

EUROPEAN UNION

Technical Assistance to the Southern Republics of the
CIS and Georgia

TRADE AND TRANSPORT SECTORS

Terms of Reference

for

**A Joint Venture for the
Trans-Caucasian Railway**

Final Recipients:

TRACECA Region Ministries of Transport

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1. Introduction and background

- 1.1 A decision was taken by the Council in July 1995 to encourage mutual co-operation in the area of the Caucasus and adjacent territories and to introduce sustainable projects involving a number of countries to this end. This was confirmed by a meeting in October 1995 between the Prime Ministers of the republics of the region. It was agreed at this meeting that
- (a) the Governments of the Caucasian Republics are in favour of regional collaboration in matters of mutual interest and given suitable conditions
 - (b) one of the areas of mutual interest is transport and a feasibility study should be prepared to provide a design for a future Joint-Venture involving national railways and ferry transport which would be undertaken when conditions in the area make it feasible. Such a Joint-Venture could form a framework for investment from Europe
 - (c) the study should initially embrace the three railways of Azerbaijan, Georgia and Armenia and the ferry boat connections between Baku, Krasnovodsk and Aktau.
- 1.2 The study would complement other studies undertaken as part of the TRACECA programme (Transport Corridor Europe Caucasia Asia) which was created as a component of the TACIS (Technical Assistance to the Community of Independent States) programme.
- 1.3 The Trans-Caucasian railway service should be examined with the short term problems and interests of Azerbaijan, Georgia and Armenia in mind but also taking into account the long term transport development possible in the corridor from Europe / Caucasia / Asia.

1.4 The short term considerations that should be taken into account are

- (a) that Armenia relies on Georgian railways to secure services to and from the North, an unreliable supply of electric power for railway traction and shortages of diesel fuel, the poor state of the railway track especially in mountain areas and the decline in traffic due to changed industrial structures and trade and transport patterns in recent years. Problems were exacerbated by the earthquake of 1989 and the regional military conflicts. Armenia is now short of funds for reconstruction and development of both its road and rail transport system.
- (b) the decline in freight traffic on Georgian railways from some 35 million tons/year under the Soviet system to between some 1 and 1.5 million tons in 1994. This is in no small part the consequence of the cessation of the "command" economy. The railways asset base is eroding with unsatisfactory permanent way (rails, sleepers and ballast), bridges requiring urgent replacement or repair, stolen signalling equipment and little technological innovation to provide the capacity for anticipated future services required or even to provide for the current demands for the conveyance of "food aid". There are few funds available even for the most urgent replacements.
- (c) the necessity for almost total reconstruction of the railway in Azerbaijan where equipment needs to be renewed and radical physical and management restructuring is essential. Since the COMECON days, Azerbaijan Railways has lost 90% of its freight traffic and 60% of its passenger traffic. A total of some 900 kms of track needs to be replaced, only 30 locos out of an inherited fleet of 560 locos are available for traffic and tele-communications and signalling are poor.

1.5 This deterioration of assets and services is in an area where people have suffered extensively from military conflict but which could now respond to the economic exploitation of Azerbaijan and other neighbouring state's hydro-carbon, oil and gas production potential following the new discoveries along the "Aspheron Sill" in the Caspian Sea. It is conservatively estimated that there is between 4-7 billion barrels of oil some 100-300 meters below sea level. Extraction will require the technologies currently used in the Gulf of Mexico and the North Sea. The skills exist locally for "offshore" drilling platforms to be built in Baku but the high technology for deep water extraction needs foreign expertise. International consortia are currently planning oil pipe lines for crude oil and gas and consideration is being given to a pipe for the 840km from Baku to Batumi as well as using the existing pipeline through Chechnya and Russia.

- 1.6 With a development of oil reserves comparable to, if not larger than, those of Saudi Arabia and production eventually peaking at some 700,000 barrels a day, the impact on the economies of Azerbaijan and its neighbour states is likely to be very significant.
- 1.7 It is in the light of this recent^{rail} development and the peaceful exploitation of other assets in the region that declining transport facilities and services should be reviewed. Some work has begun with the assistance of a number of lending agencies but current investments proposed are not enough to ensure the required improvements to capacity and efficiency. For the movement of food aid and to improve the railway system rail track is being repaired and new sleepers provided, rolling stock is being repaired, some bridges restructured and rail access to the ports of Poti and Batumi rehabilitated.
- 1.8 A radical new approach with private funding and management of state railway assets may be the solution to under-funding, poor services and inadequate financial returns from the railways. It may also help direct the funds made available from donors into areas which would help to ensure more efficient operation. A reconstructed and jointly operated railway from the Black Sea to the Caspian could become a model for rail transport re-organisation for the TRACECA programme. This is particularly important now that the empirical central directives and instructions from Moscow are no longer manifest and the responsibilities for management now lie with the newly independent states, a development which has clearly identified gaps in those managements and shortfalls in performance of the railways.

2. Project objectives

2.1 The overall goals of the project are therefore

- (a) to promote co-operation in the region
- (b) to encourage mutual co-operation between the republics of the region and promote use of the Europe, Trans-Caucasian and Central Asian rail transport corridor.

2.2 The project purposes are

- (a) to provide an efficient railway service in the region acceptable to the users and potential users in the TRACECA corridor
- (b) to ensure that the railway service provided is economically, financially and environmentally satisfactory to the Governments involved
- (c) to identify the framework of a Joint Venture between Azerbaijan, Georgia and Armenia with possible investments of European parties on a sound commercial basis which is agreed between the parties concerned, and
- (d) to consider the possibilities of a multi-modal service based on a re-structured railway network and ferry-boat links.

2.3 The results of the project would be the establishment of a Joint Venture to establish an organisation involving the Republics of Azerbaijan, Georgia and Armenia and the improvement of passenger and freight services as the consequence of improved railway

- (a) management
- (b) infrastructure
- (c) operations and engineering
- (e) finances, and
- (e) staff conditions and performance.

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- 2.4 These improvements should also be considered in the case of possible future relations with road passenger and freight services and those provided by ferry boat and other shipping services in the Black and Caspian Seas as links to Europe and Central Asia in the TRACECA programme.
- 2.5 This must, amongst other things, take into account,
- (a) past perceptions of railways as a public service and a production orientated activity rather than one required to cover costs in a market economy
 - (b) that the railways were until recently directed from the centre of the USSR "command" economy to achieve strategic objectives for the overall Soviet economy
 - (c) the apparent belief that rail transport is necessarily a cornerstone of economic well-being in the newly independent states and that massive cross-subsidy by one service for another necessarily enhances that well-being
 - (d) that those who administer a railway under the current system may be less interested in the service given to ~~users~~ and ensuring ~~revenues~~ exceed expenses than in their own organisation, domain and status, and
 - (e) that when funding for maintenance or operational improvement is provided by the Government through a separate Ministry to that dealing with transport, such as the Ministry of Finance, the decisions given may be political as well as in the interests of railway users.
- 2.6 The objective will be met by
- (a) agreement on a Joint Venture Agreement drawn up for the three Governments to sign and implement
 - (b) detailed headings and arrangements for sub-contracts for joint operations, provision of maintenance facilities and services
 - (c) restructuring transport facilities and services to ensure long term economic viability, and
 - (d) production of 'business' strategies to ensure good management and proper consideration of public interest.

3. Relevant project reports and data available

- 3.1 The project reports shown as available in Fig 3.1 could be provided. Project reports expected to be available in 1996/7 are shown in Figure 3.2. There is other data available and a great deal of background reading on the economic and institutional changes which have taken place since the secession of territories from the former USSR.
- 3.2 It must be recognised that the political and administrative changes which have taken place in recent years have had a profound effect on those currently acting as administrators and managers of railways who now have financial as well as logistical responsibilities. It is an important consideration in any strategy for development.

Fig. 3.1 Project reports available

1. Transfer: Legal Framework - Kingston Consultants Dec. 1994
2. Information Systems Data Flows - Euriware and Eutelis Dec. 1994
3. Rising Level of the Caspian Sea - Soframer July 1995
4. Human Resources: Railway Training - UIC Dec. 1995
5. Azerbaijan Railways - Interim - Neth Consult July 1995
6. Armenia Highway Survey - Technechon January 1991
7. Armenia "Government Advice to Railway Department" - Eurail Consult and Sofrerail Nov. 1991.
8. World Bank Country Study of Azerbaijan - From crisis to sustained growth - Sept. 1993.
9. World Bank Country Study of Georgia - A blueprint for Reforms - Oct. 1993
10. World Bank Country Study of Armenia - The challenge of reform in the agricultural sectors - May 1995.
11. Traffic Forecasts for the Ports of Poti and Batumi - Hamburg Port Consultants Aug. 1995
12. Forwarding Agent in Georgia - TIMOG June 1994



Fig. 3.2 Project reports expected 1996/7

1. Road Transport Services - DHV Consultants Oct. 1995 / August 1996
2. Intermodal Transport - BCEOM Oct. 1995 / Oct. 1996
3. Human Resources : Transport Management Training - Neth Consult Oct. 1995 / April 1996
4. Regional Traffic Forecasting Model - W.S. Atkins Oct. 1995 / Jan. 1996
5. Transport Legal and Regulatory Framework - Scott Wilson Kirkpatrick Oct. 1995 / Oct. 1997
6. Implementation of Pavement Management Systems - Kocks Consult Oct. 1995 / Dec. 1997
7. Human Resources : Maritime Training - HPTI Oct. 1995 / Dec. 1996
8. Rolling Stock Maintenance - tender launched Nov. 1995 / Nov. 1996
9. TRACECA Trade Facilitation - tender launched Nov. 1995 / Nov. 1996
10. Railway Infrastructure Maintenance - tender launched Nov. 1995 / Dec. 1996
11. Ferry Terminals : Baku and Krasnovodsk - tender launched Nov. 1995 / Dec. 1996

4. Scope of work

4.1 The scope of work required involves consideration of

- (a) trade potential, investment needs and framework for development given different political and social developments in the region
- (b) possible joint venture arrangements, management, investment and business strategies for a reconstructed transport service
- (c) economic and financial appraisal of relevant alternative strategies and
- (d) an agreement for a Joint Venture.

4.2 The work under this assignment should be undertaken in close collaboration with other TRACECA project teams working on relevant matters as indicated.

4.3 The work Tasks considered necessary are

A Potential trade and framework for development under different political and social developments

Task 1 Trade potential and forecast

This would be to examine trade and business prospects in the catchment area of the proposed railway and ferry services, identifying imports and exports, internal and external trade patterns and associated movements. Forecasts of trade would be required for the next 20 years. This would include examination of the plans of the oil consortia in Azerbaijan, gas and oil pipelines and the secondary activities following extension of refining in the Baku area and possibly elsewhere. (This is in cooperation with the regional traffic forecasting model development.)

Task 2 Inventory of present assets

To complement the studies of Task 1 there should be a review of the current railway and transport institutions which cause difficulty to managers and operators supplying services to users. This would establish amongst other things the deficiencies in equipment, facilities, skills and freedom to act which create 'bottlenecks'. This requires study of the personnel available for work, their

abilities, the policies of Trade Unions and the social standards set by the Government and between representative parties. It requires appraisal of the suitability and condition of equipment and rolling stock, track, bridges, signals and telecommunications. (This based on the work of the team working on infrastructure maintenance and pre-investment study Baku - Tbilisi - Batumi -Poti) When this is being done the availability of power supplies needs to be assessed. It also requires study of controls of passenger fares and freight tariffs and for the supply of ancillary services. In this connection cost recovery should be assessed on the basis of a realistic accounting system reflecting current replacement of rather than the historic value of assets. At the same time any social or political legislation, convention or attitude likely to militate against proposed modest or radical reform needs to be noted. The capacities of other railways, complementary ferry services and the ports of Batumi, Poti, Baku, Aktau, Krasnovodsk, Trabzon or ancillary road services which could affect the performance of the railway would need to be noted and commented upon.

Task 3 Identification of investments required

These would involve identification of the investments required to make the railway and ferry services reasonably efficient and capable of providing services which would match those which could be provided by road or by ship using the River Volga. (This also from the work on the pre-investment study Baku-Tbilisi-Batumi-Poti and the Azerbaijan Railway Study). It would also involve examination of the Governments' plans for highway development, with especial attention to the developments anticipated on the 'Magisteri Road'. (This should be based on a number of road studies prepared for the three countries). It also involves the study of rail links and their potential use to Novorossisk or Odessa or through Armenia to Turkey, through Azerbaijan to Iran or to the Ukraine and other parts of Russia.

Task 4 Legal and institutional considerations

The legal and institutional framework needs to be established so that the implications of the acquisition of railway assets (land, buildings and rolling stock) and the possible take-over of personnel, safe operation of trains and provision of other services, the security of assets where theft and pilferage is a problem for the conveyance of goods and railway equipment is mis-appropriated, the ownership of land and the implications of 'patrimony', the possible sale of redundant land or other assets and the implications of leasing in regard to railway management are clearly understood. The existing taxation rules and practices, possible tax exemptions for certain activities or funding arrangements or if foreign investors are providing investment monies need to be clearly defined. (This also to be based on the legal framework report completed in 1994 and commissioned to start in 1996).




B Possible joint venture arrangements, management and implementation strategies

Task 5 Management strategies and joint venture arrangement

Having ensured the appropriate levels of service to be provided in a developing competitive situation, the management strategies, the engineering requirements and the consequences of each alternative need to be examined. Management or ownership strategies would be examined including but not restricted to establishment of

- a railway 'Joint Venture' group including ferry services across the Caspian Sea with representatives from Azerbaijan, Georgia and Armenia with a president of the group provided by a third party or elected from within the group
- joint provision of workshops for locomotive or wagon maintenance or maintenance of other equipment at one or two locations for the whole 'Joint Venture'
- separate operation of the Baku / ^{Bz} Potumi / Poti line with public or private operators providing all the required services to users
- establishment of a "track company" selling journey 'paths' to existing railway operators or new operators providing railway conveyance passenger and freight
- separate operating companies buying or leasing equipment services or track space
- free ports for TRACECA corridor services
- multi-modal operations within the Joint Venture.

Project viability involves assessment of 'economic' costs and 'benefits' and assessment of environmental impact of the various options. This would be shown as development possibilities ranked according to the internal rates of return from the different investments and net present values after 20 years and be subject to sensitivity tests as appropriate.



Task 6 Financial considerations

Financial arrangements for each management or ownership strategy then need to be considered in some depth. For each alternative which could possibly be implemented successfully there needs to be an outline 'business plan' including amongst other things the source and allocation of funds over a 10 year / 20 year period as appropriate, outline cash flow indications, outline 'balance sheets', profit and loss forecasts, indication of possible equity holdings and necessary 'stand-up' financing to part provide for debt service. The budgets prepared should be in some detail for the first five years and then in outline for the following three five periods. The financial arrangements would also be set against an appropriate evaluation of assets, a prescribed desirable capital structure, share capital, debentures for loan capital and arrangements for shareholders and so on. This would take into account any agreed taxation regime for what must be considered an important national asset whether or not it is in private hands.

C Economic and financial appraisal of alternative and recommended strategies

Task 7 Proposed procedures and implementation

This Task involves identification of the procedures for the implementation of the recommended strategy. The preferred implementation strategy would be analysed and targets set in an operations plan. "Hurdle criteria" or those problems which need to be solved before the objective can be achieved should be defined and time-limits set for the 'hurdles' to be surmounted. To enable the success of the proposed strategy to be measured, suitable operating and financial ratios should be set. These would involve traffic, operating, user-service and financial ratios which could be produced at monthly or quarterly intervals. In the course of this Task possible public or private participants in the provision of railway or ferry should be identified and consulted. This may be done earlier if appropriate. This Task would involve preparing the format for possible tender invitations, provision of advice to Governments and railways on the merits of individual bids, handling of preliminary negotiations and the preparation of the main headings of suitable contract documents.

Task 8 Human resource development

Throughout the work Tasks undertaken on this project, there should be an assessment of management training needs and the provision of short courses for railway managers and technical specialists considered essential and urgent. This

would probably involve training in management, traffic costing and pricing, marketing and business strategy. These should be based on modern teaching techniques and be appropriate to the managers requiring new skills to enable them to fulfill the duties envisaged in the running of the new railway. This should be supplemented by a further training programme for managers after issue of the Final Report which would possibly be implemented by the growing TACIS training potential.

D Recommended strategy and heads of agreement for a Joint Venture

Task 9 The final report and contractual agreements

A final report would be prepared for the various Governments involved and the European Commission which would provide a detailed strategy and time schedule for implementation showing targets achieved and to be achieved and justification for the investments and restructuring of the transport systems involved .



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5. Expertise required

5.1 The project duration should not be more than 10 months. The expertise and time inputs required should not be less than

	"International" Number of Consultants	Time inputs man/months	"National" Number of Consultants	Time inputs man/months
Project Manager	1	12	-	-
Deputy Project Managers	3	30	-	-
Railway Operations Experts	1	6	1	6
Railway Mechanical Engineers	1	5	3	3
Railway Civil / Track Engineers	1	5	3	3
Railway Signalling and / Telecommunications Experts	1	5	3	3
Shipping and Ports Operations Expert	1	2	-	-
Legal Advisers	1	6	3	12
Financial Advisers / Auditors	1	10	1	10
Transport Economist	1	6	1	6
Man/month totals		87		43

5.2 The Project Manager should be responsible for the conduct of the project both within and without the TRACECA region and will co-ordinate the work of this project with that of others in the transport sector and involving trade facilitation. The Deputy Project Managers would be responsible for the project and administration in the three capitals, Baku, Tbilisi and Yerevan. Other experts would base their activities mainly within the region.

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- 5.3 It is required that full use be made of local experts and institutions in relevant transport disciplines and
- (a) full use is made of local experience and data bases, and
 - (b) skills are transferred to the Government administrators and railway and ferry-boat operators to ensure continuation of the activities recommended and to meet the criteria set as a measure of successful project implementation.
- 5.4 The Project Manager and the appropriate Deputy Project Managers would also be required to attend the monthly meetings of the proposed regional co-ordination committee of TRACECA.

6. Timetable and reporting

6.1 Reports should be delivered to the TACIS organisation of the EU and to the Governments of Azerbaijan, Georgia and Armenia as follows

- (a) an "Inception" report to be issued within two months after the agreed start date and commencement of work to summarise initial findings and any proposed modifications to methodology or the work plan. This will take into account other Technical Assistance provided in the region to avoid duplication of effort
- (b) an "Interim" report after six months from commencement of work showing progress of work and findings
- (c) a "Draft Final" report at the end of the tenth month following commencement of work on the agreed start date
- (d) a "Final" report one month after receipt of comments by the Governments involved and the EC. Comments from all parties will be submitted to the Consultants within six weeks of the submission of the Draft Final Report.

6.2 A copy of each report will be issued in the Russian Language within one month after issue of the report in English. Each report will include a brief "Executive Summary".

6.3 The number of copies to be provided is as follows

	in English		in Russian	
	EU	Governments	EU	Governments
Inception Report	2	3	1	6
Interim Report	2	3	1	6
DFR	5	6	1	12
Final Report	10	15	2	15

