinking by all the transactors whose plans influence the future. Strategic studies which reveal the reactions, whether conflicting or not, of the different transactors faced with probable scenarios cannot take into account government action alone.

The welfare state will prove increasingly incapable of leaving the management of change to decentralised economic transactors.

c) The development of international transport and the increase, in the case of certain traffic, not only of the volume carried, but also of the distances covered, has increased the share of land transport, and consequently the use in domestic transport of the intermodal unit loads which have been so successful for transport where part of the journey is by sea.

The use of transport techniques involving several modes for the transfer of a single unit load provides an extremely timely reminder, at a time when it is increasingly difficult to finance new infrastructure, that the adaptation of transport organisation must follow and even, if possible, precede the development of traffic.

Infrastructure problems are very real and everything possible must be done to attenuate them. The countries which experience a heavy volume of international through traffic have drawn the attention of the international organisations, and in particular the ECMT, to the adjustments needed in the rates charge for use of infrastructure and the possibilities of international financing.

d) Clarification of all the problems of combined transport will can for close co-operation between operators and those engaged in study and research. This Symposium provided the opportunity to recall once again the need for such work in common. It will be necessary to associate in this exercise the carriers who try to organise international transport and who, with their modern methods of management geared to use of the computer, will increasingly be able to make transport a system in which techniques are more complementary than competitive.

e) The efficiency of transport over the major trade routes which by the logic of urgency have been equiped as a priority may produce a cumulative effect of concentration which repeatedly raises the question of the tendency for large-scale transport infrastructure to create permanent structures and the dangers of excessive polarisation, to the detriment of the "peripheral" regions.

Better knowledge of the external effects of transport policy decisions will always be necessary if one wishes to avoid what are known as the perverse effects, calling in question the short-term profit from investment.

f) One would be neglecting an essential aspect of the problem if one spoke of structural changes without mentioning the three aspects of the energy question:

- the exhaustion of certain natural resources and the accompanying development of "alternative" sources;
- the uneven upward rise in prices with the consequent upheaval in foreign trade;
- finally, the danger of temporary but destabilizing shortages.

However, it must be acknowledged that so far the energy crisis has not changed the specific character of transport, probably for the simple reason that the inertia resulting from the heavy investment in this field is such that any sudden change could only result from a real economic war and would seem incompatible with the maintenance of a market economy.

The main conclusions of the Symposium were announced at a press conference at the end of the proceedings. A general report by Mr. Garcia-Gordillo (Spain) will be published in 1980 to provide detailed information on the main conclusions of the statements and discussions.

4. In 1979, the ECMT held four Round Tables, taking special care to choose their dates and topics to suit the policy concerns of the Conference. The purpose of these activities is to provide guidance and information for practical application as a first step in relating theory and practice, a process which is continued by organising discussions among Ministry officials concerned. It must be pointed out that the conclusions reached by Round Tables are the outcome of discussions between economic research specialists and, though they provide an objective contribution which is of value to the authorities concerned, they do not in themselves commit the Conference as to policy.

ROUND TABLE 45

The topic of **Round Table 45** was **"Infrastructural capacity problems raised by international transit"**: The general introductory report was written by G. Chappuis from Berne and three case studies concerning Austria, Denmark and Germany were presented respectively by M. Keller from Karlsruhe, H. Zierl from Bludenz and J.H. Mortensen from Copenhagen.

The main conclusions of the Round Table were as follows:

1. International transit transport: overview

The question of international transit is undoubtedly a current issue. While it has also been an economic problem, there is no doubt that today this kind of traffic raises:

- a problem of infrastrcuture, i.e. a technical problem. Bottlenecks have recently begun to occur in transport infrastructure used by international traffic and in this connection traffic with the Middle East has brought the problem to the surface. These bottlenecks have been made more acute by the fact that traffic growth has not been even over all modes of transport;
- a problem of infrastructure pricing and more generally a financial problem. Underlying this question, whose importance is shown by the introduction of transit charges by certain States, is the idea that transit countries should be entitled to fair compensation for transit traffic through them, which brings them little benefit.

Difficulties of this kind have been experienced particularly by road hauliers in international traffic, but it is very difficult to find solutions for them because countries' sensitivity to this question varies depending on whether they are transit countries or countries where traffic is generated.

Actually the problem of competition between rail and road is at the heart of the discussion on international transit. In face of the physical or financial difficulties encountered by international freight transport in transit and of the trends in the different modes' shares, the basic question in every country is whether those conditions obtain which would enable traffic to be distributed in the optimum way between the various transport techniques.

2. A better modal split for international traffic

When as now happens a transport system, namely rail transport, has considerable surplus capacity, it seems necessary, before embarking on expensive investment in infrastructure for other modes of transport, to consider the desirability, effectiveness and possibility of distributing international traffic between rail and road.

As regards international freight transport, the substitution of rail for road transport is only possible to a limited extent. Any massive transfer of road freight to the railways is ruled out by geographical features and by conditions stipulated by consignors.

Not even a marginal substitution of rail for road transport is possible with a railway run in the traditional manner. For any hope of a significant transfer of international traffic to the railways in the conditions of free competition prevailing in most European countries, rail transport will have to change and become more attractive. Measures which might improve the supply of rail services in Europe include:

- action to solve the problems of insufficient capacity found at certain strategic points on the international rail network;
- schemes for improving the quality of the service provided by the railways:

- development of forms of combined transport such as piggy-back services;
- harmonization of the techniques for combined transport by rail and investment by Europe in suitable equipment;
- closer co-operation between national railway undertakings;
- a suitable policy for marketing combined transport;
- more co-operation between road and rail transport in promoting traffic using swap bodies, piggy-back services, etc...

In spite of all the efforts which can be envisaged to improve rail services, one has to admit that there is fairly general scepticism regarding whether it is possible, by liberal policies, to bring about a really significant transfer of international freight traffic from road to rail. This scepticism is connected mainly with the railways' rising labour costs and the inflexibility of this mode of transport. In addition, the present operation of Europe's transport market, in which the road infrastructure for international transport is made available almost free of charge, certainly does not tend to favour the substitution of rail for road transport.

In spite of such a situation there is a general refusal by political authorities in European countries to resort to extreme measures such as a quota system, and there is a desire to allow users to choose their mode of transport freely. If in these circumstances there is to be a better modal split for international traffic, it seems essential for Europe to harmonize conditions of competition between the different transport modes on the market and especially to arrive at a fair distribution of infrastructure expenditure between carriers.

3. A system for charging for the use of infrastructure

By enabling the end cost of transport to be adjusted and brought closer to its real cost to the community, the levying of charges on road transport and especially the introduction of charges for the use of infrastructure would seem to be particularly effective courses of action for promoting a new modal split.

Fuel taxes, transit dues recently charged on entry into certain countries, and charges for the use of infrastructure as envisaged by the European Communities are either insufficient or unsatisfactory for dealing with the problem of international transit.

In order to achieve fully the objectives assigned to it, a European system of charges for the use of infrastructure should:

- apply to all international transport and not only to transit traffic, which cannot be regarded as solely responsible for the harm done by overcrowding and wear and tear of the road system;
- be applied to all modes of transport;
- be calculated on the real costs due to vehicular traffic;
- be planned on a European basis so as not to lead to distortion in international trade.

Two methods would seem able to provide a fairly satisfactory solution:

- an international system of tolls whose amounts would be based on the costs of using infrastructure. This arrangement would have the advantage of being felt keenly by the user, but there would be some difficulties in applying it in countries where there are a great number of points of access to the main traffic corridors;
- an international system for levying charges for the use of infrastructure, together with the establishment of a compensation and equalisation fund for solving at least the financial problem of transit countries by redistributing the proceeds from the charges. However, while this arrangement is undeniably international in character it is complicated to put into practice.

4. Conclusion

There is no single solution for the problems raised by international traffic. The solution must consist in a series of parallel actions aimed at making better use of existing transit corridors and at achieving closer European co-operation in planning, financing and managing transport infrastructure. No single measure can be decisive. The difficulties experienced by international traffic can only be overcome as part of an overall plan of action covering all modes of transport, both passenger and freight traffic, and both land and water transport, involving all countries and forming part of a European transport policy. At all events, in view of the gravity of the situation, concerted action on a European scale cannot be long delayed, even if initially it were not perfect. Unless it were taken, some countries would not fail to take early decisions on a purely nationalist basis which would tend to

promote transfers of freight between transport modes or to restrict access to certain communication routes. Such a development could only distort competition even more in the European transport market and give rise to retaliation.

ROUND TABLE 46

Round Table 46, introduced by a report by H. Baum and W. Kentner from Cologne, was devoted to the topic **"Tariff policies other than road pricing for urban transport"**.

The Round Table came to the following conclusions.

The main finding of this study of the arguments for and against subsidising public transport is the need for careful monitoring.

Whilst the contribution from public funds is considerable the fact is that the fares problem has now evolved into a financing problem, tariffs and subsidies being supplemented by other sources of income. For obvious reasons of efficiency, fixing the overall level of external finance in advance would seem a better principle than a commitment to cover losses.

Modal split policy needs to be combined with measures to smooth out peaks or, better still, an overall policy on the organisation of time. Only when this is done will it be possible to work out the optimum cost of transport services in relation to the other factors involved. In the present situation, transport services are produced in particularly unfavourable conditions and it is therefore impossible to tell whether transport costs are too high and whether users are paying their proper share.

The ultimate objective is the long-term management of mobility and this breaks down into:

- improving trip efficiency;
- improving accessibility;
- improving the environment;
- improving the distribution of profits; and
- improving the allocation of resources.

Aspects such as modal split, traffic restraint and financial resources are often mistaken for objectives in themselves whereas in fact they are only means.

Before decisions are taken on major investment projects, the first criterion to establish is how much mobility is wanted and to what extent transport pricing can help to achieve that optimum level. This approach also affects the factors to be taken into account in pricing.

The object of pricing is to offset the social cost, but the latter is only partly the result of the use of cars. It also stems from certain land-use practices which cannot now be corrected except at enormous costs. In that light, therefore, transport is sometimes simply a less efficient but cheaper alternative to the correction of certain planning shortcomings.

In the long term, however, a fiscal reform designed to bring about better land-use would be advisable so that these shortcomings are not made worse. Current practice is unsatisfactory because its attempts to correct cost components by transport tariffs are immediately neutralised by developments in other sectors.

The social argument needs to be carefully analysed and not trotted out automatically as an objection to every economic measure. Otherwise the effect will be purely to skate over the surface of the social problem and to move further and further away from the economic optimum because of the mounting social losses. Ultimately, therefore, the argument could be self-defeating.

Some serious mistakes have been made in the past regarding parking facilities – which is a key factor in urban-planning policy. The provision of far too much parking capacity for non-residents has caused congestion by attracting volumes of traffic for which the roads in town centres are in no way designed Conversely, preferential parking treatment for residents is necessary for several reasons, one being to bring city centres back to life.

Lastly, the market on which the development of public transport depends is heterogeneous in both supply and demand. Stimuli and changes will therefore be effective only if engineere by segments and not on an overall basis. The real problem of public transport is increasingly one of knowing what services to provide and for whom.

ROUND TABLE 47

Round Table 47 was held at Hamburg at the invitation of the German Government in the course of the IVA 79 exhibition. The topic dealt with was: **"Scope for railway transport in urban areas".**

As a subject of this kind does not easily lend itself to general comment, the introductory report consisted of case studies of transport systems in 14 European cities: Amsterdam, Barcelona, Brussels, Hamburg, Copenhagen, Lille, Liverpool, Madrid, Milan, Munich, Naples, Newcastle, Oslo and Vienna. Conurbations with a population of several million such as Paris or London were not discussed by the Round Table because their size, the extent of their transport system and the scale of the journey patterns they involve, are such that they raise very special problems and because many studies have already been devoted to them.

The case studies put particular emphasis on the following points:

- Typological description of the conurbation concerned:
  - Population;
  - Jobs;
  - Housing patterns;
  - Development trends;
- volume of traffic, modal split and the part played by the railways in short-distance public passenger transport;
- Form and organisation of transport undertakings:
  - Co-ordinated fares and services;
  - Frequency of services, timetables;
  - Park-and-ride facilities.
- Financing of investment and maintenance of infrastructure and vehicles;
- Economic situation of transport undertakings:
  - Operating costs;
  - Extent to which costs are covered;
  - Fares policy.

Tentative conclusions to be drawn from the Round Table were set out in a summary report by Professor Heimerl (Stuttgart) which may be summarised as follows:

Problems concerning short-distance public passenger transport have been an important subject of policy discussion in recent years. There is an increasing awareness of the important bearing that an efficient transport system can have on the living conditions of city-dwellers and on the proper working of the economy. Apart from the importance of these aspects important for the community, the economic and financial situation of short-distance public transport services has also attracted more attention from political decision-makers.

The situation confronting transport planners seeking to provide a conceptual framework for short-distance transport in high-density areas may be described under the following headings:

- concentration of the services sector in the towns; this change in urban economic structures has led to changes in sociological structures, viz;
- decline in the resident population of city centres, with people living away from their place of work; and at the same time:
- further emigration from rural areas to the fringe areas of conurbations.

The consequence is a heavy demand for transport which grows in step with the size of the population and distances to be covered and – more especially for short-distance public passenger transport services – an even stronger concentration of demand at morning and evening peak hours. A large amount of reserve capacity which, in consequence, can hardly be used economically, is accordingly made necessary, and this brings about growing deficits for short-distance public passenger transport undertakings. There are other important considerations, some of which have come to the fore only recently but they have attracted a good deal of public interest and planners must take them into account. They may be summarised as follows:

- keener awareness of environmental considerations as regards noise and vehicle exhaust gases;
- the realisation that energy resources are not unlimited;
- the scarcity of land available for vehicular traffic and parking space;

– the probability of a lower rate of economic growth in future and, in consequence – the likelihood of public investment being reduced in future; and

– the historical pattern of growth for the public transport system, with special reference to the railways.

On this point, the desire for better co-ordination of ever-increasing capital expenditure on transport is plainly apparent. Efforts made to integrate transport planning and to co-ordinate in closer detail the transport plans of regional and local authorities are a welcome development.

Further investigation is required as to how far the existing railway infrastructure can be used more intensively than it is at present. In many cases, traffic and operating conditions can both be improved at little capital cost. Where urban areas are concerned, it can generally be taken as a basic principle that in catering for transport requirements, the operation of more efficient railway services is of benefit to the economy generally and is an essential requirement for better living conditions in these areas. Broadly speaking, the arguments in favour of rapid transit railway services are as follows:

– by carrying passengers in mass transport units they provide a better service whilst using land resources more sparingly;

– electric traction (in contrast to buses powered by internal combustion engines) involves no emission of exhaust gases and so generates far less environmental puisance – a most important consideration especially in densely populated areas;

– because of their technical merits, tracked transport systems are particularly safe.

Urban railway and/or metro networks should be supplemented by feeder or distribution systems with co-ordinated timetables and fares throughout the entire conurbation. In peripheral areas the advantages of private cars for journeys to and from terminals should be made use of and the aim should be to link up public and private transport and more particularly to provide park-and-ride facilities. Where short-distance rail services completely segregated from road transport cannot be provided, more use should be made – on a temporary or permanent basis – of reserved lanes and special traffic light control at intersections so as to speed the flow of public transport vehicles.

As part of an integrated planning procedure, transport authorities should try to develop short-distance public passenger transport in urban areas by making utmost use of existing installations and, where necessary, expanding them.

ROUND TABLE 48

The topic discussed by **Round Table 48** (Introductory report by Professor Lambooy, Amsterdam) was **"Transfers through the transport sector; evaluation of redistribution effects".**

The redistribution effects of transport policies being such a wide subject, the Round Table decided to restrict the scope of its study to the redistribution effects of transport investment projects.

1. Definition and identification of transfers

The introductory report more especially referred to transfers between certain particular income groups and the analysis was centred on the problem of land use, that is, the key concept of the inter-relationships between capital investments, land values and the resulting transfers. It showed that the biggest redistribution effects were transfers between government authorities and land-owners.

Such an analysis is open to criticism on three counts.

– As all the effects, especially benefits, are not in money terms, it follows that they are not necessarily capitalised – at least within a time span enabling them to be plainly identified – by reference to land values.

– The land market does not operate as perfectly as might be believed and, in consequence, is perhaps not a precise instrument for the evaluation of transfers. The following comments are relevant in this connection;

– No transfers would exist if all goods and services were supplied at prices resulting from the free play of market forces. The question of transfers arises only because the market for transport infrastructures is not a perfect market and because of uneconomic pricing determined by government authorities.

- The land market itself is not a perfect market because of government intervention in various ways. In consequence, land prices can hardly be regarded as a satisfactory yardstick for transfers.
- Though the relative levels of land prices are probably affected by transport investment, it is in fact impossible to say what happens at aggregated levels since there may be very many widely scattered slight changes and also transfers between landowners among themselves as distinct from transfers between landowners and the State.
- It is most difficult to distinguish changes in land values that are due to measures concerning the transport sector as distinct from those attributable to other causes.
- Other dimensions of redistribution are at least as important as those relating to land ownership.

– If the redistribution effects of transport investments are to be correctly analysed, due regard must be paid in particular to their implications for social groups according to age, sex and household characteristics and how far they are dependent on transport. Attention must be paid to the distribution of negative effects as well as benefits and the redistribution effects of alternative projects must also be taken into account. The most suitable dimensions for analysis vary according to the countries and problems concerned. They must be selected in each case with an eye to their practical use for decision-making.

2. Measurement and analysis of transfers

Some light was thrown on the discussion on measurement of transfers by references to various case studies. In the present state of the art, several problems are of special importance:

– If, in accordance with the usual inclination hitherto, the measurement and analysis of transfers is based on geographical classifications alone, the results may well be distorted. Typically, there is indeed a wider variability of trip parameters within considered zones than between different zones. Furthermore, the main problem for governments is not that of average redistribution effects. What essentially matters where they are concerned is to avert redistribution effects which concentrate heavy losses on a few people.

– When one tries to interpret the available data, the need for better models showing land-use/transport interrelationships is plainly apparent. Conventional models are not a suitable instrument for analysing redistribution effects.

– To achieve their purpose and facilitate decision-making, analysists should give very close attention to the way in which they submit their results to politicians and should dispense with unduly complex matrices. Redistribution effects can be displayed in simple and practical forms such as planning balance sheets, graphs, etc. The discussion of transport policy problems could also be made a good deal easier by drawing a distinction between the "productive" and "reproductive" spheres as this would make it possible to identify fairly clearly the implications of political intervention. On the other hand, cost/benefit or multi-criteria analysis seems only of limited use for demonstrating redistribution effects.

3. Transport policy and redistribution effects

Efficiency and redistribution are in fact closely interlinked. An approach based on objectives and constraints where redistribution effects are treated as constraints should accordingly be sought. However, although the channeling of transfers through a particular sector may have some advantages and serve as a last resort for political decision-makers when other solutions are found inadequate, it does not seem that governments should use transport policy primarily as an instrument for redistribution purposes.

As regards the compensation of benefits, taxation seems far better than any other procedure but transfers in terms of money value should doubtless be compensated within the framework of a general policy for the taxation of capital gains. Non-monetary transfers alone should be given specific treatment within transport projects, notably by internalising their costs in the corresponding calculations.

To offset negative effects or losses, direct subsidisation of the people affected would certainly be better than subsidisation of the public services provided. A direct redistribution policy seems preferable in this case. This makes it possible, in particular, to avoid certain negative effects in connection with location of activities and land-use planning.

5. The ECMT continued its work in the field of **documentation** in 1979.

The year saw the first results of the modifications to the ICTED system which were introduced as from 6th July, 1978, i.e. the date on which the Committee of Deputies approved the recommendations submitted by the Management Group.

A new edition of the Operating Rules and a new data input worksheet were finalised and submitted to national delegations. The date adopted for introducing the new rules was 1st January, 1980. The Terminology Group restructured the existing list of thesaurus terms while the Data Processing Group finalised the ICTED format for the transmission of data on magnetic tape which is modelled on the one used by the International Road Research Documentation (IRRD), so that organisations dealing with data in that field will now be able to process ICTED data in the same way. Lastly, a newsletter: "ICTED-INFORMATION", was launched as a way of providing information both for participants in the system and for its users. The first issues were well received.

The ECMT Documentation Centre made use of its documentary data base to publish two bibliographies: "ECMT and Urban Transport", giving a detailed list of all the activities of the Conference since its origin (special reports, accounts of Round Tables and Symposia), and "Energy and Transport", a general bibliography in which the references (over 300) are classified by subject. These two documents have been submitted to ECMT bodies as a contribution to their work in these fields. Aside from this use of the system for general purposes, the Documentation Centre has had to respond to daily requests for specialised information, and it is clear from the intensity of this activity that the documentary base will ultimately have to be decentralised. Since 1978, Germany has had the entire ICTED documentary base in the "Bundesanstalt für Strassenwesen" (Cologne) where it is employed for the benefit of German users. The Secretarait has also made contact with the countries concerned in order to study the possibilities of transferring information to national data-processing centres.

In addition to these activities relating to the development of the ICTED system, the Documentation Centre has continued to publish its Six-monthly Information Bulletin, which is reaching an ever-increasing number of researchers, and has also published a list of "Transport Administrations" in the loose-leaf form which is easy to update. It gives the organisational charts of the Ministries dealing with transport in ECMT Member countries and the names of the officials responsible for the various services and their relevant functions.

All these different activities have been directly prompted both by the need to back up and increase the efficiency of the Conference's work and the desire to provide national transport authorities with useful background material for their work.

6. **Noteworthy developments concerning ECMT co-operation with other international organisations** in matters of research in 1979 were as follows:

a) In co-operation with the OECD, the ECMT organised a seminar on the general topic: "Urban Transport and the Environment" which was held from 10th to 12th July, 1979 (see Part II, chapter IIA).

b) The freight transport forecasting exercise launched by the European Economic Community was completed in 1979. The results of this study, in which the ECMT participated as an observer, have been published by the European Communities.

Part III

TRAFFIC AND INVESTMENT TRENDS

Chapter 1

GENERAL

Introduction

1. This report on the development of transport in the ECMT countries consists of four chapters. Chapter 1 sets out the main trends in summary form for all modes of transport; Chapter 2 deals in detail will Rail; Chapter 3 with Road and Chapter 4 with Inland Waterway, Ports and Pipeline transport. There is also a statistical annex presenting the detailed tables upon which the report is based and which has been compiled from returns submitted annually by ECMT member countries.

Main features in 1978

1.2. Both freight and passenger transport increased for all modes in 1978. The growth rate of rail transport was, considerably less than that of other modes, particularly compared to road freight and private road passenger transport.

1.3. Rail and inland waterways were particularly affected in the mid-1970's by the fall in demand for freight transport following the oil price rises of 1974/5. It seems possible that they will be similarly affected by the recent economic downturn in spite of their advantages in terms of energy utilisation.

Freight transport (tables A and D)

1.4. Tonne-Kilometres moved by rail increased slightly by 1% in 1978 (18 countries) following a slight decline in 1977. 1978 traffic was 3% up on the low point reached in 1975 following the economic downturn of 1974/5 but was still 9% below its 1970 level. Although increases in rail freight traffic were recorded in most member countries, decreases were recorded in several including Spain, United Kingdom, Italy, Norway and Turkey.

1.5. Road freight continued its rapid expansion in 1978 with a 7% increase in tonne-kilometres (12 countries). Freight traffic moved by road is now at nearly twice its 1965 level and its market share of inland freight transport now stands at 55% (11 countries). No country experienced a decrease in 1978 but the slowest growth rates were recorded in Finland, United Kingdom and Sweden. In contrast, the fastest growth rates were recorded in Italy and Yugoslavia.

1.6. Tonne-Kilometres moved by inland waterways increased by 5% in 1978 (8 countries) and have now passed the 1970 level, following the low point in 1975. Growth in 1978 was particularly strong in Germany and the Netherlands.

1.7. Oil and oil products moved by pipeline continued their steady growth in 1978 with a 3% increase over 1977. 1975 was a relatively bad year for pipeline transport following the oil crisis of 1974/5. However, since then it has maintained a comparable rate of growth to that of road freight transport. In 1978 growth was particularly strong in the United Kingdom.

Passenger transport (tables B and E)

1.8. Travel by car and motor-cycle (private road transport) has increased continually and fairly steadily throughout the 1970's, although at a slightly slower rate than experienced during the 1960's. In 1978 passenger kilometres increased by 4% (12 countries) and, as with road freight transport, are now standing at about twice the 1965 level. Particularly strong rates of growth in 1978 were recorded in Belgium, Spain and Greece.

1.9. Both bus (public road transport) and rail travel only increased marginally in 1978, by 2% (11 and 18 countries respectively), although bus travel has been increasing more rapidly over the longer term. Three member countries experienced a decrease in bus travel in 1978: Belgium, United Kingdom and Netherlands, although only in the British case can this be seen to be part of a longer term trend. There was considerable divergence between member countries in the performance of their passenger rail systems during 1978 and indeed, over the whole period since 1965 there have been considerable fluctuations. In 1978 passenger kilometres travelled by rail decreased in Belgium and Spain, and increased most rapidly in the United Kingdom, Portugal and Turkey.

Car ownership (table C)

1.10. Registered private cars and taxis numbered 97 million in 17 countries in 1978, indicating a probable total of 99 million in all 19 member countries of the ECMT. This is a 4% increase over 1977, 50% over 1970 and a 130% over the 1965 level. A comparison between tables C and B indicates that car ownership has been growing at a faster rate than actual passenger kilometres travelled by these cars, although the decrease in the average amount of travel per car has been less marked in recent years. The number of cars per 100 population has now reached 27 in 17 countries but for all 19 member countries the figure is about 24. Several countries now have well over 30 cars per 100 population. These are: Germany, France, Luxembourg, Sweden and Switzerland.

TABLE A : FREIGHT TRANSPORT TRENDS IN 11 COUNTRIES*

(a) Index (1970 tonne-kilometers = 100)

Mode	1965	1970	1975	1977	1978
Rail	87	100	88	89	90
Road	71	100	124	134	140
Inland Waterway	86	100	95	99	104
Pipeline	60	100	112	123	126

(b) Percentage by Mode (tonne-kilometers)

Mode	1965	1970	1975	1977	1978
Rail	36	32	26	25	24
Road	43	47	54	55	55
Inland Waterway	16	14	12	12	12
Pipeline	6	7	8	8	8

* Germany, Belgium, Spain, Finland, France, United Kingdom, Luxembourg, Netherlands, Sweden, Switzerland, Yugoslavia.

TABLE B: PASSENGER TRANSPORT TRENDS IN 10 COUNTRIES*

(a) Index (1970 Passenger-kilometers = 100)

Mode	1965	1970	1975	1977	1978
Road-Private	71	100	121	131	136
Road-public (bus)	86	100	118	122	123
Rail (excluding Metro)	101	100	102	102	103

(b) Percentage by mode (passenger-kilometers)

Mode	1965	1970	1975	1977	1978
Road-private	71	76	78	79	79
Road-public (bus)	16	14	14	13	13
Rail (excluding Metro)	13	10	8	8	8

* Germany, Belgium, Denmark, Spain, Finland, United Kingdom, Norway, Netherlands, Switzerland, Yugoslavia.

TABLE C: CAR OWNERSHIP TRENDS IN 17 COUNTRIES*

Registered Cars & Taxies	1965	1970	1975	1977	1978
Number (millions)	42.0	63.9	84.5	92.7	96.6
Index (1970 = 100)	66	100	132	145	151
Number per 100 population	13	19	24	26	27
Index (1970 = 100)	68	100	129	140	145

* All member states except Austria and Turkey.

TABLE D: FREIGHT TRANSPORT TRENDS BY COUNTRY

(Billion tonne-kilometers)

	Rail			Road			Inland Waterway			Pipeline		
	1970	1977	1978	1970	1977	1978	1970	1977	1978	1970	1977	1978
Germany (1)	70.3	54.9	56.5	72.2	89.0	92.4	48.8	49.3	51.5	16.9	15.3	15.3
Austria	10.2	10.3	.	.	.	.	1.3	1.5	1.5	3.7	6.5	7.0
Belgium (1)	7.9	6.5	7.2	13.1	15.7	16.8	6.7	5.8	5.9	0.3	1.8	1.7
Denmark	1.8	1.8	1.8	7.8	11.8	12.2	–	–	–	–	–	..
Spain	10.3	11.8	11.1	51.7	84.8	90.9	–	–	–	1.0	2.5	2.7
Finland	6.3	6.4	6.3	10.4	15.2	15.3	.	0.1	0.1	.	.	.
France (1)	70.4	66.2	67.3	62.4	85.5	89.1	14.2	11.3	11.6	28.2	32.3	33.1
United Kingdom (GB) (1)	26.8	20.1	20.0	85.0	98.0	99.1	0.1	0.1	0.1	2.7	8.1	9.1
Greece	0.7	0.9	0.9	.	.	.	–	–	–	–	–	–
Ireland	0.5	0.6	0.6	.	.	.	–	–	–	–	–	–
Italy	18.1	17.6	16.6	58.7	74.4	88.0	0.4	.	.	9.1	11.6	.
Luxembourg (1)	0.8	0.6	0.6	0.2	0.8	0.8	0.3	0.3	0.3	–	–	–
Norway (2)	1.4	1.6	1.5	3.2	5.4	5.7	–	–	–	.	0.4	0.4
Netherlands (3)	3.5	2.8	2.9	12.4	17.3	.	30.7	32.1	34.4	4.1	5.3	5.1
Portugal	0.8	0.9	0.9	.	.	.	–	–	–	–	–	–
Sweden (1)	17.3	14.8	14.8	17.8	19.9	20.3	–	–	–	.	.	.
Switzerland	6.6	5.9	6.2	4.2	5.1	5.4	0.2	0.2	0.2	1.2	1.2	1.3
Turkey	6.1	7.6	6.6	.	.	.	–	–	–	.	.	9.4
Yugoslavia (1)	19.3	22.2	23.4	17.8	32.2	38.0	4.3	5.8	5.9	–	0.1	0.2

NOTES : (1) Road - National Vehicles only
(2) Rail - Domestic transport only
(3) Pipelines - International transport only

(.) Signifies not available
(-) Signifies zero or negligible

TABLE E: PASSENGER TRANSPORT TRENDS BY COUNTRY

(Billion passenger-kilometers)

	Road-Private (1)			Road-Public(2)			Rail (exc. Metro)		
	1970	1977	1978	1970	1977	1978	1970	1977	1978
Germany	352.3	434.1	451.2	49.6	61.5	62.5	37.3	37.3	37.6
Austria	45.0	46.2	47.6	10.1	12.5	12.7	6.3	6.8	.
Belgium (3)	39.9	58.1	61.8	9.3	9.5	9.1	7.6	7.3	7.1
Denmark (3)	33.3	41.5	42.3	4.6	6.3	6.5	3.5	3.1	3.1
Spain	64.3	114.7	121.1	20.9	28.9	29.5	15.0	18.6	18.1
Finland	24.7	32.5	32.7	6.2	7.8	7.9	2.2	3.0	3.0
France	.	.	.	.	.	.	41.0	51.8	53.5
United Kingdom (GB)	308.7	373.5	390.1	56.5	53.0	52.0	30.4	29.3	30.7
Greece	14.6	37.7	45.3	.	5.0	5.2	1.5	1.6	1.6
Ireland	.	.	.	.	.	.	0.8	0.9	1.0
Italy	234.4	325.9	.	32.0	54.6	60.6	32.5	38.4	39.2
Luxembourg	.	.	.	.	.	.	0.2	0.2	.
Norway (4)	18.9	31.6	33.3	3.7	4.0	4.0	1.5	1.9	1.9
Netherlands (5)	81.2	99.3	102.2	7.3	9.5	9.4	8.0	8.0	8.1
Portugal	17.5	36.0	37.4	4.4	.	.	3.5	5.2	5.5
Sweden (3)	70.8	91.2	91.2	.	.	.	4.6	5.6	5.6
Switzerland	49.5	64.2	65.7	3.2	4.2	4.5	8.2	8.0	8.1
Turkey	.	.	.	.	.	.	5.6	5.1	5.6
Yugoslavia	17.7	47.9	48.4	20.3	36.5	37.1	10.9	10.5	10.4

NOTES : (1) Cars and motorcycles/mopeds
(2) Buses
(3) Road - Private excludes motorcycles for those countries
(4) Rail - Domestic only
(5) Road private-national vehicles only: Road Public-includes metro

CHAPTER II

RAILWAYS

PASSENGER TRAFFIC

2.1. Table 1 (a) shows the passenger traffic trends for the years 1965 and 1970 to 1978 in ECMT Member countries.

2.2. The number of passengers carried in 1978 increased by 4.8 per cent over the previous year (1977), but fell by 4.0 per cent compared with 1965.

2.3. The figures for passenger kilometres are shown in table 1 (b) and cover the same period of reference. On average, the 1978 figures are about one per cent up on the previous year's, and 11 per cent up on 1965.

FREIGHT TRAFFIC

2.4. For most ECMT Member countries, freight traffic in terms of tonnes carried was higher in 1978 than in 1977. The trend for the intervening years was alternately up and down. The figures for tonnes carried (Table 2 (a)) in 1978 are on average about 5 per cent higher than for 1977. Freight traffic was slightly down in Spain, Italy and Sweden. Transport output in the UK has been declining almost continuously over the period, from 1,167.9 million tonnes in 1965 to 1,066,1 million in 1977 (about 8.7 per cent). – 15 countries –.

2.5. As regards the increase in tonnes carried in 1978 (Table 2 (b)), the average figures are only 1.5 per cent up on the previous year. For Spain, Finland, the United Kingdom, Greece, Italy, Norway and Sweden, the 1978 figures were below the previous year's.

2.6. Highest freight transport output was achieved in 1974.

INTERNATIONAL FREIGHT TRAFFIC BY RAIL

2.7. The figures for international freight traffic by rail are shown in Table 3. The total volume increased by nearly 10 per cent for the year 1978 compared with the previous year, except in Spain, the Netherlands and Switzerland.

LENGTH OF RAIL NETWORK

2.8. The total length of Member countries' networks fell by 10.0 per cent since 1965 (Table 4 a), due to the closure of unremunerative lines and now totals 178,731 km.

2.9. The total length of electrified line in ECMT Member countries is 58,094 km (Table 4 b).

2.10. In 1978, the total electrified network was about 8,000 km longer than in 1970.

RAIL OPERATION

2.11. Trends in train - km and gross tonne-km are show in Table 5. A comparison between 1965 to 1978 shows a practically constant level in total train kilometres for ECMT Member countries. The figure for gross tonne-km,

for the same period, on the other hand, has increased considerably in some cases, suggesting better utilisation of freight trains.

ROLLING STOCK, 1977

2.12. The composition of the ECMT Member countries rolling stock is shown in Table 6.

2.13. The railcar figures include both motor cars and the associated trailers. The freight stock figures do not include private wagons.

ENERGY CONSUMPTION FOR TRACTION

Table 7 provides details of total energy consumption (electricity and diesel fuel) for traction (1,000 tonnes or 1,000 kWh) for 1970 and for the years 1970-1978. The average 15 to 20 per cent drop in consumption over the eight year period is essentially due to diminishing traffic and more efficient traction conditions (more economical traction systems).

In 1970, overall electricity consumption was not quite as high as diesel fuel consumption, but by 1978 electricity accounted for most of the energy consumed.

CHAPTER III

ROADS

ROAD PASSENGER TRANSPORT ON NATIONAL TERRITORY

3.1. **Private cars and taxis** (Table 8a)

Twelve countries have comparable data for Table 8a as a whole (D, B, DK, E, SF, GB, GR, N, NL, P, CH, YU). For these twelve countries, annual growth rates deriving from Table 8a are as follows:

1977-1978: + 4.55 %
1976-1977: + 4.55 %
1975-1976: + 4.22 %
1975-1978: + 4.44 %
1970-1975: + 4.35 %
1965-1970: + 7.72 %

3.2. Passenger transport, expressed in passenger-km continued to increase at a fairly steady annual rate of 4 to 5 per cent, i.e. much lower than for the 1965-1970 period. Theses rates were greatly influenced by trends in the larger countries (Germany and the United Kingdom by themselves account for more than half the total passenger-km). However, the trend by country hardly varied. For the 1977-1978 period, the arithmetic mean for country growth rates is 4.78 per cent (13 countries). Most of the figures are between 3 and 6 per cent. Exceptions are an 20.65 per cent increase in Greece and a slight decrease (0.09 per cent) in Sweden. Overall, the use of cars for passenger transport is now twice what it was in 1965.

3.4. **Two-wheeled motor vehicles** (Table 8b)

The annual rates of increase for all ten countries in Table 8b (E, SF, GB, GR, I, N, NL, P, CH, YU) are as follows:

1977-1978: + 2.11 %
1976-1977: + 5.97 %
1975-1976: + 0.52 %
1975-1978: + 1.06 %
1970-1975: + 1.82 %
1965-1970: + 3.98 %

3.5. The trend here appears so variable as to raise doubts about whether the data are sufficiently consistent.

3.6. Once again, the rates are greatly influenced by trends in the larger countries (Italy alone, for example, accounts for more than half the total). In contrast to car use, the trend varies considerably from one country to another. For the 1977-1978 period, the variation ranges from −26.19 per cent in Yugoslavia to +5.81 per cent in the United Kingdom. The arithmetic mean for all countries is −3.71 per cent. Even so, six out of the ten countries reported positive rates of increase.

3.7. Overall, passenger transport by two-wheel motor vehicles has remained at a lower level since 1970 than the figure for 1965.

3.8. **Buses, coaches, trolleybuses** (Table 8c)

Annual rates of increase for all twelve of the countries in Table 8c combined (D, B, DK, E, SF, GB, GR, I, N, NL, CH, YU) are as follows:

1977-1978: + 2.66 %
1976-1977: + 2.71 %
1975-1976: + 4.32 %
1975-1978: + 3.23 %
1970-1975: + 3.79 %
1965-1970: + 2.95 %

3.9. The trend has thus continued at a moderate, fairly steady rate of 2 to 3 per cent a year; from a peak of about 4% in 1975 to 1976, it has declined noticeably, falling to the same level as that for the period 1965-1970.

3.10. For 1977-1978, the arithmetic mean for individual rates of increase is 2.11 per cent. Three of the 12 countries (B, GB and NL) report negative rates. The growth rate is particularly high for Switzerland (+ 7.45 per cent) and still more so far 10 for Italy, (+ 11.13 per cent).

3.11. Aggregate figures for bus, coach and trolleybus transport are now 53 per cent higher than in 1965.

GOODS TRANSPORT BY ROAD

Output expressed in tonnes (Table 9a)

3.12. Seven countries (D, B, F, GB, N, CH, YU) have comparable data for the whole of Table 9a.

For those seven countries, trends are as follows:

1977-1978: + 1.26 %
1976-1977: – 0.45 %
1975-1976: + 1.95 %
1975-1978: + 0.92 %
1970-1975: + 0.01 %
1965-1970: + 3.98 %

3.13. A very slight recovery is therefore discernible, following a drop in 1976-1977 and a completely no-change situation between 1970 and 1975.

3.14. Even so, by the end of 1978, overall the tonnages carried were 25 per cent up on 1965.

3.15. For 1977-1978 (nine countries), rates of increase per country are on the whole over 3 per cent. The United Kingdom even reports 5.06 per cent. Only three countries report a decrease in tonnes carried (F: –2.60 %; S: –5.09 %; YU: –7.55 %).

GOODS TRANSPORT OUT PUT EXPRESSED IN TONNE-KILOMETRES (Table 9b)

3.16. Nine countries (D, B, E, F, GB, I, N, CH, YU) can be compared across the whole table.

3.17. The following table shows the trends in these nine countries, and also for the seven referred to in paragraph 3.12 above (the same less E and I):

Nine countries	Seven countries
1977-1978: + 7.21	4.71 %
1976-1977: + 4.77	2.81 %
1975-1976: + 4.92	5.00 %
1975-1978: + 5.63	4.17 %
1970-1975: + 3.90	3.53 %
1965-1970: + 6.24	5.95 %

3.18. For the seven countries considered, the trend was absolutely parallel with the trend for tonnes carried, but with distinctly higher rates, pointing to longer hauls.

3.19. For the 1977-1978 period, country rates of increase are usually under 6 per cent (12 countries), but Italy and Yugoslavia report rates of over 18 per cent. The arithmetic mean for country rates of increase is 6.31 per cent (12 countries).

AVERAGE DISTANCE

3.20. The more rapid growth in t-km indicates a continuing increase in average haul distance. For the seven countries referred to above, the trend is as follows:

1965	1970	1975	1976	1977	1978
35,86	39,39	46,89	48,21	49.79	51,48 km

3.21. For 1977-1978, the average rate of increase is 3.39 per cent. However, the United Kingdom data show a decrease of 3.76 per cent and these for Yugoslavia an increase of 26.18 per cent. The figures for the other countries lie somewhere between, the arithmetic mean for the rates being 4.91 per cent. The United Kingdom is the only country with a negative rate).

GOODS TRANSPORT OUTPUT BY TYPE OF CARRIER (Table 9c)

3.22. At the end of 1978 output in tonne-kilometres, can be broken down as follows (ten countries):

Hire or reward: 56.7 per cent
Own account : 43.3 per cent

3.23. Country-by-country analysis shows that carriage for hire or reward, which usually takes the lion's share, comes to only 30.9 per cent in Italy and 44.3 per cent in Yugoslavia.

3.24. As regards trends since 1965, the figures in Table 9c enable six countries (D, B, F, GB, I, YU) to be compared.

For these six countries together, trends are as follows:

	1965	1970	1978
Hire or reward:	51.8	55.2	54.7
Own account :	48.2	44.8	45.3

3.25 By-country analysis shows that for the period from 1965 to 1970, the share of transport for reward increased in each of the six countries; for the period for 1970-1978, however, it increased only in Belgium and the United Kingdom. In the four other countries, it declined slightly.

INTERNATIONAL ROAD HAULAGE (Table 10)

3.26 Comparative output figures are give in Table 10 for nine countries since 1965 and for twelve countries since 1970.

3.27 Trends since 1965 (nine countries: D, B, SF, GB, N, NL, S, CH, YU) are as follows:

1965-1970: + 10.65 % per year
1970-1975: + 9.42 % per year
1975-1978: + 7.77 % per year
1977-1978: + 7.26 %

3.28 Trends since 1970 (twelve countries: as above plus E, F and P) are as follows:

1970-1975: + 8.57 % per year
1975-1978: + 8.48 % per year
1977-1978: + 8.57 %

3.29 These figures clearly show the rapid growth in international road haulage, but they also seem to indicate a gradual slowing down in the growth rate. They are, however, greatly influenced by the major countries especially Germany, and to eliminate the influence of country size, the arithmetic mean has been calculated for the annual growth rates per country. The table below shows the result for each of the periods under consideration:

	1965-1970	1970-1975	1975-1978	1977-1978
9 countries	11.87	10.13	9.99	9.01 per year
12 countries	–	9.14	11.40	11.58 per year

3.30 Thus, the overall trend appears to be confirmed for the nine countries, but not for the twelve, the three additional countries (E, F and P) having all had very high growth rates (between 10 and 30 per cent per year) for the last two periods.

ROAD TRAFFIC ON NATIONAL TERRITORY (vehicle-km)

Private cars and taxis (Table 11a)

3.31 Table 11a shows the trend in vehicle-km since 1965 for twelve countries (D, B, DK, SF, GB, GR, I, N, NL, P, CH, YU) and since 1970 for 14 countries (the same plus E and S).

3.32 Annual rates of increase are as follows:

	1965-1970	1970-1975	1975-1978	1977-1978
12 countries	10.00	4.56	4.96	6.35 % per year
14 countries	–	4.64	5.15	6.19 % per year

3.33 Thus, after the relatively slow growth between 1970 and 1975, the rate of increase seems to be mounting again.

3.34 Largely however, this is due to the figures for Germany and Italy; by-country analysis does not confirm the trend. The following table, giving the arithmetic mean for annual growth rates and individual countries shows that, on the contrary, that figure has a slightly downward trend.

	1965-1970	1970-1975	1975-1978	1977-1978
12 countries	12.03	6.81	6.37	5.76 % per year
14 countries	–	6.85	6.13	5.56 % per year

3.35 For 1977-1978, five of the 14 countries (D, GB, GR, I, NL and E) report a much higher growth rate than for 1975-1978, but in some countries (and in particular DK, SF, N and S) the rate has become very low. In Sweden there is even a slight decrease (0.09 per cent). This is the first report of a decrease in this area since 1953.

TWO-WHEELED MOTOR VEHICLES (Table 11b)

3.36 For the eleven countries represented in Table 11b, the overall trend since 1965 is as follows:

1965-1970	1970-1975	1975-1978	1977-1978
–4.78	+2.11	+1.92	–1.74 % per year

3.37 Rates of increase in individual countries, are roughly the same.

–2.15	+0.77	+0.26	–1.68 % per year

(arithmetic mean for country rates of increase for each period).

3.38 For the period 1977-1978, however seven countries report rising trends, the highest rate being in Germany (10.53 %). Three countries report falling trends: Italy (3.81 %), the Netherlands (–14.11 %) and Yugoslavia (–26.44 %).

3.39 The trend here is very irregular, with pronounced peaks and valleys, and considerable differences from one country to another. Over the period 1965 to 1978, it remained continually positive in only three countries (GR, P, CH) and continuously negative in only one (NL).

BUSES, COACHES AND TROLLEYBUSES (Table 11c)

3.40 For the twelve countries which have a complete series in Table 11c (D, B, DK, E, SF, GB, GR, I, N, NL, CH, YU) the overall trend since 1965 is as follows:

1965-1970	1970-1975	1976-1978	1977-1978
+2.5	+3.05	+4.07	+3.40 per year

3.41 Growth has thus been continuous and fairly steady at about 3-4 per cent a year, with few differences from country to country, or from one period to the next. However, for the period from 1975 to 1978, two countries depart noticeably from the average growth rate: Italy (+ 12.37 %) and Belgium (−0.08 %).

GOODS VEHICLES (Table 11d)

3.42 Table 11d presents a complete series since 1965 for eight countries (D, DK, E, SF, GB, I, CH and YU), and since 1970 for eleven countries (the same, plus B, F and S).

3.43 The overall trend is shown in the following table:

	1965-1970	1970-1975	1975-1978	1977-1978
8 countries	3.69	2.09	3.81	4.97 % per year
11 countries	–	1.98	3.55	4.71 % per year

For both groups of countries, the table shows that the growth rate has been accelerating continuously since 1970.

3.44 The by-country analysis shows that in most cases growth rates are fairly modest, except for Italy where the figure is 8.30 % per year over the period 1975-1978 (13.85 % for 1978), and Sweden where it has been negative since 1970 (−2.38 %) per year over the period 1975-1978).

THE VEHICLE POPULATION

PASSENGER TRANSPORT VEHICLES (Table 12)

3.45 As can be seen from Table 12, the average annual increase in the number of vehicles in use for each of the periods in categories concerned is as follows:

Period:	1965-1970	1970-1978
Two wheeled:	−1.84	+1.83 % per year (16 countries)
Private cars:	+ 8.70	+5.26 % per year (15 countries)
Public transport:	+ 3.88	+2.87 % per year (16 countries)

3.46 In aggregate, the number of vehicles is higher now than in 1965 and seems to be increasing in all categories although this is not done of all countries except in the case of cars, where two countries (E and YU) still have rates of increase of the order of 13 per cent per year. For the other categories the picture is more varied.

3.47 For public transport, all countries except the United Kingdom now have more vehicles in use than in 1965, but in three countries (GB, S and CH) the figure is lower than it was in 1970.

3.48 The number of two-wheeled vehicles is falling in eight of the sixteen countries (DK, E, SF, IRL, N, NL, S, YU) and growing in the eight others, the highest rates of growth being 7.91% in Germany, for the period 1970-78. The number two-wheeled vehicles in use is higher than in 1965 in only seven countries (D, B, E, GR, I, CH, YU).

GOODS VEHICLES

NUMBER OF VEHICLES (Table 13a)

3.49 The overall trends for the number of vehicles for the same countries for each of the two periods under consideration are as follows: (average annual rates of increase):

Period:	1965-1970	1970-1978 (%)
Lorries of under 1.5 t payload	5.79	4.38% per year (19 countries)
Lorries of over 1.5 t payload	5.15	4.09% per year (19 countries)
Tractive units	7.57	6.58% per year (11 countries)
Trailers and semi-trailers	5.88	7.22% per year (9 countries)

Countries concerned :
- Lorries : D, B, E, SF, F, GR, I, NL, P, S, CH.
- Tractive units: D, B, E, SF, F, I, NL, P, S, CH, YU.
- Trailers and semi-trailers: D, E, SF, F, I, P, S, CH, YU.

3.50 A point to note is that the rate of increase for goods vehicles is similar to that for cars, and even higher in the case of tractive units, trailers and semi-trailers.

VEHICLE CAPACITY (Table 13b)

3.51 The overall trends in vehicle capacities, for the same countries for both periods, expressed as average rates of increase are as follows:

Period:	1965-1970	1970-1978
Lorries of under 1.5 t payload	6.51	3.91% per year (7 countries)
Lorries of over 1.5 t payload	5.37	4.62% per year (8 countries)
Trailers and semi-trailers	6.61	5.55% per year (5 countries)

Countries concerned:
- under 1.5 t: D, B, E, F, NL, S, CH.
- over 1.5 t: the same countries and Denmark.
- trailers : D, B, F, S, CH.

3.52 This means that the rates of increase have slowed but the figures are not comparable with those in section 3.49, since they do not relate to the same countries.

COMPARISON BETWEEN TRENDS IN VEHICLE POPULATION AND VEHICLE CAPACITY

3.53 Limited to the period from 1970 to 1978, this comparison can be made for the following countries:
- under 1.5 t: D, B, DK, E, F, GB, NL, S, CH, YU (ten countries).
- over 1.5 t: (ditto).
- trailers: D, B, DK, F, S, CH, YU (seven countries).

3.54 The annual average rates of increase are as follows:

	Vehicle population	Capacity
Under 1.5 t:	4.08	3.14 % per year (10 countries)
Over 1.5 t:	2.28	3.58 % per year (10 countries)
Trailers and semi-trailers:	6.25	5.33 % per year (7 countries)

TRENDS IN VEHICLE POPULATION STRUCTURE

3.55 Limited to the seven countries whose data are fully comparable for the period 1970-1978 (D, B, DK, F, S, CH, YU), the data can be tabulated in the following way :

	1970			1978		
	Number in use %	Capacity %	Average capacity	Number in use %	Capacity %	Average capacity
Under 1.5 t	39.1	8.1	0.700	38.4	7.9	0.689
Over 1.5 t	41.1	52.0	4.280	38.8	48.8	4.236
Trailers and semi-trailers	19.7	39.9	6.839	22.8	43.3	6.382
Total	100.0	100.0	3.383	100.0	100.0	3.366

3.56 Overall, for the seven countries under consideration, the number of vehicles has increased at a faster rate than total capacity, giving a slight decrease in average capacity. This is due partly to the effect of weighting, and partly to the figures being limited to seven countries. In many countries, in fact, vehicle unit capacity increased slightly in all categories.

FUEL CONSUMPTION (Table 14)

3.57 The trend for the average annual increase in fuel consumption by road vehicles is shown by the following figures:

Period:	1965-1970	1970-1976	1976-1977	1977-1978
10 countries	9.66	5.05	4.78	5.81 % per year
12 countries	9.66	5.46	4.30	5.58 % per year
13 countries	9.66	5.05	4.43	5.64 % per year

Countries concerned:
1st line : D, B, DK, E, SF, F, IRL, I, P, CH.
2nd line: as above, plus GB and S.
3rd line : as line 2, plus GR.

3.58 During 1978, the annual rate of increase in consumption began to grow again following a drop in 1977. In 1978, diesel fuel accounted for 32 per cent of total consumption (13 countries).

LENGTH OF ROAD NETWORK

NATIONAL NETWORKS (Table 15)

3.59 Except for motorways, the figures in Table 15 are not homogeneous and no conclusions can be drawn from them, except that road networks have been increasing for more than would be accounted for by motorway building alone.

3.60 Between 1970 and 1978, for example, the length of motorways increased by 7,287 km (93.51 %), whereas the total length of all roads increased by 76,861 km or 7.70 % (this relate to nine countries: D, DK, E, GB, N, NL, P, S, CH). The increase attributable to motorways thus accounts for barely 10 per cent of the total increase in the road network for the nine countries concerned.

INTERNATIONAL NETWORK (Table 16)

3.61 In 1965, the international network was 45,159 km in length; it is now 60,169 km and has therefore increased by some 15,000 km over 13 years. This does however include the networks in Ireland and Finland (3,127 km in all) which were not members of the ECMT in 1965. The figure now appears to have levelled off, any changes being very slight and largely the result of changes in road categories in the international network.

CHAPTER IV

INLAND WATERWAYS

TRANSPORT TRENDS

Introductory note

4.1 To give an idea of the relative volume of traffic in 1978, it is compared in this report with the average for the years 1970-1974. Comparison with a single year would have been statistically unsound owing to the irregularity of traffic in the early seventies.

All countries under review

4.2 Trends in tonnages carried by inland waterways in six countries – Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland – is shown below:

TONNES CARRIED

Year	Internal traffic	International traffic	Total
1965	269.3	127.5	396.8
1970	299.7	173.7	473.4
1971	300.3	171.2	471.5
1972	299.0	171.3	470.3
1973	285.6	192.5	478.1
1974	271.6	207.6	479.2
1975	234.3	185.3	419.6
1976	258.5	194.4	452.9
1977	255.3	199.7	455.0
1978	271.1	213.8	484.9

4.3 These figures show that a sharp fall in total traffic in 1975 (about 12 per cent) was followed by a partial recovery in 1976 which levelled off in 1977, but by a marked improvement in 1978 when internal and international traffic combined reached a record level,

4.4 It must be pointed out, however, that these two categories of traffic followed different trends. The volume of international of traffic followed different trends. The volume of international traffic was exceptional, nearly 17 per cent above the 1970-1974 average, whilst internal traffic, was about 7 per cent below that average. The upwaid trend in international traffic that has been apparent for many years continued in 1978, when it accounted for 44 per cent of total traffic, as compared with only 32 per cent in 1965.

4.5 The improvement in aggregate transport output continued in 1978 in the six countries mentioned, with an increase of about 5 per cent to 103,600 million tonnes/km, which is approximately 6 per cent better than the average for the years 1970-1974. Average voyage length, at 214 kilometres, was slightly down.

4.6 The total tonnage carried on the Rhine across the German-Netherlands frontier increased by nearly 10 per cent to 139.7 million tonnes, which is a new record.

Remarks on traffic trends in various countries

4.7 In the Federal Republic of Germany, 246.4 million tonnes of freight were carried on the waterways in 1978, a net increase of 6 per cent. The present figure is about 3 per cent higher than the average for the years 1970-1974.

4.8 Internal traffic remained practically unchanged, international traffic increased by more than 10 per cent and traffic in transit decreased by 7 per cent.

4.9 Shipments of building materials, which account for a third of total traffic, increased by 3 per cent.

4.10 The hydrocarbons category, accounting for 21 per cent of the total, rose by nearly 10 per cent. A similar trend is apparent for solid fuels, which accounted for 15 per cent of total traffic. In 1978, 8 per cent more steel was carried.

4.11 Traffic recorded at frontier points increased by the following amounts: nearly 10 per cent on the Rhine at Emmerich, 3 per cent on the Rhine at Neuburgweier and 4 per cent on the Danube at Passau.

4.12 In Belgium, total traffic – 100.2 million tonnes – remained practically down and transit traffic up. International traffic, which accounts for some three-quarters of the total, showed little change.

4.13 In aggregate, traffic exceeded the 1970-1974 average by about 3 per cent.

4.14 In **France** too, the situation was more or less the same as in 1977 with total traffic amounting to 91.6 million tonnes (+0.4 per cent). Internal traffic was down slightly (–0.6 per cent), but international traffic, accounting for 37 per cent of the total, was 5 per cent up. Transit traffic fell by 10.5 per cent.

4.15 The downward trend, which had been the main characteristic of total inland waterways transport during these last few years in France, has now been halted, but in 1978 total freight carried was still well below the 1970-1974 average (–16 per cent).

4.16 In the following summary, total inland waterways traffic is broken down by goods carried. It also shows, the increase over 1977 for comparison purposes.

TOTAL TRAFFIC BY BROAD CATEGORIES OF GOODS - FRANCE - 1978

	Million tonnes	1978 as % of 1977
Agricultural products	9.1	+ 24
Foodstuffs	3.8	+ 13
Solid fuels	9.4	+ 10
Ores	2.4	–25
Metal products	4.5	+ 2
Building materials	39.5	– 6
Fertilizers	1.9	– 3
Chemicals	1.3	– 3
Manufactures	0.8	+ 2
Oil products	18.9	+ 2
Total	91.6	

4.17 Three categories, i.e. building materials, oil products and solid fuels, alone account for three-quarters of all traffic. The largest category, building materials, has been constantly losing ground and its level is already 17.5 million tonnes lower than in 1969. The conversion of several EDF power stations has been responsible for a steady rise in solid fuel traffic.

4.18 In **the Netherlands**, inland waterway traffic increased by a further 1.8 per cent to 277.5 million tonnes, the highest level observed to date. This is not due to internal traffic, down by 6 per cent, but to international

traffic (55 per cent of the total) which increased by 7 per cent, and to transit traffic, which also rose slightly. As a result total traffic was 9 per cent above the average for the years 1970-1974.

4.19 In **Switzerland**, total traffic feel by 2 per cent, but internal traffic held its level, while international traffic (59 per cent of the total) fell slightly. Total traffic is 4 per cent higher than the average for the period 1970-1974.

4.20 In **Luxembourg**, these was considerably more international traffic - both imports and exports - in 1978 than in 1977.

4.21 In **the United Kingdom**, internal traffic rose by 1.5 to 5.5 million tonnes which is 6 per cent above the 1970-1974 average. This country is therefore clearly on its way to the level it last reached in 1971.

4.22 In **Yugoslavia**, the upward trend in inland waterway traffic has continued: 33.9 million tonnes carried in 1978, i.e. 10.4 per cent more than in 1977. Internal traffic, which accounts for 68 per cent of the total, increased by 15 per cent, while international traffic fell by nearly 6 per cent. The total tonnage carried was more than 47 per cent up on the average for 1970-1974.

DEVELOPMENT OF THE FLEET

All countries under review

4.23 The total fleet of five Member countries – Federal Republic of Germany, Belgium, France, the Netherlands and Switzerland – changed in the following ways between 1970 and 1978:

End of Year	Self-propelled craft		Dumb barges		Total fleet	
	Number	Capacity*	Number	Capacity*	Number	Capacity*
1965	26.517		8.740	5,511.7	35.257	
1970	23.756	11,447.3	4.797	4,033.0	28.535	15,480.3
1971	22.951	11,583,0	4.494	4,052.4	27.445	15,635.4
1972	22.175	11,649,4	4.414	4,139.7	26.589	15,789.1
1973	21.689	11,747.5	4,272	4,027.5	15.961	15,775.0
1974	20.839	11,581.0	3.916	3,803.3	24.755	15,384.3
1975	20.029	11,411.7	3.799	3,800.7	23.828	15,212.4
1976	18.896	11,076.9	3.588	3,718.8	22.484	14,795.7
1977	17.872	10,705.3	3.356	3,537.3	21.228	14,242.6
1978	17.415	10,415.6	3.161	3,462.3	20.331	13,877.9

* Thousand tonnes.

4.24 In 1978, mainly as a result of measures taken to scrap craft in a number of West European countries, the total fleet of the five above-mentioned countries again decreased, this time by 897 units bringing the figure down to 20,331. The corresponding less of carrying capacity was 364,700 tonnes (2.6 per cent), which brought the 1978 figure down to nearly 11 per cent below average capacity for the years 1970-1974. The decline in capacity coincided with an increased flow of traffic. Average capacity per unit rose by 12 tonnes from 671 tonnes in 1977 to 683 tonnes in 1978.

4.25 The number of craft fell in all three categories mentioned: self-propelled craft by 702 to 17,170 (–3.9 per cent). Total capacity fell by 289,700 tonnes or 2.7 per cent. The number of dumb barges (pull-towed and push-towed) fell by 195 to 3,161 (-5.8 per cent). Total capacity fell by 750,000 tonnes to 3.5 million tonnes (-2.1 per cent). Despite a less of 10 units in 1978, the total number of tugs and pusher craft was still higher than in 1970.

REMARKS ON THE DEVELOPMENT OF THE FLEET IN VARIOUS COUNTRIES

4.26 In **the Federal Republic of Germany**, the waterway fleet again lost 202 units in 1978, and this brought it down to 4,230 units. Its carrying capacity, at 3.06 million tonnes, was 4 per cent down on the year before and 13 per cent below the average for 1970-1974.

4.27 Self-propelled craft accounted for 77 per cent of total tonnage, as against 83 per cent in 1977. A further increase in average capacity per craft brought this up to 912 tonnes (907 tonnes in 1977).

4.28 In **Belgium**, the fleet fell by the appreciable figure of 253 units, leaving 3,316 in all. Total capacity dropped by 108,500 tonnes (5.2 per cent) to 1.95 million tonnes, i.e. 21.9 per cent below the average for 1970-1974.

4.29 The total capacity of the fleet has been falling since 1966 since when it has lost 30 per cent of its craft. However, average capacity per craft is rising steadily and in 1978 stood at 589 tonnes (577 in 1977).

4.30 In **France** too, the downward trend in waterway fleet capacity continued in 1978, when it dropped by a further 88,900 tonnes (3.3 per cent). Remaining capacity – 2,618,000 tonnes – is 12.4 per cent below the average for 1970-1974. Average capacity per craft rose to 474 tonnes, i.e. 9 tonnes more than in 1977.

4.31 In **the Netherlands**, the waterway fleet lost 159 units, amounting to a capacity of 52,000 tonnes, in 1978. Total capacity thus fell to 4.87 million tonnes, i.e. more than 4 per cent below the average for 1970-1974.

4.32 Average capacity per craft rose significantly from 700 tonnes in 1976 to 709 tonnes in 1978. The biggest increase was in the dumb barge category (pull-towed and push-towed), where average capacity rose from 1,287 to 1,396 tonnes. Average capacity of self-propelled craft was 2 tonnes higher at 608 tonnes. Scrapping of craft decided by the authorities in 1978 eliminated 899 units, amounting to a capacity of 160,095 tonnes.

4.33 In **Switzerland**, in 1978 the fleet gained 15 units, the additional capacity, 36,800 tonnes, bringing the total up to 567,200 tonnes (+6.9 per cent). Total capacity is now 0.9 per cent above the 1970-1974 average.

4.34 Average capacity per craft rose to 1,451 tonnes, an increase of 40 tonnes. The increase for dumb barges (pull-towed and push-towed) was 56 tonnes, which brought their average capacity up to 1,778 tonnes, and that for self-propelled craft 30 tonnes, which thus brought their average up to 1,348 tonnes. Switzerland has the highest average capacity per craft of all the ECMT countries under review.

DEVELOPMENTS IN PIPELINE TRANSPORT

4.35 The total length of pipeline networks increased in 1978: in **Belgium**, by 141 km to link Antwerp to Geelen; in **Yugoslavia** by 86 km; and in **Spain** by 19 km. The total length of the network in the eight countries mentioned in Table 22 is now 12,967 km.

4.36 Transport output increased by 2.6 per cent in 1978. It amounted to 68,439 million tonne-km, which is 8 per cent above the average for 1970-1974.

4.37 The total length of the network in 1978 was 22.6 per cent up on the average for 1970-1974. By comparison, the growth in transport output has been significantly slower.

Developments in individual countries

4.38 In **the Federal Republic of Germany**, transport output was the same in 1978 as in the previous year, i.e. 15,300 million tonne-km. This is more than 17 per cent below the average for 1970-1974.

4.39 In **France**, pipeline transport increased by 2.3 per cent in 1978 to 33,100 million tonne-km, i.e. 0.7 per cent above the average for 1970-1974.

4.40 In **Belgium**, transport output increased by 5.4 per cent 10 2,700 million tonne-km, or 62 per cent above the average for 1970-1974. This improvement was mainly due to the growing importance of the Rotterdam-Antwerp pipeline.

4.41 In contrast with the situation observed in every other country, pipeline transport output in **the Netherlands** fell by 4.7 per cent to 5,100 million tonne-km, thengh that is still 2.9 per cent higher than the average for 1970-1974.

4.42 In the **United Kingdom**, transport output increased steeply in 1978, as it did the previous year. This time the figure was 12.3 per cent bringing the total up to 9,100 million tonne-km, evidence of the mounting importance of North Sea oil. In 1978, output was 2 1/2 times the 1970-1974 average.

4.43 In **Spain**, transport output also increased (+ 5.4 per cent) and is now 2,700 million tonne-km, or 8 per cent higher than the average for 1970-1974.

TRAFFIC TRENDS AT THE MAIN SEAPORTS

4.44 Total traffic (inbound plus outbound) was steadier in 1978 after a fall of 2.8 per cent in 1977; the 0.8 per cent increase raised total traffic to 1,300 million tonnes, which is about 5 per cent higher than the average for 1970-1974.

4.45 The economic situation has clearly affected the figures for total seaport traffic. The yearly increase for 1970-1978 was only 1.7 per cent, as compared with an annual 8 per cent over the period 1965-1970.

4.46 Goods loaded and unloaded show different trends. Both figures rose by nearly 8 per cent between 1965 and 1970, but the respective trends between 1970 to 1977 were different: a yearly increase of 3.8 per cent for goods loaded and only 0.5 per cent for goods unloaded.

Comments concerning individual countries

4.47 The following table shows trends in goods loaded and unloaded in the seaports of various countries in 1978, first by reference to the average for 1970-1974 and secondly by reference to 1977. All the figure are percentages.

	Goods loaded (1978 as a percentage of the average for 1970-1974)	Goods unloaded (1978 as a percentage of the average for 1970-1974)	Total traffic (Difference by reference to 1977)
Federal Republic of Germany	35.3	– 2.4	2.1
Belgium	11.9	– 7.3	– 0.1
Spain	89.2	22.0	0
France	46.4	13.9	1.4
United Kingdom	80.7	– 26.1	3.3
Portugal*	–19.4	32.6	6.1
Ireland*	–47.5	–30.9	11.2
Netherlands	– 4.5	6.5	– 1.7
Sweden	– 3.8	– 7.4	– 1.1
Yugoslavia	23.6	44.4	7.1

* 1977 figures.

4.48 After the fall in 1977, most countries apart from the Netherlands and Sweden, where it fell again, show a rise in total traffic. Developments in the United Kingdom were remarkable by comparison with the average for 1970-1974, goods loaded increased and goods unloaded fell, in both cases substantially. One particular reason was the 76 million tonnes decrease in oil imports and the 50 million tonnes increase in hydrocarbon exports.

4.49 Compared with the average for 1970-1974, goods loaded in 1978 rose appreciably faster than goods unloaded in most of the countries mentioned. The only exceptions are the Netherlands, Portugal and Yugoslavia,

where the figures for inbound traffic showed much more favourable trends than these, for outbound traffic. The case of the United Kingdom is worthy of note, where inbound traffic was plainly below, but outbound traffic above, the average for 1970-1974.

STATISTICAL ANNEX

LIST OF CONTENTS

GENERAL

RAILWAYS

ROADS

INLAND WATERWAYS

INLAND TRANSPORT INVESTMENT - EQUIPMENT AND INFRASTRUCTURE

National currency unit (million)

COUNTRY	YEAR	GROSS NATIONAL PRODUCTION PURCHASES VALUES (*)	GROSS FIXED CAPITAL FORMATION (*)	RAILWAYS			LOCAL RAILWAYS AND URBAN LINES	ROAD TRANSPORT				INLAND WATERWAYS			INVESTMENT IN INLAND TRANSPORT (5 + 6 + 10 + 13)
								VEHICLES							
				ROLLING STOCK	INFRA-STRUCTURE	TOTAL (3 + 4)		COMMER. VEHICLES	OTHER VEHICLES	INFRA-STRUCTURE	TOTAL (7 + 8 + 9)	VESSELS	INFRA-STRUCTURE	TOTAL (11 + 12)	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Germany	1976	1,119,380	231,890	955	2,931	3,886	1,646	6,770	24,975	13,741	45,486	77	599	676	51,694
	1977	1,193,500	249,140	1,029	2,985	4,014	1,657	7,763	29,746	14,303	51,812	81	621	702	58,185
	1978	1,278,740	276,460	1,001	3,016	4,017	1,697	9,485	33,523	...	43,008	57	651	708	49,430
Austria	1976	727,640	190,390	...	...	...	...	...	...	...	...	...	...	...	...
	1977	792,530	215,600	...	...	...	...	...	...	...	...	...	...	...	...
	1978	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Belgium	1976	2,630,832	568,517	5,944	6,177	12,121	4,412	6,186	67,837	34,246	108,269	859	3,625	4,484	129,286
	1977	2,830,731	605,038	6,169	7,714	13,883	6,160	7,046	74,424	33,747	115,217	846	4,659	5,505	140,765
	1978	3,041,856	645,685	5,604	9,537	15,141	6,439	7,972	84,429	33,665	126,066	995	4,058	5,053	152,699
Denmark	1976	248,982	60,223	152	175	327	224	2,926	7,195	1,864	11,985	–	–	–	12,536
	1977	276,243	64,427	180	141	321	196	2,791	7,236	2,372	12,399	–	–	–	12,916
	1978	...	...	140	107	247	151	2,623	7,649	2,370	12,642	–	–	–	13,040
Spain	1976	6,999,400	1,605,600	2,076	20,701	22,777	6,782	61,024	181,666	63,803	306,493	–	–	–	336,052
	1977	8,782,900	1,998,000	4,653	24,804	29,457	7,734	81,930	270,850	80,209	432,989	–	–	–	470,180
	1978	10,826,500	2,174,800	6,637	...	...	...	...	...	59,381	...	–	–	–	...
Finland	1976	115,003	31,842	264	462	726	167	1,506	2,738	1,297	5,541	–	21	21	6,455
	1977	127,065	33,778	303	447	750	225	1,428	2,891	1,399	5,718	–	17	17	6,710
	1978	139,467	32,528	257	420	677	200	1,395	3,260	1,496	6,151	–	19	19	7,047
France	1976	1,669,310	388,400	...	...	...	...	...	...	...	...	...	443	...	...
	1977	1,870,340	422,090	...	...	...	...	...	...	...	...	...	389	...	...
	1978	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Greece	1976	823,437	175,000	659	590	1,249	–	31,914	14,271	5,721	51,906	–	–	–	53,155
	1977	965,592	222,300	545	710	1,255	–	38,271	33,043	5,842	77,156	–	–	–	78,411
	1978	...	...	555	1,030	1,585	–	...	40,728	6,268	...	–	–	–	
Ireland	1976	4,492	1,040	9	4	13	–	36	229	15	280	...	...	...	293
	1977	5,380	1,328	3	4	7	–	59	319	24	402	...	...	...	409
	1978	6,352	1,679[1]	2	4	6	–	92	454	31	577	...	...	...	583
Italy	1976	156,657,000	31,396,000	219,791	238,261	458,052	44,110	1,245,010	4,558,350	1,131,120	6,934,480	6,120	4,370	10,490	7,447,132
	1977	189,978,000	37,352,000	313,816	290,268	604,084	78,260	1,888,980	5,834,730	1,230,570	8,954,280	15,000	8,210	23,210	9,659,834
	1978	220,743,000	41,406,000	331,087	367,469	698,556	...	...	...	...		...	...		...

INLAND TRANSPORT INVESTMENT - EQUIPMENT AND INFRASTRUCTURE *(cont'd)*

National currency unit (million)

COUNTRY	YEAR	GROSS NATIONAL PRODUCTION PURCHASES VALUES (*)	GROSS FIXED CAPITAL FORMATION (*)	RAILWAYS			LOCAL RAILWAYS AND URBAN LINES	ROAD TRANSPORT				INLAND WATERWAYS			INVESTMENT IN INLAND TRANSPORT (5 + 6 + 10 + 13)
								VEHICLES							
				ROLLING STOCK	INFRA-STRUCTURE	TOTAL (3 + 4)		COMMER. VEHICLES	OTHER VEHICLES	INFRA-STRUCTURE	TOTAL (7 + 8 + 9)	VESSELS	INFRA-STRUCTURE	TOTAL (11 + 12)	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Luxembourg	1976	86,500	24,643	97	127	224	–	...	...	...	...	...	...	...	...
	1977	101,500	26,317	122	217	339	–	...	...	...	...	...	...	...	...
	1978	...	...	38	354	392	–	...	...	1,451	...	–	2,240	2,240	...
Norway	1976	170,709	62,000	131	268	399	79	2,002	4,889	2,509	9,400	–	–	–	9,878
	1977	190,417	70,558	142	336	478	59	2,402	6,431	2,941	11,774	–	–	–	12,311
	1978	209,579	65,162	119	405	524	53	2,445	4,561	3,191	10,197	–	–	–	10,774
Netherlands	1976	237,990	46,410	73	370	443	323	2,000	6,838	2,781	11,619	91	219	310	12,695
	1977	261,130	55,110	109	465	574	930	2,570	8,643	2,538	13,751	111	177	288	15,543
	1978	...	...	89	456	545	288	2,610	9,424	2,600	14,634	137	176	313	15,780
Portugal	1976	464,677	78,784	377	802	1,179	387	830	1,510	2,711	5,051	39	–	39	6,656
	1977	624,000	127,000	1,408	1,109	2,517	346	...	669	1,657	2,711	...	–	–	...
	1978	...	...	1,559	1,409	2,968	348	...	...	2,163	2,749	...	–	–	...
United Kingdom	1976	123,081	23,590	101	111	212	37	1,095	2,828	834	4,757	–	–	–	5,006
	1977	141,776	25,894	95	150	245	30	1,544	3,478	715	5,737	–	–	–	5,982
	1978	161,254	29,205	102	187	289	31	1,951	5,052	745	7,748	–	–	–	8,068
Sweden	1976	323,087	67,381	380	200	580	–	2,396	9,824	2,764	14,984	–	–	–	15,564
	1977	351,327	73,030	349	247	596	–	2,631	8,287	2,730	13,648	–	–	–	14,244
	1978	394,516	77,162	430	252	682	–	2,492	7,854	3,166	13,512	–	–	–	14,194
Switzerland	1976	141,960	29,230	297	467	764	108	396	3,444	2,150	5,990	–	30	30	6,892
	1977	145,630	30,215	224	510	734	104	427	4,209	2,062	6,698	–	33	33	7,569
	1978	151,050	33,130	140	435	575	79	598	4,854	2,380	7,832	–	33	33	8,519
Turkey	1976	658,989	152,617	...	...	...	...	...	...	...	...	–	–	–	...
	1977	860,313	199,700	...	...	...	...	...	...	...	...	–	–	–	...
	1978	1,274,045	261,100	...	...	...	...	...	...	...	...	–	–	–	...
Yugoslavia	1976	682,800	206,600	2,728	2,040	4,768	85	20,161		7,100	27,261	82	–	82	32,196
	1977	835,200	267,900	2,640	4,100	6,740	102	26,127		7,900	34,027	105	–	105	40,974
	1978	...	...	2,800	7,300	10,100	150	28,020		14,100	42,120	310	40	350	52,720

* Source : OCDE Statistical Bulletin.
... : Not available
– : Nil
(1) : *estimate.*

I. GROSS INVESTMENT IN INLAND TRANSPORT - EQUIPMENT AND INFRASTRUCTURE

a) Transport Investment and GNP

Million national money

	Transport Investment					GNP				
	1965	1970	1976	1977	1978	1965	1970	1976	1977	1978
Germany	2,261	2,930	3,934	4,063	4,075	460,400	679,000	1,123,800	1,193,300	1,282,600
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	12,593	32,505	44,972	49,096	50,657	837	1,292	2,646	2,850	3,057
Denmark	.	.	.	.	.	.	.	.	.	.
Spain[1]	.	72,988	205,317	290,993	.	1,750,732	2,394,542	3,286,624	3,381,042[2]	3,427,600[2]
Finland	.	.	6,460	6,710	7,050	25,828	44,630	115,003	127,085	139,466
France	.	.	.	.	.	483,488	782,560	1,672,372	1,875,180	2,128,162
United Kingdom	.	.	4,632	5,786	8,055	31,654	44,001	111,567[3]	125,412[3]	142,835
Greece[4]	3,589[5]	5,174[5]	51,168	76,764	87,611[6]	186,417	257,855	359,740	370,583	392,250
Ireland[7]	46,3	87,6	309,7	426	.	984,4	1,648,5	4,510,8	5,359	.
Italy[10]	.	3,089	7,820	10,642	.	.	62,883	156,657	189,978	220,743
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway	2,072	3,079	6,781	7,867[2]	8,451[2]	55,828	79,876	170,709	191,534[2]	211,732[2]
Netherlands	3,397	5,260	8,297	9,910	.	68,557	105,104	240,480	263,080	282,840
Portugal	1,742	2,482	6,729	.	.	107,865	178,227	463,600	615,400	767,400
Sweden[8]	.	.	.	.	.	113,804	170,734	323,190	351,190	394,605
Switzerland	3,259	4,935	6,784	7,466	.	62,450	93,930	147,180	151,740	156,960[9]
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	2,241	8,153	25,785	33,771	49,755	7,100	12,600	49,257	59,336	76,390

(1) The GNP in million of pesetas to 1970, in factor cost.
(2) Provisional figures.
(3) Revised figures for 1976 and 1977
(4) GNP: Constant 1970 prices.
(5) Investment on infrastructure only.
(.) Not available.
(6) Estimates.
(7) Excluding investment in inland waterways-craft.
(8) GNP : gross domestic product in purchaser's values.
(9) 1978. approx.
(10) Milliards national money.

b) Investment in Equipment

Million national money

	Railway rolling stock[1]			Commercial road vehicles			Other road vehicles			Inland waterway craft		
	1976	1977	1978	1976	1977	1978	1976	1977	1978	1976	1977	1978
Germany	955	1,029	1,001	2,350	2,600	3,330	24,975	30,167	0	90	90	80
Austria	.	.	.	.	.	.	.	.	.	.	.	.
Belgium	5,944	6,170	5,604	11	13	28	.	1	3	858	846	995
Denmark	.	.	.	2,504	2,577	2,423	7,616	7,450	7,849	.	.	.
Spain	2,356	4,915	.	61,024	81,930	.	.	.	.	.	.	.
Finland	264	303	257	1,500	1,430	1,400	2,740	2,900	3,260	.	.	.
France	1,329	1,575	2,416	.	.	.	.	.	.	.	.	.
United Kingdom	100.6	93.6	99.9	1,095[2]	1,544[2]	1,951	3,357[2]	4,247[2]	6,004	0,24	0,11	0,03
Greece[3]	650	545	180	29,947	36,476	39,676	16,238	34,568	42,585	.	.	.
Ireland	8.4	2	.	45	63.7	.	238	333.2	.	.	.	.
Italy[8]	219.791	313.815	331.087	1,079	1,737	.	4,852	6,152	.	6	15	.
Luxembourg	.	.	38.3	.	.	43.3	.	.	1.6	.	.	.
Norway[7]	131	142[6]	161[6]	979	1,255[6]	1,177[6]	2,695	3,073[6]	3,289[6]	.	.	.
Netherlands	73	109	.	2,000	2,570	2,610	2,440	3,010	3,240	91	111	.
Portugal	377	1,412	1,559	.	.	.	.	.	.	18	.	.
Sweden	326.9[4]	362.5[4]	387.4[4]	2,396	2,631	2,492	9,824	8,237	7,854	.	.	.
Switzerland	297	224	140	396	427	598	3,444	4,209	4,854	.	.	.
Turkey	.	.	.	.	.	.	.	.	.	.	.	.
Yugoslavia	3,378	2,929	2,857	11,217[5]	16,372[5]	17,869[5]	.	.	.	43	94	204

(1) Excluding local/urban railways.
(2) Revised figures for 1976 and 1977.
(3) Other road vehicles : including buses.
(4) Only State railways. Private railways are excluded.
(5) Including other road vehicles.
(6) Provisional figure.
(7) Other road vehicles: not including purchase of private cars for consumption.
(8) Milliards national money.

I. GROSS INVESTMENT IN INLAND TRANSPORT - EQUIPMENT AND INFRASTRUCTURE

c) Investment in Infrastructure

Million national money

	Railways			Local/Urban[1] railways			Road			Inland waterways		
	1976	1977	1978	1976	1977	1978	1976	1977	1978	1976	1977	1978
Germany	2,931	2,985	3,016	.	.	.	12,650	13,060	15,100	1,000	1,010	970
Austria	.	.	.	.	.	.	.	.	.	.	.	
Belgium	6,177	7,714	9,537	4,405	6,126	6,200	22,184	23,577	23,286	5,393	4,649	5,004
Denmark[2/3]	.	.	.	.	.	.	1,667	2,011	1,946	.	.	.
Spain	22,777	26,617	.	3,610	5,472	4,490	63,803	80,209	59,381	.	.	.
Finland	462	447	420	167	225	200	1,300	1,400	1,500	21	17	19
France	1,470	1,730	1,503	462	542	613	15,015[4]	.	–	589	.	.
United Kingdom	110.1	150.4	186.7	36.5	30.0	30.8	834	715	745	0.08	0.35	0.12
Greece	590	705	1,000	.	.	.	5,502	5,402	5,666	.	.	.
Ireland	2.6	3.1	.	.	.	.	15.4	23.8	.	0.30	0.30	.
Italy[8]	238.261	290.268	367.485	33	30	.	1,131	1,231	.	4	8	.
Luxembourg	.	.	445	.	.	.	.	.	1,690	.	.	52.2
Norway	296	378[7]	472[7]	79	59[7]	43[7]	2,601	2,960[7]	3,309[7]	.	.	.
Netherlands	370	465	.	323	930	.	2,781	2,538	.	219	177	.
Portugal	804	1,092	1,113	220	346	346	2,928	3,795	4,676	.	.	.
Sweden	189.3[5]	222.4[5]	251.3[5]	132[6]	131[6]	110[6]	2,764	2,685	3,267	.	.	.
Switzerland	467	510	435	108	104	78	2,150	2,062	2,073	30	33	33
Turkey	.	.	.	.	.	.	.	.	.	.	.	.
Yugoslavia	2,102	4,141	6,708	.	.	.	7,759	7,970	15,496	0	.	20

(1) Includes investment in equipment.
(2) Current prices.
(3) Road: due to the alternative of the financial year the figures cover the following periods:

Year	Main highways	Other roads
1976	1-4-76 to 31- 3-77	1-4-76 to 31-12-76
1977	1-4-77 to 31- 3-78	1-1-77 to 31-12-77
1978	1-4-78 to 31-12-78	1-1-78 to 31-12-78

(4) Road: excluding collective urban transport.
(5) Only state railways.
(6) Excluding all local trains but undergrounds.
(7) Provisional figure.
(8) Milliards national money.

1. RAIL PASSENGER TRANSPORT

a) Passengers carried — Million

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	1,070	930	986	979	1,019	1,051	1,008	971	971	991
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	199	201	201	197	194	195	190	187	179	171
Denmark	.	.	.	.	.	.	.	.	.	.
Spain	328	314	314	326	335	336	333	334	339	323
Finland	31.1	23.4	24.9	27.8	29.6	32.8	35.5	37	36.8	37.3
France[1]	.	.	.	.	601	623	639	655	673	684
United Kingdom	865	824	816	754	728	733	730	701	702	724
Greece	12	13	13	13	13	12	12	13	13.4	10.7
Ireland	9	10	11	12	13	15	14	14	15	16
Italy	320.9	343	347.3	354.8	361.1	386.7	370.1	390.1	393.6	391.4
Luxembourg	.	.	.	.	.	.	.	.	.	11
Norway[2]	34	29	29	29	29	32	33	32	33	34
Netherlands	192	188	188	184	181	183	176	172	171	176
Portugal	127	145	146	154	166	179	183	192	196	205
Sweden	70	60	56	65	69	78	76	76	76	77
Switzerland (SBB/CFF)	239	231	230	224	224	220	211	208	205	203
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	236	157	146	141	137	135	129	126	124	113

(1) Including the road traffic with SNCF fares.
(2) Domestic passenger transport.

b) Passenger-kilometres

Millions

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	38,419	37,314	37,592	38,824	38,945	39,734	36,897	37,100	37,348	37,589
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	8,008	7,567	7,750	7,510	7,449	7,641	7,650	7,575	7,346	7,136
Denmark	.	.	.	.	.	.	.	.	.	.
Spain	13,906	14,992	15,118	16,034	17,250	17,633	17,643	18,183	18,643	18,092
Finland	2,050	2,156	2,349	2,594	2,773	3,047	3,135	2,985	2,977	2,983
France[1]	.	.	.	.	44,300	46,900	50,300	51,100	51,800	53,500
United Kingdom	30,116	30,408	30,127	29,100	29,800	30,900	30,300	28,500	29,290	30,740
Greece	1,131	1,531	1,635	1,563	1,571	1,594	1,553	1,583	1,623	1,568
Ireland	542	754	783	844	875	881	899	788	873	966
Italy	26,502	32,457	33,948	35,394	36,359	37,880	36,332	39,118	38,361	39,234
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway[2]	1,633	1,502	1,520	1,534	1,548	1,778	1,827	1,874	1,892	1,945
Netherlands	7,715	8,011	8,114	8,039	8,173	8,589	8,501	8,218	8,013	8,146
Portugal	2,970	3,546	3,569	3,761	4,106	4,552	4,856	5,235	5,235	5,514
Sweden	5,290	4,559	3,914	4,412	4,645	5,480	5,615	5,617	5,563	5,557
Switzerland (SBB/CFF)	7,859	8,168	8,226	8,306	8,402	8,289	7,984	8,115	8,028	8,094
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	12,800	10,939	10,556	10,578	10,578	10,429	10,284	9,941	10,459	10,445

(1) Including the road traffic with SNCF fares.
(2) Domestic passenger transport.

2. RAIL GOODS TRANSPORT

a) Tonnes carried

Million tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	298	352	324	326	342	352	287	299	280	290
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	65	72	67	70	76	83	60	60	59	64
Denmark	.	.	.	.	.	.	.	.	.	.
Spain	44	43	43	47	49	51	47	47	48	45
Finland	20	23.6	22.4	24.1	26.5	27.3	22.7	23.4	22.1	22.6
France	239	250	240	246	258	266	219	227	214	214
United Kingdom	232	209	198	178	197	176	175	176	170	171
Greece	3	3	3	3	3	4	4	3.5	3.5	3.6
Ireland	3	4	4	4	4	4	3	4	4	4
Italy	52.8	57.8	54.3	55.3	56.3	54.3	44.4	50.2	52.3	50.9
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway[1]	8	7	8	7	7	7	8	10	8	8
Netherlands	26.4	26.7	23.3	21.8	23.6	22.6	17.7	17.7	17.7	18.2
Portugal	3.690	3.927	3.772	4.114	4.322	4.178	3.316	3.420	3.653	3.861
Sweden	61	66	60	62	68	73	58	59	51	50
Switzerland (SBB/CFF)	37	46	45	46	48	46	34	37	39	40
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	75	75	76	72	75	82	78	74	77	81

(1) Domestic goods transport.

b) Tonne-kilometres

Millions

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	57,298	70,268	64,263	63,836	66,356	68,274	54,311	58,390	54,886	56,467
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	6,814	7,876	7,387	7,546	8,238	9,199	6,804	6,693	6,528	7,157
Denmark	.	.	.	.	.	.	.	.	.	.
Spain	9,209	10,339	10,112	10,753	12,002	12,009	11,079	11,159	11,826	11,077
Finland	5.200	6.300	5.800	6.500	7.000	7.500	6.400	6.500	6.400	6.300
France	64,560	70,410	67,040	68,610	73,870	77,060	64,040	68,510	66,210	67,320
United Kingdom[1]	25,229	26,807	24,279	23,357	25,566	22,005[1]	20,896[1]	20,590[1]	20,118[1]	19,980
Greece	564	688	748	756	798	902	931	844	855	854
Ireland	376	545	575	564	568	603	568	595	596	619
Italy	15,223	18,069	17,226	17,400	17,910	18,482	15,173	16,788	17,577	16,639
Luxembourg	.	.	.	.	.	.	.	.	.	647
Norway[2]	1,160	1,448	1,440	1,445	1,454	1,536	1,508	1,587	1,588	1,538
Netherlands	3,409	3,532	3,233	3,071	3,463	3,370	2,721	2,696	2,805	2,882
Portugal	755	776	812	797	819	867	754	854	885	933
Sweden	13,883	17,311	15,658	16,214	18,260	19,598	16,057	16,238	14,782	14,764
Switzerland (SBB/CFF)	5,187	6,592	6,622	6,703	7,140	7,004	5,141	5,659	5,933	6,218
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	18,036	19,253	19,653	19,179	20,447	23,081	21,638	21,017	22,225	23,378

(1) Revised figures 1974 to 1977 (inc.).
(2) Domestic goods transport.

3. INTERNATIONAL GOODS TRANSPORT BY RAIL

Goods loaded — Thousands tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	32,670	40,382	36,517	38,315	41,111	45,787	35,761	38,319	32,900	35,558
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	8,765	13,200	12,524	12,528	13,694	15,001	12,019	12,515	12,665	13,571
Denmark	.	.	.	.	.	.	.	.	.	.
Spain	.	1,220	1,151	1,349	1,634	1,438	1,252	1,365	1,638	1,524
Finland	5.5	5.3	5	6.3	6.3	5.9	4.1	4.5	5.1	5.7
France	35,470	38,280	37,020	36,280	39,420	40,340	30,430	31,810	30,830	32,530
United Kingdom	.	.	.	.	.	123*	170	203	260	272
Greece[1]	142	584	683	624	637	1,094	1,244	1,002	1,005	1,025
Ireland	.	.	.	216	242	245	192	267	159	210
Italy	9,377	9,354	10,771	11,467	10,372	9,044	8,989	9,273	10,857	11,212
Luxembourg	3,673	4,036	4,338	4,602	4,904	5,110	3,585	3,417	3,432	3,723
Norway[5]	372	420	380	420	506	549	445	429	418	414
Netherlands	.	.	7,072	6,845	8,667	8,540	5,887	6,423	7,008	6,695
Portugal[4]	.	64	42	68	112	59	27	71	75	133
Sweden	19,138	24,568	23,291	24,570	27,135	27,280	19,074	21,497	17,362	21,085
Switzerland (SBB/CFF)	3,200	3,700	3,500	3,300	3,800	3,900	3,000	3,508	4,147	3,858
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	2.7	4.1	3.8	4.4	4.4	4.7	3.7	4.6	4.7	4.9

(1) 1974 to 1978 including transit.
(2) Including export and transit.
(*) Revised 1974 figures
(3) Estimate 1965-1975.
(4) Export only.
(5) Before 1975 including goods transported by railway on ferry.

4. LENGTH OF RAIL NETWORK

a) Route length

Kilometres

	1965	1970	1976	1977	1978	Increase 1977 to 1978 (%)
Germany	30,372	29,555	28,581	28,557	28,359	– 0.1
Austria	.	.	.	5,863	5,857	– 0,1
Belgium	4,441	4,165	3,998	4,003	4,046	+ 1.1
Denmark	.	.	.	2,004	2,004	–
Spain	17,432	16,378	15,832	15,758	15'739	– 0.1
Finland	5,470	5,841	6,036	6,089	6,079	– 0.2
France	38,065	36,019	34,299	34,150	34,096	– 0.2
United-Kingdom	24,013	18,989	18,007	17,973	17,901	– 0.4
Greece	2,612	2,602	2,479	2,479	2,479	–
Ireland	2,857	2,189	2,008	2,005	2,005	–
Italy	16,139.8	16,073	16,143.6	16,176.9	16,086.4	– 0.6
Luxembourg	.	.	274	270	270	–
Norway	4,348	4,292	4,257	4,257	4,257	–
Netherlands	3,235	3,148	2,825	2,850	2,876	+ 0.9
Portugal	3.591	3,591	3,592	3,588	3,588	–
Sweden	13,433	12,203	12,061	12,077	12,074	–
Switzerland (SBB/CFF)	2,934	2,926	2,933	2,934	2,934	–
Turkey	.	.	.	8,139	8,139	–
Yugoslavia	11,839	10,289	9,967	9,967	9,762	– 0.2

4. LENGTH OF RAIL NETWORK

b) Routes electrified — Kilometres

	1965	1970	1976	1977	1978	Proposed 1980
Germany	6,472	8,586	10,341	10,546	10,649	.
Austria	.	.	.	.	.	.
Belgium	1,078	1,217	1,296	1,302	1,307	1,491
Denmark	.	.	.	.	.	.
Spain	3,533	3,749	4,883	5,321	5,417	.
Finland	.	.	394	515	675	820
France	8,323	9,251	9,267	9,553	9,710	.
United Kingdom	2,886	3,162	3,709	3,767	3,766	3,977 (1983)
Greece	.	.	.	.	.	.
Ireland	.	.	.	.	.	.
Italy	7,915.1	7,871.2	8,137.6	8,363.6	8,379.5	.
Luxembourg	.	.	.	.	137	137
Norway	2,030	2,455	2,456	2,456	2,456	.
Netherlands (31/12)	1,624	1,646	1,719	1,731	1,754	.
Portugal	404	404	404	404	430	430
Sweden	7,587	7,520	7,479	7,479	7,583	7,583
Switzerland (SBB/CFF)	2,906	2,911	2,918	2,919	2,919	.
Turkey	.	.	.	.	.	.
Yugoslavia	472	1,510	2,649	2,912	2,911	.

5. RAIL OPERATIONS : TRAIN-KILOMETRES AND GROSS TONNE-KILOMETRES

Million

	Train-kilometres					Gross tonne-kilometres				
	1965	1970	1976	1977	1978	1965	1970	1976	1977	1978
Germany	561	615	576	570	580	228,020	269,177	242,954	236,231	242,407
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	81	83	88	89	93	30,160	32,595	33,194	33,094	34,681
Denmark	.	.	.	.	.	.	.	.	..	.
Spain[1]	44	45	45	44	44	21,335	23,574	26,091	26,705	25,648
Finland	46.9	42.6	43.5	42.6	41.6	19.2	21.3	23.5	22.7	22.4
France	455	469	489	492	497	235,943	253,500	265,717	260,300	263,600
United Kingdom	519	470	446	446	450	.	.	162,330	162,939	159,932
Greece	19	19	18	17	17	2,702	4,317	4,589	4,636	4,529
Ireland	12	12	12	12	13	.	.	.	.	.
Italy	256.8	275.8	288.8	292.9	294.2	138,760	151,748	161,659	164,253	163,736
Luxembourg	.	.	.	.	4.3	.	.	.	.	1,834
Norway[3]	32	32	34	34	34	.	.	.	.	.
Netherlands	.	98.4	107.6	107.9	.	.	26,847	24,832	24,438	.
Portugal	25.8	25.6	26.6	34.2	32.3	5,163	6,392	7,528	8,269	7,911
Sweden[2]	119	111	105	104	103	43,923	47,342	46,110	43,805	42,780
Switzerland (SBB/CFF)[2]	83	90	92	94	94	28,322	33,518	33,303	34,086	34,023
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	119	121	126	127	125	50,838	55,221	58,140	60,826	62,083

(1) Including only the transport by RENFE (National Spanish Railway).
(2) Gross tonne-kilometres hauled.
(3) Train-km: ordinary services.

6. ROLLING STOCK : 1978

Number

	Locomotives		Powered Passenger			Vans	Goods Wagons	
	Electric	Other	Rail Cars		Coaches		All	Of which Europe-pool
Germany	2,692	4,650	3,716		15,380	956	283,319	118,300
Austria	.	.	.		.	.	.	.
Belgium	249	936	553		2,325[1]	371	47,090	23,677[2]
Denmark	.	.	.		.	.	.	.
Spain	477	954	4,189		.	611	46,674	.
Finland	62	393	.		134	1,107	23,794	.
France	2,379	2,191	1,819	13,876		20	174,000	.
United Kingdom	312	3,377	4,722		17,022	4,430[3]	150,371	514
Greece	.	307[5]	505[6]	54	28	150	10,584	.
Ireland	.	213	* see list below			127	5,448	.
Italy	1,894	1,354	2,096	.	.	11,190	112,188	25,876
Luxembourg	19	64	14	49	74	1	3,695[7]	2,242
Norway	168	92	178[12]	108[13]	644[14]	91[15]	8,967	.
Netherlands (31/12)	112	467	1,631	.	.	.	13,306	.
Portugal	49	149	193		535	137	6,054	.
Sweden	802	663	2,276[8]		.	206	47,355	.
Switzerland (SBB/CFF)	887	308[9]	3,916[10]		.	551	32,066[11]	22,435
Turkey	.	.	.		.	.	.	.
Yugoslavia	409	1,058	2,269	.	410	.	47,325	.

(1) Excluding 998 electric powered rail cars.
94 diesel powered rail cars.
13 coaches for diesel powered railcars.
(2) Excluding 20,917 goods wagons RIV
(3) There are in addition 3,698 freight brake vans not included in this total.
(4) There are in addition 18,438 privately owned wagons.
(5) Including 120 railcar tractive units.
(6) Including 85 railcar trailers.
(*) 456 rail service vehicles, 357 passenger carriages.
(7) Including 488 privately owned wagons.
(8) 2276: carriages 1467 + railcars 396 + railcars trailers 413.
(9) Including 193 rail motor vehicles.
(10) Including 57 carriages restaur.
(11) Including 6,972 wagons private.
(12) Diesel, petrol and electric rail motor vehicles.
(13) Sleeping, restaurant and other passengers cars.
(14) Ordinary coaches.
(15) Post office and guards vans.

7. ENERGY CONSUMPTION FOR RAIL TRACTION

Tonnes and kW/h

	Diesel thousands tonnes				Electric thousands kW/h			
	1970	1976	1977	1978	1970	1976	1977	1978
Germany	451	525	520	513	5,535,000	5,840,000	5,837,000	6,085,000
Austria	.	.	.	.	.	.	.	.
Belgium	141	137	134	141	588,102	641,869	656,539	679,997
Denmark	.	.	.	.	.	.	.	.
Spain	.	197,540	195,050	186,750	.	1,020,400	1,033,500	1,054,400
Finland	98.3	93.5	89.0	81.4	7.1	96.1	111.9	133.8
France	540	491	484	482	4,625,000	5,054,000	5,029,000	5,123,000
United Kingdom	.	729	732[1]	734	.	212	235	2,270,000
Greece	36	43	43	40	.	.	.	.
Ireland	.	.	34.3	36.5	.	.	.	.
Italy	119.3	139.2	136.9	135.9	3,065,204	3,306,130	3,424,736	3,495,000
Luxembourg	.	.	.	9	.	.	.	29,393
Norway[1]	23.6	17.2	16.9	16.4	294,000	334,000	342,000	346,000
Netherlands	.	.	.	.	.	.	.	.
Portugal	39	46	48	47	147	184	164	152
Sweden[2]	41	40	40	40	1,918	1,947	1,924	1,938
Switzerland (SBB/CFF)	8.6	6.9	7.5	8.0	1,529,164	1,953,409	2,139,163	2,147,263
Turkey	.	.	.	.	.	.	.	.
Yugoslavia	139	166	174	176	359	686	745	787

(1) Thousands kW/h: for propulsion and heating of the trains.
(2). Instead of thousands tonnes, read 1000 m^3 ; instead of thousands kW/h, read GWh.

8. ROAD PASSENGER TRANSPORT ON NATIONAL TERRITORY

a) By type of vehicle: Cars and taxis

Million passenger-kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany[1]	268,600	352,300	373,600	379,200	391,300	384,000	407,200	419,400	434,100	451,200
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	25,680	39,713	44,872	47,176	49,005	51,110	53,132	55,495	58,146	61,827
Denmark	28,000	33,300	35,000	37,100	38,300	36,100	37,800	40,100	41,500	42,300
Spain	23,710	60,980	71,180	79,710	89,964	92,654	99,380	104,769	112,550	118,965
Finland	16,300	23,700	25,300	27,600	29,800	26,500	30,700	31,300	31,900	32,210
France	.	.	.	.	.	.	.	.	.	.
United-Kingdom[2]	223.5	304.2	325.8	342.8	359.6	345.3	346.6	356.4	366.2[3]	382.7
Greece	6,192	13,477	15,683	18,004	20,595	22,585	26,084	30,295	36,192	43,664
Ireland	.	.	.	.	.	.	.	.	.	.
Italy	81,200	211,900	248,900	273,300	278,200	258,500	279,300	287,500	296,500	.
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway[6]	10,451	18,210	20,622	22,045	24,278	24,306	27,134	28,908	30,985	32,710
Netherlands[4]	41,000	75,300	80,200	83,600	87,500	84,000	89,300	92,800	95,000	99,000
Portugal[5]	8,870	16,920	19,490	21,590	23,970	26,380	28,640	31,418	35,170	36,995
Sweden	.	70,814	73,366	76,017	78,087	81,057	85,771	89,467	91,234	91,150
Switzerland	31,632	46,833	49,098	52,540	55,639	56,742	56,429	58,698	61,048	62,553
Turkey	.	. .	.	.	.	.	.	.	.	.
Yugoslavia	6,648	16,605	20,648	24,265	27,673	31,700	37,053	42,205	47,213	47,881

(1) Cars and taxis, two-wheeled motor vehicles.
(2) Great-Britain only.
(3) Revised figures for 1977.
(4) National vehicles.
(5) Estimated.
(6) Norwegian registrered vehicles.

b) Two-wheeled motor vehicles

Million passenger-kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany					See Table 8 (a)					
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	.	.	.	.	.	.	.	.	.	.
Denmark	4,000	3,300	2,800	2,700	2,123	1,917	2,731	2,066	2,108	2,150
Spain	1,100	1,000	900	850	800	700	650	600	550	500
Finland	.	.	.	.	.	.	.	.	.	.
France	7.5	4.5	4.4	4.0	4.2	4.5	5.6	6.7	7.3	7.4
United Kingdom[1]	778	1,090	1,140	1,195	1,260	1,323	1,379	1,433	1,500	1,588
Greece	.	.	.	.	.	.	.	.	.	.
Ireland	27,595	22,488	23,087	26,138	26,544	25,098	27,054	27,043	29,355	28,714
Italy	.	.	.	.	.	.	.	.	.	.
Luxembourg	798	695	681	663	641	619	603	595	596	600
Norway[3]	1,100	500	400	400	500	600	800	800	900	1,000
Netherlands	6,500	5,400	5,200	4,800	4,500	4,200	3,800	3,100	2,800	2,200
Portugal[2]	382	550	587	622	658	713	745	801	828	843
Sweden	.	.	.	.	.	.	.	.	.	.
Switzerland	1,942	2,674	2,813	2,866	2,968	3,079	2,994	3,041	3,123	3,189
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	1,078	1,088	1,037	978	897	843	801	735	653	482

(1) Great Britain only.
(2) Estimated.
(3) Norwegian registered vehicles.

8. ROAD PASSENGER TRANSPORT ON NATIONAL TERRITORY

c) Coaches, buses, trolley buses

Million passenger-kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany[1]	40,800	49,600	51,800	53,700	55,800	57,700	59,600	59,700	61,500	62,500
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	8,260	9,324	9,380	9,645	9,433	9,931	9,878	9,338	9,526	9,059
Denmark	3,400	4,600	4,900	5,100	5,400	5,600	5,700	6,200	6,300	6,500
Spain	11,220	20,910	23,270	28,610	23,473	25,236	26,885	30,192	28,874	29,450
Finland	5,925	6,220	6,320	6,450	7,440	7,220	7,820	7,810	7,800	7,870
France	.	.	.	.	.	.	.	.	.	.
United Kingdom[2]	63,000	56,500	56,500	55,000	54,000	54,000	54,000	53,000	53,000	52,000
Greece	64	83	85	88	91	95	97	100	104	109
Ireland	.	.	.	.	.	.	.	.	.	.
Italy[7]	27,871	32,004	33,309	36,757	38,649	40,967	42,329	48,259	54,577	60,649
Luxembourg	.	.	.	.	.	.	.	.	.	.
Noway[5]	3,263	3,726	3,770	3,867	3,907	4,058	3,963	3,916	3,987	3,987[6]
Netherlands[3]	7,804[4]	7,264[4]	8,662	8,633	8,785	9,017	9,079	9,572	9,476	9,404
Portugal	3,729	4,358	4,554	4,725	4,867	5,024	5,152	5,386	.	.
Sweden	.	.	.	.	.	.	.	.	.	.
Switzerland	2,670	3,214	3,300	3,522	3,704	3,943	3,763	4,172	4,229	4,544
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	10,472	20,257	23,324	25,782	28,441	31,247	34,321	36,285	36,445	37,083

(1) National vehicles on national territory and abroad.
(2) Great Britain only.
(3) Coaches, buses, trolley-buses, tram and metro
(4) Excluded local transport.
(5) Norwegian registered buses.
(6) Provisional figure.
(7) Trolley buses excluded.

a) All transport by national vehicles

Million tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	1,633	2,118	2,172	2,245	2,334	2,177	2,042	2,136	2,173	2,254
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	227	315	342	339	342	343	338	332	314	324
Denmark	.	280	284	286	292	288	282	289	296	305
Spain	.	.	.	.	.	.	.	.	.	.
Finland	.	.	.	.	.	.	.	.	.	.
France[1]	1,231	1,432	1,451	1,484	1,529	1,550	1,357	1,427	1,385	1,349
United Kingdom[2]/[3]	1,590	1,610	1,582	1,629	1,672	1,538	1,602	1,516	1,422	1,494
Greece	.	.	.	.	.	.	.	.	.	.
Ireland	.	.	.	.	.	.	.	.	.	.
Italy	743	.	.	999	1,037	.	.	.	.	.
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway	138	170	178	187	195	204	212	220	228	232
Netherlands[4]	255.9	304.5	309.7	314.7	327.1	329.6	327.8	336.5	339.5	.
Portugal	.	.	.	.	.	.	.	.	.	.
Sweden	.	.	.	447.1	506.6	490.6	447.3	403.7	409.0	388.2
Switzerland	198	252	263	280	311	308	218	240	251	260
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	367	648	732	780	760	790	780	806	874	818

(1) National vehicles only (loading capacity ⩾ 3 t).
(2) National vehicles only.
(3) Great Britain only.
(4) Road goods transport (inland).

b) All transport by national vehicles

Million tonne-kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	59,000	72,200	74,700	78,500	83,900	81,700	79,300	86,700	89,000	92,400
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	8,532	13,087	14,328	15,173	15,961	17,011	16,251	15,756	15,650	16,799
Denmark[1]	.	7,800	8,200	8,600	9,200	9,300	9,500	11,500	11,800	12,200
Spain	33,200	51,700	58,600	65,100	70,800	78,100	76,500	79,200	84,800	90,900
Finland	7,100	–	10,400	–	–	–	14,900	15,000	15,200	15,300
France	43,500	62,400	68,300	74,600	83,200	87,400	78,500	83,900	85,500	89,100
United Kingdom[2]	68,800	85,000	85,900	87,500	90,400	89,900	95,300	95,600	98,000	99,100
Greece	.	.	.	.	.	.	.	.	.	.
Ireland	.	.	.	.	.	.	.	.	.	.
Italy	45,788	58,658	57,481	58,986	61,929	62,426	62,795	66,708	74,361	88,022
Luxembourg	.	.	.	.	.	.	.	.	.	794
Norway	2,183	3,194	3,455	3,736	4,069	4,370	4,690	4,994	5,394	5,703
Netherlands[3]	8,905	12,396	13,093	13,973	15,460	15,638	15,444	16,671	17,304	.
Portugal	.	.	.	.	.	.	.	.	.	.
Sweden	.	.	.	18,170	20,670	21,460	20,190	20,580	19,940	20,310
Switzerland[4]	2,847	4,156	4,654	5,178	6,050	6,357	4,511	4,957	5,181	5,367
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	8,207	17,750	19,124	21,672	23,393	25,526	28,015	29,984	32,212	38,049

(1) National territory.
(2) Great Britain only.
(3) Road goods transport (inland).
(4) Freight transport total in Switzerland.

c) All transport by type of operator

Million tonne-kilometres

	Hire/Reward			Own Account			All Goods Transport		
	1965	1970	1978	1965	1970	1978	1965	1970	1978
Germany	40,600	51,100	72,300	21,900	26,900	39,400	62,500	78,000	111,700
Austria	.	.	.	.	.	.	.	.	.
Belgium	3,820	6,224	8,909	4,712	6,863	7,890	8,532	13,087	16,799
Denmark	.	4,400	5,300[1]	.	3,400	4,200[1]	.	7,800	9,500[1]
Spain	.	.	.	.	.	.	33,200	51,700	90,900
Finland	.	.	10,700	.	.	4,600	.	.	15,300
France	23,300	38,000	51,000	20,200	24,400	38,100	43,500	62,400	89,100
United Kingdom[2]	39,200	51,000	60,700	29,600	34,000	38,400	68,800	85,000	99,100
Greece	.	.	.	.	.	.	.	.	.
Ireland	.	.	.	.	.	.	.	.	.
Italy[5]	14,535	19,721	20,558	35,372	39,302	46,017	49,907	59,023	66,575
Luxembourg	.	.	.	.	.	.	.	.	.
Norway	.	.	.	.	.	.	.	.	.
Netherlands[3]	.	8,393	11,660[4]	.	4,004	5,644[4]	.	12,396	17,304[4]
Portugal	.	.	.	.	.	.	.	.	.
Sweden	.	.	16,420	.	.	3,900	.	.	20,310
Switzerland	.	.	.	.	.	.	2,847	4,156	5,367
Turkey	.	.	.	.	.	.	.	.	.
Yugoslavia	3,640	7,945	16,873	4,567	9,805	21,176	8,207	17,750	38,049

(1) 1975 figures.
(2) Great Britain only.
(3) Road goods transport (inland).
(4) 1977.
(5) Figures for 1972 and 1973 instead of 1970 and 1978.

10. INTERNATIONAL ROAD GOODS TRANSPORT

Goods loaded

Million tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	8.9	17.4	18.8	23.2	27.9	34.3	32.9	40.2	43.3	46.8
Austria**	2.8	3.5	3.9	4.6	4.9	4.6	4.5	5.4	5.7	6.3
Belgium	9.1	21.4	22.0	26.0	30.1	29.7	29.8	33.9	35.5	35.5
Denmark	2.4	3.3	3.8	3.8	3.9	4.0	4.2	4.2	4.2	4.5**
Spain	.	1.5	1.6	2.1	2.4	2.6	2.8	3.6	3.8	4.4
Finland	0.05	0.12	0.12	0.16	0.22	0.35	0,19	0.29	0.45	0.62
France	9.9	20.6	19.5	25.6	28.9	28.7	25.9	28.8	31.0	35.2
United Kingdom[1]	0.7	1.2	2.0	2.9	3.7	4.5	4.9	4.9	5.3	5.9
Greece**	.	0.1	0.1	0.2	0.2	0.2	0.5	0.7	0.8	0.8
Ireland	.	.	.	.	.	.	.	.	.	.
Italy*	3.9	6.7	8.3	11.4	10.7	10.9	11.3	13.2	14.6	.
Luxembourg	0.7	0.9	0.9	1.0	0.8	0.9	0.8	0.9	1.2	1.0
Norway[6]	0.4	0.9	1.0	1.2	1.0	1.0	1.0	1.0	1.1	1.1
Netherlands[2]	9.5	15.2	13.0	15.6	18.0	18.9	18.2	20.8	20.8	22.4
Portugal[5]	–	0.34	0.30	0.32	0.37	0.41	0.34	0.40	0.46	0.60
Sweden[3]	0.3	0.60	0.60	0.70	0.80	0.90	1.0	1.0	1.0	1.1
Switzerland[4]	1.1	1.4	1.4	1.8	2.0	2.1	1.9	2.4	2.6	2.7
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	0.7	1.0	1.047	1.184	1.471	1.648	1.451	1.637	1.488	1.487

(1) Great Britain only.
(2) 1971-78 excluded export to BLEU
(3) Goods freighted by Swedish goods roads vehicles for hire or reward between Sweden and the Continent (Denmark excluded).
(4) Export and transit (estimate).
(5) Export only.
(6) Before 1975 including goods transported by lorry on ferry.
(*) SOEC yearbook.
(**) Annual bulletin of EEC.

11. ROAD TRAFFIC ON NATIONAL TERRITORY

a) By type of vehicle : Cars and taxis

Million vehicle-kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	143,400	201,100	214,600	221,600	229,800	227,200	245,100	255,000	265,500	279,300
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	15,108	21,626	22,619	23,868	25,090	26,273	27,445	28,749	30,149	31,221
Denmark	11,500	19,200	20,100	21,100	21,700	20,500	21,400	22,700	23,500	23,900
Spain	.	24,648	28,818	32,180	36,695	37,502	40,311	42,640	45,805	49,872
Finland	9,590	13,940	14,760	16,120	17,150	16,980	17,700	18,060	18,290	18,470
France	.	.	.	.	.	.	.	.	.	.
United Kingdom[1]	115,800	161,300	173,900	184,300	194,500	189,000	192,500	200,500	206,400	219,800
Greece	3,127	6,806	7,920	9,093	10,401	11,407	13,173	15,300	18,279	22,053
Ireland	.	.	.	.	.	.	.	11.2	12.1	13.3
Italy	45,122	122,505	144,640	159,840	160,800	147,680	158,670	162,440	166,600	182,700
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway[3]	5,353	8,819	9,535	10,184	11,211	11,224	12,503	13,315	14,629	15,059
Netherlands	20,750	38,850	41,200	42,370	44,480	42,440	44,920	46,880	49,280	51,840
Portugal[2]	3,736	7,124	8,210	9,088	10,089	11,102	12,407	13,200	14,750	15,523
Sweden	.	32,188	33,348	34,553	35,494	36,844	38,987	40,667	41,470	41,432
Switzerland	14,706	21,440	22,660	24,200	25,343	26,268	26,098	27,664	28,690	29,882
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	2,659	6,642	8,259	9,706	11,069	12,680	14,821	16,881	18,885	19,512

(1) Great Britain only.
(2) Estimated.
(3) Norwegian registered vehicles.

b) Two-wheeled motor vehicles

Million vehicle-kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	5,600	2,400	2,200	2,300	2,600	2,900	3,200	3,600	3,800	4,200
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	.	.	.	.	.	.	.	.	.	.
Denmark	2,800	2,100	2,200	2,300	2,300	2,300	2,300	2,200	2,200	.
Spain	2,983	2,489	2,115	2,020	1,571	1,420	1,704	1,536	1,567	1,619
Finland	.	.	.	.	.	.	.	600		.
France	.	.	.	.	.	.	.	.	.	.
United Kingdom[1]	6,700	3,900	3,800	3,500	3,700	4,000	4,900	5,800	6,700	6,800
Greece	741	1,038	1,085	1,138	1,200	1,260	1,314	1,365	1,429	1,513
Ireland	.	.	.	.	.	. .	.	0.21	0.30	0.33
Italy	24,660	20,520	21,020	23,905	24,318	22,950	24,700	24,720	26,804	25,784
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway[3]	798	695	681	663	641	619	603	595	596	600
Netherlands	6,800	5,300	5,000	4,600	4,500	4,300	4,100	3,500	3,300	2,800
Portugal[2]	303	437	466	494	523	552	591	636	657	669
Sweden	.	.	.	.	.	.	.	.	.	.
Switzerland	1,943	2,674	2,813	2,866	2,968	3,079	2,994	3,041	3,123	3,189
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	692	725	691	652	598	562	534	490	435	320

(1) Great Britain only.
(2) Estimated.
(3) Norwegian registered vehicles.

c) Coaches, buses, trolley buses

Million vehicle-kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	1,800	2,200	2,300	2,500	2,500	2,600	2,700	2,800	2,900	3,000
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	337	368	373	381	389	402	397	393	399	396
Denmark	300	300	300	300	300	300	300	300	400	400
Spain	434	811	907	919	908	976	1,041	1,168	1,117	1,160
Finland	440	465	490	510	550	540	591	591	603	609
France	.	.	.	.	.	1,293	1,277	1,411	.	.
United Kingdom[1]	3,900	3,600	3,600	3,600	3,600	3,500	3,600	3,500	3,700	3,700
Greece	593	738	768	805	868	907	936	973	1,039	1,082
Ireland	.	.	.	.	.	.	.	0.345	0.25	0.28
Italy[2]	1,175	1,361	1,401	1,417	1,595	1,669	1,680	1,899	2,148	2,384
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway[3]	280	317	320	331	343	349	348	356	368	368
Netherlands	434	447	456	459	468	497	512	532	526	539
Portugal	146	200	209	213	210	217	218	227	.	.
Sweden	.	.	.	.	.	.	.	.	.	.
Switzerland	155.3	186.9	193.9	203.8	212.2	218.9	189.7	201.2	208.7	225.5
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	396	794	885	995	1,055	1,106	1,174	1,207	1,272	1,317

(1) Great Britain only.

(2) Trolley buses excluded.

(3) Passenger	216	241	245	252	253	257	262	270	278	282
Goods	64	76	75	79	90	92	86	86	90	86

d) Goods vehicles

Million vehicle-kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	22,100	26,200	26,400	26,700	28,900	26,400	25,700	26,200	26,500	27,000
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	.	3,158	3,440	3,397	3,361	3,254	3,172	2,971	2,895	3,189
Denmark	2,600	2,900	3,500	3,500	3,500	3,500	3,600	3,500	4,200	.
Spain	6,798	10,437	11,271	12,911	14,215	14,932	14,172	14,128	14,958	15,300
Finland	2,015	2,056	2,083	2,107	2,182	2,171	2,175	2,182	2,198	2,218
France[1]	.	9,884	10,564	11,235	11,599	12,261	10,844	11,415	11,542	11,754
United Kingdom[2]	36,300	37,800	39,200	40,200	42,000	40,600	40,300	41,600	42,600	43,900
Greece	.	.	.	.	.	.	.	.	.	.
Ireland	.	.	.	.	.	.	.	2.725	3.1	3.4
Italy	17,227	22,557	22,513	23,285	23,429	23,521	24,208	25,344	27,007	30,747
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway[4] (nation.vehicles)	.	.	.	.	1,695	1,714	1,737	1,752	1,798	.
Netherlands	.	.	.	.	.	.	.	.	5,340	.
Portugal	.	.	.	.	.	.	.	.	.	.
Sweden	.	2,431[3]	.	2,322	2,602	2,552	2,366	2,365	2,254	2,201
Switzerland	2,540	3,376	3,815	4,017	4,031	4,106	4,212	4,218	4,223	4,600
Turkey	.	.	.	.	.	.	.	.	.	.
Yugoslavia	2,286	4,768	5,459	6,060	6,419	7,072	7,718	7,970	8,436	8,625

(1) ⩾ 3t load capacity.
(2) Great Britain only.
(3) Partly a calculated figure.
(4) Norwegian registered vehicles.

12. PASSENGER TRANSPORT VEHICLES

Registered vehicles by type — Thousand

	Two-wheeled vehicles			Cars and Taxis			Public transport vehicles		
	1965	1970	1978	1965	1970	1978	1965	1970	1978
Germany[1]	1,924	1,433	2,635	9,267	13,941	21,212	39	47	66
Austria	.	.	.	.	.	.	.	.	.
Belgium	531	431	559	1,503	2,060	2,973	9[2]	10[2]	13[2]
Denmark[3]	84.8	43.9	34.9	900.3	1,209.8	1,505.7	3.9	5.0	6.8
Spain	1,124	1,267	1,171	807	2,378	6,530	20	31	42
Finland	76.5	44.1	42.9	183.4	712.0	1.108.1	5.8	8.1	8.8
France	5,500	5,020	5,460	9,600	12,900	17,400	27[4]	42[4]	65[4]
United Kingdom[5]	1,614	1,053	1,195	9,028	11,669	14,309	83	79	77
Greece	49	69	101	.	.	.	4.8[6]	6.0[6]	8.0[6]
Ireland	52	41	31	285	393	640	2	2	5
Italy	4,117	3,350	4,995	5,473	10,191	16,986	33	39	51
Luxembourg[7]	.	.	.	.	.	153	.	.	0.7
Norway	162[9]	148[9]	140[9]	435	695	1,147	6	7	11
Netherlands	140[10]	72[10]	92[10]	1,273	2,465	4,016	10	10	10
Portugal	41	59	90	275	523	1,111	4	5	8
Sweden	64.4	41.3	18.2	1,792.7	2,287.7	2,856.2	10.3[8]	14.3[8]	12.7[8]
Switzerland	482	669	797	845	1,383	2,061	4	6	5
Turkey	.	.	.	.	.	.	.	.	.
Yugoslavia	106	370	142	188	721	1,857	8[8]	15[8]	20[8]

(1) Public transport vehicles: coaches, buses and trolley-buses in total
(2) This figure includes vehicles for regular and special services and coaches (3.2 for 1978).
(3) Two-wheeled vehicles: moped are not registered.
(4) Vehicles less than 10 years.
(5) Great-Britian only. December 1978 census figures.
(6) Rounded figures.
(7) Two-wheeled vehicles: > 50 cm^3.
(8) All registered autobuses.
(9) Including snow-scooters.
(10) Moped: in 1965: 1,500 thousands - in 1970: 1,900 thousands - 1978 : 1,000 thousands.

13. GOODS TRANSPORT VEHICLES

a) Registered vehicles by type

Thousand

	Rigid vehicles under 1.5 T Capacity			Rigid vehicles over 1.5 T capacity			Tractors			Trailers/ Semi-trailers		
	1965	1970	1978	1965	1970	1978	1965	1970	1978	1965	1970	1978
Germany	387.4	443.1	524.1	493.9	585.0	651.4	66.1	90.8	147.6	396.7	462.2	720.7
Austria	.	.	.	.	.	.	.	.	.	.	.	.
Belgium	60[1]	89	94	107[1]	97	104	2[2]	11	16	.	25	41
Denmark	—	53.1	91.2	—	58.7	71.0	7.0	5.0	5.9	.	17.3	25.0
Spain[3]	162	341	643	205	365	546	3	6	20	12	18	41
Finland[4]	5	5	3	38	41	45	139	169	221	9	14	80
France[3/5]	632.1	767.8	1,153.7	533.5	658.7	1,016.8	29.5	53.8	109.5	56.2	81.4	150.0
United Kingdom[6]	.	985.0	1,273.0[7]	.	631.0	448.0[7/8]	.	.	.	.	.	.
Greece	25	43	130	40	64	171	.	.	.	.	.	.
Ireland	.	[9]	[9]	.	48.8	59.6	.	[9]	[9]	.	.	.
Italy[3/17]	526	690	879	409	577	763	6	13	25	66	104	244
Luxembourg[10]	.	.	5.6	.	.	4.7	.	.	14.5	.	.	.
Norway[4]	.	.	39	.	.	61	.	.	2	.	.	65
Netherlands	131	190	175	86	91	113	8	12	20	30	.	70
Portugal	34.4	45.3	91.6	23.7	27.6	53.4	18.3	37.9	81.0	12.5	31.2	76.7
Sweden	62.1[11]	70.7[11]	89.7	66.2[12]	69.7[12]	79.4	3.2[13]	4.1[13]	3.7[13]	51.3	84.5	210.5
Switzerland	49.0[14]	63.2[14]	88.1	35.0[14]	42.6[14]	64.6	1.2[15]	1.5[15]	87.0[16]	40.1	51.6	52.0
Turkey	.	.	.	.	.	.	.	.	.	.	.	.
Yugoslavia	.	27	39	.	80	115	19	31	72	25	41	40

(1) In 1965, included vehicles of 1 t.
(2) In 1954, this figure includes tractors, trailers and semi-trailers.
(3) Capacity 1 t. instead of 1.5 t.
(4) Capacity 2 t. instead of 1.5 t.
(5) Vehicles less than 10 years in 1st january.
(6) Great-Britain only.
(7) Up to 2999 kg and over 2999 kg.
(8) Articulated units are included in rigid vehicles over 1.5t.
(9) Included in column 2.
(10) Tractors for agriculture.
(11) Under 2 t. capacity (rigid vehicles: lorries).
(12) 2t. capacity and over.
(13) Tractors for semi-trailers in use.
(14) Capacity 1.6t instead of 1.5t.
(15) Tractors industrial only.
(16) Including tractors agriculture.
(17) Figures for 1977 instead of 1978.

b) Loading capacity by type of vehicles

Thousand tonnes

	Rigid vehicles under 1.5 T.capacity			Rigid vehicles over 1.5 T.capacity			Trailers/Semi-trailers		
	1965	1970	1978	1965	1970	1978	1965	1970	1978
Germany	343	412	478	2,113	2,615	3,156	1,796	2,261	3,123
Austria	.	.	.	.	.	.	.	.	.
Belgium	36[1]	70	76	422[1]	492	569	221	387	627
Denmark	.	57	95	230	289	340	.	130	262
Spain[1]	81	218	393	831	1,446	2,998	.	.	.
Finland	.	3	4	–	243	344	.	87	216
France[1]	316	384	577	1,734	2,141	3,237	1,035	1,499	2,756
United Kingdom[2]	.	586	616[3]	.	4,493	4,988[3/4]	.	.	.
Greece	.	.	.	.	.	.	.	.	.
Ireland	.	.	.	.	.	.	.	.	.
Italy	.	128	.	1,006	2,303	.	638	908	.
Luxembourg	.	.	.	.	.	.	.	.	.
Norway[6]	.	.	60	.	.	353	.	.	.
Netherlands	111	165	155	411	480	645	309	.	1,070
Portugal[5]	.	105	.	.	260	.	.	131	.
Sweden	60[6]	53	78	415[6]	504	553	258	410	556
Switzerland	45	58	92	202	291	354	117	162	210
Turkey	.	.	.	.	.	.	.	.	.
Yugoslavia	.	25	38	.	480	696	.	369	374

(1) Capacity 1 t. instead of 1.5 t.
(2) Great Britain only.
(3) Up to 2999 kg and over 2999 kg.
(4) Articulated units are included in rigid vehicles over 1.5 t.
(5) Figures for 1974.
(6) Capacity 2 t. instead of 1.5 t.

14. ENERGY CONSUMPTION BY ROAD VEHICLES

Million tonnes coal equivalent

	1965	1970	1976	1977	All Fuels	1978 of which : Petrol	Diesel
Germany[1]	22.1	32.1	41.6	44.1	47.0	34.0	13.0
Austria	.	.	.	.	.	.	.
Belgium	2.2	3.2	4.1	4.4	4.5	3.1	1.4
Denmark	2.2	3.0	3.4	3.5	3.7	2.8	0.8
Spain	3.5	8.4	13.6	14.0	14.8	8.4	6.4
Finland[2]	1.4	1.9	2.3	2.3	2.4	1.8[4]	1.1[4]
France[3]	10.6	16.4	23.6	24.3	25.5	17.3	8.2
United Kingdom	.	19.3	22.5	23.0	24.2	18.3	5.9
Greece	.	.	1.4	1.7	1.9	1.2	0.7
Ireland	0.9 0.6	1.2 0.8	1.69 1.12	1.81 1.21	2.02 1.35	1.54 1.02	0.48 0.33
Italy	8.0	13.5	16.7	17.8	.	11.1	8.1
Luxembourg	.	.	.	0.4	.	0.5	
Norway	.	.	.	.	.	.	.
Netherlands	.	.	.	.	.	.	.
Portugal	0.75	1.29	2.13	2.22	2.41	1.0	1.41
Sweden	.	5.5	6.9	7.2	7.4	5.5	1.9
Switzerland	2.6	3.6	3.9	4.1	4.2	3.5	0.7
Turkey	.	.	.	.	.	.	.
Yugoslavia	.	.	.	.	.	.	.

(1) Petrol = 1.49 TCE
Diesel = 1.46 TCE
(2) Million tonnes oil equivalent.
(3) Fuel weight.
(4) Million cubic meters.

15. LENGTH OF ROAD NETWORK

Roads open to public : National Network — kilometres

	All roads			Motorways		
	1965	1970	1978	1965	1970	1978
Germany	407,751	440,844	475,700	3,372	4,461	7,029
Austria	.	.	.	.	.	.
Belgium	11,699	12,109	13,740[1]	310	488	1,128
Denmark	2,327	2,975	4,665	102	198	450
Spain	133,320	139,395	146,607	54	187	1,604
Finland	28,761	32,109	34,023	18	108	194
France	82,200	82,542	29,103	645	1,542	3,873
United Kingdom[2]	13,986*	14,463*	15,509	571	1,057	2,523
Greece	7,704	8,004	8,736	.	65	66
Ireland[3]	15,900	15,940	15,981	.	.	.
Italy	39,068	46,668	.	1,736	3,913	.
Luxembourg	.	.	5,069	.	.	41.3
Norway	65,737	72,262	79,817	29	79	202
Netherlands[4]	71,418	76,990	90,569	504	979	1,716
Portugal	17,841	18,076	18,685	46	66	74
Sweden	166,010	173,580	181,405	223	389	745
Switzerland	57,889	60,139	62,628	107	377	737
Turkey	.	.	.	.	.	.
Yugoslavia	78,505	91,289	112,216	.	.	292

(1) Figures for 1977.
(2) All roads: trunk roads (including motorways).
(3) The kilometrage shown above comprises:
- national primary roads.
- national secondary roads.
- main (trunk + link roads).

(4) All surfaced roads, in and outside built-up areas.
(*) Revised figures for 1965 and 1970.

16. INTERNATIONAL ROAD NETWORK - "E" ROUTES

Existing and proposed length — Kilometres

	1965	1970	1976	1977	1978	Proposed
Germany	5,762	6,137	6,131	6,154	6,136	.
Austria	.	.	.	.	.	.
Belgium	1,093	1,111	1,073	1,073	1,073	1,126
Denmark	886	886	901	901	901	.
Spain	5,928	5,888	6,438	6,442	6,269[1]	6,269
Finland	1,804	1,804	2,313	2,313	2,313	2,393
France	5,943	5,943	11,466	11,466	.	.
United Kingdom	1,651	2,000	2,444	2,514[2]	2,570[1]	3,838
Greece	2,742	2,742	3,972	4,108	4,213	4,374
Ireland	.	.	814	814	814	1,190
Italy	6,402	.	.	.	.	.
Luxembourg	89	89	90	90	90	.
Norway	2,278	3,928	3,940	3,909	3,916	3,825
Netherlands	1,336	1,367	1,348	1,348	1,350	.
Portugal	1,246	1,246	1,246	1,246	1,246	1,436
Sweden	3,409	3,441	3,942	3,939	3,927	4,457[3]
Switzerland	1,309	1,298	1,238	1,238	1,238	1,252
Turkey	.	.	.	.	.	.
Yugoslavia	3,281	3,281	7,026	7,026	7,026	.

(1) Estimate.
(2) Revised figure for 1977.
(3) Included 530 km planned in 1980.

a) All transport

Million tonne-kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	43,552	48,813	44,991	43,969	48,480	50,972	47,565	45,804	49,254	51,489
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	6,087	6,734	6,729	6,758	6,494	6,853	5,124	6,072	5,763	5,936
France	12,510	14,183	13,773	14,156	13,792	13,738	11,905	12,156	11,266	11,594
United-Kingdom	217	129	100	91	90	73	74	72	72	85
Italy	.	350	386	392	.	.	.	.	.	.
Luxembourg	.	.	.	.	.	.	.	.	.	303,2
Netherlands	24,071	30,741	30,426	29,334	31,997	33,196	29,597	30,954	32,127	34,459
Switzerland	133	169	164	163	167	168	132	156	160	158
Yugoslavia	3,313	4,284	4,240	4,959	4,850	5,517	5,461	5,572	5,796	5,907

b) Internal transport: Goods carried

Million tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	98.2	102.4	99.4	97.4	97.0	92.1	78.8	82.5	79.1	79.7
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	25.8	31.2	29.4	28.1	24.9	26.1	18.5	21.9	21.7	20.1
France	58.3	66.9	64.4	64.5	62.5	61.0	52.9	54.0	50.5	50.2
United Kingdom	8.5	6.5	5.5	5.0	5.0	3.9	4.2	4.6	4.0	5.5
Italy	2.8	4.4	.	4.1	.	.	.	.	.	3
Luxembourg	.	.	.	.	.	.	.	.	.	.
Netherlands	82.2	93.0	100.8	102.7	94.8	85.9	79.5	94.1	98.0	92.2
Switzerland	4.8	6.2	6.3	6.3	6.4	6.5	4.6	6.0	6.0	6.0
Yugoslavia	7.0	12.5	13.9	14.7	15.1	15.6	17.7	17.6	19.9	22.9

c) International transport: Goods loaded

Million tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany[1]	32.4	49.5	47.3	44.9	50.0	56.7	50.9	48.2	52.8	59.0
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	18.9	20.3	21.5	23.0	29.0	28.8	24.1	31.1	33.7	31.4
France	15.1	22.2	22.6	25.3	25.9	25.8	22.3	21.0	20.1	22.4
United Kingdom	.	.	.	.	.	.	.	.	.	.
Italy	.	.	.	.	.	.	.	.	.	.
Luxembourg	.	.	.	.	.	.	.	.	.	1.16
Netherlands	60.4	81.4	79.5	77.8	87.3	96.0	87.7	93.8	92.7	100.5
Switzerland	0.7	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.5
Yugoslavia	0.7	0.6	0.6	0.7	0.7	0.7	0.6	0.7	0.6	0.5

d) International transport: Goods unloaded

Million tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany[1]	57.0	75.8	73.6	77.9	88.9	91.0	85.6	89.3	86.4	94.5
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	27.8	35.6	39.1	39.6	42.6	46.5	37.0	42.6	41.7	44.2
France	9.3	13.3	13.1	12.7	13.0	14.3	11.5	11.4	12.0	11.3
United Kingdom	.	.	.	.	.	.	.	.	.	.
Italy	.	.	.	.	.	.	.	.	.	.
Luxembourg	.	.	.	.	.	.	.	.	.	0.878
Netherlands	28.2	42.9	41.1	39.6	45.0	47.7	43.9	43.5	49.0	51.6
Switzerland	8.0	8.6	7.9	7.7	8.2	9.1	7.9	8.0	8.6	8.2
Yugoslavia	1.0	2.3	2.4	2.3	2.2	2.8	2.9	2.8	3.0	2.9

(1) Transport from and to the DDR included.

e) International transport: Goods in transit

Million tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	8.1	12.3	9.7	8.3	9.9	12.2	12.0	10.0	14.2	13.2
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	4.6	4.4	5.4	5.7	5.2	5.5	4.2	4.6	3.8	4.5
France	7.0	8.0	6.6	6.2	7.4	8.2	7.9	7.5	8.6	7.7
United Kingdom	.	.	.	.	.	.	.	.	.	.
Italy	.	.	.	.	.	.	.	.	.	.
Luxembourg	.	.	.	.	.	.	.	.	.	7.997
Netherlands	23.2	24.5	24.0	24.3	27.7	30.1	24.7	28.9	33.0	33.2
Switzerland	.	.	.	.	.	.	.	.	.	.
Yugoslavia	4.7	5.5	4.9	5.3	6.1	7.4	7.1	6.4	7.2	7.6

18. RHINE TRAFFIC AT THE GERMAN-NETHERLANDS FRONTIER - EMMERICH-LOBITH

Thousand tonnes/Percentage

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
All traffic:	80,700	112,300	104,600	101,500	116,800	128,321	119,139	118,496	127,340	139,682
of which:										
Upstream	52.500	68.500	63.400	62.200	72.900	78.722	74.743	76.988	78.761	85.879
Downstream	28.200	43.800	41.200	39.300	43.900	49.599	44.396	41.508	48.579	53.803
Push-Tow traffic	7.700	20.900	20.100	23.600	32.800	37.108	35.877	33.644	37.355	42.276
of which:										
Upstream	6.800	16.400	16.100	19.500	27.400	30.749	29.999	28.348	30.016	32.818
Downstream	900	4.500	4.000	4.100	5.400	6.359	5.878	5.296	7.339	9.458
Push-Tow traffic as percentage of all traffic	10	19	19	23	28	29	30	28	29	30

19. CRAFT IN SERVICE: 1965, 1970, 1976-1978

a) Self propelled craft

	Number					Capacity (Thousand tonnes)				
	1965	1970	1976	1977	1978	1965	1970	1976	1977	1978
Germany	5,664	5,190	3,800	3,658	3,506	3,404.8	3,447.8	3,145.7	3,057.9	2,957.9
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	5,212	4,843	3,628	3,363	3,126	2,294.4	2,244.3	1,968.7	1,842.8	1,743.8
France	5,961	5,583	4,751	4,504	4,253	2,211.5	2,124.3	1,835.0	1,756.3	1,673.1
United-Kingdom	.	.	3	3	1	.	.	0.6	0.6	0.2
Italy[1]	645	431	434	.	301	60.6	60.7	60.9	.	.
Luxembourg	.	.	.	.	20	.	.	.	.	11.9
Netherlands	9,309	7,807	6,416	6,052	5,987	3,180	3,297	3,739	3,666	3,639
Switzerland	371	333	301	290	298	337.5	334.2	388.5	382.3	401.8
Yugoslavia	21	21	29	32	47	9	7	14	17	29

b) Dumb and pushed barges

	Number					Capacity (Thousand tonnes)				
	1965	1970	1976	1977	1978	1965	1970	1976	1977	1978
Germany	1,853	1,146	813	774	724	1,559.2	1,076.2	989.7	962.4	900.6
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	689	455	229	206	190	520.3	370.4	227.5	220.3	210.8
France	3.727	1.591	1.348	1.314	1.272	1,401.4	869.8	967.6	950.6	944.9
United Kingdom	.	.	30	30	28	.	.	10.4	10.4	9.6
Italy[1]	.	393	381	.	217	98.7	67.9	67.8	.	.
Luxembourg	.	.	.	.	.	.	.	.	.	.
Netherlands	2,384	1,523	1,099	976	882	1,915	1,600	1,365	1,256	1,231
Switzerland	87	82	99	86	93	115.8	116.5	169.1	148.1	165.4
Yugoslavia	729	839	881	870	863	481	615	699	696	700

(1) Figures for 1972 instead of 1976.

c) Tugs and pushers

	Number					Capacity (Thousand HP)				
	1965	1970	1976	1977	1978	1965	1970	1976	1977	1978
Germany	687	448	390	381	371	261.4	183.4	212.0	209.2	195.0
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	169	247	288	288	288	28.1	40.5	60.6	60.1	63.4
France	520	207	241	241	244	164.1	119.9	172.5	172.6	174.7
United-Kingdom	.	.	10	10	10	.	.	2.5	2.5	2.5
Italy[1]	123	124	115	.	.	8.2	8.2	7.8	.	.
Luxembourg	.	.	.	.	3,121	.	.	.	.	.
Netherlands	2,262	2,078	2,087	2,080	2,073	426	440	491	490	490
Switzerland	31	14	19	19	23	30.7	17.1	18.0	18.4	24.6
Yugoslavia	240	260	266	267	266	72	75	105	105	104

(1) Figures for 1972 instead of 1976.

20. CRAFT IN SERVICE - BY AGE: 1978

a) Self propelled craft

	Number			Capacity (Thousand tonnes)		
	Pre 1950	1950-1969	1970 Onwards	Pre 1950	1950-1969	1970 Onwards
Germany	2,100	1,051	355	1,297.0	1,156.7	504.2
Austria	.	.	.	.	.	.
Belgium	1,697	999	67	828.6	564.5	106.7
France	2,284	1,924	16	852.9	797.8	11.4
United Kingdom	.	1	.	.	0.15	.
Italy	.	.	.	.	.	.
Luxembourg	4	15	1	2.44	8.74	1.09
Netherlands	3,757	2,116	179	1,805	1,574	287
Switzerland	68	156	74	75.2	183.6	143.0
Yugoslavia	12	8	27	4.0	2.6	22.4

b) Dumb and pushed barges

	Number			Capacity (Thousand tonnes)		
	Pre 1950	1950-1969	1970 Onwards	Pre 1950	1950-1969	1970 Onwards
Germany	346	162	216	271.4	213.4	415.8
Austria	.	.	.	.	.	.
Belgium	119	31	30	91.5	43.3	66.7
France	459	675	127	199.1	541.2	198.1
United Kingdom	.	17	11	.	7.0	2.6
Italy	.	.	.	.	.	.
Luxembourg	.	.	.	.	.	.
Netherlands	548	197	231	594	310	352
Switzerland	25	26	42	39.3	41.6	84.5
Yugoslavia	305	408	150	187	350	163

20. CRAFT IN SERVICE: BY AGE: 1978

c) Tugs and pushers

	Number			Power (Thousand HP)		
	Pre 1950	1950-1969	1970 Onwards	Pre 1950	1950-1969	1970 Onwards
Germany[1]	32	27	30	10.3	20.0	41.4
Austria	.	.	.	.	.	.
Belgium	184	53	51	37.9	15.9	9.6
France	97	103	35	35.2	99.3	37.2
United Kingdom	1	7	2	0.35	1.5	0.6
Italy	.	.	.	.	.	.
Luxembourg	.	.	.	.	.	.
Netherlands (registered)	1,417	538	125	255	155	81
Switzerland	4	13	6	2.4	13.9	8.3
Yugoslavia	75	139	52	17	56	31

(1) Pushers only, in thousand kW (1 kW = 1.360 HP - 1 HP = 0.735 kW).

21. CRAFT IN SERVICE - BY CARGO CAPACITY: 1978[1]

a) Self propelled craft.

	Number by class						Capacity (Thousand tonnes)					
	0	I	II	III	IV	V	0	I	II	III	IV	V
Germany[2]	272	392	576	1,015	1,041	210	38.5	128.5	299.0	841.3	1,280.4	370.3
Austria	.	.	.	.	.	.	.	.	.	.	.	.
Belgium	22	1,744	461	249	222	65	4.0	631.0	244.0	212.4	278.5	129.9
France	128	3,510	430	154	27	4	23.4	1,277.2	203.3	128.2	32.7	11.0
United Kingdom	1	.	.	.	.	.	0.15	.	.	.	.	.
Italy	.	.	.	.	.	.	.	.	.	.	.	.
Luxembourg	.	11	1	4	4	.	.	4.21	0.41	3.21	4.45	.
Netherlands	743	1,597	1,702	1,286	532	192	131	529	891	1,063	658	394
Switzerland	2	3	6	72	119	96	0.3	0.9	3.3	62.9	148.6	185.8
Yugoslavia	15		5	21	6	.	2.1		3.1	15.7	7.8	.

b) Dumb and pushed barges

	Number by class						Capacity (Thousand tonnes)					
	0	I	II	III	IV	V	0	I	II	III	IV	V
Germany	61	51	110	128	107	267	9.0	16.6	55.3	106.9	138.5	574.3
Belgium	16	31	27	12	44	50	2.9	11.4	13.6	9.9	59.3	104.4
France	106	363	396	166	35	206	16.6	124.8	180	127.2	41.9	454.3
Luxembourg	.	.	.	.	.	.	.	.	.	.	.	.
Netherlands	68	149	89	136	187	347	9	55	48	116	243	784
Switzerlands	.	.	2	24	18	49	.	.	1.2	20.7	24.3	119.2
United Kingdom	8	2	18	.	.	.	1.26	0.52	7.80	.	.	.
Yugoslavia	112		211	270	216	54	21.7		112.9	210.6	267.8	91.8

(1) Class O = Up to 250 T
Class I = From 251 T to 400 T
Class II = From 401 T to 650 T
Class III = From 651 T to 1000 T
Class IV = From 1001 T to 1500 T
Class V = Over 1500 T
(2) 1-1-1979

22. PIPELINES

a) Length[1] in service

Kilometres

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	1,070	2,058	2,058	2,086	2,086	2,086	2,086	2,086	2,086	2,086
Belgium	.	50	277	277	277	277	277	277	277	418[3]
Spain	267	1,099	1,099	1,099	1,099	1,099	1,099	1,306	1,306	1,325
France	1,646	3,533	4,631	4,743	4,903	5,212	5,222	5,222	5,222	5,222
Italy	1,222	1,860	2,096	2,247	2,247	2,615	3,044	3,903	3,911	
United Kingdom	830	1,634	1,695	1,583	2,417	2,446	2,658	2,665	2,827	2,827
Norway[2]	.	.	.	.	.	.	.	.	28	28
Netherlands (oil)	153	408	476	476	476	613	613	613	.	.
Switzerland	60	222	222	222	237	237	239	239	239	239
Yugoslavia	.	.	.	151	151	151	151	151	151	237

b) Tonnes carried by type of traffic: 1978

Thousand

	Internal	Imports	Exports	Transit	All traffic
Germany	20,400	63,800	.	.	84,200
Belgium	12,073	25,443	99	.	37,615
Spain	8,403	.	.	.	8,403
France	77,457	78,498	1,041	24,042	102,540
United Kingdom	47,255	.	.	.	47,255
Norway	.	.	15,255	.	15,255
Netherlands[4]	.	.	.	.	45,843
Switzerland	.	6,010	.	7,685,3	13,695,3
Yugoslavia	1,652	.	.	.	1,652

(1) Excluding pipelines less than 50 km in length and military pipelines.
(2) On Norwegian territory
(3) Anvers-Geelen, on national territory 141 km
(4) International, removals.

c) Tonne-Kilometres by type of traffic: 1978

Million

	Internal	Imports	Exports	Transit	All traffic
Germany	.	.		.	15,300
Austria	.	.	.	.	.
Belgium	847	865	14	.	1,726
Spain	2,687	.	.	.	2,687
France	18,541	19,182	641	13,893	33,075
United Kingdom	9,137	.	.	.	9,137
Italy	.	.	.	.	.
Luxembourg	.	.	.	.	.
Norway	.	.	427	.	427
Netherlands[1]	.	.	.	.	5,096
Switzerland	.	266,3	.	993,3	1,259.6
Yugoslavia	143	.	.	.	143

d) Tonne-kilometres: 1965, 1970-1978

Million

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany	8,900	16,900	18,300	18,701	19,200	16,500	14,600	16,100	15,300	15,300
Austria	.	.	.	.	.	.	.	.	.	.
Belgium	–	270	521	1,554	1,710	1,472	1,535	1,524	1,756	1,726
Spain	109	1,023	1,296	1,607	2,054	2,293	2,119	2,737	2,548	2,686
France	20,728	28,184	29,908	32,470	37,503	36,164	31,095	35,335	32,304	33,075
United Kingdom	1,299	2,665	3,063	3,011	4,287	4,784	5,417	5,182	8,134	9,137
Italy	1,578	9,074	10,832	12,175	11,609	10,695	11,500	10,406	11,581	.
Luxembourg	.	.	.	.	.	.	.	.	.	.
Norway	.	.	.	.	.	.	.	.	380	427
Netherlands[1]	1,575	4,075	4,598	5,703	5,933	4,459	4,450	5,005	5,345	5,096
Switzerland	73	1,210	1,224	1,124	1,227	1,110	1,251	1,335	1,178	1,260
Yugoslavia	.	.	19	100	93	111	110	128	143	159

(1) International; removals.

23. INTERNATIONAL TRAFFIC THROUGH SEAPORTS

a) Goods loaded

Million tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany[1]	17.8	22.5	21.0	22.5	27.8	35.5	27.9	29.0	32.4	35.0
Belgium	21.3	29.2	28.9	34.0	36.2	40.1	35.3	33.7	38.7	37.7
Denmark	.	.	.	.	.	.	.	.	.	.
Spain	8	15	14	16	12	17	16	21	26	28
France	19.5	25.2	25.9	29.9	30.2	40.8	40.8	43.1	43.1	44.5
Greece (Thessoloniki)	0.6	0.8	1.1	1.3	1.1	1.7	1.7	1.7	1'4	1.4
United Kingdom	35.1	48.0	48.7	49.7	53.5	51.1	50.2	62.8	77.6	90.7
Ireland[2]	.	14.1	13.3	15.9	20.0	19.6	11.8	7.5	8.7	.
Italy	23.99	34.65	34.94	37.09	36.93	35.79	29.47	31.01	36.25	43.63
Norway[3]	11	16	16	19	19	18	21	17	15	18
Netherlands	29.3	63.9	67.7	77.2	88.1	85.1	80.8	82.5	77.0	73.0
Portugal	3.4	3.7	3.5	3.6	3.8	4.0	2.9	3.1	3.0	.
Sweden	24.7	32.2	30.7	33.5	40.1	41.3	32.4	32.4	30.8	34.2
Yugoslavia	1.4	3.8	3.3	3.2	3.9	4.0	3.5	4.0	4.7	4.5

(1) Transport from DDR included.
(2) Includes oil transhipment, excludes Livestock traffic.
(3) Before 1975 excluding goods transported by railways and lorry on ferry.

23. INTERNATIONAL TRAFFIC THROUGH SEAPORTS

b) Goods unloaded

Million tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Germany[1]	78.9	106.3	101.8	102.0	110.2	115.1	98.9	110.4	104.2	104.5
Belgium	44.1	71.0	63.8	56.1	61.4	63.7	50.4	60.1	57.7	58.6
Denmark	.	.	.	.	.	.	.	.	.	.
Spain	33	57	60	66	74	79	75	83	84	82
France	109.6	168.8	175.5	191.3	187.9	226.7	194.8	223.1	214.3	216.4
Greece (Thessoloniki)	0.5	4.4	5.1	5.6	5.5	5.4	5.5	5.7	6.2	6.8
United Kingdom	159.4	196.2	202.2	205.0	219.5	211.1	175.3	180.0	158.2	152.8
Ireland[2]	.	21.5	20.8	23.0	29.2	28.3	18.5	15.6	17.0	.
Italy	114.29	200.79	209.87	221.86	237.24	225.31	198.88	217.91	217.53	223.97
Norway[3]	14	21	20	21	22	23	20	22	22	21
Netherlands	118.1	202.7	208.9	232.8	261.8	250.9	242.6	255.8	248.1	246.5
Portugal	6.0	8.9	9.8	10.6	11.5	13.5	11.7	13.3	14.4	.
Sweden	34.7	51.0	47.3	57.8	50.5	55.2	52.2	55.1	52.8	48.5
Yugoslavia	2.2	11.6	12.7	11.5	12.3	14.9	14.0	16.2	16.5	18.2

(1) Transport from DDR included.
(2) Includes oil transhipment, excludes Livestock traffic.
(3) Before 1975 excluding goods transported by railways and lorry on ferry.

24. TRAFFIC AT SELECTED MAJOR SEAPORTS

Goods loaded and unloaded — Thousand tonnes

	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Hamburg	35,200	46,800	45,000	45,900	49,300	51,700	47,500	51,500	52,600	53,300
Bremen	12,700	15,500	15,000	15,800	16,100	16,200	13,700	14,300	14,500	14,600
Amsterdam	13,228	22,868	21,867	20,688	21,352	18,916	18,963	18,920	17,113	17,064
Rotterdam	116,100	218,500	229,400	261,700	294,330	279,528	269,313	283,104	271,908	264,025
Antwerp	59,390	80,722	73,251	66,938	71,537	75,857	60,483	66,147	70,010	68,392
Gent	3,153	10,189	10,380	17,173	14,729	15,125	14,347	15,102	14,717	14,883
Dunkerque	16,281	26,175	26,055	28,167	32,152	35,217	30,594	34,258	33,562	36,240
Le Havre	28,037	59,826	61,625	66,362	89,029	86,277	73,881	81,751	79,998	76,491
Bordeaux	7,313	11,455	13,362	14,390	14,034	13,923	11,610	12,415	11,581	12,379
Marseille	56,962	75,395	77,024	84,400	101,725	111,082	97,455	106,601	100,543	95,236
London	58,059	57,040	53,248	48,151	51,280	46,198	41,479	44,164	43,097	41,686
Southampton	23,813	27,503	28,025	28,969	29,075	27,506	24,470	26,553	23,743	19,978
Liverpool	32,167	29,314	31,814	26,961	27,255	27,798	23,723	22,200	17,656	14,775
Tees & Hartlepool	11,909	22,563	22,218	22,704	26,031	24,994	20,051	30,463	28,152	30,710
Immingham	5,910	21,956	16,933	18,842	23,474	21,180	20,494	22,380	22,497[1]	25,070[1]
Genoa	26,237	43,554	45,966	47,819	50,802	48,745	44,132	41,326	41,102	40,657
Venice	9,525	14,185	14,187	14,317	14,632	12,961	13,167	14,901	15,410	16,185
Trieste	4,706	24,598	31,049	33,332	34,832	31,623	29,978	33,518	34,480	34,813
Lisbon	7,739	9,013	9,610	10,461	10,922	11,817	9,765	11,190	11,284	11,381
Leixöes	2,221	5,853	5,783	5,711	6,063	8,621	7,431	8,973	9,827	9,385
Pireaus	8,588	9,283	9,854	11,828	14,270	13,083	13,244	13,109	13,165	13,912
Bilbao	6,725	11,184	11,419	13,750	18,715	19,516	18,684	19,647	18,490	17,993
Tarragona	2,247	4,391	4,988	5,291	6,014	6,601	8,109	15,871	16,073	17,530
Barcelona	6,707	8,804	9,335	10,264	1,392	11,842	11,651	13,399	15,150	14,836
Santa Cruz de Tenerife	12,515	14,344	14,991	15,193	14,127	14,845	12,487	13,026	14,361	14,122

(1) Includes Grimsby.

ANNEX

INTRA-EUROPEAN CIVIL AIR TRANSPORT OF ECAC STATES TRAFFIC STATISTICS

(Contributed by the ECAC Secretariat)

STATISTICS OF AIR TRANSPORT REPORTED IN ECAC STATES

Paris, 1st September 1980 - The European Civil Aviation Conference (ECAC) has released statistics of non-scheduled air traffic reported in its Member States for the twelve-month period ending 31 October 1979.

The publication, compiled by the Secretariat of ECAC and examined by a group of statisticians, covers passengers carried on inclusive tour charter (ITC) flights and on non-scheduled flights other than inclusive tours (affinity group flights, student flights, etc.) between ECAC Member States and between these States and other States situated in Europe, the Mediterranean area and the Middle Esat. It also includes statistics of passengers embarked in ECAC States on non-scheduled flights (inclusive tours and others) for intercontinental destinations in Africa, the Americas, Asia and Australasia, and passengers arriving in ECAC States from North America on inclusive tours and other non-scheduled flights. It further reproduces estimates furnished by the Association of European Airlines (AEA - with headquarters in Brussels) for inclusive tour traffic carried on scheduled flights by its member airlines within the Europe/Mediterranean region.

The statistics, which are broken down by country and category of traffic, show that, in the year ending 31 October 1979, there was an increase over the previous year of 8.1 % in the total non-scheduled traffic recorded in ECAC States, well above the 4.5 % growth recorded in 1978 and higher than the average annual growth rate of 5.0 % recorded since 1973. It is worth noting that the latter remains well below the growth rate observed between 1968 and 1973 (annual average 23.5 %).

A little more than three quarters of ECAC States' total non-scheduled traffic in 1979 comprised charter passengers travelling between these States, the main traffic flows being, as in earlier years, those generated in Northern Europe for Mediterranean destinations. ITC traffic from Germany, the Netherlands, Scandinavia and the United Kingdom to Spain accounted for almost half the 27.1 million intra-ECAC ITC passengers in 1979. Among other main destinations, high growth rates of ITC traffic were recorded by Malta (+ 60 %), Turkey (+ 50 %) and Greece (+ 44 %).

A comparison (see Table 1 of the Attachment) of the data contained in the publication with other statistics compiled by ECAC and relating to intra-European scheduled air traffic (international) in 1979 indicates that of a total of roughly 68.2 million passengers (scheduled and non-scheduled) carried between ECAC States in that year approximately 43 % (29.2 million) were charter passengers and 57 % (39.0 million) scheduled passengers. When estimated in passenger-kilometres, the shares of charter and scheduled traffic are reversed: 57.5 % and 42.5 % respectively. Of the total intra-European traffic (domestic and international), which amounted to approximately 125 million passengers and 102,000 million passenger-kilometres, the domestic traffic of ECAC States accounted for about 57.2 million passengers (45.6 %) and 23,000 million passenger-kilometres (22.6 %).

It can be seen from Table 2 in the Attachment that the growth in the total number of intra-European passengers in 1979 (+ 7.7 %) followed a similar pattern to 1978 with a marked expansion in the number of domestic scheduled passengers (+ 9.5 %) offsetting the lower growth rate (+ 6.2 %) of international passengers.

The diagrams in the Attachment illustrate trends in international intra-European traffic (measured in passenger-kilometres) over the last decade. While the shares of scheduled and non-scheduled traffic have remained fairly stable throughout this period, growth rates have fluctuated somewhat. After the marked decrease in 1974, traffic growth recovered gradually until 1977, since when it has declined slightly.

Note : The European Civil Aviation Conference (ECAC) is composed of the following 22 Member States: Austria, Belgium, Cyprus, Denmark, Finland, France, Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and Yugoslavia.

NOTES TO TABLES

Column (1) The estimates in this column refer to the total scheduled metropolitan domestic traffic of ECAC Member States. The data have been consolidated from figures given for ECAC Member States by ICAO, adjustments having been made for Denmark, France, the Netherlands and Portugal in an effort to eliminate the domestic traffic not performed within the metropolitan (European) territories of the States concerned (i.e. Denmark - Greenland traffic, France - French Antilles traffic, etc...).

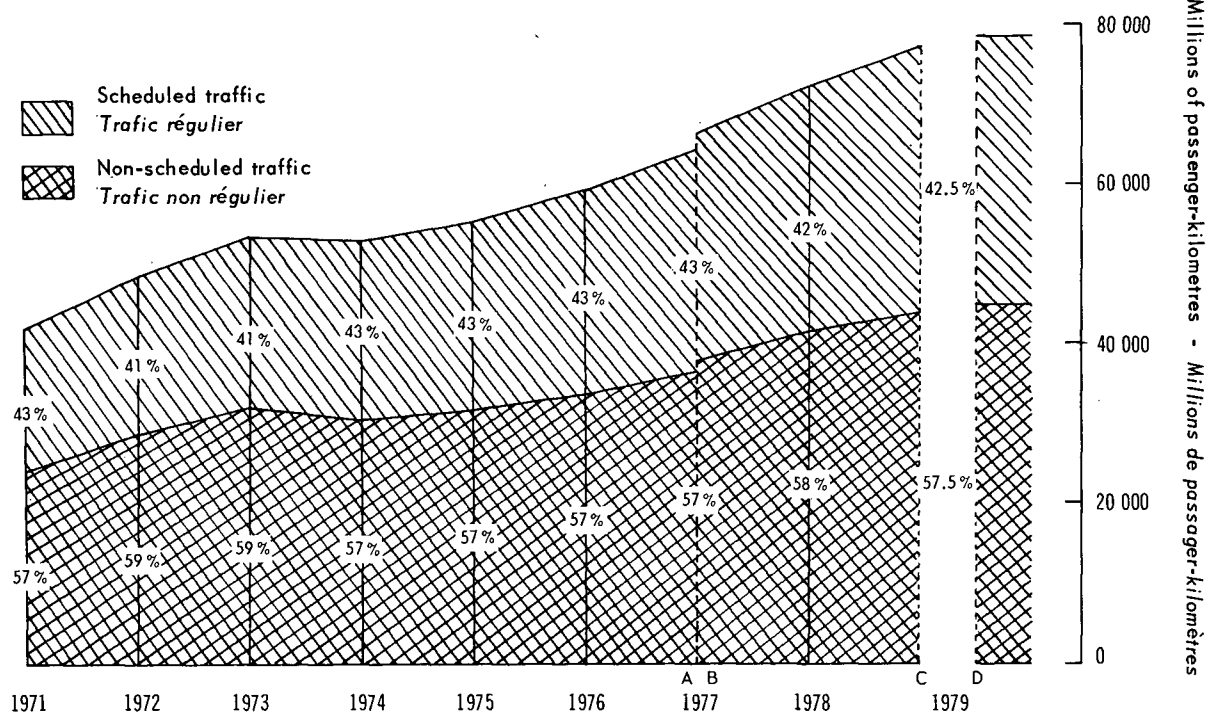
Column (2) The figures in this column refer to intra-ECAC scheduled traffic performed by member airlines of the Association of European Airlines (AEA)* during the calendar year 1979 and were compiled from data supplied by the AEA.

Column (3) The estimates in this column refer to non-scheduled traffic (international) carried between ECAC Member States during the twelve-month period ended 31 October 1979.
The figure for passengers was taken from ECAC. CEAC Doc No. 22 and the passenger-kilometres figure arrived at by applying an average passenger trip length of 1550 kilometres estimated by the Secretariat.

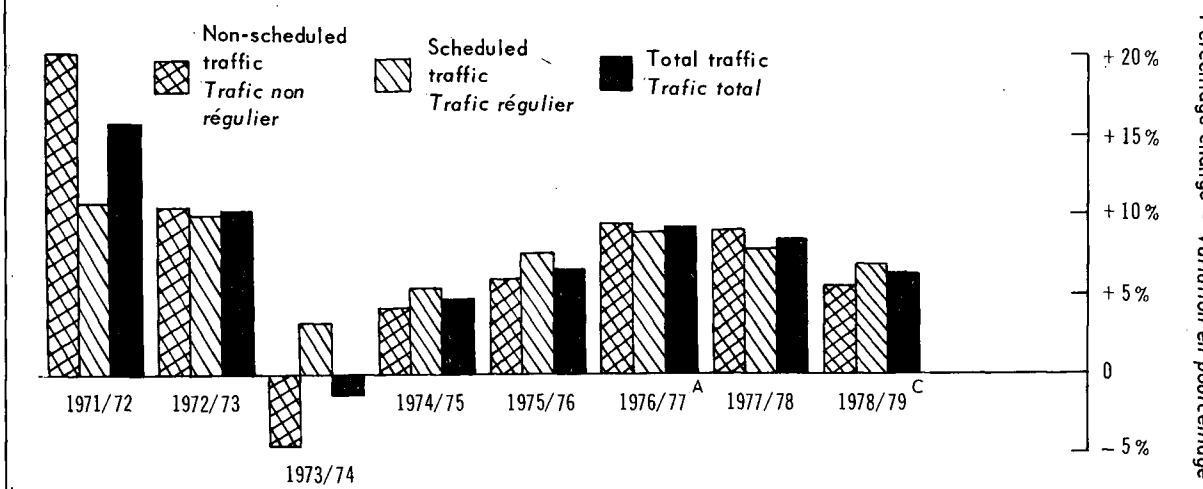
* AEA member airlines :

Aer Lingus, Irish International Airlines
Air France
Alitalia
AUA, Austrian Airlines
British Airways
British Caledonian
Finnair
Iberia
Icelandair
(Flugfelag Islands)
JAT, Yugoslav Airlines
KLM, Royal Dutch Airlines
Lufthansa
Olympic Airways
Sabena
SAS, Scandinavian Airlines System
Swissair
TAP, Portuguese Airways
THY, Turkish Airlines
UTA (France)

INTERNATIONAL INTRA-EUROPEAN TRAFFIC
TRAFIC INTRA-EUROPEEN INTERNATIONAL
1971-1979



ANNUAL PERCENTAGE CHANGES - VARIATIONS ANNUELLES EN POURCENTAGE
1971/72-1978/79



Note : Breaks in series in 1977 and 1979, when Yugoslavia and Malta, respectively became member States of ECAC.
Les discontinuités observées en 1977 et 1979 correspondent, respectivement, à l'accession de la Yougoslavie et de Malte à la qualité d'Etats membres de la CEAC.

A. excl. Yug./*You.* B. incl. Yug./*You.* C. excl. Mal. D. incl. Mal.

INTRA-EUROPEAN CIVIL AIR TRANSPORT OF ECAC STATES
ESTIMATED SCHEDULED AND NON-SCHEDULED TRAFFIC (Domestic & International) (1979)

			Domestic scheduled Traffic (1)	International Traffic			Total Scheduled traffic (Domestic & International (5)=(1)+(2)	Total all Traffic (6)=(1)+(4)
				Scheduled (2)	Non-Scheduled (3)	Total (4)=(2)+(3)		
Number of passengers		thousands	57,183	39,010	29,158	68,168	96,193	125,351
	%	- international	–	57.2 %	42.8 %	100 %	–	-
	of	- scheduled	59.4 %	40.6 %	–	–	100 %	–
	Total	- all traffic	45.6 %	31.1 %	23.3 %	–	–	100 %
Number of passenger-kilometres		millions	22,992	33,349	45,195	78,544	56,341	101,536
	%	- international	–	42.5 %	57.5 %	100 %	–	–
	of	- scheduled	40.8 %	59.2 %	–	–	100 %	–
	total	- all traffic	22.6 %	32.8 %	44.5 %	–	–	100 %
Freight		millions of tonne-kilometres	178.3	524.8	N/A	N/A	703.1	N/A
	% of total scheduled		25.4 %	74.6 %			100 %	
Mail		millions of tonne-kilometres	43.6	65.0	N/A	N/A	108.6	N/A
	% of total scheduled		40.1 %	59.9 %			100 %	
Total		millions of tonne-kilometres	221.9	589.8	N/A	N/A	811.7	N/A
	% of total scheduled		27.3 %	72.7 %			100 %	

PERCENTAGE CHANGES[1] 72/71 TO 79/78

		Domestic scheduled Traffic (1)	International Traffic			Total scheduled traffic (Domestic & International) (5)	Total all Traffic (6)
			Scheduled (2)	Non-scheduled (3)	Total (4)		
Number of passengers	79/78	+ 9.5 %	+ 5.9 %	+ 6.6 %	+ 6.2 %	+ 8.8 %	+ 7.7 %
	78/77	+ 11.6 %	+ 6.4 %	+ 8.0 %	+ 7.1 %	+ 9.4 %	+ 9.1 %
	77/76	+ 5.1 %	+ 7.6 %	+ 11.7 %	+ 9.3 %	+ 6.1 %	+ 7.4 %
	76/75	+ 9.9 %	+ 5.8 %	+ 0.2 %	+ 3.5 %	+ 8.2 %	+ 6.3 %
	75/74	+ 1.9 %	+ 2.7 %	+ 8.1 %	+ 4.9 %	+ 2.2 %	+ 3.6 %
	74/73	+ 2.4 %	+ 2.7 %	− 6.8 %	− 1.4 %	+ 2.6 %	+ 0.2 %
	73/72	+ 8.0 %	+ 6.9 %	+ 9.3 %	+ 7.9 %	+ 7.5 %	+ 7.9 %
	72/71	+ 9.6 %	+ 7.8 %	+ 18.8 %	+ 12.2 %	+ 8.8 %	+ 11.1 %
Number of passenger-kilometres	79/78	+ 11.7 %	+ 7.1 %	+ 5.5 %	+ 6.2 %	+ 8.9 %	+ 7.4 %
	78/77	+ 6.2 %	+ 7.8 %	+ 9.0 %	+ 8.5 %	+ 7.2 %	+ 8.0 %
	77/76	+ 5.9 %	+ 8.9 %	+ 9.5 %	+ 9.2 %	+ 7.6 %	+ 8.4 %
	76/75	+ 10.3 %	+ 7.5 %	+ 6.0 %	+ 6.6 %	+ 8.6 %	+ 7.4 %
	75/74	+ 3.0 %	+ 5.4 %	+ 4.2 %	+ 4.7 %	+ 4.4 %	+ 4.3 %
	74/73	+ 4.2 %	+ 3.2 %	− 4.6 %	− 1.4 %	+ 3.6 %	− 0.2 %
	73/72	+ 9.9 %	+ 10.1 %	+ 10.6 %	+ 10.4 %	+ 10.0 %	+ 10.3 %
	72/71	+ 12.0 %	+ 10.9 %	+ 20.4 %	+ 16.1 %	+ 11.3 %	+ 15.2 %
Freight	79/78	+ 17.3 %	+ 9.6 %			+ 11.5 %	
	78/77	− 13.3 %	+ 3.9 %			− 0.9 %	
	77/76	+ 16.9 %	+ 7.6 %			+ 10.0 %	
	76/75	+ 9.0 %	+ 7.9 %	N/A	N/A	+ 8.2 %	N/A
	75/74	− 11.8 %	− 8.8 %			− 9.6 %	
	74/73	+ 10.1 %	+ 1.7 %			+ 3.8 %	
	73/72	+ 18.8 %	+ 9.4 %			+ 11.4 %	
	72/71	+ 8.6 %	+ 13.6 %			+ 12.5 %	
Mail	79/78	+ 6.3 %	+ 3.9 %			+ 4.8 %	
	78/77	− 17.1 %	+ 7.1 %			− 4.1 %	
	77/76	+ 7.6 %	+ 16.3 %			+ 12.1 %	
	76/75	+ 6.7 %	+ 5.4 %	N/A	N/A	+ 6.0 %	N/A
	75/75	− 0.2 %	+ 13.1 %			+ 6.3 %	
	74/73	+ 12.8 %	+ 5.6 %			+ 9.2 %	
	73/72	+ 9.7 %	+ 9.1 %			+ 9.4 %	
	72/71	+ 2.9 %	+ 7.5 %			+ 5.4 %	
TOTAL	79/78	+ 15.0 %	+ 8.9 %			+ 10.5 %	
	78/77	− 14.1 %	+ 4.3 %			− 1.3 %	
	77/76	+ 14.7 %	+ 8.5 %			+ 10.3 %	
	76/75	+ 8.4 %	+ 7.6 %	N/A	N/A	+ 7.9 %	N/A
	75/74	− 9.6 %	− 6.8 %			+ 7.9 %	
	74/73	+ 10.7 %	+ 2.0 %			+ 4.5 %	
	73/72	+ 16.7 %	+ 9.4 %			+ 11.2 %	
	72/71	+ 7.2 %	+ 13.0 %			+ 11.6 %	

(a) Breaks in series in 1977 and 1979 when Yugoslavia and Malta respectively became member States of ECAC.

ANNEX I

PARLIAMENTARY ASSEMBLY OF THE COUNCIL OF EUROPE

THIRSTY-FIRST ORDINARY SESSION

Resolution 704 (1979)[1] in reply to the 24th and 25th annual reports of the European Conference of Ministers of Transport

The Assembly,

1. Considering the 14th and 25 th annual reports of the European Conference of Ministers of Transport (ECMT) (Docs. 4282 and 4379), and the report presented by its Committee on Economic Affairs and Development (Doc. 4408).

2. Recalls that 1978 marked the twenty-fifth anniversary of ECMT, and that the Ministers of Transport took this opportunity to define new working structures enabling them to adopt an inter-modal approach for tackling existing problems;

3. Trusts that this new approach will make it easier to work out a concerted and ambitious European transport policy, which is more than a mere juxtaposition of national policies and a series of specific joint projects;

4. Notes in this connection that, in accordance with its Protocol, ECMT is required to co-ordinate and promote the activities of international organisations concerned with European inland transport;

5. Urges ECMT to intensify its co-operation with the European Community, more particularly in the field of rail transport and combined transport, and with other international organisations concerned, in particular the European Civil Aviation Conference, in view of the repercussions of changes in the organisation of air transport on the operational aspects of land transport.

6. Notes with satisfaction the attention given by ECMT to the Assembly's Recommendation 826 and Resolution 668, on recent developments concerning trunk communications and regional planning in Europe;

7. Welcomes the close relations established between ECMT and the European Conference of Ministers responsible for Regional Planning (CEMAT) on the occasion in particular of the joint ECMT/CEMAT Seminar (Paris, November 1977) and the 4th CEMAT Conference (Vienna, October 1978), and trusts that the two conferences will continue their co-operation by means of dialogue at ministerial level;

8. Invites the two conferences to continue their political and technical dialogue, at the level of senior officials, especially by organising joint seminars taking into account suggestions made by the Assembly and offering it the possibility to be associated with these seminars;

1) Assembly debate on 5 October 1979 (13th Sitting) (see Doc. 4408, report of the Committee on Economic Affairs and Development). Text adopted by the Assembly on 5 October 1979 (13th Sitting).

9. Considers that the high rate of unemployment in Europe places greater responsibility on the Ministers of Transport, partly because of the volume of work which depends on their investment policy for rail, road and inland waterway communications, and partly because of the impact of infrastructure investment on economic activity in the most threatened regions, and hence on employment;

10. Stresses that a co-ordinated transport policy for Europe must form a part of each general economic and social policy, while paying due regard to the interests of regional planning, environment and the quality of life;

11. Considers that the continuing energy crisis makes it imperative to promote an enlightened policy regarding the best possible contribution of the various existing modes of transport, taking account of their efficiency in terms of energy, the relevant economic and social criteria and the principles of healthy competition;

12. Recalls its Resolution 697 (1979), in which it urged the European Conference of Ministers of Transport to work out "objective criteria for the definition of commercial operations and public service obligations of railways",

13. Calls upon ECMT to give priority to the development of rail and inland waterway transport, which consume less energy than other modes of transport, and in particular to encourage combined rail/road transport;

14. Urges ECMT:

i) to make a cost/benefit analysis of the various modes of transport, having regard to the necessary investments, social and energy costs, and environmental impact, with the object of making informed political decision;

ii) to seek ways and means of establishing unbiaised conditions of competition between road and rail transport, especially from the social point of view;

iii) to pursue actively its work on questions of transit, in order to reduce obstacles to international road transport and allow a further increase in multilateral quotas, while paying due regard to the effects of transit traffic on the populations and environment of the countries through which it passes;

iv) to persist in its efforts to improve the urban transport sector, particularly with a view to promoting public transport in large towns, and between rural and urban areas;

15. Supports the efforts of ECMT in seeking a solution to the harmonisation of dates for the beginning and end of summer-time in member countries, and measures designed to improve traffic flow at the start and finish of summer holiday periods;

16. Regrets that the Council of Europe was unable to associate with ECMT in organising the 3rd Joint Conference on Road Safety Education in Schools in 1979, the Year of the Child, and trusts that this conference will be held in 1980;

17. Congratulates ECMT on its initiative in defining measures to enable handicapped persons to move about more freely.

ANNEX II

1. LIST OF OFFICERS OF THE ECMT

OFFICERS OF THE COUNCIL OF MINISTERS

In accordance with the provision of Article 1 a) of the Rules of Procedure, the Council of Ministers, at its session of 23rd November, elected the following Officers:

Chairmanship (Germany)
Mr. K. GSCHEIDLE, Federal Minister of Transport.

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Mr. SINDELKA**, Head of the Departmental Staff of the Federal Minister of Transport

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