

# COMMISSION OF THE EUROPEAN COMMUNITIES

COM(81) 507 final

Brussels, 16th September 1981

## COMMUNITY ASSISTANCE FOR TRANSPORT INFRASTRUCTURE : THE EVALUATION OF "COMMUNITY INTEREST" FOR DECISION MAKING

(Report from the Commission to the Council)

COM(81) 507 final

Community assistance for transport infrastructure:  
the evaluation of 'Community interest' for decision making

1. - Introduction

1.1. The Commission's proposal to create a financial instrument<sup>1</sup> to assist infrastructure projects stipulates that the project should be shown to be of Community interest. Whilst national interest is of primary importance in infrastructure planning, some aspects of major projects can be particularly relevant to the Community as a whole. These 'Community interest' aspects in the Commission's view merit attention in conjunction with national factors.

The questions posed on Community interest can be placed in two groups:-

first : on the practicability of identifying the Community as compared to the national interest of a project;

second: the possibility of translating Community interest into a quantifiable form.

This paper is addressed to these questions in an attempt to propose a practical and acceptable approach.

1.2. The starting point of the paper is the Commission's proposal for a financial instrument. The paper contends that the concept of Community interest is both relevant and appropriate for work in this field. An attempt is made, by reference to both national practice and a specific Commission sponsored study, to demonstrate that the inclusion of Community interest in project evaluation is logical and practical. It is suggested that the practical development of the notion of Community interest can be best achieved by the joint examination of a number of projects. However, it is stressed that economic evaluation will be a valuable but not exclusive part of the information supplied to the decision makers. The object of evaluating Community interest

is not to substitute for the essentially political decision process. Rather the aim is to illuminate certain factors of particular importance to the Community so that they can be better integrated into the whole process. The proposals that are made are based substantially on the approach to evaluation now generally adopted by Member States.

<sup>1</sup> O.J. No. C 207 of 2.9.76 and COM(80)58 final

1.3. This paper has been prepared following discussions with the Committee on Transport Infrastructure although it remains the responsibility of the Commission alone. The aim is not to propose a detailed solution to all the problems at an economic level but to show that progress is possible now and that practical experience will provide further answers. It has been prepared by reference to national material and reference to reports published by international bodies. The comprehensive information given in the report on the German transport evaluation system, the Danish plan, information from the Netherlands the UK and Ireland have also been taken into account<sup>1</sup>.

The four main parts of the note cover : -

- I : Objectives of economic evaluation at the Community level.
- II : The distinction between the notification and evaluation of projects. The aims of evaluation systems.
- III : The evaluation of projects in the Member States : the development of national systems to incorporate Community interest.
- IV : The treatment of external factors in the evaluation.

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1) Notably :

Gesamtwirtschaftliche Bewertung von Verkehrswegeinvestitionen,  
Bonn, Februar 1980

Planlaegningsvirksoemheden I - Ministeriet for Offentlige Arbejder,  
Oktober 1979 Copenhagen.

C.O.B.A. manual - Department of Transport, London 1979.

## 2. - Objectives of economic evaluation at the Community level

### 2.1. What does Community interest mean: in theory ?

2.1.1. The growth of social and economic activity in any society leads inevitably to an increase in the demand for transport. The transport sector of the economy presents a mixed character with a combination of public and private enterprise being responsible for the provision of services. The infrastructure requirements for transport are generally the responsibility of public or quasi-public bodies. Even in those cases where the private sector plays a role and this role is invariably closely constrained by the State, the construction of new transport infrastructure facilities clearly has important secondary consequences for industry, environment, regional policy etc. These important externalities combined with the lack of any direct charging method for infrastructure use have led to the development of methods to aid decision making by encompassing the benefits and costs of schemes in a uniform framework. The growth of traffic and the general pressure on State funds in the Member States has led to increasing attention being paid to identifying and if possible quantifying the benefits and costs that projects competing for national funds offer. In a Community of 10, national resources available for infrastructure vary considerably. Action by the Community to develop the possibilities of individual Member States in favour of projects of proven Community interest benefits not only the Member States concerned but all the Community.

2.1.2. The pressure to ensure that investment in national infrastructure makes a maximum contribution to the national interest finds a parallel at the Community level. It is not particularly remarkable that the removal of tariff and other barriers in the Community has led to:-

first: a general increase in trade and social contact

second: a change in the distribution of economic activities as a result of greater locational freedom

third: an increase in wealth (disposable income) leading to a greater expenditure on holidays and travel in general

fourth: a particular change in the structure of frontier regions often artificially restricted in the past.

Radical changes in the volume, nature and structure of traffic in the Community have resulted. Although international traffic is generally a small part of national flows, in recent years some international and transit traffic flows have grown considerably quicker than national traffic. These developments have reached a stage where they cannot be ignored if the effective planning of major transport infrastructures projects is to be ensured.

2.1.3. This growth of international traffic is only one reason for putting forward the case for adding a Community dimension to that of national interest. It is also necessary to demonstrate that Community interest and national interest are not identical and both justify consideration in the process of allocation of resources.

2.1.4. There are a number of typical situations which demonstrate the need to identify the overall impact of projects : -

first : where there exists a budgetary priority problem and a project of importance for Community traffic cannot be included in the national programme.

second : where the ranking accorded to various costs/benefits differs between the Community assessment and the national assessment. This might arise in say the case of energy saving or industrial development : the Member State considers some factors to be priority issues whilst the Community has its own set of values;

third : where technical standards differ e.g. a Member State with a majority of, say, DC 1500 v railways might prefer to continue this system whereas throughrunning from other systems would be facilitated by using AC 25 KV; or where the rail gauge in use will not allow combined transport trains to operate.

fourth: where the overall level of provision for transport infrastructure investment by a Member State even though correctly allocated could not finance the level of facilities necessary for transport infrastructure to keep pace with economic and social development (i.e. the case in certain regions particularly of 'poorer' Community members). These possible situations are put forward as examples of Community and national interest not necessarily converging. Where the Community interest is established, the proposed financial instrument provides the possibility of a Community contribution.

2.1.5. If it is accepted that the Community is justifiably interested in securing consideration in national transport infrastructure planning for Community interest the question is how to identify the nature of the interest and its magnitude. Clearly to be effective the amount of Community assistance should be sufficient to ensure the project is undertaken. This simple but vital fact can be illustrated by the example of a hypothetical road project which on the basis of the national evaluation has a rate of return of, say, 8% whereas the required minimum rate of return is 10%: this project has, however, a Community interest in that it will divert traffic from congested roads in neighbouring States. If the benefits to these States are calculated they amount to a 4% return on the costs of the project. But all these costs are met by the one State, where the project is located.

In this hypothetical case the 4% 'Community interest' added to the 8% national interest, which itself includes factors of Community interest, would render the project acceptable. Hence, Community financial assistance of a minimum of 2% would enable the project to be undertaken and at the same time produce Community-wide benefits. This very simple demonstration of the mechanism points up the need to be able to trace the results of projects on the Community generally. If this can be done the question is how are these results to be employed to aid a decision making process that must be very flexible to give proper weight to the large number of different factors involved.

## 2.2. Community interest in practice

2.2.1. Major transport infrastructure projects are now almost invariably subject to some form of quantitative analysis: a recent report on 'Investment Criteria' concluded that evaluation methods 'are indispensable for the preparation of decisions today'.<sup>1</sup>

Given the basic information and analysis that is applied to projects at the national level the question is whether the scope of the evaluation can be widened to include the Community dimension.

2.2.2. What factors are likely to enter into the calculation of Community interest? The two broad groups are those affecting:-

firstly: intra-Community transport consideration, i.e. Community interest in traffic terms;

secondly: factors linked to the implementing of Community objectives e.g. economic convergence, regional policy, energy policy and, of course, transport policy, in other words 'general Community' interest.

2.2.3. The first group of factors occur through removing the constraint of national frontiers for the measurement of benefits and costs of national projects. This is important in the case of major schemes which result in notable improvements in the Community's principal route system e.g. a project to construct a bridge over the Great Belt (Storebaelt) in Denmark would have consequences in Germany and even further to the South (not to mention the impact on other non Community Scandinavian countries): again the construction of a motorway between Alsace and DIJON would cause important traffic diversions on roads in Luxemburg, Germany and Belgium.

2.2.4. The second group of factors associate projects with the achievement of over all Community objectives. A Community objective is to reduce energy consumption particularly of external fuels. This goal would be helped by the provision of a comprehensive Community system of combined transport. Such a system to be efficient would need to have a wide

<sup>1</sup> Final report ECMT experts group "Investment criteria". Exchange of information on investment criteria applied to transport infrastructure projects.

coverage and offer competitive services throughout the Community irrespective of frontiers: in this way one of the main disadvantages of rail services could be overcome. The chances of such a network being established without Community assistance look slim. The 'Community interest' in such a system would be estimated in function of its potential to attract inter-Community traffic in the long run and thus save fuel as well as improving the railways' financial situation. Again in the case of the provision of facilities to regions of special need the Community would have an interest in ensuring that facilities were such as to match the demands that would be made upon them.

2.2.5. The nature and emphasis of 'Community interest' could change in the long term. Initially, the aspects of projects likely to arise would involve estimating how and in what way the individual Member States would benefit directly in terms of the use made by their nationals or the consequences on traffic flow within their borders. However, with time, if a general concept of a 'core network' composed of links of particular Community interest can be laid down, more general aspects related to the quality of service in general on the network could be included in the project selection process. In this context there is a parallel with planning of the national networks where the criterion of justifying an optimal standard of service throughout the system has to be balanced against the competing financial demands of different modes and regions. In this situation an overview has to be taken of the relative benefits of schemes for different parts of the network to ensure that the total budget is being used to maximum advantage in the light of the priority objectives set for the Community.



3. - The distinction between the notification and evaluation of projects. The aims of evaluation systems.

3.1. The proposed regulation on financial assistance for transport infrastructure requires the Member States to submit potential projects accompanied by an economic evaluation (cost-benefit analysis). Before going on to discuss the possible form of the evaluation it is useful to consider what types of project are potentially of Community interest. In doing so it is hoped to clarify the distinction between the list of suggested types of projects mentioned in the regulation that could be candidates and the process of identifying and evaluating Community interest itself. Article 1 of the proposed regulation lists the following potential categories : -

- projects to be undertaken in the territory of a Member State the failure of which to be undertaken creates a bottleneck in Community traffic;
- cross-frontier projects which are not sufficiently viable to pass the threshold, based on available resources, where a Member State would be willing to intervene;
- projects having a socio-economic profitability at the national level which is insufficient to justify their undertaking but from the Community point of view, taking account of the Community's objectives, have a greater benefit;
- projects which facilitate the standardisation of work on the Community communications network.

3.2. These groups are intended to be no more than guidelines to Community interest: the transmission of a project to the Commission does not imply that a favourable decision will ensue. Rather, the Commission will prepare an opinion on the project which will be submitted to the Community budgetary authorities for a final decision. The Commission's opinion will include an evaluation of the Community interest of the project as part of the supporting evidence.

3.3. Looking at the guidelines noted above the following points emerge :-

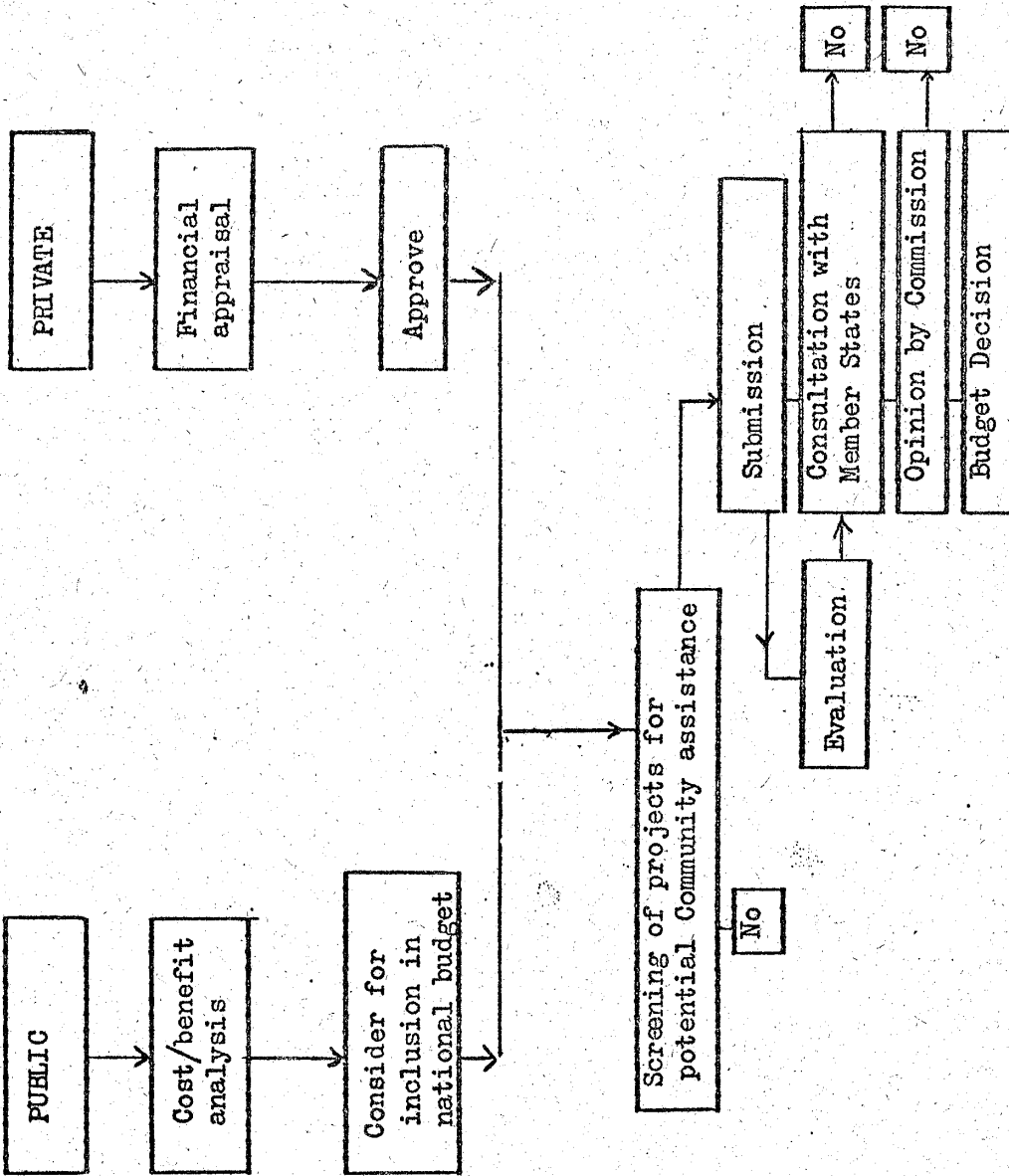
first : projects should be capable of meeting accepted economic criteria necessary for adoption when Community interest is taken into account.

second : acceptable projects will be likely to present substantial benefits for international traffic or to contribute notably to the success of Community policies i.e. regional, energy etc.

3.4. The various stages for the consideration of a project are shown in a diagram I. It may be noted that the screening of projects to select those of potential Community interest is an early stage of the procedure and is not directly linked to evaluation. In practice, in the early stages of the process, there are clear advantages to be gained from considering a wide range of schemes to develop a framework of "case studies" to provide guidelines for the selection process.

DIAGRAM I

PROJECT  
GENERATION



4. - The evaluation of projects in the Member States:  
the development of national systems to incorporate  
Community interest

4.1. This part of the note briefly comments on the evaluation methodology applied in the Member States. Some of the main areas that need to be considered in a Community interest evaluation are outlined.

4.2. The objectives of project evaluation in the Member States:

The objective of evaluating transport infrastructure projects is to offer guidance for decision making: the information provided by the evaluation relates to the costs and benefits that the project offers. The exact nature of the evaluation system, what it covers etc., varies from country to country according to the decision making system in use: however, the fundamental objective remains the same.

4.2.1. In the private sector of the economy the costs and receipts of a project are forecast and a financial appraisal is undertaken to estimate the rate of return. This rate of return is compared with the lending rates and the profitability of other potential projects, taking account of risk, and a decision on the investment is taken. In the public sector, where the bulk of transport infrastructure projects are found, a similar financial appraisal is seldom either possible or sufficiently comprehensive. The many factors involved in a major transport infrastructure project are normally neither expressed in market prices e.g. environmental factors, regional policy effects nor adequately quantified, time savings, energy savings etc. For this reason it has become common practice to adopt a wide ranging approach to evaluation and to attempt to include factors not included in the normal financial evaluation. The methods adopted in the Member State resemble to a greater or lesser degree those of social cost-benefit analysis.

#### 4.3. The place of cost-benefit analysis in the decision making procedure

Some of the doubts that have been expressed about the practicability of evaluating the Community interest of projects stem from a misunderstanding of the nature of an economic evaluation. An economic evaluation is but one element of the decision process set out by the Commission; it is an important element but not the sole or deciding factor. This point can be clarified by considering how the economic evaluation relates to the proposed Community procedure.

4.3.1. As has been noted above the development of sophisticated methods to evaluate costs and benefits in the Member States is intended to translate into monetary values the "external" benefits from investment projects and compare them with the social costs, capital and others, involved. In practice the coverage of the analysis is incomplete and considerable 'grey or blank' areas remain. There are certain effects which can be identified and measured by studying the ways in which they are treated on the market. Certain other effects, usually termed intangible, cannot be accurately identified and measured. Hence, although the evaluation procedure attempts to aid the decision makers by reducing the area where intuitive judgment has to be made, it is seldom, if ever, complete. Even in those Member States where detailed statistics are available and a comprehensive evaluation is normally undertaken the role of the decision maker acting upon his or her judgement remains preponderant. The Commission is proposing a process for the provision of financial assistance that is essentially similar to that of the Member States; an evaluation will be undertaken but the decision remains firmly in the hands of the Communities' budgetary authorities.

4.4. The elements that figure in the economic evaluations undertaken by Member States

4.4.1. The basic elements of an evaluation of a transport infrastructure project are:-

first: an assesement of the costs, both construction and maintenance: "shadow"<sup>1</sup> prices may be justified in some cases;

second: the traffic flows involved, for larger projects including generated traffic;

third: a calculation of the change in operating costs for users (in comparison with the status quo position);

fourth: the time savings expressed in money terms.

fifth: accident savings

Other elements are sometimes added to expand the evaluation notably in the field of external effects.

4.4.2. With these elements quantified in money terms a discounted rate of return is calculated. In some cases an alternative presentation of the elements, called a "planning balance sheet" or "multi-criteria analysis", is undertaken by assigning weights to the various costs and benefits to arrive at a comprehensive ranking of the possible courses of action. This information is included with other advice, on social monetary matters etc. for a decision to be made.

4.5. The process of moving from an evaluation of national interest to Community interest

4.5.1. The practice of carrying out a detailed evaluation of major projects is widespread in the Member States. The basic inputs for an evaluation are therefore already assembled at the national level. The transformation of a national interest evaluation to a Community interest might be undertaken by, either: a new approach starting

<sup>1</sup> "Shadow prices" - these are prices applied to factors which it is considered have a market price structure that does not reflect their value to society in general.

from basic data and assembling this, plus any new data, into a specific Community interest calculation; or, developing the existing national evaluation in order to take Community factors into account. The choice of the latter of these courses is not difficult to justify. Building upon the national evaluation, which is in all events a major part of the total evaluation, will simplify the additional calculations that are needed, reduce the data inputs and make the integration process of national with Community factors less complex.

4.5.2. The Commission has undertaken a 'Community interest' evaluation of a major project as part of the support programme for transport infrastructure policy: a brief summary of the principal results of this study are shown in Annex 1 (Study of Community interest of projects for a fixed link across the Channel from France to the UK). The principal extensions that were undertaken for the study were the following:-

- first: an examination of the impact of the project on Member States other than France and the UK i.e. the effect on transport operations in those countries;
- second: an assessment of the projects impact on Community policies, notably regional and energy;
- third: a distribution of user benefits (surpluses) by the State of origin of the users.

In view of the cost and general importance of the Channel Crossing projects their evaluation had to be a relatively long and comprehensive process. The nature of the evaluation process should evidently be in some way related to the importance of the project; for most projects the type of evaluation undertaken for the Channel Link would not be justified.

4.5.3. Although it has been suggested above, (para. 3.5.1.), that the Community interest evaluation framework can be based essentially upon the national evaluation there has to be a certain convergence in the approaches adopted in order to render them comparable. The principal areas where comparability should be looked for are:-

- Time horizons
- Traffic forecasting assumptions (scenarios)
- Value of benefits (notably time savings)
- Rates of discount.

The basic goal of ensuring that results of the evaluations are comparable is to ensure that Community budgetary resources are allocated in an optimum manner i.e. that projects offering the highest Community interest receive the highest priority: additionally the Member States will require to know how the projects compare with the marginal projects of their own national pool.

4.5.4. Possibly the most straightforward of the elements to deal with is the DIS-COUNT RATE. Here it is suggested that the Member States present the calculations discounted at the usual rate employed. However, appended to the evaluation a table of costs/benefits, by year, is given which will allow the Commission to calculate both the internal rate of return<sup>1</sup> on the project and its net present value<sup>2</sup> under differing rates of discount. The Commission believes that this procedure will be easy and effective.

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<sup>1</sup> That rate of interest which, when used to discount the cash flows associated with an investment project, reduces its net present value to zero.

<sup>2</sup> The net value now of a stream of costs and benefits arising in the future calculated by discounting at a rate of interest related to current interest rates.



- 4.5.5. The mention of presenting a time stream of costs and benefits from the project brings up immediately the question of the time horizon to employ. Again it is clear that the varying nature of projects and practice in the Member States means that the TIME HORIZON employed will vary. It is again difficult to lay down any general rule that is universally applicable to all projects, all regions and all discount rates. A solution would lie in the provision of a table of costs and benefits year by year with a statement of the likely nature of the cost and benefit streams through a period of 50 years: in some cases the life of a project is limited technically to say 25 years but for the majority of transport infrastructure projects a fifty year life is both feasible and reasonable. Where a shorter term horizon is employed than the technical characteristics indicate as feasible a statement of residual values can be made.
- 4.5.6. The common valuation of benefits presents more problems than in discount rates and time horizons. The most important benefit stemming from transport infrastructure projects is usually TIME SAVINGS. They are a function of the traffic forecasts (see below) and the value of time of the various groups of users. Quite important differences exist between the approaches adopted by Member States e.g. certain States calculate time savings per vehicle, others calculate the time savings per person; these differences imply that a direct comparison of time savings will be of very limited value. An approach to the solution of this difficulty may be found in:-

first: clear statements by the Member States of the approaches employed,

second: the application of a re-weighting formula to the actual time saved (on a country by country basis) to convert to a comparable figure.

Time savings are normally the most important quantifiable benefit in project evaluation. In view of their importance considerable care should be taken in treating their valuation in Community interest projects.

4.5.7. On the question of SCENARIO's the objective should be to consider the benefits and costs of projects against the background of a number of possible economic situations. It is well known that no single forecast can be reliable over more than a short period and hence the performance of a project should be considered in relation to a range of possibilities. The work on preparing a system of broad forecasts of long distance traffic now underway as part of the Commission's program should be of value in this field.

4.6. To conclude, the recommended way forward is to use national methods initially and to attempt to develop keys to relate estimates to a given 'bench mark'. In the longer term a joint research programme could be envisaged to relate particularly to values to use for costs and benefits occurring on the principal routes.

5. - The treatment of external factors in the evaluation

5.1. The form of the evaluation procedure

5.1.1. The point has already been made that an evaluation is not aimed at replacing the rôle of the national decision maker but rather at reorganising and clarifying the information available. Furthermore, it is clear that whatever claims are made no evaluation can hope to cover more than a part of the problem areas concerned. The evaluation system adopted for Community interest will need to be accompanied by a broad, flexible but structural presentation of the project in the framework of socio-economic development.

5.1.2. In the case of project evaluation at the national level where the objective is to choose between alternative ways of achieving a given objective, the inability to measure all elements involved need not be of great importance. Frequently one of the alternative projects considered can be demonstrated to be so superior to the others in terms of quantifiable elements that its overall superiority can readily be accepted. However, in the case of Community interest evaluation, external factors are likely to be more important than at the national level.

5.2. The importance of external factors

5.2.1. The importance of external factors for Community interest schemes is easily demonstrated. The concept of an external factor is applied to any effect which is not reflected in the directly calculated impacts of a scheme i.e. the noise, pollution, regional employment, trade-development effects of a project. These have to be set against the tangible effects which are directly measured and those, such as time savings which are also now habitually included in a project evaluation. In the case of potential Community interest projects their essential Community interest will lie either : in their direct benefits to traffic flow and accessibility, or : in their external impact beyond the frontiers of the country concerned or on the achievement of a Community policy within that country.

Consideration of the candidates for Community aid will point up the importance of the external factors that they involve and how to treat them.

5.2.2. Given the importance of external factors the necessity to arrive at a clear understanding of the objectives of transport in the regions, for industry etc. is clearly brought out. Whilst it is premature to say what these objectives are it is important to take note of the great programme in which individual projects are undertaken and the requirements of the Decision of 1978 facilitate this. At an opening phase of the exercise it is clearly important to engage in an exploratory exercise designed to create a common understanding of the practical objectives to be followed. Such an approach will dictate a flexible system capable of being adapted to cope with projects of varying natures. The development of objectives for transport in connection with industrial, regional and other external objectives must take place in the context of an inter-play between the various Member States and the Commission. As a first step it seems sensible for the Member States themselves to take a view on the importance of projects in the light of their own overall programmes, the projects therein and submit likely candidates. The consequential process of examination will produce a clearer answer to the questions whether some general objectives can be set up and how these factors are to be included in the overall evaluation.

### 5.3. The principal objectives

5.3.1. Grossly simplifying the whole exercise of Community involvement in transport infrastructure schemes, two central groups of objectives can be identified:

- first : those relating to projects designed to improve conditions on main routes: these are essentially transport objectives capable of being quantified (subject to the points made in Part III),
- second : those relating to more general objectives to which transport can contribute, e.g. regional development, industrial policy etc.

5.3.2. For certain projects it is likely that the benefits under the first heading will be sufficiently large to present a good case for action whatever the outcome of an analysis of points in the second group. However, for many projects it will be necessary to attempt to identify the relevant factors and to consider how they relate to the net value of the project under the first heading. This task will have to be accomplished in connection with actual projects. The Commission is currently engaged on studies to produce a methodology that will be applied to certain test cases in the Alps and in less developed regions notably in Italy. The results of this work will be available to the Infrastructure Committee at the end of the year.

The work undertaken in the evaluation by Member States is being examined and the experience in Germany, France and elsewhere on multi-criteria analysis should be particularly useful (see Annex 2).

5.4. As noted above (4.5.2.) the Commission has underway a programme of studies designed to provide evidence of the nature of Community Interest and to help with the evaluation of projects. The first results of this programme illustrate the feasibility of the proposals set out in this paper. The empirical analysis of problems shows that much can be accomplished on the basis of existing information. It has been demonstrated that a clear and comprehensive appreciation of the basic elements of projects can go a long way to providing the information needed for effective decision making. To meet this objective projects should be accompanied by statements that show the basic elements of the hypotheses and calculations that have been made. Points of particular interest that have been shown to be of especial relevance are e.g. time savings, the actual time saved and the value assigned, the flows of costs and benefits over time etc. Such basic information will be of considerable value in the careful and detailed consideration of projects that the Commission considers to be of particular importance. With such information available it will be perfectly feasible for the Commission and the Member States to examine the incidence and importance of the economic or technical parameters that have been employed for the evaluation. This possibility will go far to meet the criticism that at least in the initial phase of the operation no uniform criteria will be used. An examination of the importance of adopting different

even common standards for such elements as time savings will be both feasible and easy to undertake. Given the possibility of benefiting from the results of practical experience with real projects it will be possible to move in time towards a more uniform structure following the requirements of the decision making authorities.

5.5. In conclusion, it is argued that a solution to the question of external factors would consist of an approach having a number of phases:-

- first : the submission of projects by Member States with a national appreciation of their Community interest. This phase would proceed simultaneously to a review of methodology by the Commission and an examination of test cases;
- second : a joint consultation on projects to arrive at an appreciation of their Community interest and to develop flexible guidelines for future project selection and evaluation;
- third : the development of a network of Community interest having certain clear objectives set out for future development. The preparation of mutually acceptable procedures for evaluation including the incorporation of external and intangible elements.

The three elements of this approach are considered to be realistic and practical. To adopt such an approach would be cost-effective in terms of national resources and would preserve the essential flexibility and freedom of selection that should characterise the opening steps of the Community programme.

## 6. - Conclusions

### 6.1. What will evaluation achieve ?

The case for evaluating major transport infrastructure projects to better understand their importance for the Community can be argued on several levels.

6.2. At the most basic level the case rests on the clear evidence that transport projects cause effects which can spread beyond national frontiers and impose costs and benefits on neighbouring countries indeed on the Community as a whole. In a Community committed to development for mutual self-interest it is clearly unacceptable for national interest to be the sole factor involved in decision making. In this situation the value of an evaluation of Community interest is evident.

### 6.3. The Questions:

6.3.1. This argument however ignores the fundamental questions of:-

- what purpose does the evaluation serve
- is it practical
- how cost-effective is the process?

6.3.2. In order to answer these questions the subject has to be treated in a manner which takes better account of the realities of the Community. Clearly to evaluate projects for the sake of expanding knowledge but with no link to practical policy is a futile academic exercise. A Community interest evaluation has to be closely related to the practical possibilities of Community infrastructure planning. Having made this point it is immediately clear that the application of the evaluation can be considerably restricted. The Community can, on practical grounds, only expect to take a practical role in relation to large projects having a wide spread impact. Furthermore, the fact that 'Community interest' is in most if not all practical cases likely to be limited to a level well below 'national interest' means that the Community will play an associate role and intervene in projects to a limited financial extent: In other words, the Community should not be expected to justify financing projects which

perform particularly poorly in a national evaluation but rather for projects that are marginal or have some special features requiring assistance that the Community as a whole could best provide. The answer to the first question is therefore that an evaluation will only be useful in direct relation to a feasible course of Community action: it is unlikely not to serve to change national priorities substantially and will refer essentially to large projects on the major routes.

6.3.3. Turning to the second question, this is essentially the point to which this paper has been addressed. The paper has not claimed to provide more than an approach to the practical development of a system: a justification for the Commission's belief that its proposals are feasible. It has been shown that Member States now almost universally adopt methods to evaluate projects in the public sector that take account of external factors. It has been argued that by adopting a flexible approach at the beginning of the exercise it will be possible for Member States to present projects, possibly taken from the "bottlenecks Report"<sup>1</sup>, with their own presentation of Community interest and to investigate each of these projects to identify factors of common interest. For many projects on the trunk routes it will be possible by a study of their traffic consequences, time savings etc. to establish a first approach to their importance for the Community. Thus it is not claimed that this short note presents more than a very brief sketch of the problem and its solution. However, it is hoped that sufficient arguments have been advanced to indicate that a practical approach can be devised if the will exists to make the effort to understand the sometimes differing approaches adopted in the Member States and to reach an agreement on a common interpretation.

6.3.4. Finally, is the proposal cost-effective? There is no answer to this point. The Commission's position is that it should not engage in an activity that could be more efficiently undertaken by the Member States concerned. In this case the Commission believes that the nature of the problem goes beyond national frontiers and concerns the Community. It might be feasible to consider bilateral negotiation to meet this need for coordination and co-finance for the reasons given in the bottlenecks report (para. 5.3.1.). However, for a number of projects such a process is likely to be even more

<sup>1</sup> COM(80)323 final



difficult to arrange efficiently and involve the same methodological problems as working in a systematic yet flexible manner through the Community.

- 6.4. If it is accepted that the arguments put forward on the need and feasibility of evaluating Community interest are accepted the next step is to take practical action. Without achieving a satisfactory and acceptable evaluation of Community interest in the context of practical projects in the Member States it is likely that doubts on the system and its practicability will remain and create a major handicap for the final development of a Community programme.

The Nature and Extent of Possible Community Interest  
in the Construction of a Fixed Link across the Channel

Summary of the Results of the Study

This study examined the effects throughout the Community of the construction of fixed links of various types across the Channel. The costs and benefits accruing to each Member State were identified and quantified as far as possible.

It was assumed that the fixed link would be opened in 1985. The first stage of the study was concerned with forecasting the traffic likely to use each type of fixed link up to the year 2000. On the basis of the forecasts, a financial appraisal was made of the returns to the operators of the link. This appraisal indicated that all the projects examined were likely to prove profitable if the cost and revenue forecasts were achieved in practice. A cost/benefit analysis was then undertaken to take into account the effects on the operators of existing cross-Channel services, (including ports and airports), the net benefits to the users of all cross-Channel services and the effects on railway undertakings and road authorities. The results of this analysis indicated that both single-track and double-track rail tunnels would provide net benefits even if economic growth was slow and in spite of the use of high discount rates (10-15%). A road bridge or a combined road/rail link would provide substantial net benefits at discount rates of 3-5%.

An examination of the distribution of the net benefits led to the conclusion that although the major share of benefits accrued to the United Kingdom and France, other Member States also should obtain substantial benefits.

The scope of the national (United Kingdom and France) cost/benefit study was broadened to cover non-transport effects of a fixed link, including effects on:-

Multi-Criteria Analysis : approach to the presentation  
of evaluation Results employed in Germany

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1. Cost-Benefit analysis aims to present a single conclusion upon the evaluation of competing projects. Multi-criteria analysis aims to employ an extensive range of criteria of different character in order to reflect the impact of a project on different target groups.
2. By the use of varying criteria it is hoped that multi-criteria analysis can be more comprehensive and flexible than standard cost-benefit analysis. However, it should be noted that it is possible to extend the scope of cost-benefit analysis in order to take account of the distributional aspects of the projects being evaluated.
3. There are clearly certain advantages in the approach used in multi-criteria analysis although there are also drawbacks. The Commission is considering how the approach might be developed to apply to infrastructure projects and there would be advantages in the Member States with experience in this approach using the technique in connection with projects submitted to the Commission.
4. The German transport ministry has developed a unified approach for the consideration of projects which is shown in the table attached. This approach is not intended to serve as model for the Community but it does show the practicability of aiming for a common approach to projects at some future date.

Encl.

2.

- the environment
- regional economies
- each sector of the economy (in the construction phase)
- energy consumption.

These aspects were not incorporated into the cost/benefit analysis, either because they relate to the distribution of benefits rather than their total value or because of difficulties of quantification (environmental factors). The results of this part of the study were, however, generally favourable to all types of fixed link. Further study is underway into the formulation of external benefits and their incorporation into the evaluation system.

In conclusion the study demonstrated :

- that economic evaluation could produce considerable useful evidence for the consideration of the Community interest of major projects ;
- the degree to which a major infrastructure project could contribute to improvements in transport over a wide area was shown ;
- the scope for Community involvement in planning and financing was clarified.

Project:

Land:

Project No.:

Situation:

I. Result of macro-economic evaluation

1. Important characteristics of project

Length:

Costs:

Works planned:

Capacity (annual average)

(Forecast 1990, median for whole section)

2. Macroeconomic benefits and costs

		Unweighted benefits M. DM/yr.	Weights			Weighted benefits		
			Alternatives			Alternatives		
			1	2	3	1	2	3
1. <u>Primary cost-savings</u> (vehicle runnings costs, infrastructure maintenance)	$N_k$		1	1	1			
2. <u>Contributions to traffic safety</u>	$N_s$		1	1	1			
3. <u>Improvement of access- ibility of central towns,</u> places of work, leisure areas	$N_e$		1	0,5	1			
4. <u>Regional economic benefits</u> (effects on employment, regional preference)	$N_r$		1	1	2			
5. <u>Environmental effects</u> (noise, exhaust emissions, hindrance to movement within urban areas)	$N_u$		1	3	1			
6. <u>Non-transport functions</u>	$N_f$		1	1	1			
Total benefits	$\sum N$	Million DM per year						
Investment costs (incl. noise protection)	K	Million DM per year						
Cost/benefits ratio	$\sum \frac{N}{K}$							