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**REPORT FROM THE COMMISSION
TO THE COUNCIL, THE EUROPEAN PARLIAMENT,
THE ECONOMIC AND SOCIAL COMMITTEE
AND THE COMMITTEE OF THE REGIONS**

**TRANS-EUROPEAN NETWORKS 2000
ANNUAL REPORT**

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1. EXECUTIVE SUMMARY : AN OVERVIEW OF TEN IN 2000

The Commission is submitting the "Trans-European Networks (TEN) 2000 Annual Report" to the European Parliament, the Council, the Economic and Social Committee and the Committee of Regions pursuant to Article 16 of Regulation n°2236/95 as amended by Regulation n° 1655/99 of the European Parliament and the Council, laying down general rules for the granting of Community financial aid in the field of Trans-European Networks.

2000 saw the launching of the first Multiannual Indicative Programme (MIP) set up for the TEN-T under the TEN Financial Regulation, Council Regulation n° 2236/95.

The MIP is composed of the on-going « Essen » projects and the new priorities, namely the Galileo project, the removal of bottlenecks on the TEN-T rail network, cross-border projects and intelligent transport systems for the road and air systems.

Concrete progress on individual projects of common interest :

Details are given in section 2 and the annexes.

Most of the individual projects of common interest continued to make satisfactory progress. Lists of specific projects are given in Annex III and IV.

Guidelines and other legal aspects :

On 16 November 2000 the Commission took a Decision defining the specifications of projects of common interest identified in the sector of the Trans-European Energy Networks (electricity transmission, gas pipelines and storage) in Decision N° 1254/96/EC of the European Parliament and the Council.

Reports and reviews

The Court of Auditors published a special report No 9/2000, concerning TEN-telecommunications, accompanied by Commission's replies.¹

The Commission adopted the e-Europe strategy, towards the implementation of which TEN-telecom is asked to contribute.

Finance

For an overview of Community financing of the TEN in 2000, see Table 1 below.

2. PROGRESS ACHIEVED ON SPECIFIC PROJECTS

2.1. Energy

During the period 1995-2000, decisive progress was made on seven among the ten priority projects listed by the Essen European Council in December 1994.

¹OJ C 166 of 15.6.2000

The principal sections of the five gas projects became operational during this period. The Algeria - Morocco - Spain gas pipeline was completed, as were the new gas networks in Greece, in Portugal and in the south and the west of Spain. The first phase of the Yamal - EU pipeline, from the Russian networks to the EU through Bielorrussia and Poland, was also completed.

As regards the five electricity projects, one became operational (connection between northern of Portugal and Spain) and a second project entered the active construction phase (the Italy - Greece interconnection). The three other projects have not yet overcome the difficulties facing them as regards administrative authorisations (for the France – Italy and France – Spain projects) or as regards strategic decisions in the new liberalisation framework (for the connection between eastern and western Denmark).

Other projects of common interest also progressed well. A list of all energy network projects financed over this period from the TEN budget line is to be found at Annex II.

2.2. Telecommunications

On the whole the projects progressed satisfactorily. Among the TEN-ISDN all the 1996- call projects and all but one of the 1997 -call projects were technically completed. All the Teletourism projects (1997) and most of the Multimedia projects (1997) were also technically completed. A large number of the projects from the 1998 and 1999 calls were technically completed.

Technical reviews of most of the projects were carried out with the help of independent experts. The recommendations of the reviews were adequately taken into account in the remaining work. Public presentations of some exemplary projects were made in various investment forums and exhibitions, attracting the attention of the public and private sectors.

The two projects on support and co-ordination measures continued to be instrumental in making TEN-Telecom more visible and transparent, attracting new constituencies to the programme and contributing to the submission of better proposals and to disseminating the results of the projects.

The status of the projects, including the reviews, is shown in Annex III. For further details on the projects and the support and accompanying measures see the regularly updated TEN-telecom web-site: www.europa.eu.int/tentelecom

2.3. Transport

Steady progress was made on all of the remaining 11 "specific" transport projects from the 14 identified by the Essen European Council, the Øresund Fixed Link between Sweden and Denmark having been commissioned in the Summer of 2000. Details of all 14 projects are to be found in Annex IV.

Progress has been made on other projects of common interest supported in the framework of TEN-T. Further to that, following the provisions of Regulation n°1655/1999 of the European Parliament and the Council, amending Regulation n° 2236/95, laying down general rules for the granting of Community financial aid in the field of Trans-European Networks, the Commission and the Member States

launched in 2000 the procedures for the establishment of the Multiannual Indicative Programme 2001-2006 for the trans-European transport network (MIP).

The MIP is of particular importance to the transport sector for which an amount of EUR 4,17 billion out of the total EUR 4,6 billion programmed for all 3 TEN sectors in the framework of Agenda 2000, has been earmarked. The multiannual programming of Community financial aid responds to the particular needs of large transport infrastructure projects and provides for more efficient management of the TEN-T budget line.

For the preparation of the 2001 - 2006 MIP, the Commission closely co-operated with the Member States and convened several meetings of the TEN-T Financial Assistance Committee during the year 2000. At its meeting of 18 December 2000, the Committee delivered its positive opinion on the programme.

As a result of this procedure, the 2001 – 2006 MIP proposed an amount of EUR 2781 million. Besides continuing support to the still ongoing "Essen" projects which now need a financial boost to ensure their timely completion, it focuses on the following new priorities: the Galileo project, the removal of bottlenecks on the TEN railway network, the construction of cross-border links within the Community and with third countries (in particular acceding countries) and intelligent transport systems for the road and air sectors. The strong focus of the programme on sustainable mobility objectives is reflected in the fact that almost 64% of the total support goes to rail and that 95 % the funds concern rail, inland waterways and intelligent transport systems.

The GALILEO project of satellite radionavigation continued in its definition phase and the European Council of Nice emphasised its strategic importance and the need to continue with the successive development and validation phase. The costs of this phase, of about EUR 1.1 billion, will be provided entirely by public funds (Community budget and European Space Agency). In the light of the above, the TEN-T Financial Committee at its meeting of 18 December approved the participation of the GALILEO programme in the Multiannual Indicative Programme (MIP) up to an indicative amount of support of EUR 550 million.

EGNOS (European Geostationary Navigation Overlay System), which monitors the performance of the existing GPS and Glonass systems and reports to users on their performance, continued to receive TEN-T support in its critical design phase, while the ESTB (EGNOS System Test Bed) has been providing a real EGNOS space signal since February 2000.

Concrete results were achieved in the 5 Euro-regional initiatives aimed at deploying Intelligent Transport Systems on the Trans-European Road Network. Data exchange, traffic management and information services are becoming a reality across European borders. Among other examples, data exchange was implemented between Sweden and Denmark via the Öresund link and real time traffic information services made available on board (via RDS-TMC, radio Data Systems Channel), Øroadcast in Germany, Sweden, Denmark, Southern Finland, France, Spain, Italy and the Netherlands.

3. NEW DIRECTIONS AND DEVELOPMENTS; LEGISLATION; TEN COMMITTEES AND FINANCIAL CONTROL

3.1. New directions and developments

3.1.1. *Interoperability of the TEN-Transport rail networks*

In the field of High Speed Interoperability, work progressed well on the development of TSIs under Directive 96/48/EC; in particular, the Commission submitted in November 2000, to the Regulatory Committee, two proposals on which a positive opinion was given: a Commission Decision on ERTMS specifications and a Commission Recommendation on basic parameters of the trans-European high speed rail system.

Following the Council conclusions of 6 October 1999, the Commission had adopted on 25 November 1999 a Communication to the Council and to the Parliament on the integration of conventional rail transport, as well as a proposal for a directive concerning the interoperability of the conventional trans-European railway system. The EP adopted in May 2000 its first reading position on the proposed directive. The Council adopted its Common Position on 10 November 2000; the Common Position took into account the majority of the amendments proposed by the EP, thus opening the way to a rapid adoption of the Directive.

3.1.2. *Trans-European Rail Freight Network (TERFN)*

Following the political agreement reached by the Council on 9-10 December 1999 on the infrastructure package, the co-decision procedure continued during the year 2000 and ended with an agreement between the Council and the Parliament. The main outline of this agreement consists in opening access rights for international rail freight services. At a first step, the right of access will be opened up in 2003 on a defined network (Trans-European Rail Freight Network) encompassing all the major freight lines. At a second stage, access rights will be opened up on the rest of the network in 2008. It will be recalled that the infrastructure package consisted of a proposal for a Council directive amending Directive 91/440/EEC on the development of the Community's railways, a Council directive amending Directive 95/18/EC on the licensing of railway undertakings and a proposal for a Council Directive on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification.

3.1.3. *Energy infrastructure*

In its Green Paper on the Security of Energy Supply, COM (2000) 769 of 29 November 2000, the Commission pointed to the underdevelopment of the transmission infrastructure as a factor causing the slowing of the integration of national markets and of limitation of security of energy supply. There was a need to increase the capacity available on existing electricity lines, followed by the construction of new lines as necessary, consideration being given to the formulation of schemes to overcome obstacles to "projects of European interest". For gas, it was also necessary to remove actual or potential bottlenecks by identifying new interconnections required. This process of interconnection and other infrastructure improvement would need to extend also to the applicant countries.

In 2001 the Commission prepared, in response to a call from the Stockholm European Council, a Communication to the Council and the European Parliament on European energy infrastructure. The purpose of the Communication was to assess in more depth the present situation with regard to energy infrastructure, to propose actions aimed at ensuring its efficient use, and to ensure a stable and favourable regulatory regime for the provision of new infrastructure to meet growing demand, to ensure political attention to energy infrastructure issues and to enhance the benefits of the internal energy market.

In parallel to this Communication, the Commission proposed a revision of the TEN-Energy Guidelines including the identification of priority projects of European interest.

3.2. Legislation

3.2.1. Amendment of TEN-Telecom Work Programme and Guidelines

In accordance with the TEN-Telecom guidelines decision², the Commission adopted the revised TEN-telecom work programme for the period 2000 to 2002. The revision took into account the evolving needs and the rapid development of the information society, as well as the experience gained in managing the programme during the last three years. The new programme will be the basis for future open calls for proposals.

In accordance with the Guidelines Decision³, the Commission launched the procedure for the revision of Annex I of the TEN-Telecom guidelines. To this end the Commission launched a study, to assess the current content, scope and modalities of the TEN-telecom guidelines and propose, after consultation of the relevant national and industrial parties, appropriate revisions. The study was carried out by external experts⁴ and the final report came out in April 2001 (TEN Telecom Guidelines Status Review, RAND Report. April 2001).

3.2.2. Amendment of transport guidelines

On 5 June the Council adopted a common position on the proposal to amend Decision N° 1692/96 on Community guidelines for the development of the trans-European transport networks (TEN-T) so as to include seaports and inland ports and to amend a project in Annex III (Table I).

3.3. TEN Guidelines Committees and Financial Assistance Committees; Financial Control

3.3.1. Energy

The TEN-Energy Guidelines Committee met on 7 April to discuss the exchange of information on the progress of the projects of common interest (Doc. Committee on TEN- Energy N° 2000/1); the draft Commission Decision defining the specification

²Decision 1336/97/EC of 17/7/97 (OJ L 183/12 of 11/6/97)

³Article 14 stipulates that every three years the Commission shall submit a report on the implementation of this Decision and together with this it shall submit appropriate proposals for the revision of annex I of this Decision, on the basis of technical developments and experience gained.

⁴ OJ S series No 227 of 23 November 1999 and OJ S series No 13 of 20 January 2000

of the projects of common interest (Doc. Committee on TEN-Energy N° 2000/2); and a draft report of the Commission on the implementation of the TEN-Energy Guidelines (Doc. Committee on TEN-Energy N° 2000/3), on possible future modifications to those Guidelines, and on new projects to be included in the list of projects of common interest.

3.3.2. Telecommunications

The TEN-Telecom Guidelines Committee met three times during 2000. At its first meeting on January 28 it delivered its opinion on the draft TEN-Telecom Work Programme and the draft text determining the content of the 2000/1 call for proposals in the field of trans-European telecommunications networks: validation studies and deployment projects in the areas of generic services and of applications in education and training, culture, transport and mobility, environment and emergency management, healthcare, city and regional networks and applications and services for SMEs.

At its second meeting on July 25 the Committee delivered its opinion on the draft text of the 2000/2 call for proposals for generic services and applications in the same fields as in the 2000/1 call. Furthermore it discussed ways to a) find national projects with good potential to expand on the trans-European level, b) exchange good practices, c) map the state of the art in the different Member States, in order to identify areas where the leverage of the Community intervention is high, i.e. where needs are not met by the market. The Committee pointed out that synergy potentials with the bench-marking exercise of *e-Europe* should be taken into account when identifying projects. It also exchanged views on the status of the intermediate evaluation of the TEN-Telecom action, giving constructive guidance on the methodological approach of the study as well as practical advice on consulting the relevant stakeholders.

At the last meeting of this Committee held on 12 December 2000 the main issue discussed was the final report of the intermediate evaluation of the TEN-Telecom action, which was presented by the independent consultant. The Committee welcomed the general findings and recommendations of the report raising, inter alia, the following main points: a) the TEN-Telecom programme should make connections to the *e-Europe* initiative and co-ordinate its activities with other programmes, such as IST, INFO2000 and *e-Content*; b) the trans-European dimension of the projects should be further clarified and reinforced; c) more emphasis should be given to the business planning process of the projects; d) the innovative nature of the services should be prioritised; e) activities focusing on trust in technology and confidentiality should be carried out; f) neutrality to technology should be maintained and emphasised; g) contract negotiations should be speeded up; h) relations with national contact points should be developed further.

3.3.3. Transport

The Committee referred to in Article 18 of the guidelines met three times in the course of 2000. The first meeting was held on 14 February, the second meeting was held on 23 March 2000, and the third meeting was held on 18 May. The meetings reviewed the work of ad hoc working parties of the Committee which met several times:

- On strategic environmental assessment, one meeting
- On road bottlenecks, 2 meetings
- On rail bottlenecks, 2 meetings
- On the implementation reports, 1 meeting
- On road ITS (please see 2.3)

The meetings assisted the Commission in the preparation of the revision of the guidelines and in the identification of the main rail and road bottlenecks on the trans-European network. Exchanges of information on the implementation of strategic environmental assessment were held. The meetings also assisted the Commission in the design of a questionnaire to prepare a report on the implementation of the guidelines

3.3.4. *TEN financial assistance Committee*

The TEN financial assistance committee met seven times in the course of the year ("horizontal" once, "energy" once, "telecommunications" twice and "transport" three times) and gave a favourable opinion on the commitment of EUR 643.3 million. Details of its financing decisions are to be found below in section 4.1.

3.3.5. *Financial control*

In the course of 1999 the Commission had started an exchange of views with the TEN Financial Assistance Committee in its "horizontal" and three sectoral configurations on the practical arrangements for co-operation on financial control between the Commission and the Member States. There was general agreement that the situation varied from one sector to another, that measures should be cost-effective and that telecommunications needed special treatment, as the sector had largely been privatised.

Following the discussions started in 1999, the Committee in its TEN-Telecom configuration discussed this issue on 12 December 2000 and concluded that a Member State does not enter any financial obligation by approving the submission of a proposal to a TEN-telecom call, except in cases when explicitly giving a financial guarantee, or when acting as a partner in the project.

Table 1 : Community financing of the TEN in 2000 (million ECU/EUR)

Sector	Type of assistance	Instrument	1993-1995 ⁵	1996 ⁵	1997 ⁵	1998 ⁵	1999 ⁵	2000 ⁵
<i>Transport</i>	Loans	EIB ⁶⁻⁷	7 666	3 504	4 943	4 415	5 977	4989
	Loan guarantees	EIF ⁶⁻⁷	161	303	55	71	256	55
	Grants	ERDF ⁷⁻⁸	999	2 639	527	n.a.	n.a.	n.a.
		Cohesion Fund	2 995	1 221	1 251	1 337	444	1287
	Grants, interest rate subsidies, loan guarantees and co-financing of studies	TEN budget line B5-700	625	280	352	474	497	581
		(Of which the 14 specific projects)	362	211	211	305	266	288 ⁹
<i>Energy</i>	Loans	EIB ⁶⁻⁷	1 822	1 176	854	393	174	392
	Guarantees	EIF ⁶⁻⁷	220	270	4	5	0	0
	Grants and co-financing of studies	Structural Funds	764	1 265	277	n.a.	355	n.a.
		TEN budget line B5-710	12	9	24	19	29	14
<i>Telecommunications</i>	Loans	EIB ⁶⁻⁷⁻¹⁰	4 295	1 626	1 880	3 434	2 126	2726
	Guarantees	EIF ⁶⁻⁷⁻⁹	175	9	276	230	44	165
	Financial contributions	Structural Funds	295	173	n.a.	n.a.	387 ¹¹	n.a.
	Co-financing of feasibility and validation studies and deployment projects	TEN budget line B5-720	45	16	27	28	22	35
<i>Telematic Networks</i>	Grants	TEN budget line B5-721	119	44	47	15	21	22

NB: n.a. = not available

⁵Money committed

⁶Signed contracts

⁷TEN and TEN-related projects

⁸Usually includes appropriations committed for the period 1996-1999

⁹Including rail traffic management

¹⁰Estimate

¹¹TEN-related projects only

4. FINANCING THE TEN

Table 1 above gives an overall picture of Union financing of the TEN.

4.1. TEN financial assistance Committee

4.1.1. Energy

The TEN financial assistance committee met on 8 June and subsequently approved by written consultation 13 feasibility and other studies for which the Commission proposed financial assistance of EUR 13.6 million. The corresponding Commission decision was taken on 16 October. Further details are to be found in annex V.

Table 2 : TEN Energy Commitments (*million ECU/EUR*)

	1995-97		1998		1999		2000	
	Amount	%	Amount	%	Amount	%	Amount	%
Electricity	14,4	42,8	10,8	58	7,9	27,4	7,3	53,7
Gas	25,9	57,2	7,8	42	20,9	72,6	6,3	46,3
TOTAL	45,3	100	18,6	100	28,8	100	13,6	100

4.1.2. Telecommunications

The TEN Financial Committee in its telecommunications composition met twice, on July 25 and December 12.

At the July meeting it delivered its opinion on the draft Commission decision granting Community aid to 35 of projects of common interest selected from the 2000/1 call for a total maximum Community support of MEUR 35. Of these projects, 31 referred to market validation studies and 4 to deployment projects. The Committee also delivered its opinion on the draft decision for selection of 1 support and co-ordination action in the field of TEN-Telecom, selected from the results of the 1998/3 Rolling call for proposals, for a maximum Community support of MEUR 0,9. During the December meeting the committee exchanged views on the Commission report on the technical reviews of the 2000 TEN-Telecom (see 6.2.1 below). The Committee also discussed the interpretation of Articles 8-submission of applications for financial aid- and 12-financial control- of the TEN Financial Regulation (see also paragraph 3.3.5 above).

4.1.3. Transport

As regards transport, the Commission received 288 requests for financial assistance, a few of them for relatively minor sums. The measure to limit financial assistance for transport projects to a minimum of EUR 1 million was broadly applied in 2000, and helped successfully to reduce the number of decisions. The total requested support was more than EUR 1700 million. The TEN financial assistance committee held three meetings in 2000 and gave a favourable opinion on 102 projects and studies for

which the Commission proposed financial assistance totalling EUR 591.659 million. Several of the actions chosen were a continuation of (or complementary to) actions previously supported; Annex VII gives full details.

Finally a total of 99 actions only amounting to EUR 580.659 million were supported in 2000. As can be seen from Table 5, the Commission has continued to concentrate a large part of its available resources (49.54%) on the 14 specific “Essen” projects. However, priority projects absorbed a smaller share of commitment appropriations than in previous years as three of them – Malpensa airport, Cork-Dublin-Belfast-Larne railway line and Oresund Fixed Link – have been completed while some of the big High Speed Train projects have not yet entered their construction phase. This share is smaller than the maximum % share mentioned in the European Parliament's budgetary commentaries on the 2000 budget.

Table 3: Transport - Project categories

	Support 2000	%	
	(Million EUR)	2000	1999
14 specific projects confirmed by the Essen European Council (includes rail traffic management)	287.69	49.54	58
Traffic management (all modes except rail)	58.33	10.05	9
Other important projects of common interest (other than the 14 specific projects)	234.63	40.41	33
TOTAL	580.65	100	100

Table 4: Transport - Form of Intervention

	Support 2000	%	
	Million EUR	2000	1999
Feasibility studies/Technical support measures	188.70	33	28
Direct grants	337.95	58	58
Interest rate rebates	54.00	9	14
TOTAL	580.65	100	100

Table 5: Transport Modes

MODE	Number of projects/studies per mode	Support 2000	
		EUR million	%
Air Traffic Management	7	14.700	2.53%
Airports	7	11.104	1.91%
Combined Transport	1	5.000	0.86%
Global Navigation Satellite Systems	1	12.000	2.07%
Inland Waterways	4	15.800	2.72%
Multimodal	1	34.000	5.85%
Ports	2	2.500	0.43%
Rail	45	346.122	59.60%
Rail Traffic Management	1	35.000	6.02%
Road	17	71.400	12.30%
Road Traffic Management	12	32.133	5.53%
Vessel Traffic Management	1	0.900	0.15%
GRAND TOTAL:	99	580.659	100%

Considerable support for other important projects reflects the number of applications received from Member States and subsequently selected. It also takes account of the remarks included in the 2000 budget regarding the percentage share between modes and the maximum support to priority projects. Support to studies was limited to 33% of the total, since many of the projects had reached the construction stage. In general, the European Parliament's budgetary commentaries on the 2000 budget were respected also as regards modal share.

4.2. IDA

The IDA projects (sectorial and horizontal actions) are financed independently of the TEN financial assistance regulation, but mention is made of them here for the sake of completeness. In 2000 EUR 22.3 million were committed for IDA actions.

4.3. Structural Funds and Cohesion Fund

The European Regional Development Fund (ERDF) and the Cohesion Fund are by far the main source of Union grants for TEN projects. However, because Regional Fund expenditure is not broken down by TEN project supported, figures for support to TENs from that source cannot be given.

4.3.1. ERDF

In 2000, the preparations for the new Structural Funds programming period 2000-2006 were made. The Member states submitted the required programming documents. The Commission negotiated the documents with Member states and the great majority of them were concluded by the end of the year 2000, enabling project funding for the new period to start in 2001.

Infrastructure regained its relative importance when it comes to Structural Funds allocations by broad area of intervention under Objective 1. While the portion for infrastructure was slightly below 30% in the last programming period 1994-1999 it will be around 34% during the current period. About half the infrastructure granting will be devoted to transport networks, highly concentrated in the cohesion countries.

4.3.2. Cohesion Fund

(See Annex VIII for details)

In 2000, the commitments made by the Cohesion Fund to TEN transport projects stood at EUR 1,287 million. This was about three times the amount committed in 1999 and shows that Cohesion Fund activity gathered pace again in 2000.

Table 6 : Cohesion Fund TEN-T Financing by country

	Commitments up to 1999 (million EUR)	Commitments in 2000 (million EUR)
Greece	1535	155
Spain	4606	852
Ireland	748	34
Portugal	1446	246
TOTAL	8334	1287

Among the 28 grants committed in 2000 (see the detailed table in Annex VIII) fifteen were aiding projects in road network, 12 were for the rail network (including one metro project) and one was supporting port infrastructure. However, while during the period 1993-1999 road construction accounted for more than half the Cohesion Fund granting to the transport sector (for details see the 1999 TEN report), rail was clearly dominant in 2000, accounting for three quarters of total commitments.

Table 7 : Cohesion Fund TEN financing by country and mode, 2000, in %

	Road	Rail	Air	Ports
Greece	74	26	0	0
Spain	15	85	0	0
Ireland	52	48	0	0
Portugal	20	75	0	5
TOTAL	24	75	0	1

In Greece Cohesion Fund granting was largely concentrated on the continued support (EUR 115 million) of the completion of the motorway system around the Essen project no 7 “Pathe-via Egnatia”. However, the grant for the construction of the new railway Korinthos-Kiato amounted to EUR 40 million and brought the share of rail in the total granted to above one quarter.

In Spain 85% of the grants for the year 2000 were devoted to the rail network, all used for the high-speed line Madrid-Barcelona-French border. The total support was EUR 728 million and thus accounted for 57% of the entire TEN-T granting of the Cohesion Fund. Out of the EUR 124 million for the road network three projects were supported, of which the *Autovia de Levante a Francia por Aragon* received by far the biggest portion (60%).

For Ireland the grants went to the road and the rail network in nearly equal shares. About EUR 17 million support went to the construction of stage 2 of the M1 Cloghren-Lissenhall and EUR 16 million contributed to the development of the South-West Rail Corridor.

In Portugal three quarters of the 2000 grants were used for rail projects. Five projects received a grant. The modernisation of the Algarve lines II and III accounted for EUR 68 million. With EUR 64 million, the development of the northern rail network enjoyed comparable support. The highest single grant (EUR 52million) for Portugal went to the Lisbon Metro to allow for its connection with the TEN-T. For the road network, IP 2, IP 3 and IP 6 were supported, with the greatest amount (EUR 20 million) used for connecting the IP 3 and the IP 5. Continuing with efforts to improve maritime transport in Portugal, a grant of EUR 12 million went to the port of Setubal, supporting the installation of a multimodal terminal.

4.4. European Investment Bank (EIB) loans

(See Annex IX for details)

The development of large infrastructure of common interest, of which the Trans-European Network constitutes the main part, remains one of EIB’s priority objectives. In 2000, the EIB’s Board of Directors approved a total of EUR 8597 million in favour of TENs and related projects in the Union. Finance contract signatures reached EUR 6613 million, representing 22% of the Bank’s activity in the Member States. These figures compare to EUR 7341 million approved and EUR

8277 million signed in 1999. In other words, there has been a significant increase in project approvals (+17%) and a decrease in signatures (-20%), which reflects a relative slowdown in TEN activity, but a significant commitment to new investment.

Since 1993¹², the Bank has approved loans in favour of TENs for a total of EUR 64057 million and signed finance contracts for a cumulated EUR 47082 million. The total investment cost of the corresponding projects is estimated to EUR 215 billion.

EIB has taken a proactive role in the financial engineering of TENs projects most notably in those based on PPPs. Some of the most significant examples of these, which are also potential models for future projects, are the development of DBFO structures which have been applied to road projects in the UK, Finland and Portugal. The Bank has also been to the fore in the development of innovative instruments such as the development of refinancing structures to enable commercial financiers a defined exit from long-term financing. EIB is also facilitating cross-fertilisation, sharing its experience in PPP financing with new promoters.

Loans approved by the EIB in 2000 for TENs in the transport sector reached EUR 6718 million in the Union (EUR 4807 million in 1999, a 40% increase), resulting in a total of EUR 41252 million approved for that sector to date¹³. Finance contract signatures amounted to EUR 4010 million in 2000 (EUR 4977 million in 1999, a 19% decrease) which brings the total amount of signatures to date to EUR 26666 million. The decrease in signatures has been especially accentuated for the bigger projects (Essen), with a reduction of 25% relative to 1999 figures. Examples of loans approved in 2000 are the PBKAL sections in Belgium and the Netherlands, the TGV Est in France and the Greek motorways (Peripheral Road of Attica (E.S.S.I), Egnatia Central, Thessaloniki East Orbital, PATHE (Katerini)).

In Central and Eastern European Countries, the Bank's signatures for projects on the 11 transport corridors approved by the Pan-European Transport Conferences of Crete and Helsinki amounted to EUR 979 million.

In the energy sector, EUR 299 million of new loans were approved in 2000 for gas and electricity TENs, for a cumulated amount since 1993 of EUR 6353 million. In 2000, EUR 392 million have been signed for the electrical interconnection Italy-Greece, the Irish Gas Transmission project in Ireland and the Verbund Burgenland Line project in Austria. This compares with EUR 174 million in 1999.

In 2000, the EIB also provided new loans for European Telecommunication networks, but not covered by the TEN Telecommunications guidelines, with EUR 1580 million of new loan approvals and EUR 2211 million of signatures (EUR 2126 million in 1999). Finance contracts signed from 1993 onwards reach a total of EUR 15196 million.

¹² 1995 for TEN-Transport projects.

¹³ Since 1995.

Table 8 : EIB lending for TEN (million EUR)

	1993	1994	1995	1996	1997	1998	1999	2000	Total
EU	3280	4754	5568	6522	7677	8242	8277	6613	50933
Transport	1908	1939	3819	3505	4943	4415	5977	4010	30516
Essen projects	1346	1137	1603	1189	1751	1142	1616	1224	11008
Energy	367	715	910	1415	854	393	174	392	5220
Essen projects	207	315	523	695	300	100	75	25	2240
Telecom	1005	2100	839	1602	1880	3434	2126	2211	15197
CEEC	579	777	400	668	784	1507	1456	1494	7665

4.5. European Investment Fund (EIF) Guarantee Activity

(See Annex X for details)

Overall EIF signatures for 2000 amounted to EUR 1,102.4 million of which EUR 807 million were related to guarantees and EUR 295.4 million related to equity.

The EIF signed eleven guarantee operations for infrastructure projects in 2000 for a total of EUR 238.9 million. Of the eleven new contracts signed during the year, five concerned telecoms, three transport and three energy projects.

Since the creation of the EIF, TEN operations have been guaranteed in eleven member states (Belgium, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, UK) as well as outside the EU in Hungary, Poland, Slovakia, the Czech Republic and the Norwegian sector of the North Sea.

Table 9 : EIF loan guarantees for TEN projects (signed operations in Million EUR)

	1994	1995	1996	1997	1998	1999	2000	1994-2000
TRANSPORT	75.6	85.2	302.6	55.0	72.0	265.8	117.5	973.7
ENERGY	207.7	11.9	270.2	3.8	4.5	-	83.75	581.9
TELECOM	156.1	19.4	9.3	277.8	235.0	123.1	37.7	858.4
TOTAL	439.4	116.5	582.1	336.6	311.5	388.9	238.9	2,414.0

TEN activities, complementary to those of the EIB, have been transferred to the latter together with the EIF's team of specialists. The relevant contract was signed with the EIB on 7 December 2000. The Bank will assume the advantages of the transferred portfolio, but will also bear the ultimate risk of the transactions, the EIF remaining merely a guarantor of record.

4.6. Member States' financing

Union financing of TEN represents in most cases a small proportion of the total cost, except for some projects in the "cohesion" countries. The greater part of the funding comes either from the public authorities of the Member States or, especially in the energy and telecommunications sectors, from the private sector. Exact or meaningful figures about Member States' expenditure on TEN are hard to come by.

4.7. Financing infrastructure in third countries

4.7.1. PHARE

Following the revision of PHARE's investment strategy for Central Europe, a Large Scale Infrastructure Facility (LSIF) was created for the years 1998 and 1999. In accordance with the Commission's decision, (Agenda 2000), from the year 2000 all Community financial assistance for transport infrastructure in the CEEC is channelled through ISPA (see below).

4.7.2. CARDS

On 5.12.2000 the European Union adopted a Community aid program entitled CARDS for the countries participating in the Stabilisation and association process, Albania, the former Yugoslav Republic of Macedonia, Bosnia and Herzegovina, Croatia and the Federal Republic of Yugoslavia. The new regulation covers the period 2000-2006, with a total budget of EUR 4.65 billion. It will accompany and support the democratic, economic and institutional reforms of the five countries concerned.

Fostering regional co-operation is one of the main goals of CARDS. Under this heading, the following specific objective is identified: to re-integrate the countries participating in the stabilisation and association process into the European infrastructure networks, namely for transport, border management and energy, and into the wider European networks, such as for environmental protection and sustainable development (specific objective to be inserted in the CARDS regional strategy paper to be prepared in 2001 by the European Commission).

4.7.3. *TACIS*

The new Tacis Regulation came into force on 21 January 2000, covering the period 2000 - 2006, having a total budget of EUR 3,318 Mio. The new regulation increased the rate of the annual budget to be allocated to investment financing from 10% to a maximum of 20%.

A priority sector for investment financing remains cross-border co-operation, including border infrastructure. To facilitate trade, commerce and revenue collection systems at the borders, the Commission continues to pay particular attention to the importance of the functioning of border crossing points.

4.7.4. *MEDA*

Spending by the MEDA programme better to link the countries of the Mediterranean Basin to the Union is at present limited to a small number of feasibility studies.

4.7.5. *ISPA*

The year 2000 was the first when the new pre-accession instrument ISPA was implemented. ISPA is tailored on the pattern of the Cohesion Fund and is aimed, for 50% of its allocation, at upgrading the transport network of transeuropean interest in the ten countries of Central Europe which are candidates to join the European Union. For transport infrastructure, ISPA grants amount to EUR 520 million per year from 2000 to 2006.

Within the TINA network, a special attention will be paid to the 10 Paneuropean Corridors identified at the Ministerial Conference in Crete (1994) and Helsinki (1997).

In the transport sector, ISPA uses, as a reference, the Transport Infrastructure Needs Assessment (TINA) study carried out by the Commission in the acceding countries. However, due to the gap between the assessed cost of the TINA Network, EUR 91.6 billion up to 2015, and the appropriation available under ISPA-Transport, EUR 3.6 billion until 2006, it is essential that ISPA focus on priorities.

In 2000, the Pan-European Transport Corridor IV was the main beneficiary of the selection process, nine projects having been selected along this Corridor, including seven rail projects. ISPA contribution along this Corridor would reach EUR 518.3 million, out of a total of EUR 800 million.

A fair balance between road and rail projects has been reached, 53% of the 2000 transport allocation being devoted to rail and 42% to road. Compliance with European standards has also been checked for any transport mode supported, in particular in the field of interoperability, signalling, safety, maximum lorries' axle loads of 11.5 tons.

An important item when selecting ISPA projects in 2000 was the adaptation of infrastructure to traffic needs and forecasts. In particular, bottlenecks were considered as a priority. Other essential points consisted in dealing properly with environmental impact and multi-annual maintenance schemes.

Infrastructure improvements have appeared to be a necessary but not a sufficient condition to ensure the operation of efficient transport networks in the beneficiary countries. Good quality of commercial services oriented towards customers' request, especially in rail transport, was considered as being essential. In that respect, synergies between ISPA and the PHARE instrument will be further developed. Besides, bottlenecks of a non-infrastructure nature, especially lengthy border crossing procedures, need to be addressed in parallel with infrastructure development policies.

ISPA will provide a substantial contribution to the enterprise efforts for the countries of Central and Eastern Europe (CEECs), especially in view of the work of the political community in transportation, and the need to reinforce the connection to the Trans-European network.

In Agenda 2000, the Commission stressed the importance of the transport sector for the pre-accession strategy of the European Union. CEECs represent an essential link between the EU, the CIS and Mediterranean countries. The transport infrastructure of the region represents a vital element for competitiveness, economic growth and employment in the EU of tomorrow.

Accordingly, the Commission required that each candidate country prepare an ISPA strategy for transport, outlining the manner in which ISPA funds would be used, the framework of analysis for the projects, and the selection of priorities for the use of this instrument.

The 10 countries completed their strategies in May-June of 2000, with attention to the following criteria:

- The reinforcement of the Trans-European Network, notably to the benefit of the ten multimodal Pan-European transport corridors, endorsed at the third Pan-European Transport Conference in Helsinki in June 1997, and with priority given to missing links and the alleviation of bottlenecks.
- The concentration of investments on these corridors as first priority, and eventually access to these corridors.
- The respect of the equilibrium between the different modes of transport; a particular effort is necessary to halt the continued decline of rail transport.
- Ensuring financial sustainability of the investment, especially concerning the operation and maintenance of the infrastructure, including environmental and health aspect and compliance with the *acquis*.
- The compliance with the EIA Directive, including public participation.
- The necessity of using external financing to leverage the impact of ISPA funds in particular through loans from international financial institutions (IFI) – notably the EIB and the EBRD.

A total of EUR 537 million for transport projects was committed from the 2000 budget, receiving over 53% of the total ISPA allocation (in addition, 39 environment projects received over 46% of the 2000 budget).

Table 10 : ISPA Funds in the transport sector 2000

Beneficiary Country	Total EUR	Rail EUR	Road EUR	Air EUR	Other° EUR	Total N°
Bulgaria	52 000 000	0	24 000 000	28 000 000	0	2
Czech Republic	42 135 864	31 620 130	10 051 734	0	500 000	4
Estonia	12 411 126	0	11 331 126	0	1 080 000	2
Hungary	44 159 860	43 825 000	0	0	334 860	6
Latvia	20 180 328	12 700 328	7 225 000	0	255 000	5
Lithuania	34 042 528	9 129 888	24 912 640	0	0	3
Poland	173 969 062	72 282 461	100 802 601	0	884 000	8
Romania	118 627 136	72 779 440	45 847 696	0	0	3
Slovakia	30 853 200	30 853 200	0	0	0	1
Slovenia	8 280 000	7 500 000	0	0	780 000	2
TOTAL	536 659 104	280 690 447	224 170 797	28 000 000	3 833 860	36

° includes primarily technical assistance programmes.

Table 11: Transport sector: Projects per TINA Corridor (funded in 2000)

Corridor	N° of projects	ISPA Funds EUR	% total of Transport Budget 2000
Corridor 1	4	27 819 326	5.18
Corridor 2	2	72 282 461	13.47
Corridor 3	2	78 431 376	14.61
Corridor 4	9	163 193 570	30.41
Corridor 4-5	1	94 860	.02
Corridor 5	1	12 331 000	2.30
Corridor 5 10	2	8 280 000	1.54
Corridor 5A	1	30 853 200	5.75
Corridor 6	1	10 051 734	1.87
Corridor 9	1	34 747 696	6.47
Corridor 9B	3	24 779 328	4.62
Corridor E-W	3	12 955 328	2.41
Corridor Not Assigned*	7	60 875 225	11.34
TOTAL	37	536 695 104	

* For several reasons, a project may fall into an area not assigned to a TINA corridor. For example, if the project is technical assistance in project management, it would not fall into a specific TINA corridor.

5. FINANCING THE TEN: OTHER ISSUES

5.1. TEN Financial Regulation - setting up of a Multiannual Indicative Programme for TEN-T (2001-2006)

In the framework of the Agenda 2000 package the European Parliament and the Council agreed in June 1999 on amending the TEN financial regulation EC No 2236/95 laying down general rules for the granting of Community financial aid in the field of trans-European networks.

As reported in the 1999 Annual Report, a financial framework for the period 2000-2006 of EUR 4,600 million for all three TEN sectors was set. Of the EUR 4,600 million approximately EUR 4,170 million would be allocated to transport projects,

EUR 155 million to energy projects and EUR 275 million to telecommunication projects.

The purpose of setting up a Multiannual Indicative Programme for the TEN-T over the period 2000-2006 under the TEN Financial Regulation as amended was to take particular account of the financial needs of large TEN-T projects. In addition to continuing support for the the “Essen” Priority Projects, it was also intended specifically to support network development projects designed to clear bottlenecks and those of a cross-border nature, together with proposals for intelligent transport systems (ITS) for road, rail and air transport. The Galileo project is a major component of the MIP. In the revision of the TEN-T guidelines and the preparation of the Multiannual Indicative Programme, the joint work of the EC and the TEN-T (national) Expert Group on ITS for road traffic management resulted in the identification of eight application domains for the deployment of ITS on the Trans-European Road Network across the 15 Member States.

Following dialogue between the Commission and the Member States establishing the fundamental elements of a TEN-T MIP such as structure, flexible arrangements and management conditions for the programme, a call for applications was launched in September 2000 which resulted in more than 200 bids, representing total support requested of more than 7 billion EURO.

The total amount proposed to the TEN-T Financial Committees to be programmed in the framework of the 2001-2006 MIP, EUR 2781 million, was the result of the assessment of the bids submitted, and represented about two thirds of the total amount available during the period, expressing the Committee's interest in leaving sufficient margin for annual budget allocations outside the MIP, as well as for the inclusion of new transport priorities in the context of the revision of the programme scheduled for 2003.

6. COMMUNICATIONS, EVALUATION, FINANCIAL CONTROL

6.1. Communications

6.1.1. *Commission Communication on the development of EURO-ISDN*

On 8 May 2000 and in accordance with Decision 2717/95/EC of the European Parliament and of the Council of 9 November 1995, article 10 thereof, the Commission published a Communication and submitted it to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions.¹⁴ This included an overall evaluation of a set of Guidelines for the development of EURO-ISDN (Integrated Services Digital Network) as a trans-European Network (TEN-ISDN).

6.2. Evaluation

In the context of its “SEM (Sound and efficient management) 2000” programme the Commission attaches high priority to evaluating its actions.

¹⁴ COM (2000) 267 final of 08.05.2000

6.2.1. Telecommunications

In total 33 projects were reviewed on 7 May and 26 October 2000 (see Annex III). The general recommendations from the reviewers were to emphasise the support to projects to develop business plans and to organise, when appropriate, more on-site reviews (this is also recommended by the Court of Auditors in its Special report).

The assessment of teletourism projects

These are 15 projects co-funded by the TEN-Telecom budget following a joint initiative that was launched in 1997 by the Directorate-General for the Information Society and the Directorate-General for Regional Policy. Their aim is to improve the quality of local information on tourism and SMEs through a critical mass of interoperable and reliable information.

In April 2000 a technical assessment of 13¹⁵ of these projects was made with the help of external experts (see annex III). The overall conclusion was that these projects contributed significantly to a pioneering action toward e-Europe, integrating actions at local level with that at the European level, while respecting the subsidiarity principle.

The intermediate evaluation of the TEN-Telecom programme

In accordance with the requirements of article 14 of the Guidelines decision, and the requirements of the SEM 2000 initiative for a systematic evaluation of EU programmes the Commission carried out an intermediate evaluation of the TEN-Telecom action. Having received a favourable opinion from the Guidelines Committee at its meeting of July 15-16 in 1999 on the outline terms of reference, the Commission published a pre-information notice in the OJ¹⁶. Early in 2000 the Commission contracted external experts under the normal open tender procedures. Furthermore, the Commission established a steering group with representatives of stakeholders, to guide the work of the experts and to guarantee their independence.

The contractor presented the findings and recommendations to the TEN-Telecom Financial/Guidelines Committees at their meeting on 12 December 2000 (see 3.2.2 above). The complete report can be accessed at the TEN-Telecom web site www.ispo.cec.be/tentelecom. The main findings of this independent evaluation are summarised below:

The intermediate evaluation of the TEN-Telecom Action shows a relevant programme on track with potential to develop a niche where it can make a difference. It is strategically placed with a relevant task to bring trans-European high-risk (business) projects and results of research projects forward to deployment with substantial SME involvement. The relatively modest size of the programme is not a disadvantage. Rather, it provides TEN-Telecom with the agility to manoeuvre in the highly fluid world of telecommunications and potential to support the e-Europe

¹⁵The total number of the TEN-Telecom funded projects within this initiative was initially 15: however the project for BRANDENBURG-D was terminated before the assessment, unable to fulfil the contractual obligations because of internal problems, whereas the CORSICA ON-LINE project was assessed in May 1999.

¹⁶OJ No S 230 of 26/11/99

strategy. Against the background of the high-risk nature of the projects, preliminary results and project participants' expectations indicate good deployment potential for many projects after the completion of the project phase financed by TEN-Telecom.

There is, however, a need to focus activities if TEN-telecom is to realise its potential impact. The areas of the Action are too numerous, with the risk of spreading activities too thinly. Furthermore, there is a need for improvement of project efficiency, especially in the field of elaborating business and investment plans, the allocation of resources to specific parts of a given project, as well as further strengthening of the trans-European dimension of projects.

6.2.2. Transport

TEN-T project management is integrated into the policy units responsible for a sector. In this way, close alignment with and contribution to Community policies and legislation is ensured. Selection and evaluation are strongly influenced by these factors. As an example of this, for all ITS (Road Traffic Management) projects funded under the TEN-T budget line, in addition to the application stage where all projects are judged by classic criteria, ex-post evaluations are carried out to assess conformity with the original objectives. In 2000, 7 projects were evaluated by the Commission with the help of external support and for two of the projects (SERTI and VIKING) detailed on-site reviews were carried out (France and Finland).

7. EXTERNAL RELATIONS

7.1. Energy

The main emphasis of external relations regarding energy networks is put on the introduction of competition and of regulation on the electricity and natural gas markets of the third countries concerned.

This is particularly true for the candidate countries which are preparing themselves for the adoption and implementation of the «acquis communautaire» in this field but other third countries will have to act along the same lines.

Indeed, it is considered that opening and regulating the energy markets is a condition for having viable investment in energy networks in the new European context of competitive energy markets

The extension and rehabilitation of the energy networks is vital, not only for the energy supply of the current European Union which will remain strongly dependent on external resources, in particular for oil and natural gas, but also for the future enlarged Union. In this respect the dependence of the Union will not alter fundamentally after enlargement. Adequate interconnected energy networks are also important in view of the actual participation of candidate countries in the future internal energy market.

The TEN-Energy Guidelines already identify gas and electricity projects involving candidate countries. TEN Energy projects related to candidate countries continued to benefit from Community financial support under the TEN-Energy programme, but also through PHARE”.

Considering South-East Europe, in particular the Western Balkans, the Regional Funding Conference held in Brussels on March 29 and 30, 2000, adopted a “**Quick Start Package**” which was prepared by the European Investment Bank (EIB) and which focused mainly on infrastructure, including several projects in the energy sector.

In the **Quick-start package**, the European Commission has accepted to prepare a regional infrastructure study programme, to be launched in 2001. The European Commission was also designated to develop in 2001 a strategic approach for transport and energy infrastructures in South-East-Europe, with a focus on the 5 countries of the Stabilisation and association process.

7.2. Telecommunications

Telecommunications infrastructure and its related new services and applications are key factors for the socio-economic development and integration of the neighbouring countries with those of the EU. Specifically, they can allow the central and eastern European countries (CEECs) and the countries of the Mediterranean Basin to modernise their economies and improve their prosperity.

In order to secure commercial financing sources for telecom development, a fair, transparent and stable regulatory framework for the sector, well managed operating companies, an attractive business environment and well-prepared investment proposals must be in place. In all cases, the pre-condition for the successful development of the telecommunications sector is the adoption of appropriate liberalisation and regulatory policies by the governments.

The first action to be taken by the EU is therefore to encourage the institutional changes needed to monitor the sector and enforce the regulatory framework.. In addition, there is considerable scope for preparing the deployment of new telecommunications applications and services with a high social and business value, based on experience derived from the TEN-Telecom action in the Community as well as from the Eumedis initiative under the MEDA programme.

Moreover, the Commission ensures that investments made by the EIB and the EBRD are accompanied by appropriate regulatory reform as far as this is possible. This has been achieved through the development of a Memorandum of Understanding between the Commission and the EBRD which ensures prior consultation on all investments in the telecommunications sector. The same standards are applied to EIB investments all of which have to be approved by Commission services. The Commission liaises with other IFIs, especially the World Bank, to achieve similar objectives. Technical assistance from Community programmes such as Phare, Tacis, MEDA may be used to advise on regulatory reform.

7.3. Transport

In addition to work on airports under TINA, PHARE, Tacis and CARDS, funds have been successfully used to identify weaknesses in the air traffic control (ATC) systems in these countries and to help them plan the way forward. In CARDS, stop-gap ATC operations have been supported, notably for Bosnia-Herzegovina. These activities are raising interest with EIB and EBRD, which are undertaking studies to investigate possibilities. The momentum achieved in this way should be retained.

Successful integration of candidate countries in an enlarged Union not only requires that these countries adopt the Community's legislative acquis, but also that they adapt their transport infrastructures to the socio-economic and environmental needs in the framework of the necessary extension of the Trans-European Transport Network. Whereas the overall strategy and policy priorities related to the infrastructure development in these countries were maintained and strengthened, the year 2000 marked a major change in the EU financial instruments with ISPA succeeding PHARE, and in particular its LSIF facility, as the main source for EU support to investments related to transport infrastructure.

In consequence, PHARE started last year to concentrate in the field of transport on technical assistance to effective implementation of the acquis and corresponding institution building, and some limited support under the National and CBC Programmes as regards developing regional or local transport infrastructures not eligible for ISPA.

Many candidate countries either progressively follow or have already implemented into their legislation and apply the main principles and objectives of the TEN-Guidelines as regards investment decisions concerning transport projects.

In the South-East Europe (Western Balkans), the EU supports the development of the Pan-European Transport Corridors (rail, road, water) defined at the Pan-European Transport Conference in Helsinki in 1997, which link the Trans-European Transport Network with central, eastern, southeastern European countries and beyond. Of particular strategic importance for southeastern European countries are Corridor IV, V, VII, VIII and X. The European Union is helping the countries concerned to develop their transport infrastructure to improve the Corridors and the networks linking to them.

The **"Quick Start Package"** approved at the Regional Funding Conference for southeastern Europe, focused mainly on infrastructure, particularly the development of road networks, representing 71% of the total infrastructure package.

8. OTHER UNION POLICIES WITH A TEN DIMENSION

8.1. Environment

The approach adopted for the financing of TENs projects for the year 2000 was based on the premise that sufficient information would be made available to ensure that TEN projects are in conformity with Community legislation. As a result, the standard application form for TENs projects was amended in December 1999 to include a specific declaration by the authority responsible for monitoring Natura 2000 sites, within the Annex on environmental legislation. This amendment was designed to facilitate internal procedures within Member States, thus ensuring the conformity of TENs projects with Natura 2000 and in particular with the site protection requirements under Art. 6 of the Habitats Directive.

8.2. Research and Development

Under the Fourth Framework Programme of the European Community for research and technological development and demonstration (1994-1998), several specific programmes have included activities contributing to the development and the

implementation of TEN-T policies. Those projects were addressing issues like support to decision making for infrastructure projects, methodologies to build up transport observatories, and the assessment of the socio-economic and environmental dimensions of the TEN policies. Furthermore many pilot cases have been used to apply the results and recommendations of the research projects. Most of those projects have already been finished and the executive summaries and results could be found either on the extra web-site <http://europa.eu.int/comm/transport/extra/home.html> or on projects' web-sites, which are linked to the extra one. Moreover those results have contributed to the revision of the Community guidelines for the development of the transport network and to the revision of the new Common Transport Policy, as it has appeared in the White Paper.

Under the Fifth Framework Programme for Research, Technological Development and Demonstration (1998-2002) many projects have been already initiated in several key actions on sustainable mobility and intermodality, land transport and marine technologies, air transport, efficient energy systems and services for citizens, satellite navigation (GALILEO). The assessment of TEN-T policies, the improvement of infrastructure, the development and improvement of quantitative tools to support policy making (transport information system, modelling service, network of airport observatories) as well as the establishment of discussion forums to address topics relevant to TEN-T policies and projects (ALP-NET, THINK-UP, EXPEDITE) have been identified as key objectives in the domain of socio-economic research.

The SCENES project has developed a transport forecasting model. The model is network based and has a detailed description of the TEN-T. It covers all 15 EU Member States and includes also Accession Countries. The "business as usual" scenario suggests that passenger transport will grow at an annual rate of 1.3% and freight 2.5% in the enlarged EU by 2010. International passenger travel between EU and the Accession countries is estimated to grow rapidly, 3.6%/pa. While EU domestic road freight is forecast to grow by only 1.1%/pa, international road freight transport will continue to grow rapidly, 2.9% for intra-EU and up to 3.9%/pa for trade between accession countries and EU. The SCENES model is currently being extended to link it to national transport models and forecasts (EXPEDITE and THINK-UP) and to allow assessment of macro-economic impacts – GDP, employment - of the TENs and other transport policies (TIPMAC).

In order to test the feasibility of establishing a transport information system to support policy making it has been decided to launch under the 4th FP a practical trial application, the "Pilot for an Alpine Transport Information System (ATIS)". Although this study was applied to the limited area of the Alpine regions, it was confronted with hot policy issues with a high level of Community interest. The main achievement of the study was the successful completion of combining trade and transport data from various sources for the Alpine pilot exercise, going through the following steps: a) *Regionalisation (NUTS2 level) of the trade flows between countries per transport mode and commodity group*; b) *Implementation of the main transport chain organisation structures in trade flows*; c) *Implementation of the specific Alpine transport chain organisation in trade flows over the Alps*; d) *Distribution of trade flows along Alpine crossings over all transport chain organisation structures*; e) *Assessing impacts related to Alpine Transport Policy issues (e.g. pricing, combined transport)*.

The work carried out through this pilot resulted in the creation of a potentially useful tool for policy which was shown to be capable of supporting decisions on infrastructure developments (e.g. in the case of TEN-T, Brenner corridor). The potential for extension and improvement of the ATIS system will be discussed in the 5th FP thematic network ALP-NET.

The key output from MAESTRO is the MAESTRO Guidelines. The main purpose of the Guidelines is to aid the decision-making process for the selection, design and evaluation of transport pilot and demonstration projects in Europe. The MAESTRO Guidelines bridge the gap between different decision points and evaluation phases in a pilot and demonstration project and are considered to be the first set of guidelines that are readily applicable throughout the entire lifecycle of a pilot and demonstration project. The Guidelines are designed to appeal to a wide range of end users. Within the Guidelines, four key groups are identified, which reflect the role of the user in the pilot project and demonstration project process and the type of information they require in order to carry out their role more effectively. In addition to being aimed at specific users, the Guidelines are also intended to be read from a more general perspective.

The Guidelines divide the process of conducting pilot and demonstration projects into 3 parts:

1. **Before the project begins**, when users define their specific transport problem and decide whether a p/d project is the most appropriate way to try to solve the problem.
2. **During the project**, when users apply the MAESTRO Methodology to address the issues associated with setting up and conducting the project.
3. **After the project**, when users consider how best to use the project results, and whether to proceed to full-scale implementation.

The Information Society Technology program (IST) was implemented under the 4th and 5th R&D programs. The year 2000 has seen major developments in the European policy with the eEurope initiative providing a driving force towards an Information Society and with the “European Research Area” providing an orientation for future framework. IST has proven to be well aligned with these policy areas. A quality assessment carried out of the IST program points to tangible contributions and the impact that this research has already had on these policies. Some progress and achievements are summarized below by main areas:

8.2.1. *Systems and services for citizens (Key Action I–KAI)*

Successful results continue to flow from the *Telematics Applications Program*:

- In the *Health* sector, transportable, fully functional telemedicine workstations have been produced and an on-line, standardized European database established for organ transplants (TELEINVIVO and RETRANSPLANT). In the Persons with Special Needs domain special interfaces have been developed to enable elderly and disabled persons to participate more fully in the Mobile and Wired (Internet)worlds (MORE and WAI), and advances have been made in terms of sophisticated, automated wheelchairs (TRANSWHEEL).

- Co-operative, digital, multi-lingual *Public Administrations* platforms providing new models of service delivery have been demonstrated in cities, regions and in towns all over Europe (CITIES, NET FOR NETS and others).
- Successful projects in the *Environment* sector have demonstrated accurate, real-time large-scale monitoring of water quality, the provision of European wide data on environmental data for citizens and Coastal Zones Management (INION, IRENIE, THESIS).

In *Transport and Tourism* successfully concluded projects have provided multi-modal traveler information, integrated road transport management, standardized electronic fee collection systems and commercialized products for the emerging aeronautical telecommunications network as well as demonstrating the possibilities for integrated tourism services (PROMISE, QUARTET+, KAREN, A1, EOLIA/ProATN, EU-SPIRIT).

8.2.2. *New Methods of work and electronic commerce (KA II)*

Work in Key Action II stems from the vision of a global networked economy where consumers, workers and enterprises can seamlessly and dynamically come together and interact through an infrastructure that promotes both trust and confidence. The objective of this key action is to pave the way for Europe to capitalize on this vision and, in the process, enhance the competitiveness of its enterprises, empower its citizens (as consumers, workers and entrepreneurs), and provide for a more sustainable economy. In this context, key requirements include the research and development of architectures and solutions that emphasize interoperability.

8.2.3. *Multimedia content and tools (KA III)*

Good progress was made on projects addressing digital libraries; acquisition of complex knowledge and skills; virtual learning communities; multi-linguality; natural and multimodal interactivity; cross-lingual knowledge management; intelligent interactive information presentation. International co-operation was further enhanced in most KAIII areas through joint workshops involving primary actors from the US, Russia and countries in association. The Cultural Heritage Applications Unit has signed an Understanding on Co-operation with the Digital Libraries Division of the National Science Foundation (USA) to cover co-operative activities in the digital libraries field, following similar synchronization between the Foundation's Intelligent Systems Division and the Human Language Technologies Unit in 1999. KAIII contributes to EC policies in Education and Culture (cf. "eLearning: Designing Tomorrow's Education", SOCRATES and LEONARDO, the MEDIA programs, Culture 2000), to the eEurope Action Plan (50% of ongoing KAIII projects contribute already to *eEurope*, in particular to the action lines relating to a knowledge-based economy and to digital content), and to the follow-on program to INFO2000 and MLIS. Awareness and dissemination have so far been limited to building up a sustainable Web presence and active participation in primary international events (e.g. Frankfurt Bookfair, Milia 2000, etc) but are expected to gather momentum in the course of 2001.

8.2.4. *Essential technologies and infrastructures (KA IV)*

Under this action support is given to projects dealing with:

- Work for terrestrial wireless and integrated *satellite networks*, systems and services often addressing the interworking of terrestrial networks with satellite broadcast.
- computing, communications and **networking, programmable** Virtual Private Networks (VPN), communications capabilities in embedded (Web) systems, interactive gateways, network management and fixed/mobile convergence, and core networks.
- Software, systems and services where particular foci are on distributed software development and end-user services, and specific attention is paid to free / open source software.
- Simulation where focus is on the real-time, large-scale dimension, and in visualization and interfaces bridging the gap between real and virtual worlds as well as on interoperability between audio-visual services on different networks and between different metadata systems
- Mobile and personal communications and systems: work carried out to fulfil the objective of integration of various radio and network access technologies contributing to the further longer term evolution towards 4th Generation wireless systems and to the necessity for further development of software re-configurable systems and networks.

8.2.5. *Research Networking*

The two objectives of this action line are:

- to upgrade the European backbone for Research to gigabit/s capacity. The launching of the GEANT Network represents the achievement of an important milestone in the e-Europe 2000 action plan;
- to facilitate advanced network-based applications through test-beds needed to test, validate and demonstrate new technologies and services in real-world settings. This is achieved through the work of 11 projects launched in 2000. The main areas addressed are optical terabit communications (ATRIUM), next generation networking (NGN Lab), access technologies (TORRENT and MOICANE), QoS (SEQUIN), IPv6 (LONG, 6WINIT), grid technologies and applications (EUROGRID, DATGRID and DAMIEN) and virtual communities (SCHOLNET and MOICANE).

More details of the IST projects can be found in the IST URL:
<http://www.cordis.lu/ist/>

9. FINAL CONSIDERATIONS

Final considerations

The 2000 annual report on TEN shows in detail the development of the trans-European networks – as well as the related financial support from different Community sources. Behind a rather positive picture of the situation, in budgetary

terms, the Commission has identified a series of weaknesses and gaps, in particular in the TEN-transport implementation, that require tackling with care in the coming years.

As far as TEN-transport is concerned, one of the most critical aspects that has characterised transport in past years is the significant increase of road freight transport and the dramatic reduction of the share of the other modes – in particular rail – leading to an increased imbalance between modes. The pressure of heavy lorry and car traffic not only on the main trans-European network but also on regional infrastructure and inside the cities, has generated a high level of congestion and severe impacts on the environment and the daily life conditions of millions of European citizens.

Despite a significant level of investment on the rail network through Member state financing often combined with European funds, long delays in implementation have been identified in particular where major cross-border projects are concerned. Based on the current execution rate, some of the major projects which appear in the 1996 TEN-T guidelines would not meet the 2010 deadline. It is likely to take at least 15 years before all the specific projects identified in the Annex III of these guidelines are completed. Among these projects, the Alpine crossings (Lyon –Torino and the Brenner) are those facing major delays. Delays which are due to the larger difficulties in terms of planning, co-ordination and financing in implementing trans-European cross-border infrastructure, as well as to the limited political interest for these projects as compared to purely national ones.

The present rail transport network has limited available capacity to absorb any increase of trans-European traffic flows, leading to a reduction of attractiveness of rail for freight transport. Rail bottlenecks affect about one tenth of the total length of the TEN-T network. The situation is difficult in the transit corridors from the North to the South of Europe, in the Alps, but also in the Pyrenées, where the French and Spanish networks are not interoperable due to different track gauges. Rail nodes, where different categories of traffic meet, are also severely affected by bottlenecks and they represent one of the major constraints for the development of rail freight. In the near future, due to the enlargement process, the East-West rail corridors could also be affected by congestion, given the foreseen increase of the exchanges between the Community and the candidate countries.

To tackle these problems and to cope with the challenges of transport for the next decade, the Commission has clearly identified the development of rail, and in particular the financing of rail infrastructure, as one of its main priorities. Since the adoption of the TEN Financial Regulation in the middle of the 90's, priority is given – for the TEN-T budget - on rail. In 2000, around two thirds of the available funds have been devoted to rail projects; that target fully complies with the recommendations of the European Parliament. These figures also include support to traffic management projects which represent one of the sectors where improvements are necessary to achieve a fully interoperable rail network.

However, in the past, the same degree of priority has not been given to rail by other Community funds, in particular structural funds, despite the clear political orientation of the Community towards more sustainable mobility since the early 1990's.

TEN roads are also congested but the construction of additional high capacity trans-European roads (apart from the need to connect remote, landlocked peripheral areas) will not drastically improve the situation. This option only represents the last resort which could soon lead to additional congestion. The real challenge is the transfer of the growth of long distance traffic from the road to other, more environmentally friendly modes, such as rail, inland waterway navigation or short sea shipping. This re-balancing of modal shift appears to be the only viable long term solution. It will require a better use of the existing capacities (which are large, as regards inland waterways and maritime transport) and the completion of missing links, as well as more efficient intermodality.

A more co-ordinated planning – though this remains the responsibility of each single Member State - and financing approach is therefore needed in the future, focusing the Community support on the more environmentally friendly modes on the main TEN corridors (bearing in mind the forthcoming enlargement) and concentrating the support to a more restricted number of projects, in particular those with low financial profitability but high trans-European added value.

It therefore appears that both the TEN-T guidelines which determine the eligibility of projects to Community funding and the management of Community financing need to evolve. The current revision of the guidelines by the Parliament and Council should aim at identifying a smaller number of major projects like the specific projects (the so called 14 « Essen » projects annexed to the present guidelines) or thematic priorities designed in view of a sustainable development of the main TEN corridors. A higher commitment of the interested authorities should also be sought. As part of this process, a first amendment of the TEN-T guidelines is to be adopted by the end of 2002.

As far as the TEN financing through the TEN-T budget is concerned, the new financial regulation entered into force in 1999. This regulation introduced a new financing management instrument to support TEN projects, namely the Indicative Multiannual Programme (MIP) is a tool, which aims to concentrate up to 75% of the total budget amount – 4.17 billion € - for the period 2000-2006 to specific priorities. These are either the specific projects (the 14 “Essen projects”) or other projects presenting a high degree of priority and community added value such as the « rail bottlenecks », « cross-border » links or Intelligent Transport Systems.

In the near future, additional groups of projects could be added to this list – safety (for all modes) and interoperability aspects should be amongst the new priorities. In addition, more priority should also be given to the development of a « dedicated » rail freight network. Rail freight infrastructure has always suffered from a lower degree of priority with respect to passenger traffic. The result is that passenger transport by rail - in particular High Speed - is highly competitive with respect to road or air transport, whereas rail freight is weak and loses market share. Further to that, the MIP provides assurance to project promoters that funds will be available, on an indicative basis, over several years, but under certain clear conditions. A « framework » decision was adopted on the 18 December 2000 , providing a clearer picture of availability of funds between 2001 and 2006, and guaranteeing the continuity of cofinancing over a long period (this was not the case until now, as decisions granting support were taken on a yearly basis). This financing « tool » is extremely important, in particular, for large infrastructure projects.

The question of the level of financing may be raised at this stage. The Regulation 2236/95 modified by Regulation 1655/99, allows support of up to 50% of the total cost of studies and up to 10% of works. Despite the catalysing role of Commission support, experience has shown that, for some projects, in particular cross-border rail projects, the current support level is not attractive to play a leverage effect and to attract private capital - in particular for Public Private Partnership (PPP) - despite promising traffic forecasts. The increase of the maximum rate of Community support, - not taken into account in the new financial regulation is therefore particularly important and needs to be tackled in the near future.

The financing aspect remains the key element to build a more competitive rail network. However, the use of other modes – inland waterways, short sea shipping – having large available capacities, but requiring investment to improve the interconnections with the land modes should not be underestimated. These modes very likely deserve more attention from the Member States as well as from the Commission.

Community funds (grants or loans) are nevertheless far from sufficient to finance all the necessary TEN infrastructure. The cost of this infrastructure amounts to 400-450 billion €, only for the Community, to which 100 billion should be added for the connections with and within the candidate countries. Fully public financing (including Community funds) of major infrastructure is becoming increasingly difficult, whereas fully private investment has demonstrated limits and does not attract potential investors. Alternative solutions that combine public and private funds, where risks are shared but where, at the same time, a certain level of « safeguard » for the private investors is also ensured, should be developed. A first approach on PPP was developed by the Commission in 1997, through the stimulus of Commissioner Kinnock. However, the present form of PPP still does not seem attractive enough, in particular for transport projects. The development of a Community framework for the gradual implementation of infrastructure charging appears a promising way to overcome the shortage of public financing and better attract private investors. Such a framework, combined with an innovative way of financing transport project, is therefore needed and new proposals from the Commission will be put forward in the near future. A good example of this new way of financing is represented by the Øresund bridge – connecting Sweden to Denmark – which was supported through the TEN-T budget and was opened to service in August 2000.

Despite significant progress in the implementation of the TEN-T, a lot still remains to be done. The development of the TEN-T network is, and will be in the coming years one of the major challenges that the Community will have to tackle. Transport infrastructure is likely to be one of the pillars to build « bridges » between the Community and the acceding countries, to allow people to travel, goods to move as well as ideas to go through the former borders. However, the development of infrastructure is one of the main condition – but not the only one – to ensure a good functioning of the network. It requires an appropriate use of the infrastructure and a high service quality, which can only be reached through an integrated and open transport market. This is the condition to reach a high socio-economic return of the high investments required by some modes, in particular the railways. It also needs a clear definition of transport and network strategy as well as good co-operation and co-ordination within the Community.

Finally, GALILEO, a project destined to have a heavy impact to the transport sector, needs to be mentioned. It is a clearly trans-national project that represents the first satellite positioning and navigation system ever conceived for civil purposes. The conclusions of the Cologne, Feira and Nice European Councils underline the strategic importance of this project in political, economic and technological terms. In fact, in political terms, the European Union intends to develop a system capable to meet the need for precision, reliability and safety as well as ensure its independence from the American monopoly; in economic terms, the development of the market of the applications services offered by the GALILEO system will yield considerable benefits; last, in technological terms, GALILEO will allow the European industry to achieve its independence in the field concerned.