EUROPEAN UNION - TACIS

Technical Assistance to the Southern Republics of the CIS and Georgia - TRACECA

TRADE AND TRANSPORT SECTORS

Terms of Reference

for

Infrastructure Maintenance 2:

- Feasibility study for upgrading of Sayak Balkhash Mointy line
- Proposals and Training to improve Freight and Passenger traffic on Traceca route
- Feasibility study for Chardzhev bridge

Railways

Final Recipients: TRACECA Region Ministries of Transport

Infrastructure Maintenance 2 +Proposals and Training to improve Freight and Passenger traffic on Traceca route

Railways (TRACECA Project No. 14a)

CONTENTS

- 1. Introduction and Background
- 2. Project Objectives
- 3. Module A: Feasibility study for the upgrading of the Sayak Balkhash Mointy line in Kazakhstan
 - Module Objectives and Scope of Work
- 4. Module B: Proposals and Training to improve the freight and passenger service on Traceca and Europe-Asia route from operational and commercial point of view
 - Module Objectives and Scope of Work
- Module C: Feasibility study for a key bridge on Traceca route
 Module Objectives and Scope of Work
- 6. Other Related Projects
- 7. Local Participation
- 8. Foreign Expertise
- 9. Logistics
- 10. Time Table and Reporting

1. Introduction and Background

- 1.1 During May 1993 a conference was held in Brussels organised by the Commission and attended by authorities of the eight Republics of the south of the former USSR:
- Armenia,
- Azerbaijan,
- Georgia,
- Kazakstan,
- Kyrgyzstan,
- Tadjikistan,
- Turkmenistan,
- Uzbekistan.

They are the Beneficiary States of this programme.

The objectives of the conference were:

- to stimulate cooperation among the participating Republics in all matters pertaining to the development and improvement of trade within the Region
- to promote the Central Asian Trans Caucasian Europe Transport Corridor
- to identify problems and deficiencies in the Region's trade and transport systems
- to define, in terms of contents and timing a Technical Assistance Programme to be financed by the European Union (EU).

TRACECA (Transport Corridor Europe Caucasus Asia) was thence created as a component of the TACIS interstate programme.

1.2 The "Brussels Declaration" issued at the conclusion of this conference recommended the European Union to address in the TACIS programme variously expressed needs for feasibility studies and technical assistance projects.

Regional sectoral Working Groups (trade, rail, road, maritime), composed of experts and officials from each TRACECA state and the EU, have been established as part of the TRACECA programme. They meet periodically in the Region. They have inaugurated specific projects including this present one, and will monitor results.

A strategic study for Central Asia has recently been completed by the EBRD under TACIS financing (see 6. Other Related Projects).

1.3 National and Regional Technical Assistance projects carried out, approved or prioritised to date, are mostly aimed at halting a deterioration of the existing transport system due to maintenance difficulties, and obsolescence. Few consider reinforcing capacity. In fact transport demand has declined since the break up of the FSU.

TACIS - TRACECA PROGRAMME

Radical Institutional transformations are taking place in the region. The transport system has been particularly affected by these, especially the rail sector which has been fragmented into national entities.

1.4 The splitting up of the FSU and the creation of new independent railways profoundly distorted the organisation of railway transport and the execution of railway maintenance, repair and replacement activities in the TRACECA states.

Tariff structures under the old regime were detached from economic considerations. It is by no means easy for regional authorities to inaugurate a market-based system.

- 1.5 This project is aimed to provide Technical Assistance and Training to all rail organisations in the region in the following activity areas:
- -infrastructure maintenance, repair and upgrading
- -operations and commercial performance of railway transport
- 1.6 After consultation of the TRACECA states, and taking into account the restructuring efforts to be addressed and / or already under way, three Modules were identified for execution under the present project (identified as Modules A to C hereafter), budgetted at 1.2 Mecu in total:

MODULE A : Feasibility study for the upgrading of the Sayak - Balkhash - Mointy line in Kazakhstan

MODULE B: Proposals and Training to improve the rail freight and passenger service on Traceca and Europe-Asia routes from operational and commercial point of view

MODULE C: Feasibility study for a key bridge on Traceca route: Including the full inspection of an existing rail bridge, and review of an existing feasibility study for a new road-rail combined bridge over the Amudarya river (Chardzhev area) in Turkmenistan

2. Project Objectives

- 2.1 The general objectives of this project are threefold:
- (i) Provide feasibility study for the Sayak Balkhash Mointy line upgrading.
- (ii) Survey, training and recommendations to investigate and improve the overall rail traffic service quality on TRACECA and Europe Asia main rail route
- (iii) Feasibility study for the development of the Amudarya road and rail crossing at the Chardzhev site

2.2 Proportional balance of modules in the total project

The three modules are equally balanced in the project.

2.3 The consultant will clearly specify in his proposal the nature and the cost of equipment and supplies, training aids, hardware and software that he intends to deliver to the beneficiaries to support the implementation. It is suggested that 20% of the total budget of the project will be used to this purpose.

3. MODULE A:

Feasibility study for the upgrading of the Sayak - Balkhash - Mointy line in Kazakhstan

3.1 Introduction

The Sayak - Balkhash - Mointy single track line is an essential part of the TRACECA and Europe - Asia main rail routes.

It is the continuation of the railway line Urumqi - Druzhba - Aktogay, linking China with Kazakhstan, and the Aktogay - Sayak section. This rail line connects, most importantly, further westwards towards the port of Aktau on the Caspian Sea, to the Traceca region south and to Russian border points in the north-west.

Improving transport capacity on east-west links fits in the framework of national and regional developments. At the purely national level, Kazakhstan wants to improve a short east - west route, the only alternate today being a long detour to the north passing over Russian territory. Investments for the port of Aktau are already planned, as is the upgrading of the Druzhba - Aktogay rail section.

The Aktogay - Sayak single track section, which is not part of the technical upgrading project, but evidently has to be included in the regional economic analysis, is 184 km long and was completed in 1986-87. This is basically a new line, comprising only a few crossing and loading/unloading stations, and does not require technical upgrading. This section is equipped with a centralised dispatching system.

The construction of the Sayak - Balkhash part is related to the Sayak copper deposit, and a copper smelter at Balkhash. The Sayak - Balkhash part was constructed in 1964; transport sharply dropped after the copper excarvation activities were abandoned.

The Sayak - Balkhash - Mointy single track section is 208 + 131 km long and in a serious state of disrepair. There are 3 + 6 intermediate loading and unloading stations.

3.2 Objectives and Main outputs

Provide feasibility study for the Sayak - Balkhash - Mointy line upgrading.

The following outputs are judged to be the most important:

- Traffic forecasts are to be worked out very thoroughly
- Economic and financial analysis is to be carried out according to international standards, and should be linked to the possible commercialisation and restructuring of Kazakhstan railways
- Technologically advanced solutions are to be proposed.

Design work is not the core part of the technical assistance effort

3.3 Scope of Work

The feasibility study for the Sayak - Balkhash - Mointy line upgrading will include :

3.3.1 Traffic forecasts

Traffic volumes (tonnage, number of trains, etc.) on the rail line shall be identified per line section for the years ahead. This estimate will be based upon economic analysis, e.g. the localisation of the potential customers and the volume of through traffic, taking into account different hypothesis.

The traffic volume forecast should be drawn up for the whole of Aktogay - Sayak - Balkhash - Mointy, as part of the national and international rail network.

Particular attention has to be paid to the effects of variations of the general level of traffic, due to changes in the execution schedule of other transport infrastructure upgradings (e.g. Druzhba terminal, Druzhba - Aktogay line, etc.).

This part of the work should be worked out very thoroughly. The consultant will rely upon locally gathered information, information available from other projects (see 6. Other related projects), and especially take into account the international dimension of the future traffic on this line.

3.3.2 Technical feasibility

A description and survey of the existing situation of infrastructure (track, signalling, buildings,...) is to be established first.

Documenation for system planning is currently centralised at the Kazguiprozheldortrans Institute in Almaty. Visual inspection and preliminary topographical surveys will complete as required the basic data.

Technical repair, upgrading and required reconstruction work (on track, signalling, buildings,...) will be assessed for the various traffic volume hypothesis and according to the prevalent construction criteria (maximum axle load and train load, maximum speed, etc.). Track doubling on some sections could be considered, depending upon the perspective of the future traffic of the line.

General layouts and descriptions of the proposed repair works and construction of new fixed installations with their main characteristics will then be worked out.

3.3.3 Economic and Financial analysis

(a) Construction and equipment cost

On the basis of the descriptions of the proposed installations, specifications of special equipment, sketches of the special structures, etc., the major construction and equipment cost items have to be identified and quantity and cost estimates for works and supplies have to be prepared. These will take into account local and foreign costs, and will include the necessary reserves for contingencies and price increases. These estimates have to be prepared in the schedule of expenditure form according to the execution schedule of each of the alternatives.

(b) Maintenance costs

Costs for maintenance and periodical replacements of fixed equipment will be calculated on a year by year basis for a suggested 20 year period.

(c) Estimates of benefits and disbenefits

In a brief study, the consultant will estimate the benefits and disbenefits of each of the alternatives considered. If possible and necessary, this study should include also indirect benefits and disbenefits of the project. The main purpose is to demonstrate the methods used in the West; it is expected that precise evaluations may not be possible.

(d) Economic and financial feasibility

The economic and financial feasibility of the different options will be assessed.

- Economic profitability of each alternative will be calculated from the point of view of the national community, taking into account both the operator, as the users and other economic agents.
- Financial profitability calculations will be made in a similar way but from the single viewpoint of the operator
- A sensitivity test will examine the effect of alterations to the basic assumptions, such as traffic levels and implementation costs, on the return of the proposed work

The calculation will be in accordance with the rules recommended by the Intenational Union of Railways and the International Finance Organisations

3.3.4 Other selection criteria

The consultant will examine other factors that may impact upon the feasibility of implementing the proposals, such as:

- Government policy and regulations
- Supply of materials and equipment
- Possible contractors
- Local and foreign funding sources

Where, as of mid 1995, the railway system is virtually an integral part of state property, the restructuring and commercialisation of Kazakhstan railways may impact in the long run upon the management system, construction, operation, tariffs applied, etc. related to this project.

3.3.5 Ranking of alternatives

The proposed solutions will be classified according to economic and financial criteria, and will include criteria not assessable in monetary terms.

From this classification, recommendations as to the solution to be implemented and its implementation schedule will be drawn up. Reports will be drawn up in bankable form.

This work being completed, the module will have reached a basic decision point, which should be reviewed by local authorities and TRACECA management.

3.3.6 Initial engineering design stage

During the remainder of the project, and depending upon the selected way forward, the consultant will work out with the local authorities the following tasks:

- Initial engineering design for the most favourable option
- Project plan
- Provide procurement / tendering advice
- Financing Strategy and Programme
- Proposal for the management of the upgrading programme

Final engineering design and preparation of tender documents are not included in the scope of work.

4. MODULE B:

Proposals and Training to improve the freight and passenger service on Traceca and Europe-Asia route from operational and commercial point of view

4.1 Introduction

- 4.1.1 In the past, railway production schedules were drawn up on a centralised basis in Moscow. Today, the railway production schedules are drawn up on a decentralised basis. They have to be more flexible and be tailored to the needs of the customers, who will decide more freely upon the most appropriate transport mode for their requirements.
- 4.1.2 Railway schedules of the various organisations have to be co-ordinated and matched to ensure an attractive and efficient offer in an international perspective.

4.2 Objectives and Main outputs

Survey, training and recommendations to investigate and improve the overall rail traffic service quality on TRACECA and Europe - Asia main rail route

4.3 Scope of Work

The study focusses in particular upon operational and commercial improvements on the main Traceca route in all five railways East of the Caspian Sea study (Turkmenbashi - Dushanbe - Bishkek - Druzhba)

4.3.1 Survey of the existing situation

- Examine the existing freight train capacity, train schedules, overall transit times, tariffs and fares, and actual performance of the rail transport operations on the mentioned route. This task will require gathering of data from railway administrations regarding the theoretical and actual timetable, to be completed by witnessing and / or sample testing of transport on the route.
- Examine the current organisation how train schedules are determined and operated in the railways along the route. This will require contacts at railway headquarters level, but probably also in districts or lower departmental levels.
- Examine the current commercial organisation of the railways along the route
- Examine the tariff structure in international rail traffic
- Inventorise and evaluate the international cooperation from operational and commercial point of view
- Inventorise delays at the border stations on the route (railway technical causes and other), their causes, and formulate proposals how to decrease or overcome them

- 4.3.2 Study visit to two European railways
- (a) The study visit participants will be drawn from the five railways concerned and will be selected by the Consultant in consultation with the TRACECA Management and National authorities.
- (b) The purpose of the study visit is to show the participants the operations and commercial organisation of Western railways related to international traffic, and more in particular:
- the organisational and technical arrangements for deciding operational transport schedules (individual wagonload and block train schedules)
- the systems and tools used (manual and computerised) to assist the middle and senior management levels to draw up train schedules, rolling stock allocation and staff rostering decisions
- the systems and tools used to monitor execution of the train service, transport quality and performance indicators
- the practice of planning and deciding international freight and passenger schedules, taking into account commercial, technical and financial requirements; the distribution within and outside the organisation of these decisions to all interested participants
- the joint use of rolling stock and maintenance facilities between EU railways
- the commercial marketing and sales functions of EU railways
- the experience of working in the market in relation with customers and in competition with other transport modes
- the operational, technical and commercial cooperation between EU railways
- (c) The study visit will cover two EU railways. The proposal will indicate the proposed study visit programme, which should last about 2 weeks for 8 participants.
- 4.3.3 Propose adjustments, on the five railways concerned, to improve the international movement of freight and passengers, the overall transport quality and transit times, etc. on the main Traceca route

Adjustments could include:

- Changes and improvements implementable in the short-term e.g. regarding train schedules, harmonisation of the tariff structures, etc.
- Suggestions in a broader context e.g. infrastructure and rolling stock improvements, modernisation of telecommunications, improved cargo transportation services, setting up a computer network on the Traceca route, changes in the railway organisation, etc.
- Suggestions for adjustments external to the railway organisations e.g. legal protection of transported cargo, other areas which require co-ordinated government initiative.

Technical assistance will be aimed at :

- identifying the changes required in the railway organisation to tailor the transport product to the requirements of the market place
- technical changes recommended in the current method how to draw up train timetables, rolling stock and staff schedules.
- definition and evaluation commercial performance

5. MODULE C:

Feasibility study for a key bridge on Traceca route: Including the full inspection of an existing rail bridge, and review of an existing feasibility study for a new road-rail combined bridge over the Amudarya river (Chardzhev area) in Turkmenistan

5.1 Introduction

5.1.1. General

(a) Present crossings of the AmuDarya river at Chardzhev comprise a rail bridge and a pontoon crossing for road traffic, with a ferry in reserve. These crossings constitue vital transport links for local and international traffic.

The crossings are situated in a wide alluvial plain. The river flow is influenced by irrigation works upstream, but is still subject to flooding. There is some navigation.

(b) The rail bridge was built at the turn of the century (1898-1901) with materials brought in by ship and rail from Kransnovodsk. It comprises approximately 25x55metre spans of simply supported steel trusses with convex upper chords. The spans are supported on cylindrical steel piers. In addition to a rail track the trusses carry HT power pylons. The rail bridge is a masterpiece of railway engineering, and is at the same time a very strategic part of central Asia rail and transport network, as it is the only rail bridge across the Amudarya river.

There are currently no speed restrictions on the bridge. From a distance the bridge shows no signs of age, distress or any other inadequacy, but the bridge is reportedly suffering from age and structural wear. Especially the foundations are said to be too light for the current rail traffic, as they were originally built for 16 T axleload, which has increase over the years to 25 T. It is said that the bridge is worn out and will have to be closed in the not so far future.

(c) The pontoon crossing is located approximately 1 km west of the rail bridge. The crossing is precarious, particularly for heavy vehicles. It is shut down for several days each year due to floods. Approach roads are indirect and encumbered by urban traffic.

(d) In 1982, a feasibility study for a new combined bridge was prepared by the Moscow Bridge Institute Guiprotransmost.

Three site options have been considered. The preferred site is close to the existing rail bridge.

Three technical options are formulated in the abovementioned study: a continuous steel truss, simply supported prestressed concrete beams, and simply supported steel trusses. All options comprise 18x110 metre spans, supported by concrete piers on deep piles (+/-42 metres). The road and rail bridges sit on the same pile caps, but are separate structures. The solutions proposed appear typical and practical FSU standard bridge designs. Reportedly the intention was to build the common foundations and the road bridge first, then the rail bridge at some later date.

Geotechnical profiles are shown in the existing feasibility study.

- (e) The planning of a new bridge will currently be influenced by the following factors:
- Road: The requirement to improve the crossing for road vehicles at Chardzhev
- Rail:
 - The outcome of the investigation regarding the life span of the existing rail bridge at Chardzhev, and the recommendations regarding its replacement
 - The new rail line Chardzhev Kerki, and the planned rail bridge at Kerki. A tradeoff between rail investments required at Chardzhev and Kerki to ensure the rail crossing of Amudarya river must be considered.

5.1.2. Security Clearances

The feasibility study and the existing site are both subject to security restrictions dating back to Soviet days. As a condition for carrying out this study, the Recipient State will be asked to make available the full feasibility study and security clearances for access by engineers to the existing bridge. The Consultant may allow for a maximum of one man.month of time to obtain the report and clearances. If after two weeks prior notice of his arrival in Ashgabad, plus two weeks in Ashghabad, all reports and clearances necessary to complete the work have not been issued to him, then the project will be put in abeyance and eventually abandoned, with a commensurate reduction in the contract price.

5.2 Objectives

The objective is to produce a comprehensive feasibility study for the development of the Amudarya road and rail crossing at the Chardzhev site, with full justifications for technical and investment recommendations made.

Supporting objectives are to:

- Inspect and assess the useful remaining life of the present rail bridge, recommend maintenance and reinforcement measures if appropriate
- Review the existing Moscow Bridge Institute feasibility report for technical validity, including environmental impact, and developing variants if appropriate
- Carry out a full economic analysis of the crossing, including traffic surveys, projections, and toll potential
- Develop an implementation plan for presentation to International Financial Institutions (IFI).

Furthermore, know-how transfer to the Recipient State is a prime objective, and local counterparts should be fully involved in all aspects of the project.

5.3 Scope of Work

5.3.1. Traffic Forecasts

The Consultant will establish forecasts for future road and rail traffic. These will be based on validated records, traffic counts, and O/D surveys which are to be conducted by the Consultant, as well as Regional economic development scenarios based on or compatible with IFI projections. Scenarios for traffic development with a new fixed crossing and without are to be projected.

The Consultant must also estimate potential future toll revenues from an eventual road (and/or rail) bridge.

The Consultant is to explain in his tender his data collection, user survey, traffic and revenue forecasting methodology (see also Section 6.2)

5.3.2. Inspection of the Existing Rail Bridge

The Consultant will carry out a thorough inspection of the existing rail bridge. He will estimate the future useful life span of the bridge taking into account the expected intensity of traffic both in load and volume.

He will determine items, methods and costs to carry out urgent repairs, if any.

He will review actual maintenance practice, make recommendations on future systematic maintenance, as well as any exceptional requirements.

He will determine the technical and economic feasibility to extend the life of the existing bridge, given current and future traffic flows.

He will prepare an estimate of the cost of future maintenance requirements, for the full anticipated life of the rail bridge.

For the future rail flows, the effect of the new rail line Chardzhev - Kerki, and the possible future rail crossing at Kerki should be taken into account.

5.3.3. Review of Existing Feasibility Study - Other crossing Options

The existing feasibility study for a new combined bridge is to be reviewed, and if necessary added to, to include aspects such as:

- design standards
- traffic capacity
- geotechnical conditions
- hydrological conditions and navigation requirements
- cost of construction and maintenance costs
- construction techniques
- required mobilisation of resources both local and foreign
- land aquisition, compensation payments, social impacts
- environmental impacts using recognised guidelines

The approach routes to the fixed crossings by road and rail, are to be examined for bottlenecks and necessary minimum improvements required to match an improvement in the river crossing itself.

A simple and practical solution for a fixed crossing is to be recommended, taking into account the limited funds that will be available to carry out the work, and the enormous competing demands for transport infrastructure investment throughout the Region.

Other options than a new combined road-rail bridge could also be considered, depending upon the road traffic potential and the lifespan of the existing rail bridge: e.g. a shuttle train service for road vehicles.

5.3.4. Economic Analysis

The Consultant is to calculate Vehicle Operating Costs (VOC) and Train Operating Costs (TOC) for representative vehicle categories. Cost of passengers times is also to be estimated.

A comprehensive cost-benefit study will be performed for the various crossing development options retained. This will include NPV, IRR, and other convential economic indicators. The various forecast traffic scenarios will all be considered, as well as the full costings of construction, maintenance and use.

The analysis will be performed with and without taking into account the cost of passengers time.

The sensitivity of the analysis will be fully explored.

A thirty year cost-benefit stream should be considered.

5.3.5 Recommendations for implementation

Alternative implementation plans depending on different strategies for ownership and development of a new bridge (or other type of crossing) are to be presented. This is to consider the various options for full public ownership, build operate transfer (BOT) or other formats. The most advantageous alternative for the Recipient State is to be identified.

A full financial development plan for the road and rail fixed crossings is to be made. Toll revenues at various toll levels are to be considered. Toll collection systems are to be recommended.

The optimal phasing of construction is to be recommended.

The further necessary steps for project implementation are to be described, including legal framework, tendering procedures, and site procurement.

5.3.6. Conceptual Design Documents

The final technical recommendation including drawings and specifications will be presented, in English and in Russian, in a format and in sufficient detail for tendering, for final design and construction. All available geotechnical, hydrological and other technical data will be collated in the technical recomendation, to allow tenderers for final design and construction to present alternative technical solutions. While the present Consultant is to verify all data for the credibility of the feasibility study, the eventual builders of the bridge are to be be responsible for all aspects relating to geotechnical and structural stability.

6. Other Related Projects

6.1 Several related reports prepared by Western consultants precede this project.

They include:			
THEY INCHINE:			

Rail Management Restructuring Studies Armenia, Turkmenistan, Azerbaijan TACIS Rail Sector Survey Russia, Ukraine, Kazakstan & Bielorussia EBRD Roads & Road Transport Study Russia, Ukraine, Kazakstan & Bielorussia EBRD Central Asia Outline Transport Strategy

Kazakstan, Kyrgyzstan, Turkmenistan, Uzbekistan EBRD/TACIS Caspian and Black sea Port Studies Georgia, Azerbaijan, Turkmenistan, Kazakstan EBRD/TACIS/OTHERS

ESCAP studies Asia UN

6.2 At the time of writing, the following projects, sharing certain domains of interest with this one, are expected to commence shortly:

Regional Traffic Forecasting Model and Review of Int'l Route Capacity	TRACECA
Forwarding - Multi-modal Transport Systems	TRACECA
Inland Terminals - Railways	TRACECA
Trade Facilitation, Customs Procedures, Freight Forwarding	TRACECA
Transport Legal Reform	TRACECA

Other related projects are or may be expected to commence within the timeframe of this present one.

6.3 The Consultants appointed to carry out this project are to coordinate their work closely with all other related activities within the TRACECA region. This particularly applies at the Inception Report stage, when preceding reports by others should be fully assmilated (TACIS will not provide copies of preceding reports for tender preparation). Duplication of effort is to be avoided.

In particular coordination and exchange of data with the Traffic Forecasting project is to be foreseen

The preceding listing of related projects must not be considered limitative.

7. Local Participation

7.1 National consultants should be deeply involved in all aspects of the project. All TRACECA countries have Institutions specialising in various aspects of transport planning and engineering. Regarding the bridge, it is however unlikely the find the necessary experience in Turkmenistan.

It is a firm requirement that Organisation and Methodologies include local experts and Institutions to:

- make full use of local experience, antecedent projects and data bases
- promote the emergence of a financially viable local consulting sector
- ensure the effective transfer of know-how to the Beneficiary states
- ensure the enduring effect of project output
- 7.2 Consultants should base their activities largely in the TRACECA region, carrying out the project in collaboration with a local technical organisation(s), and employing both senior and junior professional staff, from several TRACECA states.

The Consultants Methodology should fully explain his training and transfer of know-how programme within the project.

Consultants must make amply clear in their proposal the arrangements they have made to work with local entities.

8. Foreign Expertise

The Consultant is free to compose his expatriate team for this project as he sees fit, but the following domains of expertise should be clearly visible in his proposed staff list:

- infrastructure planning
- infrastructure construction and repair experts (track, bridges, signalling, telecom)
- rail operations
- rail transport planning and management
- rail freight marketing
- rolling stock management
- workshop management, engineering and equipment
- investment planning
- rail transport economics
- road transport economics

9. Logistics

The Consultant shall be responsible for arranging necessary living accommodation, transportation, telecommunications, equipment, surveys, investigations, document reproduction, printing, secretarial services, office space and all other input required for the purposes of the work.

10. Time Table and Reporting

- 10.1 The project is to be completed within a period of twelve months.
- 10.2 All reports are to be delivered in the numbers, languages and locations as follows:

	Bound		Loose-leaf		Diskette
TACIS Brussels	English 5	Russian 1	English 1	Russian 1	(Eng.+Rus)
TRACECA CU (per state)	I	5	1	1	0

The word processing programme to be used will be agreed with TACIS.

10.3 Reporting is to be in accordance with standard TACIS Guidelines. These foresee:

Project inception report

An Inception Report shall be issued within 2 months of the start of the project. It shall summarise initial findings and propose any modifications to the methodology and work plan. In particular it will adapt the work plan to the needs of each individual TRACECA state taking into account the parallel activities of other Technical Assistance programmes, avoiding duplication of effort, and addressing unfilled needs.

It will also confirm or modify institutes/organisations/consulting bodies to be directly involved in the implementation.

It will firm up or alter, if required, the arrangements planned for the study visit part of the work.

Project progress report

This report will be submitted at the end of month 6. It will cover technical progress to date.

One month will be allowed for TACIS to consider the contents and to orient the further phase of this project.

Final Report

The Draft Final Report for Module C will be issued at the end of Month 8.

The Draft Final Report for the other Modules will be submitted at the end of month 12.

Any comments on the Draft Final Report will be issued by TACIS Brussels within six weeks of its receipt. The Final Report incorporating any modifications will be issued one month thereafter (2,5 months after issue of the Draft Final)

All Reports must include an Executive Summary.