

**European Union
Tacis Programme**

**TRACECA:
Regional Traffic Database and
Forecasting Model**

(Project No. WW.93.05/05.01/B008)

Revised Progress Report: Phase 1A

December 1996

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TACIS REPORT COVER PAGE

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Local Operator	:	Tacis Co-ordination Units
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Progress Report: Phase 1A

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1. INTRODUCTION AND PROJECT SYNOPSIS

1.1 This Progress Report deals with the Tacis project TRACECA Traffic Forecasting Model, Project No. WW93.05/05.01/B008. This report covers the period from April 1996 to November 1996. This revised Progress Report includes details of the latest freight data collection and the updated freight data matrices including revised data from Georgia and data from Uzbekistan and Armenia.

1.2 This Progress Report consists of two main parts:

- the main body of the report, which is an administrative report in a format defined by Tacis for the use of Tacis, Brussels, and the local Co-ordination units;
- Appendices containing technical material relating to current progress, including:
 - existing road and rail transport routes in the region;
 - a description of the questionnaire-based data collection campaign;
 - existing freight movement data;
 - notes on a number of technical and other questions: zoning, commodity classifications, etc.

1.3 Additional background information gathered so far in the course of the project is presented in a separate report on background information. The main areas covered in the background information report are:

- an overview of the region and the TRACECA route;
- a review of maritime transport in the region, including the Black Sea, Caspian and related waterway systems;
- a review of road and rail transport in the region;
- economic profiles of the TRACECA states, including patterns of trade.

1.4 These documents will be of interest to our local partner organisations and other consultants working on parallel projects.

1.5 Table 1.1 shows the 'Project Synopsis'.

Table 1.1 - Project Synopsis

Project Title	: TRACECA Regional Traffic Database and Forecasting Model
Project Number	: WW 93.05/05.01/B008
Country	: All 8 TRACECA States
Wider Objectives: to assist in the prioritising of transport investment options in the region through the introduction of a quantitative planning tool which can simulate the impacts.	
Specific Project Objectives:	
<ul style="list-style-type: none"> • introduction and establishment of computer-based planning tools in the eight TRACECA states including: <ul style="list-style-type: none"> - a common regional database of transport and trade flows and transport infrastructure and transport costs; - a multi-modal model for analysing scenarios and developing forecasts; • application of the tools to: <ul style="list-style-type: none"> - create comprehensive multi-modal synoptics of existing and forecast future flows; - highlight bottlenecks of all types; - identify preferred locations for multi-modal transfer centres; - identify and catalogue specific road/rail/maritime and multimodal projects for detailed feasibility studies; • transfer of know-how in transport database design and modelling. 	
Outputs/Activities:	
<ul style="list-style-type: none"> • an Inception Mission and Inception Report (month 3); • Phase 1A involving data acquisition and storage followed by Progress Report 1 (month 9); • Phase 1B consisting of the development of scenarios and database, followed by Progress Report II (month 13); • Phase 2 including synoptic forecasts and development of investment options, followed by Progress Report III (month 15); • Phase 3 which is the handover of the computer equipment and software and support missions, followed by a draft Final Report (month 18) and Final Report (month 21). 	
Inputs:	
<ul style="list-style-type: none"> • technical assistance; • computers and other office equipment; • database, forecasting and office-oriented computer software. 	
Project Starting Date	: Mid-January 1996
Project Duration	: 21 Months

2. SUMMARY OF PROJECT PROGRESS

- 2.1 This section contains a summary of progress since the start of the project.
- 2.2 Two stages of work have been accomplished so far:
- mobilisation/inception (January to March 1996);
 - Phase 1A (April to August 1996).
- 2.3 The delays encountered on the project so far, particularly in setting up local partners in Uzbekistan and in obtaining satisfactory and consistent data on existing freight movement have resulted in the project progress being about 1 month behind schedule at present. This position is partly recoverable.
- 2.4 The major achievements of these two phases of work are:
- agreements have been made with local operators and technical partners in the 8 TRACECA states including recently concluded arrangements for data collection in Uzbekistan;
 - a regional office has been set up in Almaty and we are moving to set up project bases in Uzbekistan and in Georgia. In Almaty the technical partner has proved successful in data collection and assembly on the network and existing movements, securing completion of questionnaires and data entry tasks. We are now in process of equipping the technical partner in Uzbekistan and will be moving to equip the office in Georgia in the coming months. We are hoping for a similar level of technical achievement to that attained in Almaty in these other project bases;
 - a mission to UNESCAP in Bangkok has been carried out;
 - a detailed questionnaire-based data collection exercise has been carried out in all 8 states and the data collected has been transferred to spreadsheet files;

- the regional field co-ordinator has made several visits to all of the Traceca states and UK based staff have visited to Uzbekistan Azerbaidjan, Turkmenistan, Kazakstan and Georgia to collect and verify data and to prepare the model. Details of these visits are given in Appendix E;
- an overview of transit routes and problems has been prepared, based on existing and current work. This is contained in the Report on background information;
- a computer-based network model has been developed for road and rail transport within the Traceca states (rail and water-based networks and external links will be completed shortly);
- preliminary economic data for all countries have been collected, primarily from international sources. Locally generated data have been collected for the Kazakstan and Georgia.

3. SUMMARY OF PROJECT PLANNING

3.1 This section contains a summary of the planning for the remainder of the project.

3.2 Major progress has been achieved, sufficient for model calibration to be commenced. Certain residual small areas of discrepancies will be clarified in parallel with the calibration of the model.

3.3 The overall programme for the project is shown in Figure 3.1. The remaining stages of work are:

- Phase 1B consisting of the development of scenarios and database, followed by a Progress Report (month 13). (This will report on the substantial completion of the iterative processes of calibration of the model scheduled for February 1997.);
- Phase 2 including synoptic forecasts and development of investment options followed by a Progress Report (month 15);
- Phase 3 which is the handover of the computer equipment and software and support missions followed by a draft Final Report (month 18) and Final Report (month 21).

TRACECA REGIONAL TRAFFIC FORECASTING MODEL
FIGURE 3.1: PROJECT PROGRAMME

TASK	Month:	1996												1997									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	
MOBILISATION / INCEPTION																							
INCEPTION REPORT			X																				
PHASE Ia: DATA ACQUISITION AND STORAGE																							
Equipment procurement																							
Detailed database/model specification																							
Methodology of data collection																							
Collection of existing data																							
Data review missions																							
Surveys																							
Data entry (spreadsheet)																							
PROGRESS REPORT I									X				X										
PHASE Ib: SCENARIOS AND DATABASE/MODEL DEVELOPMENT																							
Database construction/testing																							
Forecasting model development																							
Data transfer to database																							
Scenario proposals																							
PROGRESS REPORT II																							
PHASE 2: SYNOPTIC FORECASTS																							
Scenario definition																							
Zonal economic forecasts																							
Model runs (present/future)																							
Synoptic traffic forecasts																							
Investment/redeployment studies																							
PROGRESS REPORT III																							
PHASE 3: IMPLEMENTATION/ HANDOVER																							
Database/model manual preparation																							
Handover missions																							
Study cases																							
Support missions																							
DRAFT FINAL REPORT																							
TACIS Comments																							
FINAL REPORT																						X	

4. PROJECT PROGRESS IN REPORTING PERIOD

4.1 This section covers the progress made since the Mobilisation/Inception Phase and the issue of the Inception Report in April 1996 and covers Phase 1A: Data Acquisition and Storage. Additional progress on data assembly and review since September 1996 is also presented. The required project planning tables are given in Appendix G.

4.2 The main activities in this stage of work were:

- local organisation of the work, including identification of partners, equipment procurement and preparations for technology transfer;
- data collection and a questionnaire campaign on the network, existing freight flows and costs;
- some preliminary analysis of the data including a regional transit overview and country economic profiles;
- database and model development.

4.3 A key problem in this stage of work has been the identification of technical partners. In one country this problem was only resolved in December. The situation is described below. The difficulty of telecommunications in the region has also been a significant problem. One consequence has been some delay in the questionnaire based data collection campaign. Although this exercise is now substantially complete, the processing of the data will inevitably spill over into the next phase of work. To compensate for this delay in incoming data - required for model building - we have brought forward some tasks, including:

- country economic profiles, using international sources;
- regional transit overview using existing sources of information.

- 4.4 The project can therefore be considered to be successfully launched with an extensive collection of data and a solid understanding of the strategic regional issues to be tackled.

REVISION OF RESOURCE INPUT

- 4.5 Amendments to the contract which we proposed in the Inception Report were accepted. The effect of these changes is primarily to increase the input of local consultants (from 700 to 900 days for Senior Local Experts and from 1000 to 1700 days for Junior Local Expert). The planning tables shown in Appendix G reflect these changes. During phase 1A we have also found it necessary to change the Project Manager. This change has been accepted.

LOCAL ORGANISATION OF WORK

Local Partners

- 4.6 Project work in the countries rests on a dual structure:
- a “*local operator*” which is the official counterpart organisation responsible for the project in the country;
 - a “*local technical partner organisation*” which will receive, operate and maintain the database and forecasting model.
- 4.7 The local operator is normally the Ministry of Transport, where such an organisation exists, as was the case from the start of the project in Armenia, Kazakhstan and Kyrgyzstan. It is also now the case in Georgia where the responsibility for co-ordinating transport projects was delegated to the Problem Centre for Eurasian Transport Corridor. In Turkmenistan and Uzbekistan, the responsibility for the project lies with the Cabinet of Ministers. In Azerbaidjan and Tadjikistan with the Ministry of Economy. (The names and duties of involved officials are given in Appendix I).
- 4.8 Within each country we are dependent on the local operator to nominate an appropriate local technical partner organisation. The data collection phase of the project has been co-ordinated from our regional office in Almaty based

within the Research Institute for Transport. However, technical partners, and/or local operators from each of the eight countries have participated in the data collection itself. In the latter part of the project reporting period we have sought to ensure that each of these technical partners are able to operate as a project office as the project progresses from data collection through to model development and application. Particular focus is currently being placed on Uzbekistan (Tashkent) and Georgia (Tbilisi).

4.9 The precise technical contribution of technical partners in each of the eight countries will depend, quite clearly, on the technical abilities of their staff. We, therefore, need to retain some flexibility on where certain tasks are undertaken, whilst ensuring that technical partners in the eight countries become conversant with modelling and are trained in the use of the TRACECA model. Whilst recent visits have made substantial progress in confirming the nomination of technical partners we are aware that they do not always have staff with the appropriate technical background for modelling. Our approach is to retain these organisations as technical partners and seek to encourage them to recruit the necessary skills over the coming weeks.

4.10 Progress on identifying technical partners has varied:

- in Georgia, Kazakhstan, Kyrgyzstan and Tadjikistan agreement on joint work has been signed with a technical partner;
- in Uzbekistan, Azerbaidjan and Turkmenistan a technical partner has been designated but an agreement on joint work has yet to be signed;
- in Armenia, no final decision has been made yet given that the Ministry of Transport is likely to create a group of organisations to form a technical centre for the project.

4.11 The situation country-by-country is as follows:

Kazakhstan

4.12 This country was selected as base for the project central team and has played a key role in data processing. The partner, The Research Institute for Transport or AO-NIAT, is strongly motivated. Until recently an institute for

road transport only, it is developing fast its activities to cover all transport modes. It has close links with the Ministry of Transport and Communications. The central team however comprises members from different organisations, each with experience in a particular mode.

Kyrgyzstan

- 4.13 Following discussions with the Ministry of Transport, the State Institute of Road Design "Kyrghyzdortransproekt" was selected as technical partner although it had so far little experience in all-mode traffic forecasting. The institute was very successful in winning contracts in international tenders either in joint-venture with foreign firms or on its own. It has already an extensive experience of working with international organisations. The institute has successfully completed the data collection work for Kyrgyzstan and a project office equipped with a computer, printer and fax has been created.

Tadjikistan

- 4.14 From the very start of the project, the State Project & Research Institute "Tajikgipro-transstroy", which is under the Ministry of Transport and Roads, was designated as a partner. This is the only relatively large transport engineering organisation in the country. It has now plans to develop activities beyond national borders, notably Kazakhstan and is very keen to get experience of international standards. This institute has also successfully completed the data collection work for Tadjikistan and a project office equipped with a computer, printer and fax has been created.

Georgia

- 4.15 After repeated attempts to find partners among the transport organisations which could carry out the urgent data collection task, it was decided to entrust it to the organisation which was intended as the partner for economic forecasts, the Centre for Marketing Research (CMR), founded by economists linked with the University and the Institute of Economy. From the time an agreement with the Contractor was signed, it has been very active in data collection. However, it may be necessary for this institute to recruit an individual for the modelling work.

Uzbekistan

- 4.16 In Uzbekistan, a partner had to be designated in consultation with the Cabinet of Ministers. Only several months after project start, the Contractor was informed that the technical partner would be "Uzavtotranstekhnika", a subsidiary of the State road transport holding "Uzavtotrans", organisation which took over from the Ministry of Road Transport. It was immediately involved in data collection. Part of the task, however, was handled directly by the Cabinet of Ministers and the Institute of Economy has also participated in data collection work. During the latest visit Uzavtotrans nominated a different technical partner - Uzinformtransystema. In order to secure a partner and project office in Tashkent urgently we have agreed to use Uzinformtransystema as the technical partner. However, we are aware that their main skills are accounting and data collection and, hence, they will need to recruit appropriate technical skills in order to make a significant contribution to the technical analyses and model applications. Discussions leading to a signed agreement and an equipped project office are proceeding.

Turkmenistan

- 4.17 The first choice as technical partner was the Turkmen Institute of Transport and Communications. When data collection was launched, however, it was found that this high education institution was not in the best position to handle the task. Consequently, The Cabinet of Ministers has assisted in the data collection work. Discussions have indicated that the Institute of Economy have appropriate technical skills for the modelling work and will, therefore, represent the most appropriate technical partner for the remainder of the project. We were unable to obtain formal endorsement of this appointment from Mr Kalikov (Deputy Prime Minister) during our recent visit but are proceeding with the Institute of Economy and understand that this will be acceptable.

Azerbaijan

- 4.18 The computer centre of the Azerbaijan Railways has agreed to work with the project and has assembled data collection. Again, it is necessary for this technical partner to identify an individual with appropriate skills for undertaking the modelling work.

Armenia

- 4.19 From the beginning, the Ministry of Transport thought of forming a project unit within the Ministry in the same way as there were offices for other TRACECA projects such as the Legal and Regulatory Framework Study. There is now understanding that this may not be the best way and several organisations have been considered as possible partners. We have had contact with the Graduate School of the State Engineering University of Armenia but found there may not be sufficient long-term motivation to justify a partnership. The Ministry of Transport has co-ordinated the data collection work to date and proposes to assemble a group of organisation to form a project base for the work. Consequently, no technical partner has been appointed yet.

Preparations For Technology Transfer

- 4.20 A key objective of the project is to facilitate the transfer of technology and know-how in forecasting and data management through the application of database and models. Accordingly, the study programme allows for a significant period of training and implementation of the forecasting tasks in each of the 8 TRACECA states in the latter stages of the study. However, the involvement of technical partners in data collection, data processing, economic forecasting and model development during the project phases assists with the training.
- 4.21 To date we have focused on data collection and the identification of regional entities to participate in the study and to take responsibility for maintaining and applying the model beyond the end of the study.–
- 4.22 We are also preparing documentation on modelling procedures in order to provide an introduction to the principles of transport modelling (that is, the concepts of network matrices and assignments) and a technical manual for the use of the TRACECA model.

Permanent Establishment of the Database and Forecasting Modelling System to Regional Entities

- 4.23 One of our concerns from the start of the project has been to prepare the ground for a successful know-how transfer. This requires a technical partner

with a sense of purpose and the capacity to maintain and successfully use the database and model after project completion. There is evidence from our work to date that a number of the nominated technical partners will need to strengthen their staff if this know-how transfer is to be wholly successful.

- 4.24 Research or project institutes as they were run in soviet times would certainly have been interested in acquiring computer packages of the kind developed by the project and to perfect them. Presently however, the lack of financial resources puts pressure on these organisations to reduce their staff. Also in some cases the institute most able to operate the model may not be in the best position to collect data from government organisations and, hence, a grouping of individuals from different organisations may provide the best means for continuing the forecasting work beyond this study.
- 4.25 Even if partners display a genuine interest for project work in all countries, it should probably be assumed that not all will be able to keep the database and model fully operational in the long term. An envisaged strategy is to give more means to the most promising teams so that they can constitute a core group able to support the weaker teams after project completion. Joint working between technical partners of the remainder of the project will be encouraged.
- 4.26 The database and the model technology will be normally transferred to technical partners in all countries. Training will be given to all of them during the implementation phase (Phase 3), first in the form of workshops, possibly by groups of countries. Technical support to run the applications will be provided.
- 4.27 The most difficult problem in maintaining the model after project completion will be updating of the database. This cannot be done separately by the various partners in different countries. There may be objection raised by some countries to supplying regularly to other countries information they have been providing within the frame of the TRACECA programme. There is therefore a need to get some kind of commitment from participating countries before the end of the project. A multinational statistical or forecasting group involving local operators could be arranged. During the next phase of work the Consultant will start to consult project recipients on this matter.

Technical Documentation

- 4.28 We have been careful not to simply translate existing technical manuals for the databases and the model software but have instead sought to identify the likely requirements of the technical partners taking into account their relative unfamiliarity with the principles of demand forecasting and modelling.
- 4.29 We have, therefore, taken into account the opportunity to involve our local partner organisation in Almaty in the initial model development work and to use this as a means of tailoring the technical documentation to the needs of the regional users. The basic principles of the modelling software have been demonstrated to a local expert and detailed descriptions of network building and data analysis tasks have provided sufficient guidelines for the local expert to organise hands-on modelling experience. This technical documentation will be 'tested' on our technical partners in the other countries.
- 4.30 In parallel we are rewriting the SATURN software manual specifically for use as a strategic freight modelling package with additional introductory information explaining the broader concepts of modelling.

DATA COLLECTION

- 4.31 We have approached data collection in three main ways:
- review of existing documents and data produced by consultants - including those working on other TRACECA projects - and international agencies, including a visit to UNESCAP in Bangkok;
 - a campaign of questionnaires, completed by our local technical partners;
 - interviews with existing transport operators and freight forwarders carried to by our head office staff on data review missions. This is a continuing task.
- 4.32 Data collection has covered two main areas:
- transport information on routes, flows and costs;

- economic information on the evolution of the local economies, trade etc.

Mission to UNESCAP

- 4.33 Of all the international agencies active in the region it was thought that UNESCAP, based in Bangkok would have the most complete overview of transport links and developments. For this reason a mission to Bangkok was undertaken in late March. Appendix J gives the conclusions of this mission: much work is being carried out and we intend to build on these early contacts.

Questionnaires

- 4.34 Russian-language questionnaires were prepared in Kazakhstan, with the participation of local specialists, using as far as possible the existing structure of data sets. The questionnaires were sent to the various countries in June with explanations of how they should be completed.
- 4.35 Data review missions to all TRACECA countries took place in July and August in order to make sure that the questions were properly understood and the answers accurately formulated. Since most countries are not yet properly equipped with E-mail, data transmission by fax was largely used.
- 4.36 Copies of the questionnaires and a summary of the status of data collection at the time of issuing this report are given in Appendix B.

Additional Surveys

- 4.37 In accordance with the Terms of Reference, data collection is to continue throughout the project duration. We have now completed the great majority of the data collection needed for model calibration. Although a large amount of data has already been collected, there is however a need to complement this with new data to update, validate and infill gaps in limited areas on freight commodity movements and costs.
- 4.38 The project deals with inter-regional flows, which for the smaller TRACECA countries means practically cross-border flows. In countries where Customs have already good computerised information systems such as Kazakhstan

and Turkmenistan, detailed origin/destination data on foreign trade flows can be obtained at the oblast level. Railway data are also very detailed.

- 4.39 Similarly we have collected volumetric data (flows) on rail and road links.
- 4.40 Initial appraisal of the data indicated discrepancies between different data sources. Further missions to Azerbaijan, Georgia and Uzbekistan in November and December 1996 obtained additional data to cross check and complete the earlier data sets. These additional data have substantially improved the reliability and consistency of the databases.
- 4.41 We had initially considered that validation of origin/destination data would be best undertaken through roadside interview surveys on selected routes. However, a roadside survey would only provide a short period "snapshot" of the commodity movement and O-D pattern at the time of survey. Such a survey would not enable all movements between different zones to be surveyed for example many important commodities are substantially seasonal. Consequently the confidence limits on data from this type of survey would be very wide and the value of the data as "control data" would be limited. Moreover, as evidenced by 1995 Kazakh data, the proportion of trade moved by road is small accounting for only 2% of international freight tonnage moving between Kazakhstan and Europe. It should be noted that - according to Eurostat data - Kazakhstan is the leading EU-12 trade partner in the region with 30% of trade (by weight) in 1995.
- 4.42 Having reviewed the data sets already collated we now conclude that new surveys would be better focused on verifying total volumes of trade and modal routeing at the origin/destination point and therefore, we have commenced checks with main exporters/importers in key regions.
- 4.43 We propose therefore that additional surveys concentrate on two groups of data which are still needed for model calibration:
- information on freight routing. A second and more specific questionnaire has been distributed in Kazakhstan and responses are being evaluated;
 - information on real transport costs.

4.44 Collection of this information is being carried out using both questionnaires and direct interviews. Information is being collected from several types of organisations: main exporters, a sample of importers in various regions, freight forwarders, transport companies, customs border stations. However, discussions during our recent visits to the Caucasus, Uzbekistan and Turkmenistan suggests that little additional data will be available from the customs border stations and we have therefore been concentrating effort on exporters, importers and freight forwarders. We have also been in contact with the Traceca Tarrif project being carried out by SISIE.

PRELIMINARY ANALYSIS

4.45 In parallel with data collection we have assembled a preliminary background analysis including an overview of road, rail and water transport in the region country economic profiles and existing freight movements between countries. This is contained in a Background Data Report. The following is a brief outline of the background data.

Transit Overview

4.46 An overview qualitative description of transit conditions in the region has been prepared from a wide variety of sources. It covers the structure of the transport networks, their operating conditions and traffic data, both historical and current. This overview will be the basis for development of the scenarios for modelling the situation in 5, 10 and 15 years. The overview will also provide the basis for the synoptic quantitative description of the transport system.

4.47 The overview is being regularly updated with results from data collection in the current study and information from other reports, and consists of three main sections:

- regional overview, setting the geographical and transport context;
- maritime transit concerning the ports and maritime transport in the Black Sea and the Caspian Sea as well as the Volga-Don Canal;

- road and rail transit covering transport on land. The existing strategic road and rail networks and border crossings are shown in Appendix C in Figures C1 to C5. We have updated the data for links within the Caucasus sub region.

Country Economic Profiles

- 4.48 The approach has been to develop a 'SWOT analysis' for each country, identifying strengths, weaknesses, opportunities and threats. Much of the data for this work has been obtained from the international agencies, particularly IMF, World Bank and EBRD. The economic profiles are given in the background data report.
- 4.49 A questionnaire approach on more detailed economic data is also currently being prepared.

EXISTING FREIGHT MOVEMENTS

- 4.50 These data are the initial tabulation of customs and port data on trade tonnage flows by origin/destination, commodity and mode of transport.
- 4.51 The conclusions of this work are presented in Appendix D.

DATABASE AND MODEL DEVELOPMENT

- 4.52 Appendices A and B of the Inception Report provide specifications for the databases and forecasting model. During the reporting period progress has concentrated on obtaining the data inputs for the databases and modelling process as well as building the base year model networks and flow matrices.
- 4.53 The following paragraphs describe progress on the zone system and network development and matrix development.

Zone Systems and Network Development

- 4.54 The geographic coverage and structure of the network and zone system is contained in Figure B1 of the Inception Report. This focuses mainly on the network and zone system internal to the study area. There is, however, a

need to define strategic links external to the study area, thereby representing routes to external markets. Accordingly a zoning system has been developed for which a representative strategic network will be developed that adequately represents external flows on routes through the study area.

- 4.55 A hierarchical zoning system has been developed (described in Appendix A) to allow flexibility in the level of geographic detail in model and database operation.
- 4.56 To date, the emphasis of the model development work has been on creating the networks in the 8 TRACECA states determined through consultation with local experts. The road network consists of some 600 sections, 520 nodes and has a total length of about 35,000 km. The rail network consists of some 200 sections and 170 nodes and has a total length of about 20,000 km.
- 4.57 The development of the networks comprises three stages.
- (i) A network inventory of the physical characteristics has been undertaken via questionnaires distributed to the 8 TRACECA states, e.g. section lengths, condition of road sections, single / double track or electrified rail sections, etc.
 - (ii) The data obtained from the questionnaires has been processed through the creation of spreadsheet files. Additional data required by the model such as node numbers for the beginning or end of each section and node co-ordinates is also being incorporated at this stage.
 - (iii) The data is being converted into a form that can be used by the SATURN modelling software and the network external to the 8 TRACECA states is being coded.
- 4.58 The first stage is nearly complete with the majority of questionnaires returned. The local experts in each state have provided a comprehensive set of data for the network inventory.
- 4.59 The second stage is now well advanced, with the processing of the completed questionnaires. The coding of additional data required for the model, such as

node numbers and node co-ordinates has been integrated into this process of data entry.

4.60 The third stage is also now well advanced. The SATURN road and rail networks have been created to a level that allows checking of the node connections and section lengths. The full set of network characteristics necessary for representing the generalised cost (time, money and other impedance) on each section such as speeds, interchanges, custom delays etc are currently being examined.

Matrix Development.

4.61 The matrix development is based on the zoning system described in Appendix A.

4.62 The development of the matrix being undertaken in three basic stages:

- (i) Matrix data is being collected via the use of questionnaires on the imports and exports for each of the 8 TRACECA states, the source being customs returns. This includes information on the tonnage, commodity transport by mode and country of origin or destination
- (ii) Processing the data obtained from the questionnaires by the creation of spreadsheet files with the addition of commodity codes and zone numbers.
- (iii) Analysis of the data and conversion into a matrices that can be used by the SATURN modelling software.

4.63 The first stage is substantially complete with all countries having returned the customs questionnaires and checks having been completed on some inconsistent first data sets.

4.64 The second stage has also been completed with initial tabulated results of total exports and imports for all of the 8 countries (see Appendix D).

4.65 The third stage will commence shortly and is expected to take approximately two weeks to complete.

5. PROJECT PLANNING FOR NEXT REPORTING PERIOD

5.1 The next reporting period is Phase 1B, 'Scenarios and database/model development', and consists of:

- database construction and testing;
- development of the forecasting model;
- data transfer to database;
- production of scenario proposals.

5.2 In addition some work continuing from the previous work phases will be carried out:

- procurement of computer equipment for the partner organisations;
- data collection, including the processing the data from the questionnaire returns, collection of further data on modal costs and journey times and collection of additional local economic data.

5.3 The Phase 1B Progress Report is to be submitted in February 1997. A detailed work plan is shown in Figure 5.1: the tasks are discussed below.

EQUIPMENT PROCUREMENT

5.4 Equipment procurement for the regional office in Almaty is now complete. We now plan to proceed with the procurement of equipment for the other local technical partners. Procurement has begun with the designated partner in Tashkent as well as the technical partners in Tadjikistan and Krgystan.

5.5 The equipment to be supplied is essentially computer equipment for running the forecasting and database software and will consist typically of:

- a desktop computer (at least 486DX with 8Mb of RAM, colour monitor);
- an A4 laser printer ;
- hardware (only) for an e-mail connection, or a fax machine, if requested;
- power safety devices.

5.6 The software to be provided will be a licensed copy of the Russian-language version of Windows-based Microsoft Office (including word processing, spreadsheet and database software). Although we will provide the necessary hardware for an e-mail connection, we expect the organisation itself to obtain the necessary contract with an Internet service provider. Where requested we will also supply a fax machine.

DATA COLLECTION/PROCESSING

5.7 As indicated in the terms of reference, data collection will continue over the life of the project. Because of the slow response to some of the transport questionnaire data sets we are continuing the data processing tasks during the next phase of work. Further data collection is underway for data on modal costs and transit times as well as obtaining more detailed local economic data.

DATABASE CONSTRUCTION/TESTING

5.8 The database has two complementary functions:

- to provide the source data for the development and operation of the SATURN forecasting software;
- to act as a structure for making data available to other potential users (such as other TRACECA projects or other studies).

- 5.9 One lesson from the data collection exercise was the need to take full account of the existing format of data collected in the region. We believe this is an important aspect to consider during the construction of the database, as updating information will be easier if the data sets required are available as directly as possible from the statistics maintained by the various official bodies. In other words the structure of the database should reflect the local conditions, not merely the European CETIR database structure (which we have already commented on in the Inception Report).
- 5.10 In the same way, the forecasting model should be capable of being driven directly from the database, therefore the structure of the database should permit this.
- 5.11 For this reason we wish to advance cautiously on the construction of the database, while the model is being developed. To avoid any delay on developing the forecasting model we propose to concentrate on processing data into a format that is useable by the SATURN software. This will allow the relationship between the data and SATURN to be fully explored, thus allowing the database to be determined with the ultimate end-use fully known.
- 5.12 The questionnaire returns have been processed into spreadsheet format, modelled on the questionnaire structure (which is itself modelled on the original format of the statistics). This spreadsheet will have to be manipulated to integrate with SATURN. The process will therefore be essentially as follows:
- the data are processed into EXCEL spreadsheets;
 - data are processed within these spreadsheets into SATURN-useable files;
 - in parallel a database structure is developed, retaining as much of the original format of the data and compatibility with SATURN.
- 5.13 During this process data will be available to other studies in the form of EXCEL spreadsheet files.

FORECASTING MODEL DEVELOPMENT

- 5.14 The development of the model is partially dependent on the availability of suitable data, much of which we are now confident that we have. However there are many tasks that can be carried out in parallel to the matrix development and network costing. In particular in refining the network structure, creation of commodity indices and developing documentation specific to the use of the software for freight modelling.
- 5.15 The external network coding has been delayed until more detailed information was available on international trade flows. Much of this is now available. Gathering modal cost and journey time data on these links is part of the on-going data collection exercise. This information will need to be integrated within the network data in SATURN.
- 5.16 Already some tabulations of aggregate origin/destination flows are possible, although we need to add more details on the commodities and zones. Once all the commodity data is available, commodity matrices will be produced.
- 5.17 As described above the data within the spreadsheets will need to be converted to a form that is useable by SATURN. When sufficient data from the network and matrices sources are available, we will attempt to recreate the observed base year flows via SATURN assignments. This will inevitably mean a significant adjustment of the network parameters and further validation of matrix data.
- 5.18 Prior to using the model to forecast future transport patterns for different scenarios we propose to undertake some test runs of the model in forecasting mode, principally to confirm the modelling procedures.

DATA TRANSFER TO DATABASE

- 5.19 As the work on the forecasting model progresses we will in parallel transfer data to the database. This will require testing the transfer of spreadsheet data into the database structure as well as adjusting the links with the forecasting model so that data can be read as directly as possible from the database.

SCENARIO PROPOSALS

- 5.20 The scenarios will define the key elements that define the pattern and magnitude of freight flows in the region. We have already advanced the work on developing scenario proposals by developing a regional overview description and country economic profiles. In the discussion of short term forecasts in this report we have touched on many of the issues that will be addressed in the scenario definition. Since the first issue of this report we have further advanced the scenario definition work with the addition of locally generated data from Georgia and Kazakstan and initial enquiries with the local institutes in all other countries.
- 5.21 During the next phase of work we will update the overview description with information from the data collection processing as well as from the work of other TRACECA projects (for example, the Border Crossings Study will provide details on the conditions at frontiers in the region).
- 5.22 The economic profiles will be elaborated on with more insights into the important national and regional commodity sectors: cotton, grain, bauxite/alumina/ aluminium, coal, oil etc.
- 5.23 During the next phase of work we expect to receive comments on the work that is included in this report. This feedback will ensure that the scenarios are well founded and relevant.

APPENDIX A

Zoning

A. ZONING

ZONE STRUCTURE

- A.1 The zoning system proposed in the Inception Report (Annex) defines 33 zones of which 23 are within the 8 TRACECA countries of interest and the remaining 10 cover the countries bordering them. The zoning system has been improved in two ways.
- A.2 Firstly by the introduction of a hierarchy in which the 23 zones of the CIS countries have been split into smaller zones that relate to administrative districts. The form of this could be as follows:

Level 1	No	Name	Level 2	No	Admin. District
Zone	18	Eastern Kazakhstan	Sub Zone	1801	Aqmola
				1802	East Kazakhstan
				1803	Qarghandy
				1804	Semey
				1805	Zhezqazgan

- A.3 Secondly, additional external zones such as for Europe, either at a country level or groups of countries have been introduced as follows:

Level 1	No	Name	Level 2	No	Country
Zone	34	North Western Europe	Sub Zone	3401	France
				3402	Belgium
				3403	Luxembourg
			Etc.		
	35	Southern Europe		3501	Italy
				3502	Greece
				3503	Spain
					Etc.

and extend the definition of the existing defined zones:

Level 1 No	Name	Level 2	No	Country
32	Gulf States		3201	Iran
			3202	United Arab Emirate
			3203	Jordan
				Etc.

- A.4 The use of a hierarchical system where the main zone number is extended from 2 to 4 figures (where the original number is preserved as part of the new number) allows easy correspondence list between zones and sub-zones to be compiled that can later be used within the SATURN freight model.
- A.5 This also allows the database on freight movements to be held at differing levels of detail. For example Georgia may be able to give an accurate breakdown of its exports and imports of a commodity to EU members by country, then again it may only be able to give data for the EU as a whole. If individual country data was aggregated early in the study then valuable data could be lost.
- A.6 The external zoning should be such that it reflects the routes of traffic to and from the study area, however it should not restrict the routing in such a manner that unrealistic routing results. For example a route across the central Asian countries may be un-viable, but if costs fall then it may become the cheapest route.
- A.7 If there are few large zones then the number of routes are restrictive by being only able to load these movements at a few locations. If there are many small zones then the matrix becomes too large and uncontrollable but loading and routing options become many.

A.8 The zoning split of Europe is as follows:

North-Eastern Europe - Poland, Czech Republic, Slovakia, Finland, Latvia,
(Zone 34) Lithuania, Estonia, Belorussia.

Central-Western Europe - Germany, Austria, Switzerland, France.
(Zone 35)

North-Western Europe - Denmark, Netherlands, Belgium, UK, Ireland,
(Zone 36) Norway, Sweden.

South-Eastern Europe - Romania, Former-Yugoslavia, Hungary, Bulgaria.
(Zone 37) Albania.

South-Western Europe - Spain, Portugal, Italy.
(Zone 36)

A.9 The zoning for the rest of the world is shown in the following Annex.

ANNEX

ZONE LIST - Inception Report zones

Internal Zones	Country
1 - 3	Tajikistan
4 - 6	Kyrgystan
7 - 11	Uzbekistan
12 - 14	Turkmenistan
15 - 20	Kazakhstan
21	Georgia
22	Armenia
23	Azerbaijan
External Zones	Country/Region
24	Southern Russia
25	Ukraine
26 - 29	Northern Russian States
30	China
31	Indian Sub Continent
32	Iran, Middle East
33	Turkey

A.10 The level 1 and 2 zoning split of Europe is as follows:

34	North Western Europe.	France(3401), Belgium (3402), Luxembourg (3403), Germany (3404), Netherlands (3405), Denmark (3406).
35	Southern Europe.	Italy (3501), Greece (3502), Spain (3503), Portugal 3504), Former Yugoslavia (3505), Bulgaria (3506), Albainia (3507).
36	Central Europe.	Austria (3601), Hungary (3602), Austria (3603), Slovak (3604), Switzerland (3605).
37	Baltic States.	Latvia (3701), Estonia (3702), Finland (3703), Lithuania (3704), Sweden (3705).
38	Northern Central Europe.	Poland (3801), Czech (3802).
39	Northern Europe.	Norway (3901), UK (3902), Ireland (3903), Iceland (3904).

A.11 The zoning for the rest of the world is as follows:

24		Southern Russia
25		Ukraine(2501), Modovia (2502)
26	- 29	Northern Russian States Including Belarussia
30		China (3001), Loas (3002), Mongolia (3003).
31	Indian Sub-continent.	Afgan (3101), Pakistan (3102), India (3103).
32	Gulf States.	Iran (3201), UAE (3202), Oman (3203), Saudi Arabia (3204), Qatar (3205), Kuwait (3206).
33		Turkey
40	Middle East.	Iraq (4001), Egypt (4002), Syria (4003), Lebanon (4004), Jordan (4005), Israel (4006).

- 41 East Africa. Sudan (4101), Ethiopia (4102), Somalia (4103), Kenya (4104), Uganda (4105), Zaire (4106), Tanzania (4107), Malawi (4108), Mozambique (4109), Zambia (4110), Zimbabwe (4111), Botswana (4112), Lesotho (4113), Swaziland (4114), South Africa (4115), Madagascar (4116), Mauritius (4117).
- 42 West Africa. Libya (4201), Chad (4202), Central African Republic (4203), Congo (4204), Gabon (4205), Angola (4206), Namibia (4207), Equatorial Guinea (4208), Cameroon (4209), Ghana (4210), Nigeria (4211), Niger (4212), Benin (4213), Togo (4214), Ivory Coast (4215), Burkina Faso (4216), Liberia (4217), Sierra Leone (4218), Guinea Bissau (4219), Guinea (4220), Gambia (4221), Senegal (4222), Mauritania (4223), Mali (4224), Morocco (4225), Algeria (4226).
- 43 East Asia Developing Sri Lanka (4301), Burma (4302), Indonesia (4303), Malaysia (4304), Thailand (4305), Vietnam (4306), Philippines (4307), Papua-New-Guinea (4308), Bangladesh (4309), Cambodia (4310).
- 44 East Asia Industrial. Japan (4401), North Korea (4402), South Korea (4403), Taiwan (4404).
- 45 East Coast America. Atlantic East Coast (half of USA) (4501), Cuba (4502), Canada (4503), Caribbean (4504), Argentina (4505), Brazil (4506), Mexico (4507), Central America (4508), Venezuela (4509), Guyana (4510), French Guinea (4511), Uruguay (4512), Paraguay (4513), Bolivia (4514).
- 46 West Coast America & Pacific. Atlantic West Coast (half of USA) (4601), Australia (4602), New Zealand (4603), Pacific Islands (4604).

APPENDIX B

Questionnaires

B. QUESTIONNAIRES

B.1 This Appendix contains:

- a list of questionnaire tables;
- a summary of the status of returns as of mid-September 1996;
- copies of the individual questionnaire tables.

LIST OF TABLES

Table I.1	- Social and economic indices
Table I.2	- Transportation by types of vehicles
Table I.3	- Cargo flows data through the border (export) for 1995
Table I.4	- Cargo flows data through the border (import) for 1995
Table II.1	- Road network - characteristics and condition of road sections' pavements (1994 - 1995)
Table II.2	- Road network - traffic intensity
Table III.1	- Railway network technical-operating characteristics
Table III.2	- Cargoes correspondence (in types) within railway network
Table III.3	- Railway network density of goods movement through railway network sections
Table III.4	- Railway network annual shipment of containers from railway network terminals
Table III.5	- Railway network transit time of passage of a train on the route
Table IV.1	- Sea port's technical-operating characteristics
Table IV.2	- Port dues for provision of the sea port services
Table IV.3	- Sea port loading-unloading works for 1995
Table IV.4	- List of vessels unloaded in III quarter of 1995
Table IV.5	- List of vessels loaded in III quarter of 1995
Table V.1	- Information about airports' carrying capacity
Table V.2	- Airport's technical and economic data
Table V.3	- Cargoflows direction from/to airport
Table VI.1	- Investigation of route cargoes
Table VI.2	- Investigation of vehicles' transportations on borders

(country)							
TRANSPORTATION BY MODES OF TRANSPORT							
n/n	Volume of transportation, millions tons						
	Transport mode	Years					
		1990	1991	1992	1993	1994	1995
1	Railway						
2	Road transport, total including transport of common use						
3	Water transport (river and sea)						
4	Air transport						
TOTAL:							
n/n	Freight turnover, billions ton*km						
	Transport mode	Years					
		1990	1991	1992	1993	1994	1995
1	Railway						
2	Road transport, total including transport of common use						
3	Water transport (river and sea)						
4	Air transport						
TOTAL:							

Road network - characteristics and condition of road sections surfacing (1994-95)														
No	Road sections			Total length, km		Wigth, m		Type of pavement km			Length according to the plane pavement, km			
	Origin	End	Anode	Bnode	Total	In mountain conditions	Roadbed	Pavement	Capital	Facilitated	Others	Good	Sat.	Unsat
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

(country)							
Operational characteristics of sea port							
(name)							
No	Specifications	Depth, m	Square, m ²	Length, m	Amount	Capacity, 000 tons	
						per day and night	per year
1	Tidal range _____ cm						
2	Port capacity for the receiving of the ships with maximum possible displacement _____ ton						
3	Access canal						
4	Port water area						
5	General cargo pier including						
	-						
	-						
	-						
6	Berth for bulk liquids including						
	-						
	-						
	-						
7	Multipurpose terminals including						
	-						
	-						
8	Specialised piers including						
	- for ferries;						
	- for grain;						
	-						
9	Storages: including						
	- store rooms;						
	- constructions for open goods storage;						
	-						
10	Nominal carrying capacity of goods treatment by port including						
	- general cargo;						
	- bulk cargo;						
	- bulk liquids;						
	-						

(country)			
Seaport loading-unloading handling in 1995			
(name)			
No	Cargo appellation	Export	Import
1	Cargo total, 000 tons including		
1.1	Bulk cargo, total including		
	- sugar;		
	- different ores, fluxes;		
	- coal, coke, including mixture & anthracene;		
	- cement;		
	- construction cargo;		
	- chemical cargo;		
	- others		
1.2	Grain cargo in bulk, total		
1.3	Timber cargo, total		
1.4	General cargo, total including		
	- on ferries (gross); including van container weight (mass)		
	- on lighters (gross) including lighters without cargo (weight)		
	- on rolers		
	- in large-tonnage containers (gross)		
1.5	Other piece cargo, including		
	- perishable;		
	- different metals not in business;		
	- machinery, equipment & hardware;		
	- chemical cargo		
1.6	Petroleum products transfer		
1.7	Performed tons-operations, total (000)		
1.8	From line 1:		
	- cargo not connected with sea freight turnover		
	- treated cargo in parcels		
2	Amount of large-tonnage containers (20 & 40 Foot), unit		

(country)

List of vessels accomplished loading operations in III quarter 1995.

(name of port)

No	Name of vessel	Vessel type	Export cargo		Con- tainers, (TEU)	Port of destination	Waiting time during loading, hour
			Type of cargo	Weight tons			
1	2	3	4	5	6	7	8
1			-				
			-				
			-				
			-				
			-				
			-				
2			-				
			-				
			-				
			-				
			-				
			-				
3			-				
			-				
			-				
			-				
			-				
			-				
4			-				
			-				
			-				
			-				
			-				
			-				
5			-				
			-				
			-				
			-				
			-				
			-				
6			-				
			-				
			-				
			-				
			-				
			-				

Information about airport carrying capacity (country)		Airport name																		
		No																		
1	Type of aircrafts receiving																			
2	Dimensions of run-way																			
3	Availability and amount of parking spaces for freight aircrafts																			
4	Availability and carrying capacity of freight terminals																			
5	Based types of aircrafts																			
6	Availability of mechanisation facilities (resources) for loading-unloading																			

BORDER-CROSSING TRAFFIC SURVEY

Country:

Border station:

Bordering country:

TRUCK TRAFFIC through border in 1995

Month	OUT (leaving the country)		IN (entering the country)	
	Total	In transit	Total	in transit
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				
TOTAL				
% of National Truck				
Estimated Number of Containers				

EXPORT through the border station (January-June 1996)

Estimated total volume of export (tons)

Main commodities				
% of total volume				

IMPORT through the border station (January-June 1996)

Estimated total volume of export (tons)

Main commodities				
% of total volume				

TRANSIT TRAFFIC (January-June 1996)

Inbound Traffic	Main countries of origin			
	% of transit traffic			
Outbound Traffic	Main countries of origin			
	% of transit traffic			

**QUESTIONNAIRE
ON ECONOMIC DATA FOR THE TRACECA COUNTRIES**

Section A Data

- 1 GDP (NMP) 1990-1991-1992-1993-1994-1995-1996
- 2 Data by oblast (wilaya) for 1991 and 1995:
 - Population
 - Production by commodity (21 and 99 commodities)
 - Consumption by commodity
- 3 List of projects
 - under consideration
 - decided (financing agreed)
 - started

How much of the above data are available and how much would the Institute of Stats ask for the provision of this data? And can it be done in one week?

Section B Forecasts

Current forecast for 3-5 years and longer time periods up to 15 years (if available) for:

- i by national economy overall
- ii by main items of production and consumption
- iii by oblast (if available)

The above forecasts distinguishing:

- a what is official government figures
- b what is unofficial "research" institute or bank figures

How much of the above data and forecasts is likely to be available? How much would it cost and how long would this be likely to take?

APPENDIX C

Maps

Figure C1	Caucasus
Figure C2	Western Kazakhstan
Figure C3	Turkmenistan/Uzbekistan
Figure C4	Eastern Kazakhstan
Figure C5	Kyrgystan, Tajikistan and Eastern Uzbekistan
Figure C6	Main Ports on the Black Sea
Figure C7	Main Ports on the Caspian Sea

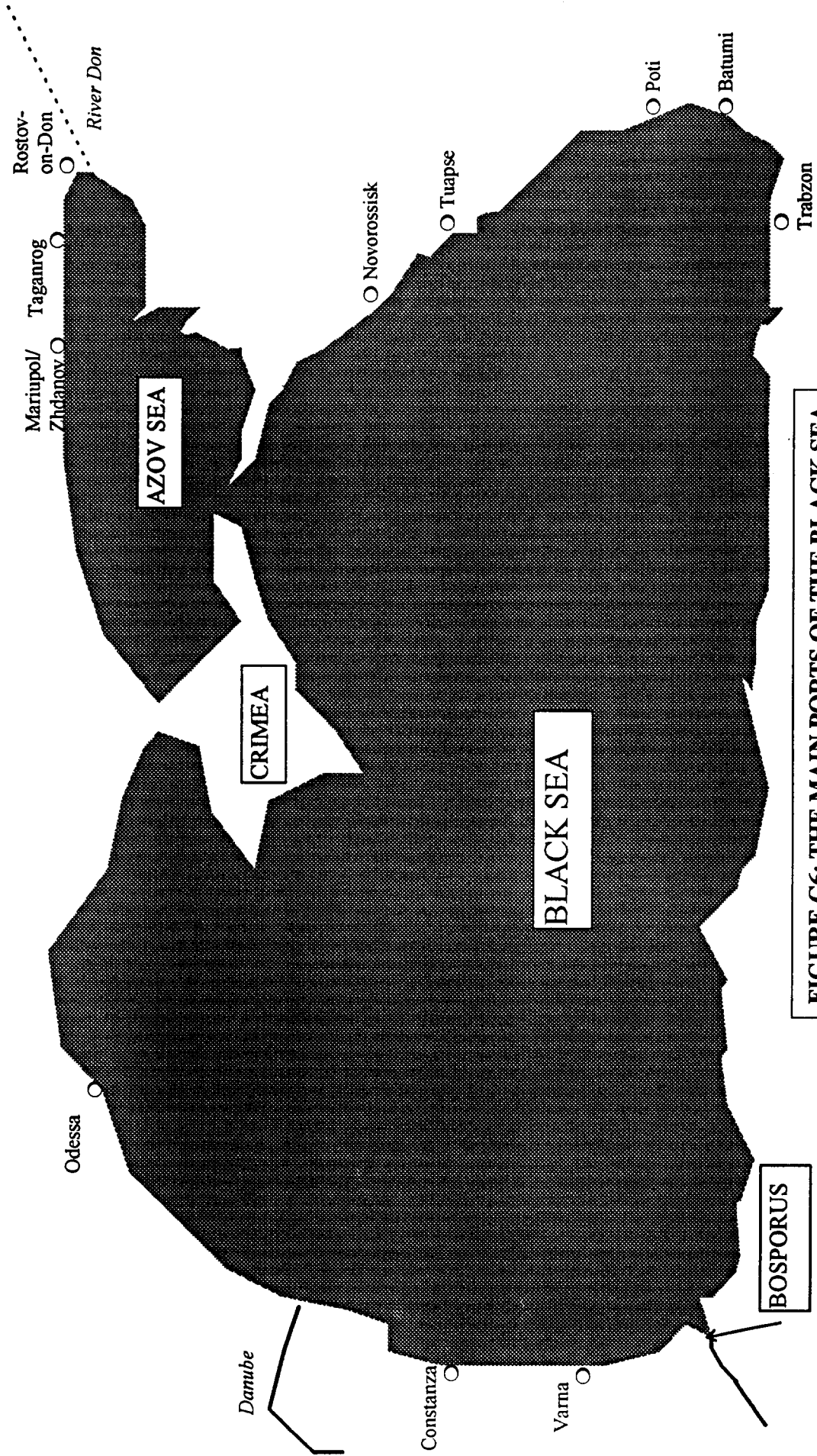


FIGURE C6: THE MAIN PORTS OF THE BLACK SEA

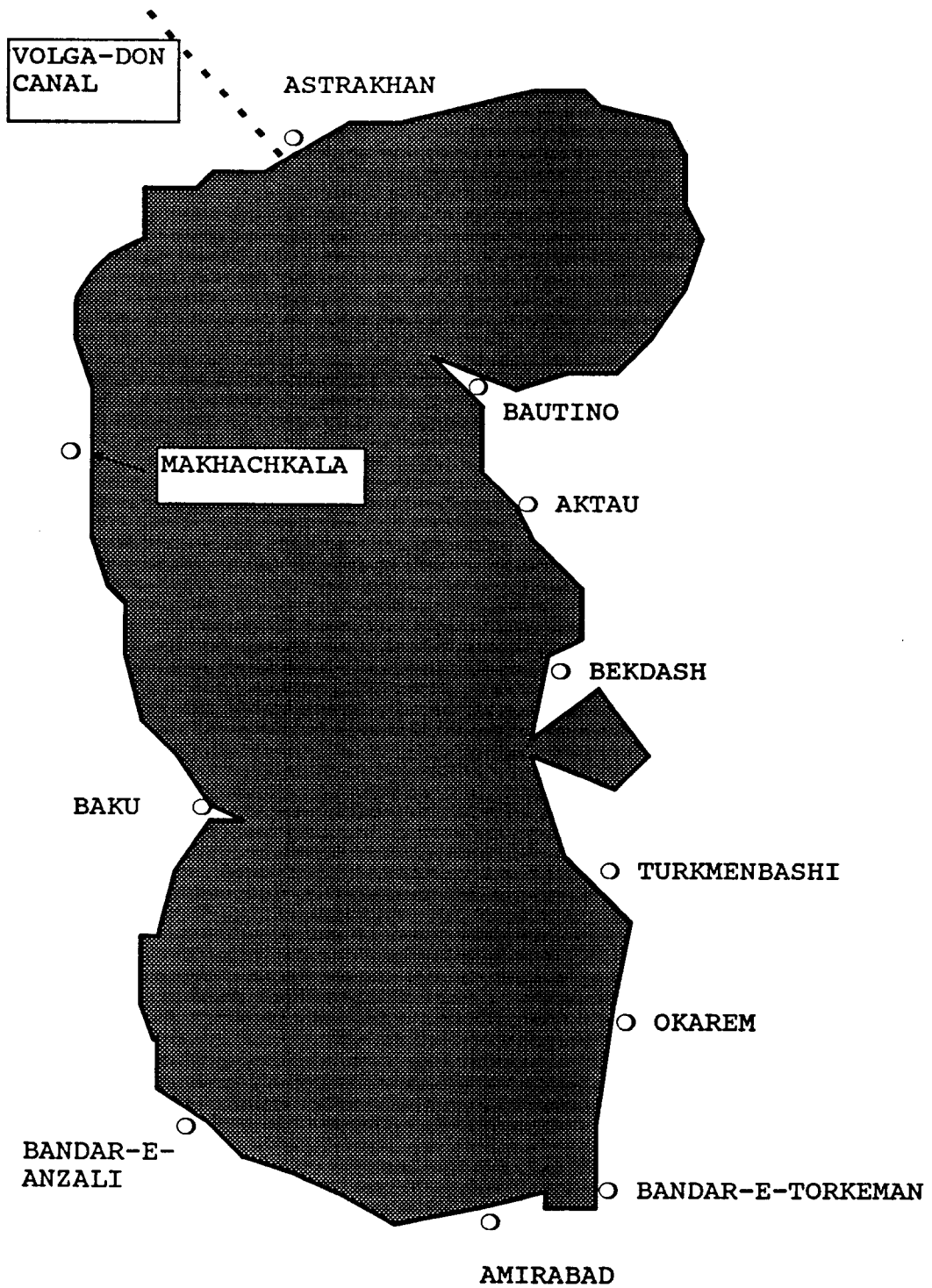


FIGURE C7: MAIN PORTS OF THE CASPIAN SEA

APPENDIX D

Development of the Observed Matrix of Existing (1995/96) Freight Movements in the TRACECA Region

D. DEVELOPMENT OF THE OBSERVED MATRIX OF EXISTING (1995/96) FREIGHT MOVEMENTS IN THE TRACECA REGION

INTRODUCTION

- D.1 This Appendix documents the procedures used to develop and validate observed freight demand matrices for a base year of 1995/96.
- D.2 To facilitate the production of the observed matrices, recent import and export data for the TRACECA countries was required. This data has been collected from custom returns via questionnaires distributed to the authorities of each country.
- D.3 Matrices of annual freight tonnage flows between all zones by commodity are required. The zoning system adopted for the final observed matrices includes 26 internal zones and 23 external zones. In the production of the matrices 21 commodity groups (aggregated from the 99 initial categories) are used. The commodities will be aggregated further into 9 main categories for use in the modal choice and assignment model.
- D.4 This Appendix describes progress to date on building the freight demand matrices and the means by which this data is being validated prior to use in the forecasting model. Our approach has been first to build preliminary demand matrices at an aggregate (country to country) level and to validate these against independent data sets. This process is now sufficiently advanced for model calibration to start. However, additional data and explanations are expected from Georgia and Kyrgyzstan and these improvements will be incorporated into the matrices as they become available.
- D.5 The following paragraphs describe:
- our approach to matrix development;
 - the preliminary matrices;
 - our approach to the disaggregation of these matrices; and
 - matrix validation procedures.

- D.6 The observed matrices will be validated against independent data collected as part of other studies being undertaken in Central Asia and Caucasus's. This will include the comparison of inter-regional freight traffic flows through the various border crossing points; total import and export trade volumes for each region, by commodity; and modes of transport used.

MATRIX DEVELOPMENT

- D.7 We have based the development of the matrices on the import and export data collected from the customs returns for each of the TRACECA states. First the data was processed (using Microsoft EXCEL spreadsheets) to allocate zone and commodity codes to each record.
- D.8 Origin and destination information on foreign trade as provided by each of the TRACECA countries has been summarised in tabular form in Annex D1. These figures show import and export trade for each region by commodity. These formed the basis for the production of the commodity matrices with the origin and destination figures by commodity providing the key to establishing cell values in the matrix.
- D.9 This data was included in the initial Progress Report for Phase 1A (September 1996) for the four countries, Kazakhstan; Tadjikistan; Kyrgyzstan; and Georgia. This information has now been updated and extended to include Azerbaijan, Armenia, Turkmenistan and Uzbekistan.
- D.10 Updated trade flows are presented for Kazakhstan and Tadjikistan resulting from further checks of the import and export data and the receipt of fresh data. Fresh data for Georgia received during a data validation mission to Tblishi in November 1996, have been incorporated. Foreign trade flows for Azerbaijan, Armenia, Turkmenistan and Uzbekistan have been included following the receipt of completed questionnaires from those countries. Revised data for Kyrgyzstan have also been received and incorporated in the matrices.

MATRICES

- D.11 Having processed the import and export data received from the completed questionnaires, the next stage was to combine this information in order to

prepare demand matrices of annual freight tonnage between all origins and destinations by commodity. An aggregate zoning system has been adopted for these preliminary matrices include 8 internal zones to represent each of the TRACECA countries, and 19 external zones. This was achieved through use of EXCEL spreadsheets. The matrices now include all available data at this stage. Minor difficulties remain with data from two countries:

- *Armenia*, for which data were supplied in terms of commodity units rather than in metric tonnes. A reasonably satisfactory conversion has been achieved. However one or two inconsistencies remain;
- *Georgia*, for which fresh data for the first ten months of 1996 have been received and processed, however additional data from the two main ports are awaited.

D.12 These origin/destination matrices for each commodity are presented in Annex D2. This Annex contains a matrix of total freight tonnage flows between all origins and destinations.

D.13 Work on matrix development is on-going and comprises:

- collation and processing of data for those areas of the matrix that are currently incomplete as described above;
- disaggregation of the data from the aggregate (country to country) zones to the agreed study zone system and disaggregation of commodity tonnage by mode;
- validation of these matrices.

D.14 The following sections describe our approach to the disaggregation and validation process.

DISAGGREGATION OF ZONES AND MODES

D.15 The initial matrices included 8 internal zones representing the TRACECA countries. we propose to disaggregate these to the study zone system, which will comprise of 26 internal zones.

- D.16 Each of the three Caucasus Regions (Georgia, Armenia and Azerbaijan (which includes Nakhichevan)) will remain as single zones.
- D.17 The five Central Asian countries will be disaggregated to 23 zones. This disaggregation will be based on origin and destination information given in the completed questionnaires, supported by any knowledge of the distribution of population and locations of industrial production and consumption of the various commodities. Kazakhstan and Tadjikistan are the only countries for which this information has been provided by oblast. Turkmenistan provided import and export data by customs point, which we will use to establish a disaggregation by oblast. Work is currently being undertaken by local technical partners to obtain this information by oblast for Kyrgyzstan and Uzbekistan.
- D.18 Modal split has been established as an average for each of the four countries for which this information has been made available. The modal split for these countries, which include Kazakhstan, Turkmenistan, Tadjikistan, and Azerbaijan, is summarised in Annex D3. Modal split data for Georgia has been promised but is still awaited. Therefore data in Annex D3 is preliminary.
- D.19 Data for Azerbaijan shows a mix of modes being used for freight travel (road, rail and sea). Rail and road are the main modes used for import trade (53% and 37% of total trade respectively), compared to exports which rely on sea (56%) and rail (35%).
- D.20 Tadjikistan and Kazakhstan rely heavily on the railways (over 95% of total) for importing and exporting commodities. Trade to Turkmenistan is largely catered for by the railways (75%), with some by sea (15%) and road (9%). This compares to export traffic which relies on sea more than rail (59% and 37% respectively).
- D.21 Using this data we propose to disaggregate the commodity matrices by mode for use in the calibration and validation of the Regional Freight Forecasting model.

MATRIX VALIDATION

- D.22 The preliminary trade matrices are based on the one set of data that is recorded across the region as a whole i.e. trade imports and exports by commodity.
- D.23 The tables contained in Annex D4 summarise the independent data sets available for validation purposes.
- D.24 Certain data sets provide a basis for checking the trade matrices derived from the customs data and it is this matrix validation that is currently being undertaken.
- D.25 The focus of our initial work on matrix validation has been to identify potential inaccuracies and discrepancies in the trade data obtained. Three specific areas warrant attention:
- the need to ensure that the data sets supplied are internally consistent given that we are collecting two records of trade movements between each of the countries (e.g. Azerbaijan have provided import and exports with Turkmenistan and Turkmenistan have provided exports and imports with Azerbaijan);
 - the need to ensure that the data sets are current and not based on indexed Soviet statistics;
 - the need to control and adjust official statistics to allow for irregular recording. This would appear to be a particular problem for road movement and road/sea movements where not all vehicles and their loads are registered in the official statistics.
- D.26 The preliminary origin/destination matrices as contained in Annex D2 present in each cell both the export flows against the import flows as declared by the distributing and recipient countries respectively. In many cases the discrepancies shown are insignificant, however in other cases checks are being undertaken to establish the more reliable figures. The trade figures initially declared for Georgia through the completion of the questionnaires

have been substantially improved with fresh data and the level of agreement with corresponding data from the other countries is much improved.

- D.27 To date we have undertaken various checks to ensure the validity of the observed matrices developed from the data obtained through the questionnaires. Data sets from other sources have been used to check both inter-regional and international trade volumes.
- D.28 Rail related data has been made available by railway operators. This data is being used to check certain demand values in the matrix, especially across borders where rail is the major mode. We are also checking total demand over selected borders, and by commodity where such information is available. However, it should be noted that the rail data is for 1993, compared to the observed matrices which represent 1995, and hence, the use of this information may be misleading. Due to the volatile nature of the economies within the TRACECA countries, there can be dramatic changes in the trade of each commodity. Over recent years many countries have experienced large declines in GDP and the use of these profiles to interpolate between the given years is not appropriate.
- D.29 Information on humanitarian aid imports associated with each of the three Caucasus regions is presented in a report issued by the World Food Programme (WFP). This data was considered for use in validating import freight movements to Georgia, Armenia and Azerbaijan, and to check traffic through major Ports serving the countries. Although this data provides much useful information regarding freight movement (both aid and commercial), it is seen to be incomplete and can only be used to check certain small aspects of the observed data.
- D.30 Scott Wilson Kirkpatrick (SWK) are currently undertaking a study of border crossings in Central Asia and the Caucasus Regions as part of the TRACECA programme. The information they have collected as part of this study is available and provides a comprehensive data set, suitable for the validation of the observed matrices. The data includes detailed information about each border crossing point, indicates the locations of major freight flows in and out of each country, and in most cases this is given by mode. Total import and export freight traffic for each TRACECA country has been derived and is being used to validate the corresponding values in the matrices. This data is

not split by commodity, however a brief description of typical traffic passing through each border crossing point is given and therefore some broadbrush checks by commodity can be carried out. As this data set also provides limited information on the major origins and destinations of the shipments passing through each customs point, we propose to utilise this in the assignment validation stage also.

- D.31 Inevitably the data sets described in Appendices D do not give a comprehensive up-to-date coverage of all zone to zone trade movements by commodity and mode.
- D.32 We have considered carefully the scope for undertaking new surveys. However, given that we require information on freight tonnages it is not possible to survey this independently from the official recordings at ports. We do anticipate that spot checks on volumes of trade movements by road will be possible by counting vehicles entering ports.
- D.33 Our approach to matrix validation, therefore, seeks to make best use of this existing data as described above and to draw on new qualitative and quantitative data through interviews and meetings with organisations responsible for data collection, freight forwarding, freight production and transport operations.
- D.34 A second stage of the validation will focus on trade flows. As outlined in Annex D3 data sets are available on transport flows for road, rail and maritime. These include:
- rail tonnage flows (tonnage by route and commodity)
 - port throughput statistics (tonnage by major commodities)
 - estimates of border crossing flows by road and rail (tonnages and details of major commodities, origins and destinations)
 - road flows of freight vehicle by route
- D.35 Our intention is to use these data to assist in the model assignment calibration and validation on specific routes as well as to check the volume of trade between zones.

Annex D1

Import and Export Information by Country and Commodity

ARMENIA

(country)

Cargo flows data through the border (import, in tonnes) for 1995

Codes of countries and groups of countries	Code of group of commodities																							Total all commodities	% by group of countries
	Code of group of commodities																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21				
1 Tajikistan	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	26	0.0	
4 Kyrgystan	0	0	0	0	0	0	25	0	0	0	0	6	0	0	0	0	0	0	0	0	0	31	0.0		
7 Uzbekistan	0	0	0	0	0	247	0	0	0	5	0	0	0	0	0	1	0	0	0	0	0	253	0.0		
12 Turkmenistan	36	0	0	0	754,488	0	0	0	0	434	0	0	0	0	3	0	1	0	0	0	0	754,963	43.9		
15 Kazakhstan	0	48	0	0	52	3	0	0	0	0	0	0	0	0	19	0	3	0	0	0	0	125	0.0		
21 Georgia	143	764	152	2,086	290,291	11,503	548	0	1,225	259	564	1	823	0	1,400	27	23	10	0	11	0	309,830	18.0		
22 Armenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
23 Azerbaijan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Sub-total for TRACECA countries	179	812	152	2,086	1,044,779	11,802	551	25	1,225	259	1,027	1	829	0	1,422	28	27	10	0	13	1	1,065,228	61.9		
% by commodities	0.0	0.0	0.0	0.1	60.8	0.7	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	61.9	0.0		
24 Russia and Belarus	7,607	5,898	662	10,246	18,901	13,810	2,573	147	1,223	3,762	1,589	22	2,824	10	12,912	7,160	833	94	0	183	26	90,482	5.3		
29 Ukraine and Moldova	1,325	139	210	879	39	1,572	2,967	0	0	93	13	0	211	0	632	100	16	0	0	29	0	8,225	0.5		
30 China	0	0	0	12	0	0	0	0	0	2	0	0	0	0	0	51	0	8	0	0	0	73	0.0		
31 Indian Sub Continent	0	0	0	0	0	548	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	548	0.0		
32 Iran and Gulf States	17,094	6,484	17,056	90,970	26,847	34,667	1,261	7	203	3,351	978	31	4,059	0	3,390	1,727	372	29	0	1,396	0	209,922	12.2		
33 Turkey	26	159	237	1,105	9,410	230	0	0	0	0	0	0	0	0	0	12	41	0	0	4	0	11,224	0.7		
34 North-Western Europe	3,889	1,186	2,080	11,147	4,618	15,369	403	1	605	603	517	1	165	4	152	539	197	122	0	638	0	42,236	2.5		
35 Southern Europe	872	1,659	1,630	5,712	49,786	1,900	15	0	0	40	13	2	35	0	11,813	66	4	25	0	106	0	73,678	4.3		
36 Central Europe	179	281	49	1,405	57,163	4,930	10	0	0	12	7	0	24	0	198	123	36	30	0	27	0	64,474	3.7		
37 Baltic States	1,934	0	0	38	51	289	2	0	0	3	5	0	2	0	127	40	2	0	0	0	0	2,493	0.1		
38 North-Central Europe	99	0	0	283	0	0	0	0	0	0	9	0	0	0	0	0	5	10	0	0	0	406	0.0		
39 Northern Europe	58	417	1,296	207	7,443	473	40	0	0	6,287	0	0	0	0	378	102	2	15	0	299	0	17,017	1.0		
40 Middle East	576	47	31	659	0	84	168	1	0	16	241	22	187	0	203	0	0	1	0	1	0	2,237	0.1		
41 East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
42 West Africa	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0.0		
43 East Asia Developing	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0.0		
44 East Asia Industrial	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	50	0.0		
45 East Coast America	10,756	9,154	1,652	3,535	23,611	75,713	121	1	0	5,387	373	0	1	0	154	459	39	122	0	20	0	131,098	7.6		
46 W Coast America & Pacific	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119	0.0		
Sub-total for non-TRACECA countries	44,534	25,466	24,903	126,198	197,869	149,587	7,580	157	2,031	19,559	3,745	78	7,508	14	29,756	10,585	1,592	456	0	2,703	26	654,347	38.1		
% by commodities	2.6	1.5	1.4	7.3	11.5	8.7	0.4	0.0	0.1	1.1	0.2	0.0	0.4	0.0	1.7	0.6	0.1	0.0	0.0	0.2	0.0	38.1	0.0		
TOTAL all countries	44,713	26,278	25,055	128,284	1,242,648	161,389	8,131	182	3,256	19,818	4,772	79	8,337	14	31,178	10,613	1,619	466	0	2,716	27	1,719,575	0.0		
% by commodities	2.6	1.5	1.5	7.5	72.3	9.4	0.5	0.0	0.2	1.2	0.3	0.0	0.5	0.0	1.8	0.6	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	

ARMENIA

(country)

Cargo flows data through the border (export, in tonnes) for 1995

Codes of Countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
	1	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0		
4	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0.0
7	0	16	0	136	0	51	0	0	0	0	15	0	0	0	117	2	3	3	0	0	0	343	0.1
12	0	0	0	2,824	0	3,609	3,428	326	500	57	1,516	607	1,740	0	566	5,893	1,072	40	0	534	0	22,712	8.0
15	0	1	0	80	0	273	90	0	0	0	41	13	48	0	187	712	0	2	0	1	0	1,448	0.5
21	13	32	0	127	37,667	676	589	19	0	26	15	0	2,802	0	986	166	5	2	0	13	0	43,138	15.1
22	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0.0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sub-total for TRACECA countries	13	49	0	3,182	37,667	4,632	4,107	345	500	83	1,587	643	4,590	0	1,856	6,773	1,080	47	0	548	0	67,702	23.8
% by commodities	0.0	0.0	0.0	1.1	13.2	1.6	1.4	0.1	0.2	0.0	0.6	0.2	1.6	0.0	0.7	2.4	0.4	0.0	0.0	0.2	0.0	23.8	0.0
24	129	323	0	17,016	10,147	6,697	3,129	51	25	6	1,302	60	728	10	13,592	12,704	291	95	0	209	150	66,664	23.4
29	0	15	0	231	50	1,378	934	0	0	43	52	0	3	0	4,799	690	95	2	0	9	0	8,301	2.9
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
32	0	0	0	0	0	0	0	0	0	1,340	23	0	47	0	45,394	372	0	0	0	3	0	70,134	24.6
33	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4,958	26	0	0	0	0	0	6,664	2.3
34	1	502	0	35	27,802	10	0	0	0	283	29	0	47	9	1,882	143	0	5	0	1	60	30,809	10.8
35	0	0	0	20	0	0	0	0	0	0	1	0	1	0	195	55	15	1	0	1	6	295	0.1
36	0	0	0	80	9,239	0	0	15	0	0	0	0	0	0	3,590	1	0	0	0	0	66	12,911	4.5
37	0	0	0	0	0	15	0	0	0	12	0	0	0	0	65	36	0	0	0	0	0	208	0.1
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
39	0	0	0	18	2,259	0	0	0	0	9,333	81	0	0	0	3,215	52	0	0	0	0	0	15,259	5.4
40	0	0	0	0	1,395	0	0	27	0	2	70	1	9	0	2,614	180	0	1	0	0	0	4,299	1.5
41	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
43	0	0	0	0	0	0	0	0	0	9	0	0	0	0	3	1	0	0	0	0	0	13	0.0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
45	0	0	0	279	0	14	0	0	2	1	21	16	59	0	1,071	16	0	0	0	0	0	1,479	0.5
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sub-total for non-TRACECA countries	130	840	0	17,679	70,239	11,168	4,918	1,771	27	11,029	1,581	77	894	21	81,378	14,276	401	105	0	223	282	217,039	76.2
% by commodities	0.0	0.3	0.0	6.2	24.7	3.9	1.7	0.6	0.0	3.9	0.6	0.0	0.3	0.0	28.6	5.0	0.1	0.0	0.0	0.1	0.1	76.2	
TOTAL all countries	143	889	0	20,861	107,906	15,800	9,025	2,116	527	11,112	3,168	720	5,484	21	83,234	21,049	1,481	152	0	771	282	284,741	
% by commodities	0.1	0.3	0.0	7.3	37.9	5.5	3.2	0.7	0.2	3.9	1.1	0.3	1.9	0.0	29.2	7.4	0.5	0.1	0.0	0.3	0.1		

AZERBAIJAN

(country)

Cargo flows data through the border (import, in tonnes) for 1995

Codes of countries and groups of countries	Code of group of commodities																				Total all commodities	% by group of countries	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21
1 Tajikistan	7	0	0	15	0	60	0	0	0	0	8	0	0	0	56	0	0	0	0	0	0	146	0.0
4 Kyrgystan	14	214	5	0	1,781	11	0	0	25	0	21	0	1,409	0	0	516	0	0	0	13	0	4,009	0.3
7 Uzbekistan	3	931	0	203	41,509	13,232	0	0	0	7	3,286	0	7,390	0	137	522	0	12	0	14	0	67,246	4.6
12 Turkmenistan	0	181	0	0	139,728	0	0	0	0	227	0	0	2,779	0	4	0	0	0	0	0	0	142,941	9.7
15 Kazakhstan	707	44,145	0	18	67,916	2,107	308	6	34	78	91	2	2,126	0	11,554	412	2	0	0	0	0	129,505	8.8
21 Georgia	408	2,142	90	1,039	12,549	28,686	11	0	26	717	40	0	1,552	0	17,843	340	14	1	0	22	0	65,479	4.5
22 Armenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
23 Azerbaijan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sub-total for TRACECA countries	1,139	47,612	95	1,275	263,482	44,097	320	6	85	1,029	3,446	2	15,256	0	29,593	1,812	16	13	0	49	0	409,326	27.9
% by commodities	0.1	3.2	0.0	0.1	17.9	3.0	0.0	0.0	0.0	0.1	0.2	0.0	1.0	0.0	2.0	0.1	0.0	0.0	0.0	0.0	0.0	27.9	0.0
24 Russia and Belarus	2,760	70,101	253	5,749	20,687	11,608	2,765	9	13,840	6,058	579	89	13,340	0	12,935	5,829	2,571	86	0	1,021	0	170,279	11.6
29 Ukraine and Moldova	4,706	2,858	171	24,089	3,477	2,091	283	8	75	732	145	23	1,269	0	15,197	2,055	473	4	0	239	0	57,896	3.9
30 China	0	35	0	119	0	46	3	0	21	0	194	20	37	0	5	211	0	0	0	113	0	811	0.1
31 Indian Sub Continent	0	1,185	0	68	0	114	0	11	0	1	99	0	0	0	0	0	0	0	0	1	0	1,478	0.1
32 Iran and Gulf States	20,082	116,049	26,311	118,086	25,617	9,939	3,353	21	1,324	640	5,484	4,797	17,492	0	406	1,201	588	1,121	0	3,212	0	355,723	24.2
33 Turkey	6,526	46,504	21,590	27,608	1,791	5,651	921	75	105	2,329	672	185	1,187	0	1,242	2,901	2,117	3	0	3,137	0	124,545	8.5
34 North-Western Europe	4,365	165,047	1,021	9,718	33	1,801	422	3	0	73	149	18	1	0	2,305	467	307	47	0	575	0	186,353	12.7
35 Southern Europe	414	66,350	81	342	19	2,576	28	5	0	24	3	1	1,925	0	13	12	0	0	0	104	0	71,896	4.9
36 Central Europe	4,322	3,268	28	1,879	189	582	112	0	2	70	0	0	0	0	18	106	99	31	0	181	0	10,787	0.7
37 Baltic States	3,088	3,418	35	1,508	932	527	15	0	21	57	117	0	23	0	20	16	289	1	0	118	0	10,186	0.7
38 North-Central Europe	90	4,365	53	470	0	122	0	0	0	59	7	0	90	0	246	11	60	0	0	61	0	5,634	0.4
39 Northern Europe	0	5,475	0	1,542	40	15	0	0	0	13	50	25	0	0	323	30	3	1	0	551	0	8,070	0.5
40 Middle East	113	5	0	1,050	0	31	19	0	2	27	41	0	0	0	0	26	1	5	0	6	0	1,327	0.1
41 East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42 West Africa	0	0	0	0	32,231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32,231	2.2
43 East Asia Developing	0	342	0	0	0	0	0	0	0	0	1,115	0	1	0	7	1	0	0	0	0	0	1,467	0.1
44 East Asia Industrial	0	0	0	17	0	225	0	0	0	0	1	0	0	0	510	19	180	1	0	0	952	0.1	
45 East Coast America	983	7,878	1,425	3,504	0	1,071	54	1	0	20	84	1	0	0	134	41	1	2	0	18	0	15,216	1.0
46 W Coast America & Pacific	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.0
47 Unknown - No name	0	3,184	352	336	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,871	0.0
Sub-total for non-TRACECA countries	47,450	496,064	51,319	196,086	85,016	36,402	7,978	132	15,367	10,133	8,737	5,159	35,365	0	33,363	12,926	6,689	1,302	0	9,236	0	1,058,725	72.1
% by commodities	3.2	33.8	3.5	13.4	5.8	2.5	0.5	0.0	1.0	0.7	0.6	0.4	2.4	0.0	2.3	0.9	0.5	0.1	0.0	0.6	0.0	72.1	0.0
TOTAL all countries	48,589	543,676	51,414	197,360	348,498	80,499	8,298	138	15,452	11,162	12,183	5,161	50,621	0	62,957	14,738	6,705	1,315	0	9,285	0	1,468,051	0.0
% by commodities	3.3	37.0	3.5	13.4	23.7	5.5	0.6	0.0	1.1	0.8	0.8	0.4	3.4	0.0	4.3	1.0	0.5	0.1	0.0	0.6	0.0	0.0	0.0

AZERBAIJAN

(country)

Cargo flows data through the border (export, in tonnes) for 1995

Codes of Countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
	1 Tajikistan	0	50	0	20	3,931	15,829	0	0	0	0	0	0	0	0	0	75	0	0	0	0		
4 Kyrgystan	0	252	0	197	5,669	99	9	0	37	0	59	0	0	0	0	70	0	0	0	0	0		
7 Uzbekistan	0	211	0	177	108	232	1,476	0	0	7	24	2	0	0	79	672	2	17	0	16	0		
12 Turkmenistan	0	218	0	375	23,555	5,499	1,315	0	0	48	164	33	1,352	0	359	1,487	256	1	0	5	0		
15 Kazakhstan	15	710	22	1,421	38,332	1,093	408	0	0	3	300	48	76	0	645	2,234	261	31	0	19	0		
21 Georgia	1,213	102	0	1,305	375,255	23,816	546	0	0	267	20	0	366	0	102	0	0	0	0	0	0		
22 Armenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
23 Azerbaijan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sub-total for TRACECA countries	1,228	1,543	22	3,495	446,850	46,569	3,753	0	37	324	568	83	1,794	0	1,084	4,640	519	49	0	41	0		
% by commodities	0.0	0.1	0.0	0.1	16.9	1.8	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0		
24 Russia and Belarus	149	9,393	317	47,707	172,541	10,565	2,552	2	160	427	2,162	1	1,814	0	3,807	10,217	1,477	446	0	23	0		
29 Ukraine and Moldova	0	3,759	61	1,600	121,564	352	421	0	0	0	3,981	0	139	0	111	1,731	64	70	0	33	0		
30 China	0	779	0	0	0	0	0	0	0	0	1,210	0	0	0	0	0	0	0	0	0	0		
31 Indian Sub Continent	0	0	0	0	0	0	40	0	0	6	103	94	0	0	0	69	11	0	0	0	0		
32 Iran and Gulf States	0	830	80	3,575	976,462	3,425	1,712	0	659	911	14,031	86	11	0	39,108	9,895	17,623	21	0	0	0		
33 Turkey	72	2,118	18	8,684	0	2,995	2,915	2,246	328	616	12,974	0	84	0	1,549	27	5	0	0	7	0		
34 North-Western Europe	21	833	0	2,946	23,426	161	0	0	0	0	240	0	0	0	0	203	0	0	0	0	0		
35 Southern Europe	0	72	0	500	424,696	0	80	0	186	0	60	0	0	0	1,050	22	0	0	0	0	0		
36 Central Europe	0	0	0	0	0	0	0	0	0	0	16,624	0	0	0	2,203	215	0	0	0	0	0		
37 Baltic States	0	90	0	1,478	61,847	0	0	0	0	0	1,671	0	0	0	0	0	0	0	0	0	0		
38 North-Central Europe	0	299	0	0	0	0	0	0	0	0	79	0	0	0	40	0	0	0	0	0	0		
39 Northern Europe	0	36	0	0	46,072	0	0	0	0	0	29,952	0	0	0	241	6	0	0	0	0	0		
40 Middle East	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	69	0	0	0	0	0		
41 East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
42 West Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
43 East Asia Developing	0	92	0	0	0	0	0	0	0	0	73	0	0	0	15	0	0	0	0	0	0		
44 East Asia Industrial	0	1,000	0	0	0	0	0	0	0	0	544	0	0	0	0	0	0	0	0	0	0		
45 East Coast America	0	0	0	0	0	0	8,953	0	0	0	80	0	0	0	0	0	0	0	0	0	0		
46 W Coast America & Pacific	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233	0	0	0	0	0	0		
47 Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sub-total for non-TRACECA countries	243	19,300	476	66,189	1,826,609	17,498	16,675	2,248	1,333	1,960	83,782	181	2,049	0	48,108	22,702	19,180	541	0	63	0		
% by commodities	0.0	0.7	0.0	2.5	69.1	0.7	0.6	0.1	0.1	0.1	3.2	0.0	0.1	0.0	1.8	0.9	0.7	0.0	0.0	0.0	0.0		
TOTAL all countries	1,471	20,844	497	69,684	2,273,459	64,067	20,429	2,248	1,369	2,284	84,350	264	3,843	0	49,191	27,342	19,699	589	0	104	0		
% by commodities	0.1	0.8	0.0	2.6	86.1	2.4	0.8	0.1	0.1	0.1	3.2	0.0	0.1	0.0	1.9	1.0	0.7	0.0	0.0	0.0	0.0		

GEORGIA

(country)

Cargo flows data through the border (import, in tonnes) for 1996

Codes of countries and groups of countries	Code of group of commodities																				Total all commodities	% by group of countries	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21
1 Tajikistan	0	0	0	28	0	1	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	32	0.0
4 Kyrgyzstan	10	0	0	5	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	25	0.0
7 Uzbekistan	12	0	0	45	0	132	0	0	0	0	230	24	0	0	0	39	0	0	0	0	0	482	0.0
12 Turkmenistan	0	13	0	0	6,107	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	6,145	0.3
15 Kazakhstan	84	538	0	0	117	59	0	0	0	82	139	0	0	0	518	0	0	0	0	0	0	1,538	0.1
21 Georgia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
22 Armenia	0	0	0	19	78,313	2,814	2	0	21	143	16	1	5,231	0	3,535	437	76	0	0	8	0	90,616	4.9
23 Azerbaijan	427	158	126	783	380,739	22,827	6,053	0	0	48	111	0	0	0	10,604	45	7	24	0	7	0	421,960	22.6
Sub-total for TRACECA countries	534	709	126	880	465,277	25,833	6,055	0	21	191	439	164	5,255	0	14,661	531	83	24	0	15	0	520,797	27.9
% by commodities	0.0	0.0	0.0	0.0	24.9	1.4	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	27.9	0.0
24 Russia and Belarus	1,659	5,360	314	5,550	35,758	3,341	1,575	36	1,871	2,788	230	52	9,444	0	26,658	1,771	921	15	0	71	0	97,415	5.2
29 Ukraine and Moldova	1,512	25,670	227	24,121	20,437	842	206	0	9	732	10	2	8,364	0	8,823	471	110	0	0	20	0	91,556	4.9
30 China	0	0	0	1	0	0	11	10	0	0	138	35	0	0	394	58	0	5	0	0	0	653	0.0
31 Indian Sub Continent	0	39,252	0	0	0	0	0	0	0	0	9	0	0	0	178	0	0	0	0	0	0	39,439	2.1
32 Iran and Gulf States	151	1,681	3	1,464	1,038	1,271	254	9	458	34	968	122	1,283	0	1,051	150	83	8	0	1,776	0	11,805	0.6
33 Turkey	4,011	124,579	6,188	28,199	41,831	4,848	708	1	106	2,517	170	5	8,129	0	2,365	634	215	17	0	698	0	225,223	12.1
34 North-Western Europe	1,630	129,587	269	11,696	9,244	435	2,422	0	27	665	365	56	70	0	3,241	734	357	128	1	118	4	161,049	8.6
35 Southern Europe	6,922	113,308	505	20,239	178,880	5,997	578	1	84	479	143	50	1,372	1	1,165	380	0	46	8	792	0	330,949	17.7
36 Central Europe	755	51,394	3	9,426	151,996	112	224	0	22	246	113	117	60	0	1,598	390	113	12	0	192	0	216,776	11.6
37 Baltic States	207	1	29	1,344	0	90	0	0	2	78	1	0	93	0	169	202	16	7	0	42	0	2,281	0.1
38 North-Central Europe	89	12	0	291	0	178	10	0	4	1	3	0	264	0	79	20	21	0	3	8	0	993	0.1
39 Northern Europe	456	7,194	64	18,008	14,582	8	0	0	34	106	0	0	45	0	92	126	42	3	0	54	0	40,814	2.2
40 Middle East	178	2,484	0	788	0	50	45	7	0	84	111	45	1	0	292	71	48	14	0	23	0	4,243	0.2
41 East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.0
42 West Africa	230	0	0	0	7,763	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,993	0.4
43 East Asia Developing	0	855	43	0	7,456	0	0	0	0	0	9	1	43	0	0	3	0	0	0	5	0	8,415	0.5
44 East Asia Industrial	0	0	0	0	5,617	0	3	0	0	0	109	33	0	0	16	39	2	3	0	1	0	5,822	0.3
45 East Coast America	2,022	84,168	2,532	1,162	491	110	33	0	44	99	67	0	0	0	8,423	412	14	39	0	16	0	99,633	5.3
46 W Coast America & Pacific	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108	0	0	0	0	0	128	0.0
Sub-total for non-TRACECA countries	19,843	585,544	10,178	122,291	475,093	17,281	6,069	64	2,584	7,704	2,586	585	29,170	1	54,547	5,569	1,943	296	12	3,816	4	1,345,179	72.1
% by commodities	1.1	31.4	0.5	6.6	25.5	0.9	0.3	0.0	0.1	0.4	0.1	0.0	1.6	0.0	2.9	0.3	0.1	0.0	0.0	0.2	0.0	72.1	
TOTAL all countries	20,377	586,253	10,303	123,171	940,369	43,114	12,124	64	2,605	7,895	3,025	749	34,425	1	69,208	6,100	2,026	321	12	3,831	4	1,865,977	
% by commodities	1.1	31.4	0.6	6.6	50.4	2.3	0.6	0.0	0.1	0.4	0.2	0.0	1.8	0.0	3.7	0.3	0.1	0.0	0.0	0.2	0.0		

GEORGIA

(country)

Cargo flows data through the border (export, in tonnes) for 1996

Codes of Countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
1 Tajikistan	0	1,010	0	0	0	0	0	0	0	0	0	0	0	0	265	0	0	0	0	0	0	0	1,275	0.2
4 Kyrgyzstan	0	162	13	634	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	809	0.1
7 Uzbekistan	0	418	0	41	0	179	0	0	36	16	34	0	0	0	0	45	626	0	0	0	0	0	1,395	0.2
12 Turkmenistan	0	10,227	0	29	0	0	0	0	0	0	14	12	0	0	4	4	1	0	0	0	0	0	10,291	1.8
15 Kazakhstan	0	519	0	317	0	698	19	0	0	0	70	0	0	0	325	94	9	0	0	0	0	2,053	0.4	
21 Georgia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
22 Armenia	412	798	218	4,043	76,845	12,905	231	0	98	52	116	0	212	0	835	34	0	0	0	68	0	96,868	16.8	
23 Azerbaijan	26	354	129	5,484	2,216	19,106	14	0	48	31	490	0	5,714	0	14,385	560	18	8	0	1,963	0	50,550	8.7	
Sub-total for TRACECA countries	438	13,488	361	10,549	79,061	32,889	265	0	182	100	725	12	5,926	0	15,813	737	655	9	0	2,031	0	163,242	28.3	
% by commodities	0.1	2.3	0.1	1.8	13.7	5.7	0.0	0.0	0.0	0.0	0.1	0.0	1.0	0.0	2.7	0.1	0.1	0.0	0.0	0.4	0.0	28.3	0.0	
24 Russia and Belarus	119	7,103	53	27,002	12,336	2,046	269	1	123	83	548	7	1,503	0	46,748	2,189	746	13	0	212	0	101,100	17.5	
29 Ukraine and Moldova	96	1,752	0	1,090	906	63	35	0	0	3	95	4	0	0	81	209	0	1	0	4	0	4,340	0.8	
30 China	0	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	300	0.1	
31 Indian Sub Continent	0	0	0	3	0	0	0	0	0	0	38	0	0	0	2	0	113	0	0	0	0	156	0.0	
32 Iran and Gulf States	0	0	0	18	168	367	0	0	91	3	0	0	0	0	6,630	300	1	0	0	0	0	7,578	1.3	
33 Turkey	95	2,229	19	57	178	47,854	94	2,537	16,166	0	24	0	175	0	26,250	2,806	84	1	0	1	0	98,571	17.1	
34 North-Western Europe	0	67	0	2,810	959	26	23,764	0	0	0	98	0	44	0	45	0	2	0	0	0	0	27,816	4.8	
35 Southern Europe	48	343	0	33	56,892	0	0	4	0	0	23	0	4	0	1,262	358	0	0	0	0	0	58,967	10.2	
36 Central Europe	0	282	45	263	50,966	2	0	0	24	0	0	0	0	0	2,882	5	0	0	0	0	0	54,143	9.4	
37 Baltic States	0	367	0	688	0	1,718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,732	0.5	
38 North-Central Europe	0	0	0	70	0	0	0	0	0	0	0	0	0	0	292	0	0	0	0	0	0	437	0.1	
39 Northern Europe	0	0	0	0	37,727	19,591	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57,610	10.0	
40 Middle East	0	52	0	336	0	0	0	0	0	0	0	12	0	0	5	2	3	0	0	0	0	411	0.1	
41 East Africa	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0.0	
42 West Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
43 East Asia Developing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
44 East Asia Industrial	0	0	0	41	0	0	0	0	0	0	56	0	0	0	0	0	0	0	0	0	0	56	0.0	
45 East Coast America	0	27	0	25	0	6	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	61	0.0	
46 W Coast America & Pacific	0	0	0	0	0	0	0	0	0	0	191	0	12	0	2	0	0	0	0	0	0	264	0.0	
Sub-total for non-TRACECA countries	358	12,549	117	32,434	160,132	71,673	24,162	2,544	16,404	87	1,096	12	1,751	0	84,200	5,868	949	14	0	217	1	414,568	71.7	
% by commodities	0.1	2.2	0.0	5.6	27.7	12.4	4.2	0.4	2.8	0.0	0.2	0.0	0.3	0.0	14.6	1.0	0.2	0.0	0.0	0.0	0.0	71.7	0.0	
TOTAL all countries	796	26,037	478	42,983	239,193	104,562	24,426	2,544	16,587	187	1,821	24	7,677	0	100,013	6,605	1,604	23	0	2,248	1	577,810	0.0	
% by commodities	0.1	4.5	0.1	7.4	41.4	18.1	4.2	0.4	2.9	0.0	0.3	0.0	1.3	0.0	17.3	1.1	0.3	0.0	0.0	0.4	0.0	0.0	0.0	0.0

KAZAKHSTAN

(country)

Cargo flows data through the border (import, in tonnes) for 1995

Codes of Countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
1 Tajikistan	8	1,551	188	2,120	258	10,449	4	0	2	0	1,766	10	199	0	315	365	308	0	0	1	0	17,543	0.2	
4 Kyrgyzstan	219	6,318	33	2,959	99,474	350	94	6	14	897	598	23	9,588	1	393	1,878	787	3	0	175	0	123,810	1.4	
7 Uzbekistan	219	44,024	1,815	8,234	532,308	147,474	120	10	79	599	8,865	36	13,497	0	15,330	3,254	309	43	0	793	0	777,010	8.8	
12 Turkmenistan	108	471	0	57	19,164	3,498	0	0	8	0	538	0	261	0	96	183	9	0	0	0	0	24,391	0.3	
15 Kazakhstan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
21 Georgia	0	1,114	0	87	0	48	0	0	0	34	37	0	0	0	1,190	94	334	0	0	3	0	2,942	0.0	
22 Armenia	0	56	0	0	0	23	8	0	0	0	12	20	0	0	0	292	3	3	0	0	0	417	0.0	
23 Azerbaijan	4	429	0	1,151	50,339	7,969	182	0	9	59	257	54	192	0	512	1,331	963	23	0	15	0	63,489	0.7	
Sub-total for TRACECA countries	558	53,962	2,036	14,608	701,544	169,809	409	16	111	1,588	12,073	143	23,737	1	17,836	7,398	2,713	72	0	987	0	1,009,601	11.5	
% by commodities	0.0	0.6	0.0	0.2	8.0	1.9	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	11.5	0.0	
24 Russia and Belarus	7,204	19,768	5,463	204,500	3,919,826	590,781	43,739	271	399,748	41,082	11,124	1,320	242,974	12	1,187,414	100,413	83,156	1,457	93	10,984	0	6,871,326	77.9	
29 Ukraine and Moldova	33	1,941	2,330	159,060	14,698	7,570	1,760	0	37	146	213	76	1,922	0	20,348	10,284	7,984	65	0	272	0	228,739	2.6	
30 China	358	1,113	294	17,038	123,655	3,675	417	416	15	294	1,611	147	744	0	2,669	2,551	183	19	0	293	0	155,491	1.8	
31 Indian Sub Continent	1	3,083	0	346	0	894	21	1	0	9	113	449	0	0	306	9	7	0	0	8	0	5,247	0.1	
32 Iran and Gulf States	14	9,102	678	9,195	4,626	1,763	400	8	3	311	158	86	1,273	0	381	275	21	9	0	361	0	28,663	0.3	
33 Turkey	93	2,193	2,369	20,101	714	8,811	1,045	66	158	743	2,197	68	2,675	0	2,441	3,797	2,079	91	0	678	0	50,319	0.6	
34 North-Western Europe	2,780	3,116	2,653	24,412	36,543	9,932	2,269	15	702	2,298	2,272	526	769	0	2,323	13,132	3,930	217	3	1,244	0	109,133	1.2	
35 Southern Europe	18	1,282	1,217	7,462	3,937	2,066	212	10	24	120	364	173	384	0	463	1,194	331	14	0	1,172	0	20,441	0.2	
36 Central Europe	270	628	401	10,835	17,683	2,349	306	47	645	3,878	383	62	1,165	1	1,010	9,282	1,887	174	1	981	0	51,988	0.6	
37 Baltic States	3,851	216	238	15,345	14,763	3,418	297	16	120	510	641	222	382	0	143	3,564	1,559	20	0	1,888	0	47,191	0.5	
38 North-Central Europe	126	824	268	2,304	37,595	4,157	386	1	314	617	197	38	1,540	0	3,353	798	422	50	0	1,535	0	54,523	0.6	
39 Northern Europe	779	1,856	259	74,649	27,328	2,612	131	3	41	300	152	37	179	0	204	704	61	10	0	136	0	109,439	1.2	
40 Middle East	353	571	389	3,211	0	515	69	0	109	629	68	0	216	0	3	126	0	49	0	62	0	6,369	0.1	
41 East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	1,364	0	1,372	0.0	
42 West Africa	637	115	7	45	195	77	0	0	116	28	0	0	7	0	20	20	0	0	0	44	0	1,310	0.0	
43 East Asia Developing	0	2,063	112	721	0	436	75	18	1	5	323	38	3	0	764	578	81	3	0	63	0	5,284	0.1	
44 East Asia Industrial	4	31	0	533	102	91	444	8	0	35	152	18	31	1	243	2,996	1,557	8	0	207	0	6,459	0.1	
45 East Coast America	1,974	230	956	4,692	452	1,412	114	5	45	1,610	435	133	225	0	260	1,100	129	232	6	184	0	14,195	0.2	
46 W Coast America & Pacific	0	5	0	18	36,858	400	0	0	0	0	4	0	0	0	2,400	217	0	0	0	0	0	39,901	0.5	
Sub-total for non-TRACECA countries	18,491	48,135	17,631	554,465	4,238,973	640,957	51,684	886	402,078	52,615	20,405	3,395	254,487	14	1,224,746	151,046	103,379	2,424	102	21,475	0	7,807,388	88.5	
% by commodities	0.2	0.5	0.2	6.3	48.1	7.3	0.6	0.0	4.6	0.6	0.2	0.0	2.9	0.0	13.9	1.7	1.2	0.0	0.0	0.2	0.0	88.5	0.0	
TOTAL all countries	19,049	102,097	19,668	569,073	4,940,516	810,767	52,093	902	402,190	54,203	32,478	3,538	278,224	15	1,242,582	158,444	106,092	2,497	102	22,462	0	8,816,989	0.0	
% by commodities	0.2	1.2	0.2	6.5	56.0	9.2	0.6	0.0	4.6	0.6	0.4	0.0	3.2	0.0	14.1	1.8	1.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0

KAZAKHSTAN

(country)

Cargo flows data through the border (export, in tonnes) for 1995

Codes of countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1 Tajikistan	115	284,867	0	839	39,872	2,506	136	0	325	235	21	9	2,405	0	3,091	214	1,186	0	0	11	0	335,830	0.9
4 Kyrgyzstan	919	35,310	74	4,390	807,159	12,101	581	91	2,346	498	302	8	9,282	0	31,420	1,527	944	6	2	226	0	907,184	2.5
7 Uzbekistan	2,005	398,650	153	13,284	1,299,521	46,599	2,414	16	8,730	733	886	82	15,918	10	50,122	5,436	3,943	26	0	163	0	1,848,689	5.2
12 Turkmenistan	5,312	135,357	16	583	132,288	2,292	145	15	398	5	305	15	11,502	0	18,015	6,070	698	2	0	351	0	313,368	0.9
15 Kazakhstan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Georgia	207	235	0	0	45	107	0	1	48	7	8	0	16	0	85	1	0	0	0	0	0	759	0.0
22 Armenia	39	12	0	28	0	0	20	0	0	0	0	0	19	0	84	4	0	0	0	0	0	207	0.0
23 Azerbaijan	1,048	58,807	0	7	40,893	985	281	6	16	15	75	2	2,037	0	36,945	309	0	0	0	22	0	141,448	0.4
Sub-total for TRACECA countries	9,644	913,238	244	19,130	2,319,776	64,589	3,576	129	11,864	1,492	1,597	115	41,179	10	139,762	13,561	6,770	33	2	773	0	3,547,483	9.9
% by commodities	0.0	2.5	0.0	0.1	6.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.0
24 Russia and Belarus	71,654	2,341,286	2,764	164,844	18,215,662	1,172,121	50,762	4,400	5,161	2,999	12,040	495	381,088	36	4,097,553	203,231	22,789	759	311	4,876	0	26,754,830	74.6
29 Ukraine and Moldova	209	102,897	0	486	215,993	10,642	393	5	6	5	562	4	840	0	17,405	1,309	2,058	38	0	25	0	352,877	1.0
30 China	53	62,775	48	491	6,842	349,524	171	30,801	1,146	50	63,638	3	226	0	436,676	49,623	3,555	100	202	1,730	0	1,007,452	2.8
31 Indian Sub Continent	24	16,293	0	244	5,689	640	2	289	0	0	759	0	0	0	25,338	8	16	0	2	0	0	49,303	0.1
32 Iran and Gulf States	1,044	2,114	0	146	17,934	40,146	2,507	303	191	270	51	0	850	0	112,168	130	8	0	0	0	0	177,860	0.5
33 Turkey	747	388	0	11	1,048	384	1,802	12,508	171	21	811	0	301	0	127,912	24	16	2	0	0	0	146,145	0.4
34 North-Western Europe	1,185	3,376	0	1,404	466,884	10,823	1,564	1,295	21	0	248	3	31	11	390,480	231	85	12	0	53	0	877,705	2.4
35 Southern Europe	388	226	0	47	51,179	3,073	1,355	1,003	88	16	2,727	1	312	0	88,417	64	467	1	0	2	0	149,365	0.4
36 Central Europe	186	10,524	0	3	1,107,325	9,427	125	373	154	0	5,493	0	96	30	63,921	59	224	7	0	0	0	1,197,945	3.3
37 Baltic States	284	82,976	0	2,102	59,892	8,488	171	476	5	0	494	0	20	0	425,731	160	1,605	2	74	8	0	582,488	1.6
38 North-Central Europe	169	95,732	0	157	57,152	15,132	46	182	15	0	1,592	0	0	0	2,848	33	23	0	3	20	0	173,104	0.5
39 Northern Europe	0	1,353	0	1,109	91,151	2,594	0	76	0	0	574	0	0	30	11,063	8	0	0	0	0	0	107,959	0.3
40 Middle East	112	222	0	0	128	288	0	12	0	0	0	0	0	0	0	8	0	3	0	0	0	774	0.0
41 East Africa	0	131	0	0	0	1,340	0	0	0	0	0	0	0	0	1,120	0	0	0	0	0	0	2,592	0.0
42 West Africa	0	484	0	0	1	718	0	64	0	0	0	0	0	0	15,762	0	0	5	0	0	0	17,034	0.0
43 East Asia Developing	0	1,839	0	0	14,770	800	0	106	0	0	921	0	0	0	262,662	0	0	0	458	0	0	281,575	0.8
44 East Asia Industrial	5	343	0	0	29,671	9,049	1	225	11	0	1,098	0	0	0	166,636	0	8	0	0	0	0	207,047	0.6
45 East Coast America	13	914	0	333	34,759	8,406	5	1	5	1	1,578	0	0	0	160,697	223	2	22	0	1	0	206,959	0.6
46 W Coast America & Pacific	0	69	0	0	0	0	0	0	0	0	15	0	0	0	2,497	0	0	0	0	0	0	2,560	0.0
Sub-total for non-TRACECA countries	76,074	2,723,741	2,812	171,376	20,375,879	1,643,595	58,904	52,119	6,973	3,361	92,599	507	383,764	107	6,408,905	255,109	30,855	952	1,050	6,715	0	32,295,395	90.1
% by commodities	0.2	7.6	0.0	0.5	56.8	4.6	0.2	0.1	0.0	0.0	0.3	0.0	1.1	0.0	17.9	0.7	0.1	0.0	0.0	0.0	0.0	90.1	0.0
TOTAL all countries	85,718	3,636,978	3,056	190,505	22,895,655	1,708,184	62,480	52,247	18,837	4,854	94,196	622	424,943	117	6,548,667	268,670	37,626	985	1,051	7,488	0	35,842,878	0.0
% by commodities	0.2	10.1	0.0	0.5	63.3	4.8	0.2	0.1	0.1	0.0	0.3	0.0	1.2	0.0	18.3	0.7	0.1	0.0	0.0	0.0	0.0	90.1	0.0

KYRGHZYSTAN

(country)

Cargo flows data through the border (import, in tonnes) for 1995

Codes of countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
1 Tajikistan	0	766	501	63	9,385	413	0	0	10	3	1,555	0	0	0	578	0	0	0	0	6	0	13,280	0.8	
4 Kyrgyzstan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
7 Uzbekistan	42	1,539	11	408	70,859	29,034	53	182	89	74	5,463	25	249	0	1,994	27	2	0	0	142	0	110,192	6.5	
12 Turkmenistan	0	10	0	250	104,270	0	0	0	0	0	317	0	0	0	0	0	0	0	0	0	0	104,847	6.2	
15 Kazakhstan	903	24,919	44	8,939	354,625	493,049	236	1	1,653	412	554	1	329	0	32,533	2,997	512	0	0	907	0	922,613	54.2	
21 Georgia	0	242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242	0.0	
22 Armenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,192	0	0	0	0	0	0	1,192	0.1	
23 Azerbaijan	0	266	0	52	10,050	42	0	0	0	0	564	0	0	0	0	0	2	0	0	16	0	10,993	0.6	
Sub-total for TRACECA countries	945	27,742	556	9,712	549,189	522,538	289	183	1,752	489	8,454	26	578	0	36,297	3,024	516	0	0	1,071	0	1,163,359	68.3	
% by commodities	0.1	1.6	0.0	0.6	32.2	30.7	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.0	2.1	0.2	0.0	0.0	0.0	0.1	0.0	68.3	0.0	
24 Russia and Belarus	374	1,794	517	58,020	99,032	21,522	1,214	307	18,916	3,641	5,959	107	4,980	0	13,687	825	1,538	3	0	24,336	0	256,770	15.1	
29 Ukraine and Moldova	0	2	36	7,844	43	152	8	0	29	0	6	0	0	0	3,103	0	2,750	0	0	48	0	14,022	0.8	
30 China	0	123	309	1,568	1,794	1,278	2	0	0	18	379	363	9	0	912	1,043	472	0	0	204	0	8,473	0.5	
31 Indian Sub Continent	0	18	0	5,958	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5,978	0.4	
32 Iran and Gulf States	0	1,206	35	1,288	123	287	12	0	0	18	91	9	202	0	5	570	0	0	0	2,188	0	6,035	0.4	
33 Turkey	0	547	6,530	5,332	434	1,409	9	0	20	6	55	1	670	0	176	385	410	0	0	3,207	0	19,191	1.1	
34 North-Western Europe	158	53,852	806	2,994	2,442	305	0	0	91	59	4	0	888	0	105	584	360	0	0	338	0	62,986	3.7	
35 Southern Europe	1	0	7	1,358	0	1,472	0	0	0	28	105	2	1	0	0	0	2	0	0	0	0	2,976	0.2	
36 Central Europe	0	0	0	441	2,270	13	0	0	0	29	0	0	43	0	0	0	4	0	0	4	0	2,803	0.2	
37 Baltic States	234	1	126	1,491	773	23	0	86	115	78	70	3	209	0	253	1	258	0	0	23	0	3,742	0.2	
38 North-Central Europe	0	26	5	448	72	58	0	0	28	16	1	0	71	0	0	0	0	0	0	6	0	731	0.0	
39 Northern Europe	0	0	25	223	0	0	0	0	0	30	16	0	0	0	0	15	0	0	0	0	0	309	0.0	
40 Middle East	0	0	0	139	0	34	0	0	0	0	0	0	0	0	0	0	0	0	1	0	174	0.0		
41 East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
42 West Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
43 East Asia Developing	0	9	0	0	0	10	0	0	0	0	0	0	0	0	0	9	0	0	0	6	0	34	0.0	
44 East Asia Industrial	0	0	0	34	0	202	0	0	0	0	36	0	0	0	890	1,071	446	0	0	1,787	0	4,466	0.3	
45 East Coast America	178	75,554	1,051	67,203	21	3	2	0	0	0	3	0	0	0	1,224	42	168	0	0	6,087	0	151,536	8.9	
46 W Coast America & Pacific	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Sub-total for non-TRACECA countries	944	133,131	9,446	154,340	107,004	26,770	1,246	393	19,199	3,924	6,726	485	7,072	0	20,350	3,979	6,978	3	0	38,236	0	540,226	31.7	
% by commodities	0.1	7.8	0.6	9.1	6.3	1.6	0.1	0.0	1.1	0.2	0.4	0.0	0.4	0.0	1.2	0.2	0.4	0.0	0.0	2.2	0.0	31.7	0.0	
TOTAL all countries	1,889	160,873	10,002	164,052	656,193	549,308	1,535	575	20,951	4,412	15,180	511	7,649	0	56,647	7,003	7,494	4	0	39,307	0	1,703,585	0.0	
% by commodities	0.1	9.4	0.6	9.6	38.5	32.2	0.1	0.0	1.2	0.3	0.9	0.0	0.4	0.0	3.3	0.4	0.4	0.0	0.0	2.3	0.0	0.0	0.0	

KYRGHYZSTAN

(country)

Cargo flows data through the border (export, in tonnes) for 1995

Codes of countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1 Tajikistan	122	2,854	0	2,070	59,249	931	1	7	209	0	113	2	9,962	0	101	38	0	0	0	114	0	75,774	9.9
4 Kyrgyzstan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
7 Uzbekistan	4,173	984	0	1,982	87,764	61	322	71	262	168	10,663	1	10,731	0	8,653	5,626	0	0	764	0	0	132,224	17.3
12 Turkmenistan	58	1,096	0	483	9,488	51	0	4	0	0	45	1	19	0	245	0	0	0	33	0	0	11,523	1.5
15 Kazakhstan	769	12,575	0	15,545	109,232	170	159	4	7	496	1,300	8	5,333	0	998	4,113	0	0	1,557	0	0	152,266	19.9
21 Georgia	8	56	0	234	0	0	0	22	0	8	5	0	0	0	0	0	0	0	1	0	0	334	0.0
22 Armenia	0	60	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	70	0.0
23 Azerbaijan	13	367	0	114	1,801	10	0	0	63	0	1	0	0	0	0	0	0	0	925	0	0	3,295	0.4
Sub-total for TRACECA countries	5,144	17,993	0	20,427	267,534	1,222	482	108	541	672	12,138	13	26,045	0	9,997	9,778	0	0	3,393	0	0	375,486	49.1
% by commodities	0.7	2.4	0.0	2.7	35.0	0.2	0.1	0.0	0.1	0.1	1.6	0.0	3.4	0.0	1.3	1.3	0.0	0.0	0.4	0.0	0.0	49.1	0.0
24 Russia and Belarus	1,788	118,853	0	31,387	15,378	420	17	149	289	136	5,405	23	1,349	0	1,779	37,832	0	0	2,980	0	0	217,784	28.5
29 Ukraine and Moldova	0	228	0	8,660	64	9	1	13	0	0	338	0	0	0	218	380	0	0	59	0	0	9,970	1.3
30 China	154	461	0	591	0	8,828	14	5,343	0	0	29,842	3	8	0	56,358	11,035	0	0	0	0	0	112,636	14.7
31 Indian Sub Continent	828	0	0	0	0	0	0	60	0	0	336	0	0	0	16,378	0	0	0	0	0	0	17,602	2.3
32 Iran and Gulf States	421	0	0	195	0	6	2	0	13	20	484	0	77	0	7,673	1,857	0	0	3	0	0	10,750	1.4
33 Turkey	236	121	0	0	1	0	15	689	28	0	1,223	0	0	0	102	3	0	0	0	0	0	2,418	0.3
34 North-Western Europe	0	4	0	10	0	129	0	9	2,030	60	347	0	63	0	1,611	1	0	0	130	0	0	4,395	0.6
35 Southern Europe	20	0	0	18	0	0	0	12	0	0	1,818	0	0	0	0	13	0	0	799	0	0	2,680	0.4
36 Central Europe	0	0	0	0	0	0	0	0	0	0	2,350	0	0	0	100	0	0	0	19	0	0	2,469	0.3
37 Baltic States	26	80	0	44	0	0	0	17	0	0	252	0	0	0	1,132	3	0	0	68	0	0	1,622	0.2
38 North-Central Europe	0	50	0	0	0	1	0	6	0	0	1,522	0	0	0	0	0	0	0	0	0	0	1,579	0.2
39 Northern Europe	0	0	0	0	0	132	0	0	0	0	257	0	0	0	4,641	0	0	0	0	0	0	5,030	0.7
40 Middle East	0	0	0	0	0	0	0	0	0	0	29	0	0	0	0	0	0	0	29	0	0	29	0.0
41 East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
42 West Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
43 East Asia Developing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
44 East Asia Industrial	0	0	0	0	0	1	0	112	0	0	227	0	0	0	50	1	0	0	0	0	0	390	0.1
45 East Coast America	0	0	0	0	7	47	0	3	0	0	20	0	0	0	68	0	0	0	0	0	0	144	0.0
46 W Coast America & Pacific	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	35	0.0
Sub-total for non-TRACECA countries	3,472	119,797	0	40,905	15,449	9,574	49	6,412	2,359	216	44,485	25	1,497	0	90,109	51,126	0	0	4,057	0	0	389,533	50.9
% by commodities	0.5	15.7	0.0	5.3	2.0	1.3	0.0	0.8	0.3	0.0	5.8	0.0	0.2	0.0	11.8	6.7	0.0	0.0	0.5	0.0	0.0	50.9	0.0
TOTAL all countries	8,616	137,790	0	61,333	282,983	10,796	531	6,519	2,900	887	56,623	38	27,542	0	100,106	60,904	0	0	7,450	0	0	765,018	0.0
% by commodities	1.1	18.0	0.0	8.0	37.0	1.4	0.1	0.9	0.4	0.1	7.4	0.0	3.6	0.0	13.1	8.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0

TURKMENISTAN

(country)

Cargo flows data through the border (import, in tonnes) for 1995

Codes of Countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1 Tajikistan	0	116	0	195	879	613	0	0	2,811	0	0	0	1,341	0	1,020	0	12	0	0	0	0		
4 Kyrgyzstan	74	1,037	0	99	10,844	55	0	0	703	0	0	0	1,224	0	501	57	222	0	0	0	0		
7 Uzbekistan	123	196	0	196	276,834	120,713	0	0	0	0	50	0	33,335	0	7,212	121	52	0	0	3,275	0		
12 Turkmenistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
15 Kazakhstan	8,310	158,099	16	554	49,622	85,958	175	0	662	233	265	0	12,398	0	20,208	2,243	1,646	0	0	348	0		
21 Georgia	0	3,874	0	8,494	712	0	53	0	0	30	139	16	0	0	356	967	44	15	0	49	0		
22 Armenia	0	0	0	391	0	515	428	32	20	136	151	490	89	0	261	1,315	154	40	0	368	0		
23 Azerbaijan	0	39	0	111,189	178,549	4,495	8,021	0	26	51	180	37	9,811	0	1,423	3,397	430	0	0	12	0		
Sub-total for TRACECA countries	8,506	163,359	16	121,117	517,440	212,350	8,677	32	4,222	451	785	542	56,198	0	30,980	8,100	2,561	56	0	4,052	0		
% by commodities	0.4	7.5	0.0	5.6	23.8	9.8	0.4	0.0	0.2	0.0	0.0	0.0	2.7	0.0	1.4	0.4	0.1	0.0	0.0	0.2	0.0		
24 Russia and Belarus	938	45,116	434	8,215	14,013	59,750	2,682	28	22,577	2,339	1,017	258	2,945	0	21,863	9,211	6,161	43	19	1,117	0		
29 Ukraine and Moldova	21,756	131,278	1,488	54,751	1,504	119,979	4,022	112	2,403	832	33,898	315	54,334	0	139,222	7,837	3,224	68	0	362	0		
30 China	0	412	0	217	0	166	0	0	0	34	340	51	26	0	21	186	0	0	0	50	0		
31 Indian Sub Continent	0	623	0	555	4,409	244	220	23	0	40	52	44	0	0	467	213	0	0	0	66	0		
32 Iran and Gulf States	1,403	43,470	34	4,933	849	4,940	1,071	39	60	47	2,880	483	5,724	0	776	324	371	73	0	3,504	0		
33 Turkey	23	593	157	20,715	171	2,442	1,157	11	1,396	222	392	12	747	0	1,835	693	1,067	0	0	8,411	0		
34 North-Western Europe	5,158	251	0	3,120	49	1,587	132	0	0	0	410	10	0	0	1,843	1,347	89	0	0	3,613	0		
35 Southern Europe	190	3,394	0	1,601	0	292	17	0	0	0	12	0	31	0	10,905	739	70	0	0	2,995	0		
36 Central Europe	856	2,957	0	1,093	16	82	103	0	51	66	11	11	25	0	1,332	320	1,000	0	0	2,837	0		
37 Baltic States	1,379	99	24	10,035	923	265	50	40	80	115	215	0	123	0	1,051	229	0	0	0	119	0		
38 North-Central Europe	0	628	0	1,586	0	245	0	0	0	0	20	113	0	0	0	93	19	0	0	0	0		
39 Northern Europe	0	4,134	0	381	27,468	0	0	0	0	0	22	19	0	0	149	0	0	0	0	13	0		
40 Middle East	0	0	0	28	0	2,035	12	0	0	0	177	90	12	0	0	11	0	0	0	1,562	0		
41 East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
42 West Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109	0		
43 East Asia Developing	0	0	0	0	0	0	0	0	0	0	129	27	0	0	1,070	0	0	0	0	0	0		
44 East Asia Industrial	0	0	0	0	0	2,266	0	0	0	0	0	0	0	0	4,814	0	233	0	0	68	0		
45 East Coast America	652	202	0	468	17	678	14	0	0	0	87	91	0	0	145	2,390	0	21	0	194	0		
46 W Coast America & Pacific	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
47 Unknown	0	0	0	0	19,255	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0		
Sub-total for non-TRACECA countries	32,354	233,155	2,135	107,688	68,674	195,002	10,133	253	26,566	3,695	39,781	1,522	63,989	0	185,492	23,593	12,232	205	19	25,020	0		
% by commodities	1.5	10.7	0.1	5.0	3.2	9.0	0.5	0.0	1.2	0.2	1.8	0.1	2.9	0.0	8.5	1.1	0.6	0.0	0.0	1.2	0.0		
TOTAL all countries	40,860	396,514	2,152	228,805	586,114	407,352	18,810	285	30,788	4,146	40,566	2,064	122,187	0	216,471	31,692	14,793	261	19	29,072	0		
% by commodities	1.9	18.2	0.1	10.5	27.0	18.7	0.9	0.0	1.4	0.2	1.9	0.1	5.6	0.0	10.0	1.5	0.7	0.0	0.0	1.3	0.0		
Sub-total for TRACECA countries	8,506	163,359	16	121,117	517,440	212,350	8,677	32	4,222	451	785	542	56,198	0	30,980	8,100	2,561	56	0	4,052	0		
% by commodities	0.4	7.5	0.0	5.6	23.8	9.8	0.4	0.0	0.2	0.0	0.0	0.0	2.7	0.0	1.4	0.4	0.1	0.0	0.0	0.2	0.0		
Sub-total for non-TRACECA countries	32,354	233,155	2,135	107,688	68,674	195,002	10,133	253	26,566	3,695	39,781	1,522	63,989	0	185,492	23,593	12,232	205	19	25,020	0		
% by commodities	1.5	10.7	0.1	5.0	3.2	9.0	0.5	0.0	1.2	0.2	1.8	0.1	2.9	0.0	8.5	1.1	0.6	0.0	0.0	1.2	0.0		
TOTAL all countries	40,860	396,514	2,152	228,805	586,114	407,352	18,810	285	30,788	4,146	40,566	2,064	122,187	0	216,471	31,692	14,793	261	19	29,072	0		
% by commodities	1.9	18.2	0.1	10.5	27.0	18.7	0.9	0.0	1.4	0.2	1.9	0.1	5.6	0.0	10.0	1.5	0.7	0.0	0.0	1.3	0.0		
Sub-total for TRACECA countries	8,506	163,359	16	121,117	517,440	212,350	8,677	32	4,222	451	785	542	56,198	0	30,980	8,100	2,561	56	0	4,052	0		
% by commodities	0.4	7.5	0.0	5.6	23.8	9.8	0.4	0.0	0.2	0.0	0.0	0.0	2.7	0.0	1.4	0.4	0.1	0.0	0.0	0.2	0.0		
Sub-total for non-TRACECA countries	32,354	233,155	2,135	107,688	68,674	195,002	10,133	253	26,566	3,695	39,781	1,522	63,989	0	185,492	23,593	12,232	205	19	25,020	0		
% by commodities	1.5	10.7	0.1	5.0	3.2	9.0	0.5	0.0	1.2	0.2	1.8	0.1	2.9	0.0	8.5	1.1	0.6	0.0	0.0	1.2	0.0		
TOTAL all countries	40,860	396,514	2,152	228,805	586,114	407,352	18,810	285	30,788	4,146	40,566	2,064	122,187	0	216,471	31,692	14,793	261	19	29,072	0		
% by commodities	1.9	18.2	0.1	10.5	27.0	18.7	0.9	0.0	1.4	0.2	1.9	0.1	5.6	0.0	10.0	1.5	0.7	0.0	0.0	1.3	0.0		

TURKMENISTAN

(country)

Cargo flows data through the border (export, in tonnes) for 1995

Codes of Countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1 Tajikistan	0	0	0	17	280,264	467	0	0	0	0	51	0	337	0	0	0	0	0	0	0	0	281,135	7.7
4 Kyrgystan	0	0	54	262	117,353	98	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0	117,796	3.2
7 Uzbekistan	700	0	4,445	261	208,173	45,876	112	0	0	711	95	0	7,300	0	11,393	353	0	0	0	0	0	279,418	7.7
12 Turkmenistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Kazakhstan	22	167	65	44	50,334	45,300	0	0	0	34	1,289	0	286	0	0	20	0	0	0	0	0	97,561	2.7
21 Georgia	0	0	0	99	59,332	0	0	0	0	0	0	0	180	0	0	0	0	0	0	0	0	59,611	1.6
22 Armenia	0	0	0	0	5,989	0	0	0	0	0	216	0	0	0	0	0	0	0	0	0	0	6,205	0.2
23 Azerbaijan	0	206	0	20	175,588	659	0	0	0	278	348	0	2,607	0	0	35	0	0	0	0	0	179,740	4.9
Sub-total for TRACECA countries	722	374	4,563	703	897,033	92,400	112	0	0	1,023	2,027	0	10,709	0	11,393	408	0	0	0	0	0	1,021,466	28.0
% by commodities	0.0	0.0	0.1	0.0	24.6	2.5	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	28.0	0.0
24 Russia and Belarus	172	2,089	2,933	18,328	336,105	25,685	37	74	0	63	8,774	0	500	0	126	849	0	0	0	0	58	395,793	10.9
29 Ukraine and Moldova	0	446	0	0	10,924	1,595	14	30	0	0	126	0	0	0	20	0	108	0	0	0	0	13,263	0.4
30 China	0	0	0	0	0	723	0	444	0	0	20,507	0	0	0	0	74	0	0	0	0	0	21,748	0.6
31 Indian Sub Continent	0	138	1,040	0	101,853	8,429	175	304	189	0	37,494	0	800	0	4,023	32	21	0	21	11	0	154,529	4.2
32 Iran and Gulf States	0	0	0	0	419,883	0	234	31	98	83	11,242	0	0	0	9,086	291	360	0	0	0	0	441,308	12.1
33 Turkey	32	365	0	0	0	0	0	6,253	0	0	89,029	0	0	0	10,723	0	21	0	0	0	0	106,422	2.9
34 North-Western Europe	0	495	0	0	241,714	90	0	33	0	0	2,997	0	0	0	0	0	0	0	0	0	0	245,330	6.7
35 Southern Europe	0	0	0	0	333,210	31	0	12	0	0	14,429	0	0	0	0	0	0	0	0	0	0	347,682	9.5
36 Central Europe	0	202	0	0	330,465	0	0	30	0	0	60,976	0	0	0	0	0	0	0	0	0	0	391,673	10.7
37 Baltic States	0	90	0	0	83,275	0	0	0	0	0	14,372	0	0	0	0	0	0	0	0	0	0	97,737	2.7
38 North-Central Europe	0	0	0	0	0	0	0	0	0	0	1,635	0	0	0	0	0	0	0	0	0	0	1,635	0.0
39 Northern Europe	0	0	0	0	303,602	0	0	22	0	0	16,917	0	0	0	0	0	0	0	0	0	0	320,541	8.8
40 Middle East	13	0	0	0	0	0	0	0	0	0	202	0	0	0	471	0	0	0	0	0	0	686	0.0
41 East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
42 West Africa	0	0	0	0	16,438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,438	0.5
43 East Asia Developing	0	0	0	0	0	0	0	0	0	0	22,421	0	0	0	0	0	0	0	0	0	0	22,421	0.6
44 East Asia Industrial	0	303	0	0	0	0	0	0	0	0	2,382	0	0	0	0	0	0	0	0	0	0	2,684	0.1
45 East Coast America	2,656	513	0	0	36,366	42	0	0	0	0	6,065	0	0	0	0	0	0	0	0	0	0	45,642	1.3
46 W Coast America & Pacific	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
47 Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sub-total for non-TRACECA countries	2,873	4,640	3,973	18,328	2,213,836	36,596	460	7,233	287	147	309,567	0	1,300	0	24,449	1,246	510	0	21	69	0	2,625,533	72.0
% by commodities	0.1	0.1	0.1	0.5	60.7	1.0	0.0	0.2	0.0	0.0	8.5	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	72.0	0.0
TOTAL all countries	3,595	5,014	8,536	19,031	3,110,868	128,996	572	7,233	287	1,169	311,594	0	12,009	0	35,842	1,654	510	0	21	69	0	3,646,999	0.0
% by commodities	0.1	0.1	0.2	0.5	85.3	3.5	0.0	0.2	0.0	0.0	8.5	0.0	0.3	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

UZBEKISTAN

(country)

Cargo flows data through the border (import, in tonnes) for 1996

Codes of Countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1 Tajikistan	15	344	0	667	53,060	107	27	0	99	32	141	0	105	0	5,679	22	2,180	0	0	26	0	62,504	1.0
4 Kyrgyzstan	521	11,209	121	51,446	964,471	132	154	22	790	611	846	23	26,465	0	13,353	333	2,540	3	0	104	0	1,073,144	16.6
7 Uzbekistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
12 Turkmenistan	361	442	2,974	91	130,031	16	48	19	0	381	186	2	4,241	0	1,692	104	551	34	0	3	0	141,176	2.2
15 Kazakhstan	194	506,398	341	12,213	1,090,949	2,104	3,713	4	27,695	920	1,241	319	14,897	0	31,599	2,151	5,735	38	0	315	0	1,700,827	26.3
21 Georgia	0	612	0	544	0	50	0	0	22	10	7	0	0	0	0	8	554	0	0	0	0	1,807	0.0
22 Armenia	0	0	0	0	0	8	0	0	0	0	0	0	0	0	4	155	618	0	0	0	0	785	0.0
23 Azerbaijan	0	56	398	109	333	252	1,623	0	0	0	2	0	22	0	152	64	18	29	0	4	0	3,060	0.0
Sub-total for TRACECA countries	1,091	519,061	3,833	65,070	2,238,844	2,669	5,565	46	28,607	1,954	2,422	344	45,730	0	52,479	2,837	12,196	105	0	452	0	2,983,304	46.1
% by commodities	0.0	8.0	0.1	1.0	34.6	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.0	46.1	0.0
24 Russia and Belarus	2,758	128,601	5,035	58,284	114,414	52,872	34,221	485	354,745	25,517	4,973	1,524	23,355	0	242,305	8,772	39,931	391	0	2,909	0	1,101,093	17.0
29 Ukraine and Moldova	121	34,554	692	40,762	3,442	4,150	2,643	0	432	400	184	21	6,284	0	124,594	1,191	2,490	56	0	646	0	222,862	3.4
30 China	0	7,077	0	2,020	28,672	1,001	3,430	35	85	236	1,170	254	434	0	368	2,018	40	119	0	282	0	47,242	0.7
31 Indian Sub Continent	0	3,557	0	9,340	2	1,686	370	236	50	561	2,043	1,195	26	0	149	323	282	42	0	203	0	20,064	0.3
32 Iran and Gulf States	889	28,988	3,972	65,314	8,300	11,454	8,283	68	414	713	6,702	9,642	7,959	0	1,286	5,598	1,052	218	0	3,539	1	164,394	2.5
33 Turkey	1,010	1,521	4,973	59,038	1,601	28,214	2,929	67	955	1,966	5,062	817	3,455	0	5,133	2,084	1,105	232	0	2,462	0	122,623	1.9
34 North-Western Europe	12,062	543,435	6,168	87,329	659	6,936	3,644	95	249	861	2,393	69	2,164	0	7,074	2,117	3,203	375	0	795	0	679,629	10.5
35 Southern Europe	371	22,527	110	7,159	23,935	2,217	1,440	1	59	203	151	14	1,395	0	1,154	948	56	13	0	623	0	62,375	1.0
36 Central Europe	3,468	363,215	128	28,582	813	1,757	730	0	2	851	789	8	977	0	1,152	260	562	25	0	3,113	0	406,432	6.3
37 Baltic States	8,505	204,881	93	94,658	19,484	2,135	2,832	12	22,218	2,732	866	166	1,134	0	2,138	254	2,551	67	0	3,181	0	367,906	5.7
38 North-Central Europe	815	41,457	2,192	10,884	149	1,119	1,502	6	55	266	945	76	4,483	0	4,612	38	1,755	94	0	504	0	70,955	1.1
39 Northern Europe	60	5,692	150	9,821	947	1,174	1,105	8	142	2,261	48	139	103	0	1,206	1,353	82	15	0	312	0	24,616	0.4
40 Middle East	279	10,480	348	2,841	5	1,416	299	1	132	2,863	160	135	0	0	602	14	6	9	0	42	0	19,633	0.3
41 East Africa	0	9	0	0	5	9	0	0	0	0	0	0	38	0	0	9	0	0	0	0	0	71	0.0
42 West Africa	0	0	0	0	0	0	15	0	0	0	0	0	0	0	809	0	0	0	0	0	0	823	0.0
43 East Asia Developing	21	5,387	754	128	40	131	331	18	20	9	493	602	69	0	30	245	2	27	0	158	0	8,465	0.1
44 East Asia Industrial	4	11	1	2,232	14	1,078	3,973	32	5	344	435	76	136	0	13,952	4,877	9,823	88	0	176	0	37,258	0.6
45 East Coast America	5,033	43,235	711	27,067	41,513	1,499	2,163	3	71	194	280	30	435	0	1,567	318	115	80	0	588	0	124,889	1.9
46 W Coast America & Pacific	194	0	0	156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	350	0.0
Sub-total for non-TRACECA countries	35,590	1,444,627	25,326	505,616	243,994	118,849	69,910	1,067	379,502	37,247	29,397	14,792	52,582	0	408,129	30,421	63,055	1,852	0	19,533	1	3,481,490	53.9
% by commodities	0.6	22.3	0.4	7.8	3.8	1.8	1.1	0.0	5.9	0.6	0.5	0.2	0.8	0.0	6.3	0.5	1.0	0.0	0.0	0.3	0.0	53.9	
TOTAL all countries	36,681	1,963,689	29,158	570,686	2,482,838	121,518	75,475	1,113	408,108	39,201	31,819	15,136	98,311	0	460,608	33,258	75,251	1,957	0	19,985	2	6,464,794	
% by commodities	0.6	30.4	0.5	8.8	38.4	1.9	1.2	0.0	6.3	0.6	0.5	0.2	1.5	0.0	7.1	0.5	1.2	0.0	0.0	0.3	0.0		

UZBEKISTAN

(country)

Cargo flows data through the border (export, in tonnes) for 1996

Codes of countries and groups of countries	Code of group of commodities																					Total all commodities	% by group of countries
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1 Tajikistan	30	4,599	1,386	1,847	106,587	64,602	70	0	2	223	94	53	6,038	0	844	508	3,702	2	0	4	0	190,591	5.5
4 Kyrgyzstan	9,763	6,343	330	790	114,665	67,111	136	0	15	80	2,051	30	6,356	0	3,231	117	1,262	1	0	85	0	212,363	6.2
7 Uzbekistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
12 Turkmenistan	178	558	0	40	332,327	28,894	84	0	59	10	1,137	2	19,607	0	7,201	138	9,161	0	0	28	0	399,424	11.6
15 Kazakhstan	126	32,642	6,698	6,761	370,213	28,671	136	0	44	114	2,388	59	2,371	0	11,445	901	3,260	4	0	343	0	466,177	13.5
21 Georgia	10	68	0	60	100	100	0	0	0	0	100	20	0	0	20	52	0	1	0	14	0	445	0.0
22 Armenia	0	0	0	119	0	0	0	0	0	0	42	0	0	0	0	0	0	0	0	0	0	160	0.0
23 Azerbaijan	2	313	0	0	68,255	1	10	0	16	0	46	0	1,918	0	687	75	9	0	0	22	0	71,355	2.1
Sub-total for TRACECA countries	10,108	44,523	8,414	9,617	992,046	189,379	436	0	137	426	5,857	165	36,289	0	23,427	1,792	17,394	8	0	495	0	1,340,515	38.8
% by commodities	0.3	1.3	0.2	0.3	28.7	5.5	0.0	0.0	0.0	0.0	0.2	0.0	1.1	0.0	0.7	0.1	0.5	0.0	0.0	0.0	0.0	38.8	0.0
24 Russia and Belarus	479	410,077	4,464	49,649	46,761	12,924	1,061	72	1,564	229	121,322	362	992	0	35,386	5,547	6,828	78	0	2,345	0	700,140	20.3
29 Ukraine and Moldova	18	1,486	1,304	6,212	48,813	252	23	7	95	2	5,462	2	197	0	7,220	955	2,452	1	0	97	0	74,596	2.2
30 China	0	4,204	0	0	301	304,505	3	0	0	0	9,253	0	5	0	0	15	749	0	0	0	0	319,035	9.2
31 Indian Sub Continent	0	100	0	102	29,814	9,233	50	177	0	0	1,555	65	113	0	11,807	5	27	0	0	2	0	53,049	1.5
32 Iran and Gulf States	5	36	0	71	0	140	0	0	0	0	5,226	32	0	0	44,596	7	20	0	0	14	0	50,146	1.5
33 Turkey	5	41	0	0	0	164	0	138	0	0	16,045	0	0	0	202	59	6	0	0	0	0	16,659	0.5
34 North-Western Europe	8	555	0	10,171	49	1,094	0	1	0	140	136,170	0	0	0	32,833	151	150	2	0	0	0	181,178	5.2
35 Southern Europe	0	0	0	0	3,100	0	0	8	0	0	32,908	0	0	0	40,528	151	9	0	199	0	0	76,903	2.2
36 Central Europe	0	0	0	0	8,559	0	2	0	0	0	176,187	0	0	0	8,787	0	0	0	0	0	0	193,536	5.6
37 Baltic States	0	1,003	0	23,550	0	1,448	0	0	0	0	7,862	0	0	0	1,065	36	272	0	0	3	0	35,260	1.0
38 North-Central Europe	0	40	0	0	0	0	0	0	0	0	15,906	0	0	0	8,961	0	5	0	6	8	0	24,927	0.7
39 Northern Europe	0	0	0	1	0	0	0	0	0	361	77,245	0	0	0	25	0	0	0	0	0	0	77,632	2.2
40 Middle East	0	25	0	0	0	0	0	53	0	0	187	3	0	0	0	0	78	0	0	0	0	346	0.0
41 East Africa	0	0	0	0	210	0	0	0	0	0	0	0	0	0	0	0	364	0	65	0	0	638	0.0
42 West Africa	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	25	3	0	0	0	0	44	0.0
43 East Asia Developing	0	0	0	0	0	0	0	0	0	0	9,872	0	0	0	1	1	120	0	0	1	0	9,995	0.3
44 East Asia Industrial	0	52	0	17	0	0	0	56	0	0	125,589	0	0	0	2,004	4	0	0	0	1	0	127,722	3.7
45 East Coast America	0	0	0	0	19,799	0	0	0	0	0	149,325	0	0	0	0	0	5	0	0	0	0	169,131	4.9
46 W Coast America & Pacific	0	22	0	0	0	0	0	0	0	0	49	0	0	0	0	0	0	0	0	18	0	89	0.0
Sub-total for non-TRACECA countries	515	417,656	5,768	89,774	128,838	358,327	1,139	512	1,658	732	890,182	464	1,309	0	193,414	6,811	11,087	82	270	2,487	0	2,111,027	61.2
% by commodities	0.0	12.1	0.2	2.6	3.7	10.4	0.0	0.0	0.0	0.0	25.8	0.0	0.0	0.0	5.6	0.2	0.3	0.0	0.0	0.1	0.0	61.2	
TOTAL all countries	10,623	462,178	14,182	99,391	1,120,885	547,706	1,575	513	1,795	1,159	896,039	628	37,598	0	216,842	8,603	28,481	90	270	2,983	0	3,451,542	
% by commodities	0.3	13.4	0.4	2.9	32.5	15.9	0.0	0.0	0.1	0.0	26.0	0.0	1.1	0.0	6.3	0.2	0.8	0.0	0.0	0.1	0.0		

Annex D2

Origin and Destination Matrices by Commodity

Annex D2 - Origin and Destination Matrices by Commodity

This Appendix provides origin and destination matrices showing foreign trade flows for the TRACECA countries for each of the 21 commodities.

Trade between each of the TRACECA countries is shown in the cells of the matrices, which contain freight tonnages as declared by both the importing and exporting countries. a two letter abbreviation has been used to distinguish the source country of each figure. These are as shown in the following correspondence:

ar	-	Armenia
az	-	Azerbaijan
ge	-	Georgia
kz	-	Kazakhstan
ky	-	Kyrgyzstan
tj	-	Tadjikistan
tu	-	Turkmenistan

TRACECA - BASE YEAR MODEL MATRICES. Commodity 2, Vegetable Produce - All Modes (Tonnes in 1995)

Origin	Destination																Total											
	1	4	7	12	15	21	22	23	24	29	30	31	32	33	34	35		36	37	38	39	40	41	42	43	44	45	46
Tajikistan	1	040Rj 0786ky	1022j 116Uu	4418j 1551kz	010r 010r	2410az 367ky	0	7508r 11885z	978	0	35	0	0	0	0	0	0	202	0	0	0	0	0	0	0	0	0	0
Kyrgyzstan	4	10947j 22854ky	011209uz 180u	1098ky 1037ru	5318kz 44024kz	56ky 60ky	0	11885z 410077j	228	461	0	121	0	0	0	0	0	80	50	0	0	0	0	0	0	0	0	0
Uzbekistan	7	456uz 1571j	0558uz 10u	32942uz 197ru	098uz 019ru	098uz 019ru	0	410077j 2066u	1468	4204	100	36	41	555	0	0	0	1003	40	0	25	0	16	0	52	0	22	
Turkmenistan	12	171u 24070j	11u 39650kz	442uz 15880u	0471kz 539e	010r 010r	0	3095r 56807kz	446	0	138	0	365	495	0	0	0	202	80	0	0	0	0	0	0	303	513	
Kazakhstan	15	284967kz 0j	35310z 50598uz	135357kz 3874U	0235kz 1114kz	12kz 789e	484r 2142az	2341286j 0764ar	102687j	62775	16293	2114	388	3376	226	10524	82976	95732	1353	222	131	484	1838	343	914	69		
Georgia	21	1010ge 0j	1629e 0j	10227ge 519e	019ge 019ge	0764ar 0764ar	0	354ge 354ge	1752	300	0	0	2229	67	343	0	0	282	367	0	52	25	0	0	0	27	0	
Armenia	22	010r 286ky	0uz 211az	16ar 39u	56kz 710az	0ge 159e	32ar 0az	0	323	15	0	0	0	502	0	0	0	0	0	0	0	0	0	0	0	0	0	
Azerbaijan	23	0150az 252az	56uz 218az	218az 429kz	010r 102az	0az 0az	0	0	9393	3759	779	830	2118	833	72	0	90	298	36	0	0	0	0	92	1000	0	0	
Russia	24	10092j 0j	1784 28601	45150 19768	5360 5360	5898 5360	7010j 7010j	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ukraine	29	644 0j	34554 131278	1941 1941	25670 139	2858 139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
China	30	214 0j	123 7077	412 1113	1113 0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Indian Sub Cont.	31	66 0j	18 3557	913 3083	3083 39252	39252	0	1185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Iran, Gulf	32	223 0j	1206 28988	43354 9102	1681 1681	6484	118048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Turkey	33	112 0j	547 1521	593 2193	124579 159	46504	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
N-Western Europe	34	40335 0j	53852 543435	231 3116	1282 113308	1658 66350	1186 165047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Southern Europe	35	0 0j	22527 3394	1282 113308	1658 66350	1186 165047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Central Europe	36	16668 0j	363215 2957	828 51394	281 3288	3288	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Baltic States	37	17563 0j	204881 125	216 216	3418	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
N-Central Europe	38	3042 0j	28 41457	628 824	12 4365	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Northern Europe	39	2270 0j	0 5892	4134 1656	7194 417	5475	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Middle East	40	0 0j	0 10480	0 571	2484	47	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
East Africa	41	0 0j	0 9	0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
West Africa	42	0 0j	0 0	115	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
East Asia Developing	43	0 0j	9 5387	0 2063	855	342	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
East Asia Industrial	44	0 0j	0 11	0 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
East Coast America	45	13913 0j	75554 43235	202 230	84168 9154	7878	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
West Coast America & Pacific	46	0 0j	0 0	0 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total																												

TRACECA - BASE YEAR MODEL MATRICES. Commodity 4, Finished Food Products - All Modes (Tonnes in 1995)

Origin	Destination				24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	Total										
	1	2	3	4																																		
Tajikistan	104kl 063kl	1230kl 667kl	2046kl 2120kl	2046kl 2120kl	12276	324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
Kyrgyzstan	2255kl 42070kl	1982kl 051446kl	483kl 2858kl	15545kl 234kl	31387	8660	591	0	195	0	10	0	0	0	0	0	0	44	0	0	0	0	0	0	0	0	0	0	0	0								
Uzbekistan	24238kl 71647kl	408kl 790kl	196kl 040kl	8234kl 676kl	48649	8212	0	102	71	0	10171	0	0	0	0	0	0	23550	0	1	0	0	0	0	17	0	0	0	0	0								
Turkmenistan	120kl 630kl	250kl 833kl	250kl 13284kl	250kl 554kl	17923	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
Kazakhstan	15839kl 0kl	4390kl 12213kl	583kl 583kl	0kl 0kl	164844	486	491	244	145	11	1404	47	3	2102	157	1109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Georgia	210kl 0kl	634kl 0kl	410kl 29kl	731kl 317kl	27002	1090	0	3	18	57	2810	33	263	688	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Armenia	220kl 0kl	0kl 0kl	0kl 0kl	0kl 0kl	17016	231	0	0	0	0	35	20	0	80	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Azerbaijan	230kl 0kl	202kl 0kl	197kl 0kl	109kl 375kl	47707	1600	0	0	3575	8684	2646	500	0	1478	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Russia	24314kl 0kl	5802kl 0kl	5828kl 0kl	818kl 20450kl	5749	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Ukraine	328kl 0kl	7844kl 0kl	40762kl 0kl	54751kl 159060kl	24088	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
China	0kl 0kl	1568kl 0kl	2020kl 0kl	217kl 17038kl	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Indian Sub Cont.	59kl 0kl	5958kl 0kl	9340kl 0kl	265kl 346kl	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Iran, Gulf	1288kl 0kl	1288kl 0kl	65314kl 0kl	5049kl 1464kl	18086	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Turkey	330kl 0kl	5332kl 0kl	59038kl 0kl	20715kl 20101kl	27608	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
N-Western Europe	34588kl 0kl	2994kl 0kl	87329kl 0kl	3140kl 24412kl	9718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Southern Europe	35102kl 0kl	1358kl 0kl	7159kl 0kl	8343kl 7462kl	342	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Central Europe	36437kl 0kl	441kl 0kl	28582kl 0kl	2104kl 10635kl	1879	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Baltic States	373445kl 0kl	1491kl 0kl	94658kl 0kl	10008kl 15345kl	1508	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
N-Central Europe	384387kl 0kl	448kl 0kl	10884kl 0kl	1596kl 2304kl	470	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Northern Europe	39498kl 0kl	223kl 0kl	9821kl 0kl	381kl 74649kl	1542	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Middle East	400kl 0kl	139kl 0kl	2841kl 0kl	28kl 3211kl	1050	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
East Africa	410kl 0kl	0kl 0kl	0kl 0kl	0kl 0kl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
West Africa	420kl 0kl	0kl 0kl	0kl 0kl	0kl 0kl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Asia Developing	430kl 0kl	0kl 0kl	128kl 0kl	0kl 721kl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
East Asia Industrial	445kl 0kl	34kl 0kl	2322kl 0kl	0kl 533kl	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
East Coast America	458031kl 0kl	67203kl 0kl	27067kl 0kl	468kl 1162kl	3504	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
West Coast America & Pacific	460kl 0kl	0kl 0kl	156kl 0kl	0kl 18kl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total																																						

TRACECA - BASE YEAR MODEL MATRICES. Commodity 19, Arms and Ammunition - All Modes (Tonnes in 1995)

Origin	Destination																Total											
	1	4	7	12	15	21	22	23	24	28	30	31	32	33	34	35		36	37	38	39	40	41	42	43	44	45	46
Tajikistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kyrgyzstan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Uzbekistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkmenistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kazakhstan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Armenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Azerbaijan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Russia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ukraine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
China	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indian Sub Cont.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iran, Gulf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N-Western Europe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southern Europe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Central Europe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baltic States	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N-Central Europe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Europe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Middle East	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West Africa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Asia Developing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Asia Industrial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Coast America	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West Coast America & Pacifi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total																												

Annex D3

Import and Export Data by Mode

Azerbaijan
(country)

Cargo flows data through the border (import, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																			Total all commodities	% by group of countries					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			20	21			
1	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	20 Rail	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	30 Road	7	0	0	15	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0.0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Σ	7	0	0	15	0	60	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	145	0.0	
4	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	20 Rail	4	162	0	0	1,781	10	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	36	0.0	
	30 Road	11	52	5	0	0	1	0	0	25	6	0	0	0	0	0	0	0	0	0	0	0	0	0	3370	0.2	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	603	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	14	214	5	0	1,781	11	0	0	25	0	21	0	0	0	0	0	0	0	0	0	0	0	0	4609	0.3		
7	10 Sea	0	0	0	0	64	12,524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	
	20 Rail	0	195	0	196	39,847	696	0	0	0	7	3,246	0	0	0	0	0	0	0	0	0	0	0	0	12588	0.9	
	30 Road	3	736	0	0	1,598	12	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	52052	3.6	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2805	0.2	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	3	931	0	203	41,509	13,232	0	0	0	7	3,286	0	0	0	0	0	0	0	0	0	0	0	0	67246	4.6		
12	10 Sea	0	0	0	0	10,976	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	
	20 Rail	0	181	0	0	123,393	0	0	0	0	216	0	0	0	0	0	0	0	0	0	0	0	0	0	10976	8.6	
	30 Road	0	0	0	0	5,359	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	126173	8.6	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5782	0.4	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Σ	0	181	0	0	139,728	0	0	0	0	227	0	0	0	0	0	0	0	0	0	0	0	0	0	142941	9.8		
15	10 Sea	110	3,164	0	0	62,577	16	145	0	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.6	
	20 Rail	464	40,066	0	4	5,031	1,764	18	0	54	7	0	0	0	0	0	0	0	0	0	0	0	0	0	66637	4.6	
	30 Road	133	884	0	14	308	326	144	6	34	24	40	2	128	0	1,704	173	2	0	0	0	0	0	0	58914	4.0	
	40 Air	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3923	0.3	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	
Σ	707	44,145	0	18	67,916	2,107	308	6	34	78	91	2	2,126	0	11,554	412	2	0	0	0	0	0	0	129505	8.8		
21	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	197	572	90	950	12,382	26,220	0	0	199	10	0	0	116	0	16,826	100	12	0	0	0	0	0	0	0	3.9	
	30 Road	211	1,569	0	89	167	2,466	11	0	26	30	0	0	1,436	0	1,017	239	2	1	0	0	0	0	0	57674	3.9	
	40 Air	0	0	0	0	0	0	0	0	0	518	0	0	0	0	0	0	0	0	0	0	0	0	0	7805	0.5	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	408	2,142	90	1,039	12,549	28,686	11	0	26	717	40	0	1,552	0	17,843	340	14	1	0	0	0	0	0	65479	4.5		
22	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-		
23	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-		
Sub-total for TRACECA countries	10 Sea	110	3,164	0	0	73617	12,540	145	0	0	43	0	0	240	0	341	36	0	0	0	0	0	0	0	90237	6.2	
	20 Rail	665	41,176	90	1,150	182,433	28,750	18	0	476	3278	0	12,885	0	26,529	826	12	0	0	0	0	0	0	0	298299	20.4	
	30 Road	364	3,242	5	124	7,432	2,806	156	6	85	553	125	2	2,131	0	2,723	950	4	13	0	0	0	0	0	20759	1.4	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	1139	47,612	95	1,275	263,482	44,097	320	6	85	1,029	3,446	2	15,256	0	29,593	1,812	16	13	0	0	0	0	0	409326	28.0		
% by commodities	0.1	3.3	0.0	0.1	18.0	3.0	0.0	0.0	0.0	0.1	0.2	0.0	1.0	-	2.0	0.1	0.0	0.0	-	-	0.0	-	-	0.0	28.0		

Azerbaijan
(country)

Cargo flows data through the border (import, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																	Total all commodities	% by group of countries						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			18	19	20	21		
24	10 Sea	1,365	38,620	0	442	0	0	0	907	13	0	0	8	0	0	173	0	0	71	0	0	0	0	4,182	2.9	
	20 Rail	865	27,522	200	4,474	19,837	9,341	1,401	10,856	5,273	307	28	12,400	0	0	9,823	4,514	875	875	1	0	820	0	10,637	7.4	
	30 Road	367	3,945	47	824	849	2,033	1,274	2,076	753	245	51	913	0	0	2,485	1,166	493	81	0	200	0	17,828	1.2		
	40 Air	32	13	6	10	0	12	91	2	0	16	26	10	7	0	44	117	168	3	0	0	0	0	558	0.0	
	45 Other	130	0	0	0	0	1	0	0	0	3	0	11	0	0	310	13	965	1	0	0	0	0	1,435	0.1	
	Σ	2,760	70,101	253	5,749	20,687	11,608	2,765	13,840	6,053	579	89	13,340	0	0	12,935	5,829	2,571	86	0	1,021	0	17,027	11.6		
29	10 Sea	0	0	0	0	0	16	0	0	0	0	0	0	0	0	4,022	29	0	0	0	0	0	0	4,068	0.3	
	20 Rail	2,432	2,779	150	22,566	3,272	1,373	48	0	528	113	7	827	0	0	10,084	1,652	341	0	0	59	0	0	46,230	3.2	
	30 Road	1,663	76	21	1,518	205	538	104	8	75	158	27	11	442	0	1,090	366	77	0	0	66	0	0	6,446	0.4	
	40 Air	611	3	0	5	0	164	131	0	0	46	5	0	0	0	0	9	3	4	0	115	0	0	1,100	0.1	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	0.0	
	Σ	4,706	2,858	171	24,089	3,477	2,091	283	8	75	732	145	23	1,269	0	15,197	2,055	473	4	0	239	0	57,896	4.0		
30	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	30 Road	0	35	0	112	0	46	3	0	0	25	75	6	0	0	5	211	0	0	0	111	0	0	439	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	4	119	15	37	0	0	0	0	0	0	0	0	0	372	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Σ	0	35	0	119	0	46	3	0	29	194	20	37	0	5	211	0	0	0	0	113	0	811	0.1		
31	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20 Rail	0	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	30 Road	0	1,121	0	68	0	78	0	4	0	0	42	0	0	0	0	0	0	0	0	0	0	0	0	64	0.0
	40 Air	0	0	0	0	0	36	0	0	1	57	0	0	0	0	0	0	0	0	0	0	0	0	0	1,314	0.1
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0
	Σ	0	1,185	0	68	0	114	0	11	99	0	0	0	0	0	0	0	0	0	0	0	0	0	1,478	0.1	
32	10 Sea	0	2,542	0	0	0	0	0	950	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,492	0.2	
	20 Rail	0	562	0	270	557	0	10	0	2	62	0	2,346	0	0	2	22	0	0	0	0	0	0	7	3841	0.3
	30 Road	19,291	112,945	26,257	116,741	25,060	9,899	3,332	21	388	621	5,411	4,762	15,128	0	378	1,069	564	1,119	0	3,173	0	0	3,461	23.6	
	40 Air	792	0	54	1,070	1	40	11	35	19	10	35	18	0	0	26	110	3	2	0	0	0	0	2,226	0.2	
	45 Other	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0.0	
	Σ	20,082	116,049	26,311	118,086	25,617	9,939	3,353	21	1,324	640	4,797	17,492	0	406	1,201	588	1,121	0	3,212	0	0	0	3,557	24.3	
33	10 Sea	875	0	0	24	0	0	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0	974	0.1	
	20 Rail	0	10,402	0	620	336	50	4	0	0	18	0	81	0	0	0	0	0	0	0	0	0	0	11,520	0.8	
	30 Road	5,648	36,100	21,589	25,150	1,455	5,568	916	64	105	2,249	623	182	1,106	0	1,241	2,880	2,106	3	0	3,128	0	0	11,032	7.5	
	40 Air	4	2	0	1,815	0	13	1	11	0	5	31	3	1	0	1	21	1	1	0	0	0	0	1,909	0.1	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0.0	
	Σ	6,526	46,504	21,590	27,608	1,791	5,651	921	75	105	2,329	672	185	1,187	0	1,242	2,901	2,117	3	0	3,137	0	0	12,454	8.5	
34	10 Sea	323	0	0	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	526	0.0	
	20 Rail	247	160,614	0	1,823	0	251	0	0	7	0	0	0	0	0	1,086	0	0	0	0	0	0	0	164,029	11.2	
	30 Road	3,744	4,429	980	6,076	33	1,287	420	3	0	61	132	17	0	0	1,213	437	265	14	0	574	0	0	19,687	1.3	
	40 Air	50	4	41	1,617	0	263	3	0	0	5	17	1	0	0	6	30	33	32	0	1	0	0	2,104	0.1	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0.0	
	Σ	4,365	165,047	1,021	9,718	33	1,801	422	3	73	149	18	185	1,187	0	2,305	467	307	47	0	575	0	0	18,653	12.7	
35	10 Sea	375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	375	0.0	
	20 Rail	0	63,123	0	0	0	2,478	18	0	0	0	0	1,919	0	0	0	0	0	0	0	0	0	0	0	67,538	4.6
	30 Road	39	3,226	0	305	19	50	10	5	0	22	0	6	0	0	13	9	0	0	0	104	0	0	3,610	0.3	
	40 Air	0	0	0	81	37	48	0	0	0	2	3	0	0	0	0	2	0	0	0	0	0	0	174	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Σ	414	66,350	81	342	19	2,576	28	5	24	3	1	1,925	0	0	13	12	0	0	0	104	0	0	71,896	4.9	
36	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20 Rail	3,818	3,000	15	641	189	0	30	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7,700	0.5	
	30 Road	427	268	0	992	0	534	83	0	2	62	0	0	0	0	14	103	83	30	0	81	0	0	2,691	0.2	
	40 Air	77	0	0	246	0	47	0	0	0	1	0	0	0	0	4	2	0	0	0	0	0	0	380	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0.0	
	Σ	4,322	3,268	28	1,879	189	582	112	2	70	0	0	0	0	0	18	106	99	31	0	81	0	0	10,787	0.7	
37	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20 Rail	611	3,229	0	524	932	513	5	0	10	52	17	0	10	0	5	12	273	1	0	108	0	0	6,303	0.4	
	30 Road	1,983	189	35	964	0	2	9	0	11	5	70	0	13	0	15	3	0	0	0	10	0	0	3,329	0.2	
	40 Air	494	0	0	0	0																				

Azerbaijan
(country)

Cargo flows data through the border (import, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																	Total all commodities	% by group of countries					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			18	19	20	21	
39	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	20 Rail	0	4,586	0	893	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5741	0.4
	30 Road	0	889	0	629	20	2	0	0	0	0	7	24	0	0	80	23	3	0	0	0	545	2235	0.2	
	40 Air	0	0	0	20	0	14	0	0	0	2	43	1	0	0	1	7	0	1	0	0	5	94	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	0	5,475	0	1,542	40	15	0	0	0	13	50	25	0	0	323	30	3	1	0	0	551	8070	0.6		
40	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	30 Road	103	5	0	1,043	0	28	18	0	25	36	0	0	0	0	20	0	0	0	0	2	0	1281	0.1	
	40 Air	10	0	0	7	0	3	1	0	2	1	5	0	0	0	6	1	5	0	0	4	0	45	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Σ	113	5	0	1,050	0	31	19	0	27	41	0	0	0	0	26	1	5	0	0	6	0	1327	0.1		
41	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
42	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	30 Road	0	0	0	0	32,231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32231	2.2	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Σ	0	0	0	0	32,231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32231	2.2	
43	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	30 Road	0	342	0	0	0	0	0	0	0	1,115	0	0	0	0	7	0	0	0	0	0	0	1466	0.1	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Σ	0	342	0	0	0	0	0	0	0	1,115	0	0	0	0	7	0	0	0	0	0	0	1467	0.1		
44	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	40 Air	0	0	0	0	0	17	0	0	0	0	0	0	0	0	56	10	0	0	0	0	0	107	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	454	6	180	0	0	0	0	839	0.1	
Σ	0	0	0	0	0	17	0	0	0	0	0	0	0	0	56	10	180	0	0	0	0	1467	0.1		
45	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
46	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Sub-total for non-TRACECA countries	10 Sea	2938	41163	0	728	0	236	0	0	1857	86	0	8	0	0	4441	29	72	1	0	0	2	51551	3.5	
	20 Rail	7973	283751	1270	33898	14826	1516	10868	5893	10868	5893	40	17583	0	21534	6421	1488	2	0	1113	0	466142	31.8		
	30 Road	34335	167944	49479	155888	27641	20595	6222	111	2636	4046	5063	17726	0	6995	6123	3772	1248	0	7962	0	525503	35.9		
	40 Air	2074	22	218	5431	2	744	240	20	5	103	229	56	37	83	340	284	50	0	161	0	10100	0.7		
	45 Other	130	0	0	5	0	1	0	0	0	3	0	11	0	310	13	1073	1	0	0	0	0	1548	0.1	
Σ	47450	492880	50967	195750	85016	36402	7978	132	15367	10133	8737	5159	35365	0	33363	12926	6689	1302	9236	0	1054853	72.0			
% by commodities	3.2	33.7	3.5	13.4	5.8	2.5	0.5	0.0	1.0	0.7	0.6	0.4	2.4	0.0	2.3	0.9	0.5	0.1	0.6	0.0	0.0	72.0	-		
TOTAL all countries	10 Sea	3048	44327	0	728	0	236	0	0	1857	86	43	0	0	4782	65	72	1	0	0	0	141797	9.7		
	20 Rail	8638	324927	1360	35048	239806	43576	1534	10868	6368	3870	40	30468	0	48063	7247	1500	2	0	1124	0	764441	52.2		
	30 Road	34899	171186	49484	15812	35073	23401	6378	117	2721	4600	5065	19857	0	9718	7073	3776	1261	0	8000	0	546261	37.3		
	40 Air	2074	22	218	5431	2	745	240	20	5	103	229	56	37	83	340	284	50	0	161	0	10102	0.7		
	45 Other	130	30	0	5	0	1	0	0	0	3	0	11	0	310	13	1073	1	0	0	0	0	1578	0.1	
Σ	48559	540493	51062	197024	348488	90499	8298	138	15452	11162	12183	5161	50621	0	62957	14738	6705	1315	9285	0	1464180	100.0			
% by commodities	3.3	36.9	3.5	13.5	23.8	5.5	0.6	0.0	1.1	0.8	0.8	0.4	3.5	0.0	4.3	1.0	0.5	0.1	0.6	0.0	0.0	100.0	-		

Azerbaijan
(country)

Cargo flows data through the border (export, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																			Total all commodities	% by group of countries						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			20	21				
1	10 Sea	0	0	0	0	553	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	556	0.0		
	20 Rail	0	0	0	0	3,377	15,825	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19235	0.7		
	30 Road	0	0	0	20	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	0.0		
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	0	0	0	20	3,931	15,829	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19905	0.8		
4	10 Sea	0	0	0	0	344	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	344	0.0		
	20 Rail	0	178	0	164	5,325	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5714	0.2		
	30 Road	0	74	0	33	0	99	0	0	37	0	59	0	0	0	0	0	0	0	0	0	0	0	0	333	0.0		
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	0	252	0	197	5,669	99	9	0	37	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	6391	0.2		
7	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	20 Rail	0	16	0	59	108	117	1,181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1727	0.1	
	30 Road	0	193	0	118	0	115	295	0	0	7	24	2	0	0	0	29	478	0	17	0	0	0	0	0	1293	0.0	
	40 Air	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	0	211	0	177	108	232	1,476	0	0	7	24	2	0	0	0	29	478	0	17	0	0	0	0	0	0	3024	0.1	
12	10 Sea	0	0	0	0	20,000	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20040	0.8	
	20 Rail	0	203	0	102	3,491	5,342	1,257	0	0	30	35	33	1,330	0	345	1,198	155	0	0	0	0	0	0	0	13520	0.5	
	30 Road	0	15	0	273	64	157	50	0	0	18	117	0	22	0	15	254	64	0	0	0	0	0	0	0	1054	0.0	
	40 Air	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	0	218	0	375	23,555	5,499	1,315	0	0	48	164	33	1,352	0	359	1,487	256	1	0	0	0	0	0	0	0	34867	1.3	
15	10 Sea	0	45	0	168	16,310	0	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17537	0.7	
	20 Rail	0	118	0	294	21,905	721	166	0	0	261	48	0	60	0	642	580	122	2	0	0	0	0	0	0	24923	0.9	
	30 Road	15	519	0	959	117	372	240	0	0	3	33	0	16	0	4	607	13	28	0	0	0	0	0	0	2962	0.1	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	15	710	22	1,421	39,332	1,093	408	0	0	3	300	48	76	0	645	2,234	261	31	0	0	0	0	0	0	0	45617	1.7	
21	10 Sea	0	0	0	0	16,462	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16462	0.6	
	20 Rail	120	102	0	365	344,728	21,435	461	0	0	215	2	0	176	0	50	0	0	0	0	0	0	0	0	0	367874	13.9	
	30 Road	1,093	0	0	772	14,065	2,381	85	0	0	51	18	0	190	0	52	0	0	0	0	0	0	0	0	0	18708	0.7	
	40 Air	0	0	0	148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	1,213	102	0	1,305	375,255	23,816	546	0	0	267	20	0	366	0	102	0	0	0	0	0	0	0	0	0	0	402993	15.3	
22	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
23	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Sub-total for TRACECA countries	1228	1543	22	3495	446850	45569	3753	0	37	324	568	83	1794	0	1084	4640	519	49	0	0	0	0	0	0	0	512598	19.4	
% by commodities	0.0	0.1	0.0	0.1	16.9	1.8	0.1	-	0.0	0.0	0.0	0.0	0.1	-	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.4	-	

Azerbaijan
(country)

Cargo flows data through the border (export, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																	Total all commodities	% by group of countries								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			18	19	20	21				
24	10 Sea	0	12	0	547	72,287	0	51	0	0	0	11	0	0	0	0	0	5	0	0	0	0	0	0	72914	2.8		
	20 Rail	21	6,904	257	38,780	100,123	8,639	1,389	0	0	390	1,345	0	1,148	0	3,529	6,149	338	228	0	0	0	0	0	169251	6.4		
	30 Road	128	2,353	60	8,226	130	1,915	1,111	0	160	37	740	1	665	0	276	3,298	820	203	0	0	0	0	0	201336	0.8		
	40 Air	0	0	0	6	0	10	0	0	2	0	0	0	1	0	2	19	31	14	0	0	0	0	0	166	0.0		
	45 Other	0	101	0	148	0	0	0	0	0	0	0	0	0	0	0	746	288	0	0	0	0	0	0	1291	0.0		
Σ	149	9,393	317	47,707	172,541	10,565	2,552	2	160	427	2,162	1	1,814	0	3,807	10,217	1,477	446	0	0	0	0	0	263758	10.0			
29	10 Sea	0	222	0	12,498	0	0	0	0	0	1,236	0	0	0	0	0	0	0	0	0	0	0	0	0	13756	0.5		
	20 Rail	0	2,391	0	1,160	108,556	250	203	0	0	1,538	0	103	0	98	519	0	15	0	0	0	0	0	0	114833	4.3		
	30 Road	0	1,347	61	421	510	99	218	0	0	977	0	32	0	13	791	62	54	0	0	0	0	0	0	4620	0.2		
	40 Air	0	0	0	18	0	0	0	0	0	229	0	4	0	0	240	2	0	0	0	0	0	0	0	493	0.0		
	45 Other	0	0	0	0	0	4	0	0	0	0	0	0	0	0	181	0	0	0	0	0	0	0	0	184	0.0		
Σ	0	3,759	61	1,600	121,564	352	421	0	0	3,981	0	139	0	1,731	0	111	1,731	64	70	0	0	0	0	133887	5.1			
30	10 Sea	0	0	0	0	0	0	0	0	0	981	0	0	0	0	0	0	0	0	0	0	0	0	0	981	0.0		
	20 Rail	0	523	0	0	0	0	0	0	0	104	0	0	0	0	0	0	0	0	0	0	0	0	0	626	0.0		
	30 Road	0	256	0	0	0	0	0	0	0	125	0	0	0	0	0	0	0	0	0	0	0	0	0	361	0.0		
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	0	779	0	0	0	0	0	0	0	0	1,210	0	0	0	0	0	0	0	0	0	0	0	0	0	1988	0.1		
31	10 Sea	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.0		
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	30 Road	0	0	0	0	0	0	40	0	0	90	0	0	0	0	0	47	0	0	0	0	0	0	0	0	227	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	13	0	0	0	0	21	0	0	0	0	0	0	0	0	0	80	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11	0	0	0	0	0	0	0	0	12	0.0	
Σ	0	0	0	0	0	0	40	0	0	6	103	94	0	0	0	69	11	0	0	0	0	0	0	0	0	0	0.0	
32	10 Sea	0	0	0	0	976,400	0	0	0	0	3,366	0	0	0	0	5,562	0	0	0	0	0	0	0	0	0	324	0.0	
	20 Rail	0	0	0	0	0	45	10	0	0	5	0	0	0	5,803	36	0	0	0	0	0	0	0	0	985348	37.3		
	30 Road	0	809	80	3,322	63	3,380	1,702	0	659	911	10,643	86	11	27,723	9,815	17,623	21	0	0	0	0	0	0	5899	0.2		
	40 Air	0	21	0	252	0	0	0	0	0	0	2	0	0	0	0	45	0	0	0	0	0	0	0	76848	2.9		
	45 Other	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	320	0.0		
Σ	0	830	80	3,575	976,462	3,425	1,712	0	659	911	14,031	86	11	39,108	9,895	17,623	21	0	0	0	0	0	0	0	1068430	40.4		
33	10 Sea	0	0	0	0	0	0	0	0	0	122	0	0	0	0	0	0	0	0	0	0	0	0	0	122	0.0		
	20 Rail	0	0	0	0	0	0	20	0	0	22	0	0	0	0	109	0	0	0	0	0	0	0	0	151	0.0		
	30 Road	61	2,118	18	8,684	0	2,992	2,895	2,246	328	616	12,830	84	0	1,439	27	5	0	0	0	0	0	0	0	34350	1.3		
	40 Air	11	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0.0		
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	72	2,118	18	8,684	0	2,995	2,915	2,246	328	616	12,974	84	0	1,549	27	5	0	0	0	0	0	0	0	0	16	0.0		
34	10 Sea	0	0	0	0	22,355	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	20 Rail	0	0	0	0	1,071	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	30 Road	0	833	0	2,060	0	161	0	0	0	0	240	0	0	0	203	0	0	0	0	0	0	0	0	0	1657	0.1	
	40 Air	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3497	0.1	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0.0	
Σ	21	833	0	2,060	23,426	161	0	0	0	0	240	0	0	0	203	0	0	0	0	0	0	0	0	0	0	0	0.0	
35	10 Sea	0	0	0	0	322,612	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	20 Rail	0	0	0	0	101,985	0	0	0	0	0	0	0	0	0	1,050	0	0	0	0	0	0	0	0	0	0	0.0	
	30 Road	0	72	0	0	99	0	80	0	186	0	60	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	0	72	0	0	500	424,696	0	80	0	186	60	0	0	0	1,050	22	0	0	0	0	0	0	0	0	0	0	0.0	
36	10 Sea	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	20 Rail	0	0	0	0	0	0	0	0	0	336	0	0	0	0	2,149	0	0	0	0	0	0	0	0	0	0	0	0.0
	30 Road	0	0	0	0	0	0	0	0	0	16,287	0	0	0	0	54	203	0	0	0	0	0	0	0	0	0	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	0	0	0	0	0	0	0	0	0	0	60	0	0	0	2,203	215	0	0	0	0	0	0	0	0	0	0	0.0	
37	10 Sea	0	0	0	0	11,435	0	0	0	0	16,624	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	20 Rail	0	0	0	0	50,229	0	0	0	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	30 Road	0	80	0	465	183	0	0	0	0	1,627	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	40 Air	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Σ	0	90	0	1,478	61,847	0	0	0	0	0	16,671	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
38	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	20 Rail	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	30 Road	0	299	0	0	0	0	0	0	0	9	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
	45 Other	0	0	0</																								

Kazakhstan
(country)

Cargo flows data through the border (import, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																	Total all commodities	% by group of countries						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			18	19	20	21		
24	10 Sea	0	17	1	38	30	463	9	0	81	26	2	0	2	0	122	2	41	0	0	2	0	0	0	836	0.0
	20 Rail	4127	15073	3751	179483	3896247	577929	36353	77	361342	38819	8446	788	788	235432	11	1141938	72827	44355	1002	28	8879	0	6628909	75.2	
	30 Road	3047	4634	1704	24428	17634	12015	7344	193	20481	2201	2654	523	523	7479	0	45231	26280	13261	431	62	2091	0	191683	2.2	
	40 Air	0	36	0	550	61	371	16	1	0	17843	33	10	9	31	0	40	1107	68	13	1	8	0	2407	0.0	
	45 Other	0	7	7	0	5853	3	17	0	0	0	3	10	0	31	0	63	197	25411	11	0	4	0	49481	0.6	
Σ	7204	19768	5463	204500	3919826	590781	43739	271	399748	41082	11124	1320	1320	242974	12	1187414	100413	83156	1457	93	10984	0	6871326	77.9		
29	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	1900	2296	157905	14682	7264	1676	0	37	91	155	52	52	1871	0	19816	9359	5413	30	0	250	0	222799	2.5	
	30 Road	33	37	35	1153	17	301	85	0	0	55	57	23	23	51	0	532	847	252	35	0	22	0	3533	0.0	
	40 Air	0	0	0	2	0	5	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	13	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76	2319	0	0	0	0	2395	0.0	
Σ	33	1941	2330	159060	14698	7570	1760	0	37	146	213	76	76	1922	0	20348	10284	7984	65	0	272	0	228739	2.6		
30	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	351	77	2417	122415	1585	91	31	0	0	0	0	0	0	0	2177	1235	27	10	0	13	0	131665	1.5	
	30 Road	358	757	217	14808	1240	2088	231	384	11	234	770	101	14	446	0	491	1314	128	9	0	279	0	23658	0.3	
	40 Air	0	5	0	12	0	2	95	1	0	1	7	14	0	0	0	0	2	9	0	0	1	0	149	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	19	0.0	
Σ	358	1113	284	17038	123655	3675	417	416	15	294	1611	147	147	744	0	2669	2551	183	19	0	293	0	155491	1.8		
31	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	974	0	114	0	425	0	1	0	0	66	33	33	0	0	306	0	0	0	0	0	0	1919	0.0	
	30 Road	0	2109	0	232	0	376	19	0	0	0	19	416	0	0	0	0	8	0	0	0	3	0	3183	0.0	
	40 Air	1	0	0	1	0	93	2	0	0	8	28	1	1	0	0	0	1	0	7	0	4	0	146	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	1	3083	0	346	0	894	21	1	0	9	113	449	0	0	0	306	9	0	7	0	8	0	5247	0.1		
32	10 Sea	0	463	0	305	45	239	85	0	0	0	12	1	1	0	0	0	6	0	0	0	10	0	1191	0.0	
	20 Rail	0	160	55	527	4152	58	31	0	0	0	69	7	7	1486	0	1551	561	99	0	0	23	0	4761	0.1	
	30 Road	13	8459	616	8946	428	1463	284	8	3	289	139	66	66	1262	0	140	209	19	7	0	332	0	22085	0.3	
	40 Air	1	0	7	18	0	2	0	0	0	18	6	19	0	0	0	1	54	2	1	0	18	0	147	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	14	9102	678	9195	4626	1763	400	8	3	311	158	86	86	1273	0	381	275	21	9	0	361	0	28663	0.3		
33	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	17	22	43	183	343	26	8	6	8	69	7	7	1486	0	1551	561	99	0	0	23	0	4761	0.1	
	30 Road	73	2164	2316	19897	309	8449	1011	54	144	726	2087	50	50	1129	0	182	3148	1842	91	0	627	0	44961	0.5	
	40 Air	2	7	0	21	96	19	9	3	9	9	32	9	9	60	0	43	86	3	0	0	27	0	435	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116	0.0	
Σ	93	2193	2369	20101	714	8811	1045	66	158	743	2197	68	68	2675	0	2441	3797	2079	91	0	678	0	50319	0.6		
34	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	2165	2175	1867	20310	36297	7128	1489	3	537	1712	1577	134	134	573	0	1982	2613	1827	98	0	853	0	83298	0.9	
	30 Road	573	893	741	3055	245	1667	687	10	161	467	594	345	345	178	0	298	10075	610	113	0	365	0	21075	0.2	
	40 Air	43	49	46	1047	1	1137	90	2	4	119	101	47	47	17	0	44	439	96	46	3	26	0	3354	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1406	0.0	
Σ	2780	3116	2653	24412	36543	8932	2269	15	702	2298	2272	526	526	769	0	2323	13132	3930	217	3	1244	0	109133	1.2		
35	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	8	1122	1214	6228	3936	1655	188	8	23	67	268	78	78	363	0	384	908	286	5	0	618	0	17357	0.2	
	30 Road	9	161	3	564	0	374	19	0	1	47	78	91	91	18	0	64	229	37	1	0	548	0	2242	0.0	
	40 Air	1	0	0	318	0	15	5	2	1	7	18	5	5	4	0	15	57	6	8	0	6	0	465	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	18	1282	1217	7462	3937	2066	212	10	24	120	364	173	173	384	0	463	1194	331	14	0	1172	0	20441	0.2		
36	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	87	539	266	10316	17656	1987	251	47	645	3098	309	29	29	985	0	987	8882	1548	24	0	950	0	48625	0.6	
	30 Road	174	15	132	488	21	288	51	0	1	773	60	32	32	150	0	19	217	267	130	0	28	0	2850	0.0	
	40 Air	9	74	4	21	6	69	4	0	0	8	14	2	2	20	1	4	164	10	20	1	3	0	432	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0.0	
Σ	270	628	401	10835	17683	2349	306	47	645	3878	383	62	62	1165	1	1010	9282	1887	174	1	981	0	51988	0.6		
37	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	3411	96	201	14625	14741	3199	253	16	108	506	604	188	188	360	0	121	3307	867	17	0	1794	0	44414	0.5	
	30 Road	439	120	37	718	22	202	41	0	11	0	37	34	34	22	0	20	243	200	3	0	86	0	2295	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	3851	216	238	15345	14763	3418	297	16	120	510	641	222	222	382	0	143	3564	1559	20	0	1888	0	47191	0.5		
38	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	48	750	239	2045	37582	3937	205	1	111	550	122	10	10	1211	0	3204	462	64	32	0	595	0	51187	0.6	
	30 Road	78	73	29	257	12	215	161	1	203	61	75	27	27	329	0	139	68	14	17	0	940	0	2719	0.0	
	40 Air	0	0	0																						

Kazakhstan
(country)

Cargo flows data through the border (export, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																	Total all commodities	% by group of countries							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			18	19	20	21			
24	10 Sea	2664	135	0	369	31052	66	620	0	1960	0	21	0	356	0	61	0	2	0	0	0	0	0	37305	0.1		
	20 Rail	24888	2142518	2294	127200	17223749	1162511	47570	3017	900	2328	9051	250	176544	31	4070450	48484	15200	493	220	3345	0	25061041	69.9			
	30 Road	44000	197568	470	37108	399788	9528	2567	1371	1261	671	2964	246	194668	0	26933	14413	6122	213	80	1525	0	941493			2.6	
	40 Air	33	78	0	10	9	0	11	0	0	0	0	0	0	5	8	15	161	1	10	6	0	348				0.0
	45 Other	69	987	0	157	561073	10	5	0	1040	0	5	0	9521	0	100	140319	1304	53	0	0	0	714642				
Σ	71654	2341286	2764	164844	18215662	1172121	50762	4400	5161	2999	12040	495	381088	36	4097553	203231	22789	759	311	4876	0	26754830	74.6				
29	10 Sea	0	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		68	0.0		
	20 Rail	0	101123	0	427	165862	10125	273	5	6	5	489	4	827	0	17233	970	1914	7	0	22	0		299370		0.8	
	30 Road	209	1505	0	59	50031	517	120	1	0	0	93	0	13	0	172	339	87	13	0	3	0		53161			0.1
	40 Air	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		2			
	45 Other	209	102697	0	486	215993	10642	393	5	6	5	562	4	840	0	11405	1309	2058	38	0	25	0	352677	1.0			
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0				
30	10 Sea	0	38348	0	0	6635	345399	10	1725	0	50	8510	0	1	0	359447	24762	488	0	0	197	0			785773	2.2	
	20 Rail	53	24427	48	484	7	4125	161	29076	1146	3	55128	3	225	0	77229	24862	3026	100	0	1533	0			221631		0.6
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			7		
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0.0		
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0			
Σ	53	62775	48	491	6642	348524	171	30801	1146	50	63638	3	226	0	436676	49623	3555	100	202	1730	0	1007452	2.8				
31	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0.0
	20 Rail	0	16215	0	196	5889	600	0	76	0	0	0	0	0	0	16074	0	0	0	0	0	0				38850	
	30 Road	24	78	0	48	40	40	2	213	0	0	759	0	0	0	9284	7	2	0	0	1	0			10436	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		3	0.0		
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0			
Σ	24	16293	0	244	5889	640	2	289	0	0	759	0	0	0	25338	8	16	0	0	2	0	49303	0.1				
32	10 Sea	0	2000	0	8	7218	18	883	5	0	0	0	0	0	0	40284	0	0	0	0	0	0					50394
	20 Rail	0	194	0	0	10480	39647	50	0	0	0	0	0	850	0	46376	0	0	0	0	0	0				97570	0.3
	30 Road	723	104	0	98	236	480	1574	298	191	270	51	0	0	0	25509	130	0	0	0	0	0			29560	0.1	
	40 Air	297	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0		315	0.0		
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20	0.0			
Σ	1044	2114	0	145	17934	40146	2507	303	191	270	51	0	850	0	112168	130	8	0	0	0	0	177860	0.5				
33	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	20 Rail	0	194	0	0	937	193	541	302	0	18	162	0	301	0	124689	0	0	0	2	0	0				1430	0.0
	30 Road	747	195	0	11	111	190	261	12206	171	3	649	0	0	0	2984	24	6	0	0	0	0			127138	0.4	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		17567	0.0		
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0			
Σ	747	388	0	11	1048	384	1802	12508	171	21	811	0	301	0	127912	24	16	2	0	0	0	146145	0.4				
34	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	20 Rail	160	2834	0	0	466862	10442	73	331	0	0	152	0	0	0	390098	199	14	0	0	0	0				1350	2.4
	30 Road	1025	542	0	20	22	380	141	962	21	0	95	3	31	0	358	30	71	12	0	53	0			872549	2.4	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	2	0	0	0	0	0		3775	0.0		
	45 Other	1185	3376	0	1404	466884	10823	1564	1295	21	0	248	0	0	0	390480	231	85	12	0	0	0	0	0.0			
Σ	1185	3376	0	1404	466884	10823	1564	1295	21	0	248	0	0	0	390480	231	85	12	0	0	0	877705	2.4				
35	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	20 Rail	388	125	0	0	51179	3070	1355	798	88	16	2208	0	312	0	87388	62	0	0	0	0	0				980	0.0
	30 Road	0	101	0	47	0	0	0	201	0	0	467	1	0	0	68	2	0	0	1	0	2			145966	0.4	
	40 Air	0	0	0	0	0	0	0	0	0	0	62	0	0	0	0	0	0	0	0	0	0		881	0.0		
	45 Other	388	226	0	47	51179	3073	1355	1003	88	16	2727	1	312	0	88417	64	467	0	0	0	0	71	0.0			
Σ	388	226	0	47	51179	3073	1355	1003	88	16	2727	1	312	0	88417	64	467	0	0	0	0	467	0.0				
36	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	20 Rail	100	10524	0	3	1063954	9408	125	373	154	0	5493	0	68	0	63574	58	2	0	0	0	0				43521	0.1
	30 Road	86	0	0	0	0	0	0	0	0	0	0	0	28	0	143	1	1	0	0	0	0			1153834	3.2	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	0	7	0	0	0	0		279	0.0		
	45 Other	186	10524	0	3	1107325	9427	125	373	154	0	5493	0	0	0	15	0	221	0	0	0	0	75	0.0			
Σ	186	10524	0	3	1107325	9427	125	373	154	0	5493	0	96	30	63921	59	224	7	0	0	0	1197945	3.3				
37	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	20 Rail	0	82876	0	2057	59992	8155	90	367	5	0	488	0	20	0	424176	146	1605	2	74	0	0				579953	1.6
	30 Road	284	100	0	45	0	332	81	109	1	0	6	0	0	0	1565	14	0	0	0	8	0			2536	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0.0		
	45 Other	284	82976	0	2102	59992	8488	171	476	5	0	494	0	20	0	425731	160	1605	2	74	8	0	582488	1.6			
Σ	284	82976	0	2102	59992	8488	171	476	5	0	494	0	20	0	425731	160	1605	2	74	8	0	582488	1.6				
38	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	20 Rail	83	95674	0	157	57132	14980	0	56	0	0	1465	0	0	0	2731	9	19	0	0	3	11				172320	0.5
	30 Road	87	58	0	0	0	152	46	126	15	0	127	0	0	0	117	24	4	0	0	0	9			764	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0.0		
	45 Other	169	95732	0	157	57152	15132	46	182	15	0	1592	0	0	0	2848	33	23	0	0	3	20	173104	0.5			

Turkmenistan
(country)

Cargo flows data through the border (import, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																			Total all commodities	% by group of countries			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			20	21	
24	10 Sea	150	45	0	18	0	20	0	33	0	0	0	0	0	0	414	585	27	0	0	0	0	3426	0.2	
	20 Rail	692	44,859	434	7,963	14,013	2,362	28	22,112	2,303	897	145	2,922	0	0	21,200	8,285	2,952	43	19	1,087	0	155,480	7.2	
	30 Road	85	133	0	164	0	254	0	433	0	120	113	23	0	0	188	284	3,110	0	0	20	0	39353	1.8	
	40 Air	11	80	0	70	0	47	0	0	0	0	0	0	0	0	61	58	38	0	0	0	0	432	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0.0	
Σ	938	45,116	434	8,215	14,013	59,750	2,682	28	22,577	2,339	1,017	258	2,945	0	0	21,863	9,211	6,161	43	19	1,117	0	198,726	9.2	
29	10 Sea	0	0	0	127	0	0	0	0	0	0	0	0	0	0	19	127	0	0	0	0	0	254	0.1	
	20 Rail	21,458	128,835	1,488	54,192	1,504	4,022	112	2,403	786	33,880	289	54,334	0	0	138,532	7,417	3,199	68	0	362	0	570,024	26.5	
	30 Road	0	2,443	0	50	0	524	0	0	0	18	25	0	0	0	466	221	25	0	0	0	0	3,771	0.2	
	40 Air	298	0	0	383	0	60	0	0	0	46	0	0	0	0	205	72	0	0	0	0	0	1,064	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	21,756	131,278	1,488	54,751	1,504	119,979	4,022	112	2,403	832	33,898	315	54,334	0	0	139,222	7,837	3,224	68	0	362	0	577,392	26.8	
30	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	0	412	0	86	0	144	0	0	0	34	325	51	26	0	0	60	0	0	0	0	0	1,190	0.1	
	30 Road	0	0	0	129	0	22	0	0	0	0	15	0	0	0	21	104	0	0	0	0	0	291	0.0	
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	0	412	0	217	0	166	0	0	0	34	340	51	26	0	0	21	186	0	0	0	0	50	1,502	0.1	
31	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	0	76	0	14	4,409	0	95	11	0	30	0	0	0	0	145	56	0	0	0	0	0	4836	0.2	
	30 Road	0	547	0	516	0	200	125	12	32	40	12	32	0	0	322	157	0	0	0	66	0	2029	0.1	
	40 Air	0	0	0	0	0	44	0	0	0	10	11	0	0	0	0	0	0	0	0	0	0	90	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	0	623	0	555	4,409	244	220	23	44	40	52	44	0	0	467	213	0	0	0	66	0	6,955	0.3		
32	10 Sea	0	3,325	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,325	0.2	
	20 Rail	0	116	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	136	0.0	
	30 Road	232	40,012	34	4,897	849	4,940	1,058	39	60	47	2,880	483	5,724	0	776	262	348	73	0	3,481	0	66,192	3.1	
	40 Air	1,171	18	0	36	0	0	13	0	0	0	0	0	0	0	0	42	23	0	0	24	0	1,327	0.1	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	1,403	43,470	34	4,933	849	4,940	1,071	39	60	47	2,880	483	5,724	0	776	324	371	73	0	3,504	0	70,979	3.3		
33	10 Sea	0	0	0	186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0.0
	20 Rail	0	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0	0.0
	30 Road	23	593	120	20,362	171	2,410	1,157	11	1,376	222	392	12	731	0	1,835	666	1,053	0	0	8,175	0	39,309	1.8	
	40 Air	0	0	0	91	0	32	0	0	20	0	0	0	16	0	0	27	13	0	0	0	202	0	401	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	23	593	120	20,715	171	2,442	1,157	11	1,396	222	392	12	747	0	1,835	693	1,067	0	0	8,411	0	40,042	1.9		
34	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	4,325	231	0	2,780	0	111	0	0	0	13	0	0	0	0	747	0	0	0	0	0	86	833	0.0	
	30 Road	833	20	0	290	49	29	21	0	0	0	397	10	34	0	1,045	1,298	16	0	0	1,404	0	12,638	0.6	
	40 Air	0	0	0	50	0	143	0	0	0	0	0	0	0	0	51	34	63	380	0	2,011	0	3,808	0.2	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	10	0	0	112	0	330	0.0	
Σ	5,158	251	0	3,120	49	1,587	132	0	0	0	410	10	34	0	1,843	1,347	89	0	0	3,613	0	17,608	0.8		
35	10 Sea	0	3,394	0	52	0	64	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3526	0.2	
	20 Rail	190	0	0	1,383	0	228	0	0	0	0	0	0	0	0	10,905	703	23	0	0	1,869	0	15,313	0.7	
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	47	0	0	1,019	0	1,151	0.1	
	40 Air	0	0	0	115	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	107	0	255	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	190	3,394	0	1,601	0	292	17	0	0	0	12	0	0	0	10,905	739	70	0	0	2,985	0	20,245	0.9		
36	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	856	2,946	0	968	0	103	0	0	0	66	11	0	0	0	1,230	63	78	0	0	643	0	6,964	0.3	
	30 Road	0	0	0	0	0	82	0	51	0	0	0	11	25	0	70	181	922	0	0	2,102	0	3,458	0.2	
	40 Air	0	11	0	115	0	0	0	0	0	0	0	0	0	0	31	77	0	0	0	92	0	327	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	856	2,957	0	1,083	16	82	103	0	51	66	11	11	25	0	1,332	320	1,000	0	0	2,837	0	10,749	0.5		
37	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	1,379	99	24	9,905	923	225	50	40	80	115	163	123	0	0	1,051	229	0	0	119	0	14,526	0.7		
	30 Road	0	0	0	86	0	0	0	0	0	0	51	0	0	0	0	0	0	0	0	0	0	137	0.0	
	40 Air	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	1,379	99	24	10,035	923	265	50	40	80	115	215	123	0	0	1,051	229	0	0	119	0	14,747	0.7			
38	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	0	628	0	1,566	0	245	0	0	0	0	20	113	0	0	0	76	19	0	0	0	0	2,686	0.1	
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0.0	
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Σ	0	628	0	1,566	0	245	0	0	0	0	20	113	0	0	0	76	19	0	0	0	0	2,703	0.1		

Turkmenistan
(country)

Cargo flows data through the border (import, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																		Total all commodities	% by group of countries				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			19	20	21	
39	10 Sea	0	0	0	0	25,915	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25915	1.2	
	20 Rail	0	4,134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4134	0.2	
	30 Road	0	0	0	0	1,553	0	0	0	0	0	0	0	0	149	0	0	0	0	0	0	13	4134	0.1	
	40 Air	0	0	0	381	0	0	0	0	0	0	22	19	0	0	0	0	0	0	0	0	0	0	1715	0.1
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	422	0.0
Σ	0	4,134	0	381	27,468	0	0	0	0	0	22	19	0	0	149	0	0	0	0	0	13	0	32185	1.5	
40	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	402	0.0	
	20 Rail	0	0	0	0	0	137	12	0	0	20	0	12	0	0	0	0	11	0	0	0	402	0	573	0.0
	30 Road	0	0	0	0	1,898	0	0	0	0	0	77	0	0	104	0	0	0	0	0	0	764	0	2843	0.1
	40 Air	0	0	0	0	0	0	0	0	0	0	53	13	0	0	0	0	0	0	0	0	43	0	110	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	0	0	0	28	2,035	12	0	0	0	0	177	90	12	0	11	0	11	0	0	0	1,562	0	3927	0.2	
41	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	65	27	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	1,817	0	0	0	0	64	0	0	0	1,070	0	0	0	0	0	0	0	0	0	1909
	40 Air	0	0	0	0	0	448	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1582
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	0	0	0	0	2,266	0	0	0	0	0	129	27	0	1,070	0	0	0	0	0	0	0	109	0	109	0.0
44	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	32	654	0	0	0	0	0	0	4,728	0	0	233	0	0	0	0	0	0	5788
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	86	0	0	0	0	0	0	68	0	0	194
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	0	0	0	0	0	32	654	0	0	0	121	0	0	4,814	0	0	233	0	0	0	68	0	0	3481	0.2
45	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	43	0	0	0	80	0	0	0	0	0	0	0	0	0	0
	30 Road	652	202	0	431	0	93	14	0	0	0	0	0	0	2,363	0	0	21	0	0	0	0	0	0	3900
	40 Air	0	0	0	0	0	0	0	0	0	44	91	0	0	0	16	0	0	0	0	0	0	0	0	362
	45 Other	0	0	0	0	0	17	70	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	129
Σ	652	202	0	431	17	678	14	0	0	44	91	0	0	145	2,390	0	21	0	0	0	0	0	0	4959	0.2
46	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total for non-TRACECA countries	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	150	6783	36	383	25915	4917	37	0	33	36	0	0	0	1245	711	0	27	0	0	0	0	0	0	40760
	40 Air	29552	182537	1945	79396	20849	144635	7422	191	24594	3305	35588	625	57427	178916	20582	6519	132	19	6021	0	0	0	800254	
	45 Other	1172	43747	154	26580	2638	44993	2614	62	1919	308	4096	854	6524	5034	1977	5568	73	0	17880	0	0	0	166192	
Σ	32354	233155	2135	107686	49419	195002	10133	253	26566	3695	39781	1522	63967	185492	23593	12232	205	19	25020	0	0	0	1012230	47.0	
% by commodities	1.5	10.8	0.1	5.0	2.3	9.1	0.5	0.0	1.2	0.2	1.8	0.1	3.0	8.6	1.1	0.6	0.0	0.0	1.2	-	-	-	-	47.0	
TOTAL all countries	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	150	6872	36	383	208039	5692	120	0	33	36	0	0	0	1383	2214	49	0	0	0	0	0	0	0	315703
	40 Air	37783	344590	1962	88698	356093	353024	15665	191	28765	3660	36026	677	107095	209369	25321	8663	147	19	9649	0	0	0	1627599	
	45 Other	1448	44943	154	56094	2710	47943	2670	62	1970	330	4266	1283	6535	5337	3095	5842	73	0	17917	0	0	0	202672	
Σ	40860	396514	2152	228805	566859	407352	18810	285	30788	4146	40566	2064	122165	216471	31692	14793	261	19	29072	0	0	0	2153573	100.0	
% by commodities	1.9	18.4	0.1	10.6	26.3	18.9	0.9	0.0	1.4	0.2	1.9	0.1	5.7	10.1	1.5	0.7	0.0	0.0	1.3	-	-	-	-	100.0	

Turkmenistan
(country)

Cargo flows data through the border (export, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities														Total all commodities	% by group of countries									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14			15	16	17	18	19	20	21		
24	10 Sea	0	0	0	280	204,864	9,439	0	0	0	0	0	320	0	0	0	0	0	0	0	0	0	0	0	214902	5.9
	20 Rail	0	978	2,933	17,895	131,241	15,980	25	44	0	21	8,128	0	180	0	126	778	0	0	0	0	0	58	0	178388	4.9
	30 Road	172	1,111	0	153	0	266	12	19	0	42	646	0	0	0	0	71	0	0	0	0	0	0	0	2492	0.1
	40 Air	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	172	2,089	2,933	18,328	336,105	25,685	37	74	0	63	8,774	0	500	0	126	849	0	0	0	0	0	58	0	395793	10.9
29	10 Sea	0	0	0	0	2,500	1,147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3647	0.1
	20 Rail	0	400	0	0	8,424	448	14	30	0	0	128	0	0	0	20	0	108	0	0	0	0	0	0	9571	0.3
	30 Road	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0.0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	0	446	0	0	10,924	1,595	14	30	0	0	126	0	0	20	0	108	0	0	0	0	0	0	0	13263	0.4
30	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	30 Road	0	0	0	0	0	723	0	39	0	0	18,735	0	0	0	0	0	0	0	0	0	0	0	0	19497	0.5
	40 Air	0	0	0	0	0	0	0	405	0	0	1,759	0	0	0	0	0	74	0	0	0	0	0	0	2238	0.1
	45 Other	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13	0.0
	Σ	0	0	0	0	0	723	0	444	0	0	20,507	0	0	0	0	74	0	0	0	0	0	0	0	21748	0.6
31	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	0	138	1,040	0	101,853	8,429	175	233	189	0	7,946	0	800	0	486	0	21	0	0	0	0	0	0	121331	3.3
	30 Road	0	0	0	0	0	0	0	71	0	0	29,548	0	0	0	3,537	32	0	0	0	0	0	0	0	33198	0.9
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	0	138	1,040	0	101,853	8,429	175	304	189	0	37,494	0	800	0	4,023	32	21	0	0	0	0	0	0	154529	4.2
32	10 Sea	0	0	0	0	416,479	0	0	0	0	0	1,249	0	0	0	1,066	0	0	0	0	0	0	0	0	418784	11.5
	20 Rail	0	0	0	0	3,265	0	0	0	0	0	3,766	0	0	0	64	0	0	0	0	0	0	0	0	7095	0.2
	30 Road	0	0	0	0	0	0	0	234	31	98	6,228	0	0	0	7,957	291	360	0	0	0	0	0	0	15281	0.4
	40 Air	0	0	0	0	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	0	0	0	0	419,883	0	234	31	98	83	11,242	0	0	0	9,086	291	360	0	0	0	0	0	0	441308	12.1
33	10 Sea	0	0	0	0	0	0	0	0	0	0	750	0	0	0	10,377	0	0	0	0	0	0	0	0	0	0.3
	20 Rail	0	0	0	0	0	0	0	0	0	0	31,800	0	0	0	0	0	0	0	0	0	0	0	0	31800	0.9
	30 Road	32	365	0	0	0	0	0	6,253	0	0	56,439	0	0	0	346	0	21	0	0	0	0	0	0	63455	1.7
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	32	365	0	0	0	0	6,253	0	0	89,029	0	0	0	10,723	0	21	0	0	0	0	0	0	0	106422	2.9
34	10 Sea	0	0	0	0	241,391	0	0	0	0	0	2,597	0	0	0	0	0	0	0	0	0	0	0	0	241391	6.6
	20 Rail	0	0	0	0	323	60	0	0	0	0	3,530	0	0	0	0	0	0	0	0	0	0	0	0	330634	9.1
	30 Road	0	0	0	0	0	30	0	33	0	0	369	0	0	0	0	0	0	0	0	0	0	0	0	6107	0.2
	40 Air	0	0	0	0	0	0	0	0	0	0	10,898	0	0	0	0	0	0	0	0	0	0	0	0	10941	0.3
	45 Other	0	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	0	0	0	0	241,714	90	33	0	0	2,997	0	0	0	0	10,723	0	21	0	0	0	0	0	0	245330	6.7
35	10 Sea	0	0	0	0	330,634	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	330634	9.1
	20 Rail	0	0	0	0	2,577	31	0	12	0	0	3,530	0	0	0	0	0	0	0	0	0	0	0	0	6107	0.2
	30 Road	0	0	0	0	0	0	0	0	0	0	10,898	0	0	0	0	0	0	0	0	0	0	0	0	10941	0.3
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	0	0	0	0	333,210	31	12	0	0	14,429	0	0	0	0	10,723	0	21	0	0	0	0	0	0	245330	6.7
36	10 Sea	0	0	0	0	329,137	0	0	0	0	0	103	0	0	0	0	0	0	0	0	0	0	0	0	329240	9.0
	20 Rail	0	0	0	0	1,328	0	0	0	0	0	54,712	0	0	0	0	0	0	0	0	0	0	0	0	56040	1.5
	30 Road	0	202	0	0	0	0	0	30	0	0	6,162	0	0	0	0	0	0	0	0	0	0	0	0	6394	0.2
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	0	202	0	0	330,465	0	30	0	0	60,976	0	0	0	0	0	0	0	0	0	0	0	0	0	391673	10.7
37	10 Sea	0	0	0	0	59,193	0	0	0	0	0	13,374	0	0	0	0	0	0	0	0	0	0	0	0	59193	1.6
	20 Rail	0	0	0	0	24,082	0	0	0	0	0	998	0	0	0	0	0	0	0	0	0	0	0	0	37456	1.0
	30 Road	0	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1088	0.0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	0	90	0	0	83,275	0	0	0	0	14,372	0	0	0	0	0	0	0	0	0	0	0	0	0	97737	2.7
38	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	20 Rail	0	0	0	0	0	0	0	0	0	0	1,635	0	0	0	0	0	0	0	0	0	0	0	0	1635	0.0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	Σ	0	0	0	0																					

Turkmenistan
(country)

Cargo flows data through the border (export, in tonnes) for 1995

Code of group of countries	Code of transport mode	Code of group of commodities																				Total all commodities	% by group of countries	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21
39	10 Sea	0	0	0	0	296,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	296,575	8.1
	20 Rail	0	0	0	0	7,027	0	0	0	0	0	16,798	0	0	0	0	0	0	0	0	0	0	23,824	0.7
	30 Road	0	0	0	0	0	0	0	22	0	0	119	0	0	0	0	0	0	0	0	0	0	141	0.0
	40 Air	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Σ	0	0	0	0	303,602	0	0	0	0	0	16,917	0	0	0	0	0	0	0	0	0	0	320,541	8.8
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	13	0	0	0	0	0	0	0	0	0	202	0	0	0	0	0	0	0	0	0	0	202	0.0
41	Σ	13	0	0	0	0	0	0	0	0	202	0	0	0	0	0	0	0	0	0	0	0	202	0.0
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	Σ	0	0	0	0	16,438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,438	0.5
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	Σ	2,656	513	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,242	0.6
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	2,656	513	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	Σ	287,3	464,0	397,3	18,328	221,386	365,96	460	7,233	287	147	3,095,67	0	1,300	0	244,49	12,46	510	0	21	69	262,533	72.0	
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total for non-TRACECA countries	Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% by commodities	Σ	0.1	0.1	0.1	0.5	60.7	1.0	0.0	0.2	0.0	0.0	8.5	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	72.0	100.0
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL all countries	Σ	700	2,189	853,6	184,39	985,223	1,179,40	326	3,46	189	900	18,281,0	0	9,987	0	12,353	1,161	129	0	21	56	2,147,184	58.9	
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	2,881	2,750	0	312	233	469	2,46	6,876	98	137	12,568,8	0	127	0	12,046	468	381	0	0	11	134,1309	36.8	
	45 Other	13	0	0	0	5,734	0	0	11	0	0	56	0	0	0	0	0	0	0	0	0	0	5814	4.2
% by commodities	Σ	3,595	5,014	853,6	190,31	3,110,668	1,289,96	572	7,233	287	1,169	31,1594	0	12,009	0	35,642	1,654	510	0	21	69	3,648,939	100.0	
	10 Sea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30 Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45 Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Annex D4

Independent Data Sets Available for Matrix Validation

ROAD TRANSPORT DATA SETS

Country	Source	Status	Data Type	Data Use
Multi-country	TRACECA (Kocks/TecnEcon) Road Traffic Management	data collection completed 1996	Truck origin/destination surveys outside Almaty, Baku, Tbilisi and Yerevan (Turkmenbashi?); classified volume counts for Armenia, Azerbaijan and Georgia; traffic data for Tajikistan.	Validate a select link matrix from the assignment to compare to the O-D surveys.
	TRACECA (Scott Wilson Kirkpatrick) Trade Facilitation: border crossing data	data collection completed 1996	Border crossing data, usually giving tonnages and a description of major commodities and main origin and destinations.	Validate the total volume of traffic imported or exported to each state. Validate modal split.
Armenia	Kocks/TecnEcon (Taxis)	completed 1995	Counts at 51 locations in 1994	Assignment Validation of link flows.
Azerbaijan	Wilbur Smith(Taxis)		National Roads Plan	
	Wilbur Smith(Taxis)	completed	Baku-Astara: 6 * 48 hr counts	Assignment Validation of link flows.
	ArabConsult/ Islamic Banks	completed	Alat - Kazi Mahammed	
Kazakhstan	Louis Berger (ADB) JICA	completed due end 1996	4 counts Gulshad-Karaganda O/D surveys nr. Balkhash & nr Karaganda	Validate a select link matrix from the assignment to compare to the O-D surveys.
Kyrgyzstan	Carl Bro (ADB)	completed 1995	Bishkek - Osh; counts; O/D surveys near Karabalta on this and Bishkek-Tashkent road	Validate a select link matrix from the assignment to compare to the O-D surveys.
Turkmenistan	Kocks/TecnEcon (EBRD)	completed 1995	1994 counts; truck counts; O/D surveys at 5 border crossing points	Validate a select link matrix from the assignment to compare to the O-D surveys.

RAIL TRANSPORT DATA SETS

Country	Source	Status	Data Type	Data Use
Multi-country	WFP (Food aid programme)	historical/on-going	Mainly Caucasus: humanitarian aid (1995 data) Tonnages	
	TRACECA (Scott Wilson Kirkpatrick) Trade Facilitation: border crossing data	completed 1996	Border crossing data, usually giving tonnages and a description of major commodities and main origin and destinations.	Validate the total volume of traffic imported or exported to each state. Validate modal split.
	TRACECA (TEWET) Trans-Caucasian Railway	on-going	Caucasus only. 1995 rail tonnage flows on E-W route, by main links. 1994/5 Azerbaijan tonnage trade flows	
Kazakhstan	Japanese rail study	beginning 1996	Druzhba	
	BCEOM (EBRD)	completed 1995	Freight tonnage by section (1989/92/93/ 1st half 94)	

MARITIME TRANSPORT DATA SETS

Country	Source	Status	Data Types	Data Use
Multi-country	WFP Food aid	historical/on-going	Mainly Caucasus	
	TRACECA (Ramboll) Port Network Plan	on-going	Ferry terminals (Baku/Tukmenbashi) 1993/4/5 ferry data (& modal split road/rail)	
	TRACECA (Scott Wilson Kirkpatrick) Trade Facilitation: border crossing data	on-going	Black Sea/Caspian ports Border crossing data, usually giving tonnages and a description of major commodities and main origin and destinations.	Validate the total volume of traffic imported or exported to each state. Validate modal split.
	Tacis: Caspian Shipping Company	completed 1996	1989-1995 Shipping flows on the Caspian	
Azerbaijan	Sofremer	completed 1995	Port of Baku	
Georgia	Rogge Marine (Tacis)	completed 1993	Port of Poti	
Kazakhstan	Sofremer	completed 1995	Port of Aktau	
	EBRD Aktau	completed/on- going	Port of Aktau	
Turkmenistan	EBRD Turkmenbashi	on-going	Port of Turkmenbashi tonnages 1991- 1995	

APPENDIX E

Summary of Visits to TRACECA States

E. SUMMARY OF VISITS TO TRACECA STATES

LIST OF VISITS AND PERSONS MET

IN TRACECA COUNTRIES AS OF 15 DECEMBER 1996

(*) = Project partner or closely associated with project work

ARMENIA

First visit: 5-6 February

Second visit: 1-4 June

Third visit: 28-30 July

Fourth visit: 6-8 October

Genrik KOCHINYAN

Minister of Transport

Ashot S. SHAKHNAZARYAN (*)

First Deputy Minister of Transport

Karlen V. SAHAKIAN (*)

Chief Department of Technical Development

Pavel V. SIRADEGIAN (*)

Senior Expert - Department of Technical Development

Vardan N. MOVSESIAN

First Deputy Minister of Economy

Ansen KARAPETIAN

Chief of Department of Infrastructure - Ministry of Economy

Armen S. BUDAGUIAN

Vice-director of Graduate School - State Engineering University

Avedik YESSAYAN

Logistics assistant - World Food Programme

Sergey SUMBATAYAN

Deputy Chairman "Armentransforwarder"

State Committee for Statistics

TACIS Coordination Unit

K. DANIELIAN

Director

David AVAKIAN

Assistant to the Director

John LYNN

Team Leader / Expatriate team

Matti SALIMAKI

Project Manager

AZERBAIJAN

First visit: 26-31 January

Second visit: 23-25 May

Third visit: 22 July

Fourth visit: 27 September - 1 October

Fifth visit: 29 - 30 October

Sixth visit: 21-23 November

Seventh visit: 28 November

Icram M. SADYKHOW (*)

Head of Department of Transport and Communication
Ministry of Economy

Representatives of various institutes

Soltan KIAZIMOV

Chief Engineer - Port of Baku

Tair O. KASIMOV

Vice-President for Marketing - Caspian Shipping Company

Akiev NAGUIEV

Planning and economics Department - Caspian Shipping Company

TACIS Project - National Road Network Study

David I. WOOD

Team leader - Wilbur Smith

TACIS Project - Port Network Plan (Ferry rehabilitation)

Carsten SORENSEN

Project Manager

Moe DAJFINN

Economist

TACIS Coordination Unit

J. CASSIMOV

Director

Makhir KIAZIMOV

Expert

Dominique CHARPENTIER

Team Leader / Expatriate Team

GEORGIA

First visit: 1-3 February

Second visit: 29-31 May

Third visit: 23-27 July

Fourth visit: 2-5 October

Fifth visit: 25 November - 4 December

Akaki CHAIDZE

General Manager of Georgian Railways

Chairman of the (now disbanded) Coordination Council on
Transport

Vakhtang LOMATZE

Vice-Chairman of the (now disbanded) Coordination Council on
Transport

Now, Vice-Minister of Transport

Guram DOLBAYA

Vice-Chairman of the (now disbanded) Coordination Council on
Transport

Guram NAKAIDZE

Director - Centre on the Problems of the Euro-Asian Transport Corridor

Tenguiz GOGUELIA

Expert for Policy and Industry - Center Probl. Euro-Asian Tr. Corridor

Ramin MITAISHVILI

Deputy Minister of Economy

Gregori BOKUCHAVA

Chief of the Department Consumption and Communications
Ministry of Economy

Tariel MDIVNISHVILI

Deputy Chairman of the State Concern of Roads "Sakavtogza"

Tali TALIASHVILI

Director - Road Project State Institute "Gruzgiprodor"

George G. TSOMAIA

State Advisor - Transport & Communication

Director - Centre on the Problems of the Euro-Asian Transport
Corridor

Joseph ARCHVADZE

Deputy Chairman - State Department for Social & Economic
Information of Georgia

Alexander CHKHEIDZE

President of the Georgian International Road Carriers Association,
Former Minister of Transport

Teimuraz GORSHKOV

Expert Road Transport - Coordination Council for Transport

Vladimir CHELIA

Expert Maritime Transport - Coordination Council for Transport

Nikhilesh JAIN

Chief of Rail Operation Unit - World Food Programme

Teimuraz CHUBINISHVILI

Deputy Director of the Georgian Research Institute for Scientific and
Technical Information "Techinformi"

Michael JOBAYA

Local Business Developer - Business Communication Centre (TACIS)

Vazha MAGRADZE

Expert - Business Communication Centre

Michael MISAELIDIS

Transport Policy Adviser (TACIS)

Centre for Marketing Research - Institute of Economy ()*

Elena KVISHASHVILI

Director

TACIS Coordination Unit

Soso Joseph TSISKARISHVILI

Executive Director (since July 1996)

Jemal ACKOBYA

Executive Director (until July 1996)

Paul de St HIPPOLYTE

Team Leader Expatriate Team

Giuseppe NARDELLI

Project Manager

Tractebel Co-ordination Office

Mr Marc Graille

Mr Vadim Turdzeldze

KAZAKHSTAN

Regional Office: since January 1996

Kanat S. MOKHAMEDDJANOV
Vice-Minister of Transport and Communications

Sergey L. LARICHEV
Director - Department of Highways - Ministry of Transport and Communications (MTC)

Ilya P. SEGAL
Director - Department of Railways - MTC

Arkadi I. TARANENKO
Head of Department, Transport Development and Scientific and Technical Policy - MTC

Teodor L. KAPLAN
Head of Economic Department - MTC

Valeri A. MOTUZ
Department of Road Transport - International Transport Division

Vladimir T. PROTSENKO
Deputy Chief, Department of Foreign Economic Relations - MTC

Aigul T. IDRISOVA
Chief of Section, International Relations Department - MTC

Valery I. KACIANOV
Deputy Director - "Giprojeldortrans" Railways Institute

Svetlana L. SMIRNOVA (*)
Senior Economist - "Giprojeldortrans"

Oleg A. KRASIKOV (*)
Deputy Director - Road Research Institute

Pavel P. KAVALENKO (*)
Director "Rechmorflot"

Tatiana V. BELAEVA (*)
Chief Research Section - Air Transport Institute "Kazavtoproekt"

Vladimir A. UTEBEKOB
Director General, Consulting and Research Company, "Iskomtrans"

Sholpan K. SAGIMBAYEVA
Chief Manager, "Iskomtrans"

Rustam K. JULAMANOV
Director - Institute for Development of Kazakhstan

Hartmut FISHER
Executive Director - Institute of Management, Economy and Strategic Studies (KIMEP)

John PETROFF (*)
Head of MA Economics Program - KIMEP

Joint Stock Company, Research Institute of Road Transport (AO NIIAT) ()*

Murat M. BEKMAGAMBETOV

Director

Eduard T. KAPLAN

Deputy Director

Elena GRIGORIADI

Senior Road Transport Specialist

TACIS Coordination Unit

Pierre MAHY

Project Manager

KYRGHYZSTAN

First visit: 23-24 February

Second visit: 15 July

Third visit: 19-20 August

Fourth visit: 22 October

Ghantoro Gh. SATYBALDIEV

First Deputy Minister - Ministry of Transport

Adam Z. ZAKIROV

Deputy Minister - Ministry of Transport

Rinat U. RAKHMATULIN

Head of the International Road Department - Ministry of Transport

Almazbek O. IRSALIEV

Head of Foreign Relations and Investment Division - Min. of Transport

Esimbek KURMANBAEV

Chief Transport Section - Ministry of Economy

Kanybek O. ISMANKULOV

Representative - Militzer & Munch International Forwarders

State Institute of Road Design "Kyrghyzdortransproekt" ()*

Levan M. ALIBEGASHVILI

Director

Victor I. SOLOSHENKO

Chief Technical Section

Anatoly N. MASIUTENKO

Chief Engineer

Sergey N. LIUBIANIK

Economic Specialist

TACIS Coordination Unit

Sergey K. KASYMKULOV

National Director - Director The State Agency on Technical

Cooperation Ainura A. ABDYLDAEVA

Expert - TACIS Programme

TADJIKISTAN

First visit: 13-14 February

Second visit: 13-15 August

Victor V. BOLTOV (*)

Deputy Minister of Economy and External Economic Relations

Saddullo RAKHMATOV

Director - "Tadjiknakliot" transport-forwarding company

Martin TREVOR

World Food Programme

State Project & Research Institute "Tajikgiprotransstroy" (Ministry of Transport and Roads) ()*

Timur D. MIRZOEV

Director

Yuri A. ULDASHEV

Chief Engineer

Makhbuba ABDULAEVA

Head - Planning and Economic Section

TACIS Coordination Unit

The CU was visited but unfortunately, during the visits, no meeting could be arranged with Paul McGregor - Team Leader.

TURKMENISTAN

First visit: 22-25 January

Second visit: 20-21 May

Third visit: 8-9 August

Fourth visit: 31 October - 4 November

Fifth visit: 5-10 December

Mr KALIKOV

Deputy Prime Minister - Cabinet of Ministers

Meret S. YAZBERDYEV (*)

Head of the Transport & Communication Department - Cabinet of Ministers

Senakuli RAKHMANOV

Minister of Road Transport

Vladimir F. VOLODIN

Vice-President - State Road Company "Turkmenautoellari"

Berkeli BYASHIMOV

Senior Economist - State Railways of Turkmenistan

Murad Ch. CHARYEV

Vice-rector - Turkmen State Institute of Transport and Communication

Ashir Kh. KHURBANKUSHEV

Vice-rector for scientific and economic matters - TSITC

Jumadurby BAIRAMOV

Director, Institute of Economy - Cabinet of Ministers

Mr KOHDJAMUKHAMEDOV

Vice Director - State Institute of Foreign Investment

Mr Gerd LUCENENS

Consultant to State Institute of Foreign Investment

TACIS Coordination Unit

Mr. M. BERDYEV, National Director

TRACTEBEL

Ms Nigora SADIKESVIA

UZBEKISTAN

First visit: 16-21 February

Second visit: 25 Mars

Third visit: 4-5 April

Fourth visit: 2-3 May

Fifth visit: 15-17 May

Sixth visit: 5-7 August

Seventh visit: 14-20 October

Eighth visit: 5-7 November

Ninth visit: 2-5 December

Tenth visit: 11-13 December

Lerik A. AKHMETOV

Chairman - State joint-stock Corporation "Uzautotrans"

Khurshid NAJMIDDINOV

Chief Adviser for Foreign Economic Activities - "Uzautotrans"

Turgunbai A. AZIMBOEV

Vice-chairman, State Road Company "Uzavtoyul"

Vokhid N. AZAMOV

State Road Inspector, State Road Company "Uzavtoyul"

Valeri L. DAVIDOVICH

Chief International Department - "Uzbek Railways"

Navruz S. ERKINOV

Deputy Chief of Service, Department of International Relations -
"Uzbek Railways"

Tulagan Kh. MIRMAKHMUDOV

Deputy Chief, Freight and Commercial Service - "Uzbek Railways"

Erkin DJURAEV

Deputy Head of Department, International Transport, Ministry of
Foreign Economic Relations (MFER)

Vladimir Yu. ONKIS

Section Chief - Department, International Transport (MFER)

Ali G. INIATOV

Head of Transport Department, Gosprognoststat [Phone conversation]

Georgui V. DUBNICHIK

Deputy Director General, forwarding company "Shoshtrans"

Murat A. KHALISOV

Deputy Director General, forwarding company "Shoshtrans"

Anvar. A. ASHRABOV

National Project & Programmes Advisor, United Nations Development
Programme (UNDP)

Valery A. TOMALIDI

Chief Scientific and Production Department, Tashkent Institute of
Road Engineers (TADI)

Road Transport Institute "Uzautotranstechnica" ()*

Sobir A. IBRAGIMKHODJAEV
Deputy Director General

Irina M. ASIKOVA
Chief Section 12 (Economy)

Elena T. VASSILIEVNA
Chief Section 6

TACIS Coordination Unit

Bakhtiar B. SADRIDDINOV
National Director

Mizokhid SULTANOV
Deputy Director

Akmal S. KAMALOV
Task Manager for Transport and Communications

TRACTEBEL

Mr Mike SIMS

Road Statistics Institute "Uzinformtransistema"

? Director

Pershekov URINICHOLOVICH

Saduski URIANITOLOVICH

APPENDIX F

Mission to UNESCAP

F. MISSION TO UNESCAP IN BANGKOK (26-29 MARCH 1996)

- F.1 The development and strengthening of intra-regional and inter-regional transport and communication links to facilitate international trade and tourism are among the major objectives of Phase II (1992-1996) of the Transport and Communications Decade for Asia and the Pacific. In the field of land transport in Asia, this is being achieved through the implementation of the integrated Asian Land Transport Infrastructure Development (ALTID) project comprising the Asian Highway, the Trans-Asian Railway and facilitation of land transport.
- F.2 Within the frame of this project, several studies concerning TRACECA countries were carried out. A large amount of data on regional transport has been collected in CIS and Asian countries during the last two years. To ensure a coordination between work done under ALTID and under the TRACECA projects a visit to ESCAP was made in late March.
- F.3 The idea of co-operation with TRACECA was welcome by the Director of the Transport, Communications and Tourism Division. The Director of the Land Transport Section presented the work plan of his division and expressed willingness to exchange information and ideas with EU projects.

ESCAP ACTIVITIES OF INTEREST FOR THE TRACECA PROGRAMME

- F.4 Several activities comprised in the plan of action for phase I of the ALTID project cover TRACECA countries located in Asia, including:
- (i) Study on developing land transport linkages from Kazakhstan, Turkmenistan and Uzbekistan to seaports of the Islamic Republic of Iran and Pakistan in the South and those of China in the east.
 - (ii) Feasibility study on connecting rail networks of China, Mongolia, Kazakhstan, the Russian Federation and Korean peninsula.
 - (iii) Study on land transport corridors between Central Asia and Europe.

- F.5 The second study is completed but the final report was not yet published at the time of the mission. Only a draft report could be seen. The third study which is of much relevance for the TRACECA Regional Traffic Forecasting Model Project was still ongoing at the time of the mission. The draft report was expected in July.
- F.6 A Study on Asian Highway network development, carried out in the first half of 1994 by-passed Central Asia.
- F.7 Two activities of the plan of action for Phase II of ALTID (1996-1997) call for co-ordination with TRACECA activities:
- (i) Development of a computerised Asian Highway database; and
 - (ii) Corridor study: port of Bandar Abbas (Islamic Republic of Iran) - Central Asia - China (operationalization of routes)
- F.8 The possibility of exchanging data of the kind included in the Asian Highway database was discussed with the Road Division. It appeared however that the ESCAP database is more focused on technical characteristics than required for the forecasting model.
- F.9 Activities relevant to TRACECA also take place in other divisions. A valuable source of forecasts is the study on Prospects for Container Shipping and Port Development (East Asia Subregion). Although it does not deal directly with Central Asia, it contains an analysis of container movements between Asia and Europe and long-term forecasts for their development.

STUDY ON LAND TRANSPORT CORRIDORS BETWEEN CENTRAL ASIA AND EUROPE

- F.10 This study is closely related with the TRACECA projects. It is under the responsibility of the expert who carried out the feasibility study on connecting rail networks of China, Mongolia, Kazakhstan, the Russian Federation and Korean peninsula and in a sense complements it. Fruitful discussions took place with that expert on transport between Asia and Europe.

- F.11 The rail study was initiated to identify routes, examine potential traffic, border-crossing facilitation measures for the north-east Asian rail network which is part of the Trans-Asian Railway network.
- F.12 The study on land transport corridors is to provide a comparative analysis/assessment of route options in terms of distance, delivery time, capacity of selected land transport routes versus sea-cum-land transport between Central Asia and Europe. The study is also expected to suggest measures for the improvement of transport system operations and infrastructure in those corridors.
- F.13 Data collection for the study covers not only the TRACECA countries but also Iran, Turkey and the Russian Federation. Two sets of questionnaires were sent, one for road transport, the other one for rail with additional questions for water transport. At the time of the mission, answers were still fragmentary. An exchange of information was discussed.

DEVELOPMENT PLANNING

- F.14 It was expected that some kind of forecasts for freight flows between Asian countries and between Asia and Europe could be found in ESCAP. In fact no such information was available. The ESCAP-published Foreign Trade Statistics of Asia and the Pacific include Central Asia as well as Azerbaijan and Armenia and data is patchy. The Annual Bulletin of Transport Statistics for Europe and North America published by UN-ECE includes Kazakhstan.
- F.15 ESCAP has a Development Research and Policy Analysis which follows the development of economies in transition particularly in CIS. Workshops are held in Central Asia. The next one will be in Almaty and deal with revitalisation of links with former Soviet Union countries.

APPENDIX G

Project Planning Tables

TABLE 1

OVERALL PLAN OF OPERATIONS

Project title: Regional Traffic Database and Forecasting Model		Proj no: W.93.05/05.01/8008				Country: TRACECA States										
Planning period: January 1996 - September 1997		Prepared: September 1996				EU Lead Consultant: WS Atkins International Ltd.										
Project objectives: development and implementation of a traffic database and forecasting model																
NO.	MAIN ACTIVITIES	TIME FRAME								INPUTS			PERDIEM			
		1996				1997				EU Experts (weeks)	Local Experts (weeks)	FLIGHTS				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			Long haul (flights)	Local (flights)			
1	Mobilisation/Inception	XXXX										25	10	3	5	50
2	Data Acquisition & Storage	X	XXXXXX									45	140	6	15	140
3	Scenarios & Database Development				XX	XXXXX						20	190	4	20	120
4	Synoptic Forecasts/ Investment Options						XXX					15	100	4	20	120
5	Implementation/ Handover						XXX	XXXXX				15	50	4	20	120
6	Final Report							XX				6	30	3	10	50
TOTAL										24	90	126	520	24	90	600
										126	520	24	90	600		

TABLE 2

OVERALL OUTPUT PERFORMANCE PLAN

Project title: Regional Traffic Database and Forecasting Model	Proj no: VWV.93.05/05.01/B008	Country: TRACECA States
Planning period: January 1996 - September 1997	Prepared: September 1996	EU Lead Consultant: WS Atkins International Ltd.
Output /target dates	Agreed Objective Verifiable Indicators	Constraints and Assumptions
<p>Inception mission and Report (month 3)</p> <p>Data acquisition and storage: Progress Report I (month 8)</p> <p>Development of database/model: Progress Report II (month 13)</p> <p>Synoptic reports, development of investment options: Progress Report III (month 15)</p> <p>Handover of software and support missions: Draft Final Report (month 18)</p> <p>Final Report (month 21)</p>	<p>For all reports: - agreement and support of local partners - completion of tasks</p> <p>For database/model: - ease of use by local partners - quality of output - sustainability</p>	<p>Main constraints: - availability of suitable data - availability of suitable local experts - level of co-operation of local authorities</p> <p>Main assumptions: - sufficient degree of local co-operation - traffic forecasting is feasible in the region</p>

TABLE 3

PROJECT PROGRESS REPORT: LAST PERIOD

Project title: Regional Traffic Database and Forecasting Model		Proj no: WW.93.05/05.01/B008			Country: TRACECA States								
Planning period: January 1996 - September 1997		Planning period: April-September 1996			EU Lead Consultant: WS Atkins International Ltd.								
Project objectives: development and implementation of a traffic database and forecasting model													
NO.	MAIN ACTIVITIES	TIME FRAME						INPUTS					
		1996						PERSONNEL		FLIGHTS		PERDIEM	
		APR	MAY	JUNE	JULY	AUG	SEP	EU Experts (weeks) Pl'n'd Act'l	Local Experts (weeks) Pl'n'd Act'l	Long haul (flights) Pl'n'd Act'l	Local (flights) Pl'n'd Act'l	(days) Pl'n'd Act'l	
2	DATA ACQUISITION & STORAGE							2					
2.1	Equipment/software procurement	XX						10				10	
2.2	Database/model specification	XXXX						6	10			20	
2.3	Definition of data requirements	XX						12	90	3	10	15	
2.4	Surveys/data collection		XXXX	XXXX	XXXX	XX	XX	8	10	1		50	
2.5	Data review				XXXX	XXXX	XX	5	20			20	
2.6	Data entry					XXXX	XX	2	10	1	5	15	
2.7	Progress Report: Phase 1A											10	
TOTAL								45	140	6	15	140	180
								45	140	6	15	140	180

TABLE 3 RESOURCE UTILISATION REPORT

Project title: Regional Traffic Database and Forecasting Model		Proj no:VWV.93.05/05.01/B008		Country: TRACECA States	
Planning period: January 1996 - September 1997		Prepared: September 1996		EU Lead Consultant: WS Atkins International Ltd.	
Project objectives: development and implementation of a traffic database and forecasting model					
RESOURCES/INPUTS	TOTAL PLANNED	PERIOD PLANNED	PERIOD REALISED	TOTAL REALISED	AVAILABLE
PERSONNEL (Weeks)					
EU Experts	126	45	40	65	61
Local Experts	520	140	60	70	450
FLIGHTS (Tickets)					
Long haul	24	6	5	8	16
Local	90	15	10	15	75
PER DIEM					
Days	600	140	180	230	370

TABLE 4

OUTPUT PERFORMANCE REPORT

Project title: Regional Traffic Database and Forecasting Model		Proj no: WW.93.05/05.01/B008	Country: TRACECA States
Planning period: January 1996 - September 1997		Prepared: September 1996	EU Lead Consultant: WS Atkins International Ltd.
OUTPUT RESULTS	DEVIATION FROM PLAN % (+/-)	REASON FOR DEVIATION	COMMENT: CONSTRAINTS/ASSUMPTIONS
PERSONNEL (Weeks)			
EU Experts	163%	Increased input to recover timetable Staff substitution	Some work will carry over into next phase of work
Local consultants	117%	Delays in approval of local partners	
FLIGHTS (Tickets)			
Long haul	83%	More work in the home office	
Local	67%	Some journeys by road	
PER DIEM			
Days	129%	Increased input to recover timetable	

TABLE 5

PLAN OF OPERATIONS FOR THE NEXT PERIOD

Project title: Regional Traffic Database and Forecasting Model		Proj no: WW.93.05/05.01/B008		Country: TRACECA States									
Planning period: January 1996 - September 1997		Prepared: September 1996		EU Lead Consultant: WS Atkins International Ltd.									
Project objectives: development and implementation of a traffic database and forecasting model													
NO.	MAIN ACTIVITIES	TIME FRAME						INPUTS			PERDIEM		
		1996	SEP	OCT	NOV	DEC	JAN	FEB	EU Experts (weeks)	Local Experts (weeks)		Long haul (flights)	Local (flights)
3	SCENARIOS/DATABASE DEVELOPMENT												
3.1	Database construction/testing					XXXX	XXXX		20	10	4	20	120
3.2	Forecasting model development			XXXX	XXXX					10			
3.3	Further data collection/entry			XXXX	XXXX					120			
3.4	Data transfer to database			XXXX	XXXX	XXXX				30			
3.5	Scenario proposals						XXXX			20			
3.6	Progress Report: Phase 1B						XX						
Total									20	190	4	20	120
									20	190	4	20	120

TABLE 5-1

PLAN OF OPERATIONS FOR THE NEXT PERIOD

Project title: Regional Traffic Database and Forecasting Model		Proj no: WW.93.05/05.01/B008				Country: TRACECA States								
Planning period: January 1996 - September 1997		Prepared: September 1996				EU Lead Consultant: WS Atkins International Ltd.								
Project objectives: development and implementation of a traffic database and forecasting model														
NO.	MAIN ACTIVITIES	TIME FRAME								INPUTS				
		1996								EU Experts (weeks)	PERSONNEL		FLIGHTS	
		SEP	OCT	NOV	DEC	JAN	FEB		Local Experts (weeks)		Long haul	Local		
3	SCENARIOS/DATABASE DEVELOPMENT													
3.1	Database construction/testing				XXXX	XXXX				20	10	4	20	120
3.2	Forecasting model development	XXXX	XXXX	XXXX	XXXX						10			
3.3	Further data collection/entry	XXXX	XXXX	XXXX	XXXX						120			
3.4	Data transfer to database	XXXX	XXXX	XXXX	XXXX						30			
3.5	Scenario proposals					XXXX	X			3	20			
3.6	Progress Report: Phase 1B						XXX							
Total										23	190	4	20	120
										20	190	4	20	120

Appendix A to tables 1.3-1 and 1.4-1

Code of group of commodities	Codes included into group code	Denomination of commodity group
01	01-05	Cattle and products of animal origin
02	06-14	Products of vegetable origin
03	15-15	Fat and oil of animal or vegetable origin
04	16-24	Finished food-stuffs
05	25-27	Mineral products
06	28-38	Products of chemical industry and other industries related with it
07	39-40	Plastics and its wares: caoutchouc and rubber wares
08	41-43	Leather raw materials: leather, fur and their wares
09	44-46	Wood and its wares
10	47-49	Paper and its wares
11	50-63	Textile and its wares
12	64-67	Shoes, head-dresses, umbrellars, walking-sticks, treated feathers and their wares
13	68-70	Wares from stone, gypsum, cement
14	71-71	Precious and semi-precious stones, precious metal and their wares
15	72-83	Non-precious metal and its wares
16	84-85	Machinery, equipment and mechanisms
17	86-89	Road, air and water vehicles
18	90-92	Devices (apparatus) and appliances
19	93-93	Arms and ammunition; their spare parts and accessories
20	94-96	Different manufactured goods
21	97-97	Art products