

Development of the Port of Baku
Port Master Plan - Traffic Forecast
and Economical Assessment
Phase II Report, Vol. II
16 December 1996

Volume II

Traffic Forecast and Economic Assessment

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Traffic Forecast and Economic Assessment

1. Economic Overview

1.1 Recent Economic Development

Azerbaijan's GDP has declined continuously since 1990. Total output, as measured by GDP - index fell from 100 in 1990 to 39,2 in 1995, with the largest reduction in transport and communication, followed by construction, industry and agriculture.

The decline in output has been due to continuing disruptions of trade links among FSU Republics, reduced oil production resulting from depletion of existing fields, and the dislocation of some segments of the population resulting from the Nagorny Karabakh conflict. Real GDP is estimated to have fallen further in 1996. However, activity appears to be increasing in the informal sector and the emerging private sector.

1.2 Medium Term Prospects

Azerbaijan's medium term prospects are greatly enhanced by the country's petroleum resources. However, the country faces very serious economic and political constraints, and is unlikely to regain the former level of economic activity before the beginning of the 21st century.

The pace of development of Azerbaijan's oil resources is the major economic variable in the country's medium term outlook. Until World War II, Azerbaijan supplied most of the Soviet Union's requirements for oil. Since then, its oil production has been steadily dropping (1994: -9.6 million tonnes) as a result of depletion of its existing fields.

Developing new oil fields to expand petroleum output is complicated by Russian claims regarding the petroleum resources under the Caspian Sea and by the need to locate and build new pipelines to bring the increased output to international markets.

If the geopolitical difficulties with Georgia, Armenia and Chechnya cannot be overcome, Azerbaijan's medium term economic prospects would be diminished. However, it is anticipated that existing difficulties will be overcome, perhaps with delay of a couple of years from the technically feasible schedule for expanding output of the oil industry.

If the delay were only two years, Azerbaijan would begin to receive significant benefits from increased oil products in about the year 2000. The major increase is expected to come in the following several years. Total export earnings are projected to increase to more than 2.5 billion USD a year. In 1994 total export earnings from petroleum product exports were about 200 million USD ¹.

¹ World Bank: Economic Review

2. Development of the Transport Sector

2.1 Review of Historic Traffic

Until 1991, Azerbaijan's transport sector was integrated in the global transport system of the former Soviet Union. This system was geared to move huge volumes of bulk commodities among centralised production facilities over long distances according to centralised and fairly rigid annual plans. Given the long distances within the country, long and medium distance freight transport relied primarily on the railway, and, to a far lesser extent, on inland waterways. Road transport was used primarily for short trips as a feeder to the railway and for distribution of goods within urban areas. As a result, the Soviet railway system was the most intensively operated in the world, carrying about 90% of surface transport in terms of tonnes/kilometres, excluding pipelines.

Growth in transport levels is closely related to GDP. This relationship holds broadly true for Azerbaijan, where total freight transport has declined sharply since 1990, as has the economy as a whole. Transport's relation to GDP shifts over time, too. Comparisons with other countries show that transport demand is also related to the structure of a country's economy.

Research work concerning the former Soviet Union shows that transport demand has grown rather faster than the general economy.

Total transport grew at on average annual rate of 4.0 percent between 1970 and 1990, while GNP grew at an annual rate of 1.3%. Thus, the relevant elasticity was about 3. The negative development within the last five years in Azerbaijan shows that there is a similar correlation between the decline of the whole economy and a reduction in the volume of freight transport.

As a consequence of this strong correlation, the handling volume of the Port of Baku declined from 11.5 million tonnes to 1.0 million tonnes in 1995 (See Table 2-2)

According to the Port of Baku authorities, the main trading directions of dry cargo in the past were

- imported building material from Turkmenistan
- imported salt from Turkmenistan
- imported cereals from Latvia
- transit timber from Russia to Iran
- transit metals from Russia, Ukraine, and Kazakhstan to Iran
- transit equipment and machines from western countries to countries in central Asia
- imported chemicals from Kazakhstan and Uzbekistan
- exported cotton to Bulgaria, Turkey and Italy

It is not worth while to analyse the decline of the handling volume in detail, because the understanding of the reasons is not helpful for forecasting purposes, and because former traffic will never return to the pattern of the past, because of its commanded nature.

2.2 Future Transport Demand

When looking to the future, there is a need to assess the range of economic growth likely to occur in Azerbaijan, the changes in the structural nature of the economy and the mix of output, and the consequent impact of both on the demand for transport. Freight transport in the country will generally follow economic growth patterns and will continue to reflect overall economic developments for domestic inland traffic and international flows.

Economic forecasts are difficult in any circumstance. Uncertainty stems from the undetermined pattern of trade flows between and to and from TRACECA-states, the rate of economic recovery, and the degree of structural change within the economy, once economic recovering begins.

Structural change and a move to a market economy will eliminate uneconomic, obsolete, and ecologically harmful industrial plants. A move from state owned industrial giants to smaller consumer-oriented firms is likely to alter transport patterns significantly.

The overall downturn of the economy and the expected shift from raw materials and industrial goods to lower-density general freight will keep overall transport levels below those of the eighties for years, probably until 2015. The other significant trend expected is an increasing shift from rail to road.

The dynamics of the shift from rail to road depends upon the onset and vigour of economic growth of TRACECA-states. Several forecasts for different Eastern Europe States assume the ratio of transport demand to GDP will be 1 to 1 for rail and road transport until the economy begins to grow; thereafter, it is assumed transport demand will grow at 1.25 to 1 ratio, with a general shift to road. The assumption is that transport to a market-based economy will cause a shift toward lighter industrial and consumer goods. In a privatised, deregulated, market-oriented environment, road transport increasingly will become the mode of choice for shippers of high value or time-sensitive commodities, since road transport offers faster and more flexible service than railways.

Several factors affect the pace and size of the shift of freight traffic from the rail system to road transport:

- the speed at which the economy recovers and becomes more market-oriented,
- the rate of growth in new businesses that generate time and service-sensitive traffic that never will be shipped by rail
- the speed at which road transport services are privatised and pushed by the drive of self sufficiency to provide flexible, fast and reliable service.

As stated above the oil industry will initiate the impacts in Azerbaijan, which foster the shift from rail to road transport. The contracts with different consortia, which were signed in the past, give hope that this process will accelerate.

3. The Port of Baku - Its Role in the Transport Infrastructure

The purpose of this section is to describe the strategic geographic position of Baku to emerge as a transport and transshipment centre for cargoes to and from the Central Asian region. At the same time there are factors that may divert cargoes from Baku.

3.1 Baku - a Transport Gateway on the Caspian Sea

Under Soviet rule all water transport activities in the Caspian Sea region were controlled by the Caspian Shipping Company, head-quartered in Baku. During this time the company developed into a conglomerate marine transport and operations company, comprising a varied fleet of tankers, dry cargo vessels, ro-ro vessels, passenger-rail ferries, offshore oil support vessels and ice breakers. These vessels operated both in the Caspian Sea as well as on the Russian inland waterways and in world-wide trading. The company also controlled the ports of Baku, Bekdash and Krasnovodsk (now Turkmenbashi, Turkmenistan), Makhachkala (Dagestan), Aktau and Bautino (Kazakhstan), and four major shipyards organised as Kaspormorsudoremont. In addition, the company also performed agency services through Transflot, dredging services through Kaspormorput and wholesale and retail trading through Torgmortrans.

Following the break-up of the former Soviet Union and the establishment of the independent republics of Azerbaijan, Turkmenistan and Kazakhstan, the all encompassing influence of the Caspian Shipping Company was divided between the respective newly independent republics. The company retained, however, control over most of its fleet of vessels, including the rail-passenger ferries operating in the Caspian Sea, over the Port of Baku and over the shipyards in Azerbaijan. Control over the port of Baku was transferred on January 1, 1994, to an independent entity that now operates as the International Sea Port of Baku.

The rail ferry services across the Caspian Sea, established in 1961, were for many years a key strategic link in the transport system in the region. At the peak of its activities the ferry services were operated with eight ferries of the "Dagestan" class, plying in a continual shuttle.

These vessels were operated on three routes, all originating in Baku:

- Baku - Krasnovodsk (now Turkmenbashi, Turkmenistan): The sailing distance is 165 nautical miles, and the transit time is approximately 13 hours. At the peak operations in the mid 1980's, this link was served with six or seven sailings per day. Currently, the link is served by four to five sailings per week at a highly irregular sailing schedule, which is based on cargo availability.
- Baku - Aktau (Kazakhstan): The sailing distance is 253 miles and the transit time is about 22 hours. Regularly scheduled sailings were performed until the service was stopped in 1992.
- Baku - Bekdash - Krasnovodsk: This ferry link of 280 miles sailing distance with a transit time of 22 hours was maintained with daily sailings in the 1980's. Currently, this link is served on a sporadic basis.

At present, four of the "Dagestan" class vessels are used to serve the route between Baku and Turkmenbashi on an irregular and sporadic basis. Sailings are undertaken when the vessels have sufficient cargoes of rail cars and trucks to fill the main deck. The remaining four vessels are operated in international ferry services outside the Caspian Sea region.

The Caspian Shipping Company was and is one of the major providers of general cargo, dry bulk and liquid bulk transport services in the Caspian Sea, all of which is based in Baku. The vessels of the Caspian Shipping Company served both the transport requirements inside the Caspian Sea as well as on the Volga Don and Volga Balt inland waterways. Following the break-up of the Soviet Union and a dramatic decline in the demand for transport services, more than 40% of the total fleet has been moved outside the Caspian Sea and is operated on international transport routes in the Baltic Sea, the Black Sea and the Mediterranean.

In addition to its role as a ferry terminal for the rail ferries operating in the Caspian Sea, the port of Baku has also acted as a transshipment point for cargoes to and from Iranian ports to and from Ukraine and Russia. The Chechnya conflict and the closing of the rail link through Chechnya has resulted in a dramatic decline in these cargoes. A peace agreement resulting in lasting peace in Chechnya and the reopening of the rail link will most likely re-establish Baku as a transshipment point for Russian and Ukrainian cargoes.

Until 1991, the Caspian Shipping Company was the only local operator of vessels in the Caspian Sea. Since then, several companies, owned by the republics bordering the Caspian Sea, have been set up. These are:

- The North Caspian Shipping Company based in Astrakhan, Russia, was established in 1992. This company operates three tugboats, ten one thousand dwt barges and seven river tugs. In addition, several of the Russian river shipping companies like the White Sea - Onega Shipping Company and the Volgo Tankers based in Samara, and Volga Shipping Company based in Rostov also operate their vessels in the Caspian Sea.
- Kazakhstan currently operates three bulk carriers outside the Caspian Sea plus one small reefer vessel of about 60 dwt used to carry fruits and vegetables in the Caspian Sea. The Kazakhstan Shipping Company is reported to have ordered two ro-ro vessels of about 7,000 dwt for delivery in 1997-98.
- Turkmen Shipping Company based in Turkmenbashi currently operates four dry cargo vessels of about 3000 dwt. One of these vessels is a modern open hatch type vessel capable of carrying 176 TEU (twenty-foot equivalent units of containers). Orders for two river sea bulkers have been placed, and plans have been presented to expand the fleet to 20 vessels. Currently, the vessels are primarily engaged in the transport of Turkmen cotton exports via the Russian river system to the Black Sea and the Mediterranean.
- Two Iranian shipping companies are currently operating in the Caspian Sea. These are the Caspian Sea Shipping Company, which is a subsidiary of Iranian Line, and Khazar Shipping Company. The latter company operated the route between Baku and Bandar-e-Anzali has since 1992, carrying primarily metals and containerised cargoes.

The establishment of the TRACECA rail and road link between the Georgian ports of Poti and Batumi and Baku with further links to the Central Asian republics will again not only revive the ferry link across the Caspian Sea, but will also have the potential of attracting transit cargoes to the port of Baku, primarily in the form of containers to be transhipped to and from the other Central Asian republics.

3.2 Baku - the Emerging Oil Capital in the Caspian Sea Region

Aside from the TRACECA route, the most positive development for Baku as well as for the national economy of Azerbaijan, is the establishment of the Azerbaijan International Oil Consortium (AIOC) and its signing of a 30 years oil exploration agreement with the government in September 1994. This is a consortium comprising British Petroleum, Statoil, Amoco, Pennzoil, Ramco, UNOCAL, McDermott, Turkish Petroleum, Lukoil and SOCAR, the Azerbadjian national oil company. The agreement comprises both existing fields and exploration of new oil tracts offshore in the Caspian Sea. Currently, the consortium is engaged in the upgrading of existing production fields and in the upgrading of a semi-submersible drilling rig to undertake drilling in the Caspian

Sea. The latter is expected to be starting exploration drilling within a relatively short time. There are also plans for a second rig to be upgraded and outfitted for exploration drilling.

At the present time, these initial activities of the AIOC are generating cargo volumes, which are estimated to be approximately 20,000 to 30,000 tonnes per year, most of which is brought in via the TRACECA route. Some large oversize or overweight units, which cannot be handled on the railway, are also brought in by ship via the Volga Don waterway. In addition, cargoes are brought by ship from Northern Europe via the Volga Balt waterway. Over the next few years until the year 2000, when the fields are expected to be developed for production, a conservative estimate of the annual cargo volumes needed to be transported for the AIOC is expected to exceed 200,000 to 300,000 tonnes per year by the year 2000. In the then following years this volume is expected to increase as new fields will be opened for production.

Most of the cargo transported for the oil industry is however brought directly to the facilities operated by the AIOC in two shipyards in the Baku region, ShelfProektStroi (SPS), which is a major module fabrication yard, and the STRIZH plant, where, among other things pipes are being coated before being transported to the offshore production sites. There will, however, also be smaller cargo volumes shipped in by the many contractors of the AIOC, which will have the potential of being handled at the port of Baku. Significant proportions of these cargoes will be supplies and equipment that will be containerised.

"First oil" (the initial major production volume in the terminology of the oil industry) from the fields developed by the AIOC is expected to start flowing in the next few years. For this purpose the decision has been made to upgrade and use an existing pipeline terminating in Novorossisk on the Russian Black Sea coast. A new pipeline will be constructed from Shangashaz via Tbilisi in Georgia to connect with the exiting pipeline to Novorossisk. The construction work will be completed in about 1.5 years from the present time (i.e. the spring of 1998). The construction and upgrading of this pipeline is also expected to generate substantial cargo volumes. The construction team will be head-quartered in Baku.

The pipeline route for the "main oil" (full production of the fields) is still to be decided. The preference of the AIOC is reported to be from Baku through Azerbaijan and Georgia to the Black Sea and across Turkey to the oil terminal in Ceyhan on the Turkish Mediterranean coast. Other routes are also being considered. This pipeline will be constructed between the years 2000 to 2005.

Recently, another oil consortium was established in Baku, the Caspian International Petroleum Co. (CIPCO), whose main participants are Pennzoil and Agip. CIPCO are currently in the process of starting exploration, and will initially drill three wells. For each well approximate 3000 to 4000 tonnes of supplies will have to be brought in through Baku, most of which will be transported on the TRACECA route. A representative from CIPCO has indicated that this consortium will rely heavily on the experience of AIOC in terms of transport of its equipment and supplies once the operation is expanded, and the TRACECA route is expected to be used extensively.

Another interesting development in the oil industry, which could be of importance to the port of Baku, is the activities undertaken on the Tengiz field near the port of Aktau in Kazakhstan. These activities are led by the American oil company Chevron. Currently, most of the activities are concerned with seismic exploration. If production quantities of oil are found, it will be a significant boost to the region and substantial quantities of cargoes will be transported to Tengiz via Aktau. The port of Baku would be well positioned to act as a transit port for supplies and equipment to be transported for both the current relatively small volumes and the future significant tonnages required for the development of the oil activities in this region.

3.3 Competitive and Alternative Traffic Routes/Corridors for Cargoes handled in the Port of Baku

In addition to the TRACECA route, there are two main railroad lines of importance to the port of Baku:

- The rail system between Azerbaijan and Armenia, in particular the link between Baku and Yerevan, which at the Julfa border station in Nagorny Karabakh provides a link to the Iranian rail system: It is also connected to the Turkish rail system at Gumri. The very important border rail station between Azerbaijan and Iran located at Julfa, is currently occupied by Armenian forces and closed. Prior to the outbreak of hostilities this border station had a throughput capacity of 300 rail cars per day and at any point in time more than 3000 Soviet rail cars were in operation inside the territory of Iran.
- The rail system between Azerbaijan and Chechnya extending between Baku and Makhachkala and onto the Russian rail system both to the north to Astrakhan and to west to Grozny and Krasnodar: This system is also connected with several east-west rail lines through Kazakhstan, providing alternate routes between the Central Asian republics and Central and European Russia and northern Europe. This rail link, which was a major artery for the transport of transit cargoes to and from Ukraine and Russia through the port of Baku, is now effectively closed due the hostilities between Russian forces and Chechnyan guerrillas. At the same time cargoes to and from Azerbaijan and the Central Asian republics using this line have been diverted to the ferry link between Baku and Turkmenbashi.

Two planned railway infrastructure projects could, if they were constructed, divert cargoes that currently are being shipped via the Baku - Turkmenbashi rail ferry service and cargoes from the port of Baku in general:

- A rail line round Lake Van planned by the Turkish government to improve shipments of cargoes to and from Turkey via Iran and the Central Asian republics.
- A rail line along the east shore of the Caspian Sea, connecting Bandar Torkmen, Kizyl-Artek via Turkmenbashi to Astrakhan, would form a competitive alternative to shipping cargoes via the ferry and Baku connecting to the Russian rail system on the west side of the Caspian Sea.

Local cargoes to and from Iran and transit cargoes shipped through the port of Bandar Abbas in the Arabian Gulf are often trucked to and from Azerbaijan, as an alternative to the use of the shipping lines operating between Baku and Iranian Caspian Sea ports.

Transport on the Caspian Sea and access to the Russian inland waterway system, enabling navigation through to the Black Sea and the Baltic Sea, has always been an important part of the transport infrastructure of Azerbaijan and a mainstay of the business of the port of Baku. There are, however, limitations and restrictions reducing the importance of the inland waterways:

- The Volga-Don is closed six months of the year due to ice conditions. The limited access of the waterway system has prevented potential users from considering this alternative.
- There exist significant "bottlenecks" on the Russian waterways, preventing the full use of the normal fully loaded draft of 3.5 meters of the typical inland waterway vessels:
 - A water level of only 63 meters compared to the design level of 68 meters at the Cheboksary hydroelectric station presents draft restrictions on the Volga river in the Niznij Novgorod area. Full 3.5 meter draft is maintained only a few hours per day
 - Channel erosion and a sinking water level at the Kochetovsky Lock and Dam on the lower Don

river system allows a maximum draft of only 3.0 meters, limiting the loading capacity of the vessels.

The probably most serious negative impact on the port of Baku is the fact that Azerbaijan vessels have been denied access to the Russian waterways system. Diplomatic differences between Azerbaijan and Russia, concerning, among other issues, the rights to oil fields in the Caspian Sea basin, caused Russian authorities in November 1995 to close the Volga-Don waterway system to Azerbaijan vessels. Although it has been reported that the sanctions against Azerbaijan vessels were lifted in June 1996, there have been a reluctance by operators of Azerbaijan flag vessels to enter the Russian waterways for fear of sanctions.

Another development that may detract cargoes away from the port of Baku are the planned developments in the new port of Alia in the Volga delta. Russian authorities are reported to be undertaking the construction of a new ferry terminal in a new port at Alia near Astrakhan, which, unlike Astrakhan, will be kept open and navigable all year around. It is reported that Mr. Nikolai Petrovitch Zakh, Minister of Transport of Russia, has made a commitment that the construction will be completed in autumn 1996, and that ro-ro truck and rail ferry services are planned to operate between this port and Turkmenbashi and Iranian ports from the time the port is opened. If these plans are realised, cargoes, that historically were and in the future will have the potential of being shipped via the Baku - Turkmenbashi ferry service and via the port of Baku to and from Iran (i.e. prior to the Chechnya conflict and following a possible reopening of this rail transport corridor), will be diverted and not be available to the port of Baku, once the Chechnya conflict is resolved and the rail corridor through that country is reopened.

3.4 The Regulatory and Legislative Environment and other Factors

In addition to the physical barriers that may influence the development of the port of Baku as the transport gateway of the region, there are also several other institutional as well as invisible or intangible barriers that may act as barriers to the development of the business of the port:

- Lack of a commercial professional attitude among port management and operational personnel, which is a heritage of the former Soviet system where no competition existed.
- The ferry service between Baku and Turkmenbashi, which is an important factor in establishing Baku as a transport centre, is not operated in accordance with normal practices for such operation:
 - The practice of the Caspian Shipping Company of operating the ferry service on an ad hoc schedule and not starting a voyage until the main deck is filled with rail cars and trucks. Truckers are reported to have been forced to wait five to six days or more, which is a strong deterrent to use the services of the ferry.
 - The road access to the ferry terminal is poor and staging/marshalling areas for trucks are virtually non-existent and well below acceptable standards.
 - The sanitary conditions on board are reported to be well below normal world standards on similar ferries.
 - The Caspian Shipping Company is reported to have used its political influence in attempts to maintain its monopoly in the transport of Azerbaijan foreign trade, by attempting to prevent foreign flag vessels to handle cargoes in the port of Baku.
- Customs officials and officers are reported to use rules and regulations and bureaucratic procedures in order to extort gratuities from shippers and consignees and other users of the port.

4. General Developments in the Transport Industry Influencing the Port of Baku

The purpose of this section is to describe the general developments in the world transport industry that may influence the future development of the port of Baku, and also state business opportunities that may present themselves to the port as a result of these developments.

4.1 General Trends and Developments in the Transport Industry

While it will be outside the scope of the present project to describe an overview of developments in the world transport industry, there are, however, some general developments that will be highly pertinent and germane to the future development of the port of Baku:

- Focus on transport and logistics: Industrial companies have increasingly recognised transport as an important function in their overall cost structure. Physical distribution, transport and logistics management techniques such as "just in time" (JIT) and others are increasingly used to put focus on the material handling, warehousing and transport costs of a company. Increasingly, freight forwarders are being employed by the companies as specialists to assist in finding the best transport and logistics management solutions.
- The freight forwarding industry: From being a highly fragmented industry with small entities operating locally or at most nationally within a country, primarily providing documentary and customs clearance services, the freight forwarding industry is developing to be dominated by major international and multinational groups with offices and operations world wide, employing tens of thousands of employees, providing a wide variety of transport and related services to their customers. These companies control vast volumes of cargoes, and are able on behalf of their customers, the users of transport services, to negotiate favourable terms for transport and other services. The industry is currently dominated by companies located in Germany, Switzerland, Japan and Sweden. Major forwarding companies working for the oil industry are already establishing a presence in Baku. Others are expected to follow as the volumes of cargoes transported to and from and also through Baku to and from the Central Asia Republics are increasing. The freight forwarders represent an important customer group for the port of Baku.
- The unitisation and containerisation of the general cargo trades: In order to reduce the handling costs, reduce the need for packing, reduce the possibility of cargo damage and theft and to enable the multimodal handling of the cargoes, general cargoes shipped in national and international trades are increasing unitised in trailers or in containers. Currently, an average of 80% of the general cargoes shipped in international trades is containerised.
- The intermodal operations of container operators: The international container transport companies have changed from being merely shipping companies, providing water transport services, to being providers of multimodal transport services, using all modes of transport between ports and so called "Container Freight Stations" (CFS). "Through bills of lading" are often issued to such CFS. The port of Baku has the potential to become and should endeavour to establish itself as a CFS. (Please see Section 4.3.1 below.)
- Specialisation of sea transport vehicles: General cargoes that are shipped in large quantities to warrant shipment in full or partial shipload lots, also called neobulk cargoes, are often transported in purpose-built or specially adapted vessels, such as ro-ro automobile carriers, specialised reefer vessels for perishable and frozen cargoes, "open hatch" bulk vessels for forest products etc. Such specialised vessels may also be introduced on the Caspian Sea and the Russian waterways.
- Emphasis on road as opposed to rail transport: The transport philosophy and policy of the former Soviet

Union was to use the inland waterways and the railroad system for long distance transport, and trucks for short distance and local transport and distribution. In the rest of the world the use of the inland waterways, where available and navigable, is important for the transport of bulk cargoes. For land transport trucking has increasingly captured market shares from the railroads, and in most countries, the truck transport industry is responsible for most of the transport work performed.² The railroads have responded to the challenge posed by the truck transport industry by providing services that can be competitive with or complementary to the trucking industry (e.g. TOFC (trailer on flat car) or COFC (container on flat car) services).

- Truck transport companies and freight forwarders in their efforts to reduce the cost of transport are increasing shipping unaccompanied trailers (e.g. 13.60 meter Eurotrailers) via ferries in short sea trades or by railroad (TOFC). At the port or railroad station of destination the trailers are met by a truck, which transports the trailer to the destination. Subsequently, the trailer is reloaded and returned unaccompanied by ferry or rail. It is expected that such services will also develop on the ferry service between Baku and Turkmenbashi and other ferry links that may be developed to and from the port of Baku.

The successful ports of the world, both large and small, have recognised and adapted to the requirements of the users of transport services and the major participants in the transport industry. For the port of Baku it will be important to redefine its role in the transport scene of the region in view of the general developments in the local, regional and world wide transport industry.

4.2 Developments in the Short Sea and Ferry Transport

The Caspian Sea shipping services are comparable to the trades in the Baltic and North Seas and in the Mediterranean areas, and some observations of the developments of these trades may be relevant to the trades served by the port of Baku:

- The ferry transport market has come more clearly segmented. The segments are:
 - Leisure/cruise/ recreational market - this market is served by modern passenger ferries with all types of facilities for passengers. The main source of income is the sale of tax free goods (e.g. alcoholic beverages, tobacco, chocolate and candy etc.). Transport of trucks and trailers (and in some instances also rail cars) is a supplementary source of revenues.
 - The transport market - this market is divided in two segments:
 - Passenger transport with fast ferries - these services are provided by catamaran or monohull fast ferries capable of transporting up to 500 to 600 passenger in addition to automobiles (and in some cases buses)
 - Ferry transport of trucks and trailers - this is performed by combination passenger and truck/trailer/container ro-ro vessels. The number of passengers/drivers that can be accommodated is generally limited (e.g. up to 12 to avoid the need for a passenger certificate and up to 250 - 300 passenger spaces). These vessels are generally referred to as ro-pax vessels by the ferry industry. The "Dagestan" type vessels of the Caspian Shipping Company serving the ferry link between Baku and Turkmenbashi would be considered typical ro-pax vessels.
 - The liner transport market - this market is served by small general cargo vessels (typical cargo capacity from 3,000 to 8,000 dwt) carrying general cargoes in break bulk and containers. Some vessels are also equipped to handle rolling cargoes (ro-ro vessels). In addition, small ro-ro or lo-lo

¹ In some European countries the use of truck transport has become so pervasive as to congestion and pollution that laws and regulation have been imposed prohibiting truck transport industry to operate during the weekends (e.g. Germany) or to limit the through traffic of trucks (e.g. Austria).

container vessels (from 100 up to 1000 TEU capacity) provide container feeder services on regular routes between major container ports functioning as load centres and smaller ports not served by the large container vessels

- The neobulk market - this market is often served by specialised vessels carrying full or partial shipload lots of general cargoes. Examples would be small reefer vessels carrying frozen fish, ro-ro automobile carriers, specialised vessels for forest products etc.
- Liquid and dry bulk vessels - most of these vessels are similar to those operating in the Caspian Sea. For some dry bulk trades vessels have been equipped with specialised cargo handling equipment onboard - so called "self-unloaders" - to reduce cargo handling cost and time.

4.3 New Business Opportunities for the Port of Baku

While it is always difficult to relate a generalised statement of world or regional developments to a specific port, such as the port of Baku, there are some obvious opportunities presented to the port of Baku.

4.3.1 Baku as a CFS - "Container Freight Station"

The opening of the TRACECA route, the developments of the oil industry in the region and the general recovery of economic activities both in Azerbaijan and the other Central Asian republics, and the overall volume of general cargoes, most of which will be containerised in the relatively near future, will create the need for the establishment of a "Container Freight Station" (CFS) in the Baku area. The primary functions of such a CFS are:

- Function as the terminal, through which container to and from the Baku area and its immediate hinterland are handled.
- Provide stuffing and stripping of "less than container load" (LCL) cargoes
- Storage of cargoes and containers
- Transhipment of containers between different modes of transport
- Repair and maintenance of containers as needed.

The port of Baku has all the prerequisites for the establishment a CFS for the Baku area:

- The port has the necessary area and storage facilities required
- The port has cranes and handling equipment for lifting of containers. Relatively small investments are required for additional handling equipment
- The port has all the functions required of a multimodal terminal:
- It has more than sufficient railroads tracks to be able to handle significant volumes of cargoes and containers to and from railroad cars
- It has adequate road access and is serving the trucking industry both in the port and at the ferry terminal
- It has direct access to the general port and the ferry terminal for onwards shipment of the cargoes and containers
- It has a labour force of skilled cargo handling professionals.
- Customs officials are already established in the port, and a process has been started to establish the port area as a "Free Port Zone".

The alternative sites for a CFS in the Baku area would be one of the existing railway yards, since the major volumes of containerised cargoes can be expected to be received via train in block trains operated on the

TRACECA route. The importance of the TRACECA route and thus the railway in the transport of containers to and from Baku clearly signifies that the establishment of a CFS in Baku will have to be done in close co-operation with the railway authorities.

The establishment of the port of Baku as a CFS will represent a significant business opportunity for the International Sea Port of Baku, which will also greatly enhance the port's marketability as a multimodal cargo handling centre and thus create new business opportunities. The time frame, for which this business opportunity will be available to the port will be relatively short, and immediate action should therefore be taken by the port management to establish the port as a CFS.

4.3.2. Potential for Attracting New Operators - New Services to the Port

Although the port of Baku is open to serve vessels of all nationalities, the ships of the Caspian Shipping Company have dominated the use of the port. The challenge for the port will be to attract new operators to establish both bulk and regular liner services between Baku and the other ports in the Caspian Sea and on the Russian waterway system. Potential new services could be:

- Non-scheduled bulk and general cargo shipping services on the Russian waterways and on the Caspian Sea provided by ships of the other operators serving the region.
- Entry of regularly scheduled container feeder/ro-ro vessels capable of carrying both containers and trucks/trailers/rolling cargoes to operate between Baku and other Caspian Sea ports. The trade route between Baku and Aktau, Kazakhstan would most likely be the most interesting new link to open, while also the Iranian and Russian ports on the Caspian would provide interesting opportunities for enterprising shipping operators. The establishment of Baku as a CFS would be an added impetus to the establishment of such a ferry/feeder services.
- Entry of a conventional ro-ro ferry vessels to operate in competition with existing rail ferries between Baku and Turkmenbashi. The increased truck/trailer/container traffic opens the possibility of establishing an alternative service on this route.

Active contacts with and marketing of the services of the port of Baku will be required to attract new operators to use the port as a basis for new water transport services.

4.3.3 Potential of Establishing a Free Port

A Free Port in Baku would take a special position in Azerbaijan's development towards market economy and also enhance the trade links to central Asian countries along the TRACECA corridor.

The role of the Baku Free Port could be to strengthen Azerbaijan's international trading position by establishing new and reinforcing existing trade contacts and networks. In order to achieve these aims, the services of the Baku Free Port should support international trading and transit trading by liberalising customs procedures within the Free Port and offering sufficient cargo handling, storage and warehousing facilities by the operators.

A possible Free Port in Baku will include the General Cargo Complex with the future container handling facilities and the Railway/Truck Ferry Terminal. The whole port area would be exempted from customs control and tax regulations. Cargo coming in transit to the port can remain there without customs clearance until it will be imported into Azerbaijan. This gives traders the opportunity to store goods in the port, from where they can re-export them to neighbouring countries or import them into Azerbaijan.

Additionally to cargo handling and storage, treatment of goods as far their nature is not altered is a further service to be offered in the Free Port. The main types of treatment are:

- Re-packing
- Neutralisation
- Marking
- Classification
- Grouping and Repartition
- Consolidation and De-consolidation
- Sorting, Mixing and Grading

A typical service carried out in a Free Port is the stuffing and stripping of "Consolidation Container. The Free Port allows to treat each consignment separately for customs clearance and does not require the clearance of the whole container at once.

A framework study has been carried out for establishing a Free Port at Baku (see Annex III).

5. Future Cargo Potentials of the Port of Baku

In former times more than 11 million tonnes of cargo were handled in the port of Baku. As stated above this cargo volume resulted mainly from strategic economic planning of the former Soviet Union.

Future traffic potentials, however, will be created mainly by the trade volumes of various independent states. The trade patterns of tomorrow are determined by the rules of comparative cost advantages, trade, regulations, traffic infrastructure, natural resources and overall economic development etc.

5.1 Commodities traded by TRACECA - States

Volume and structure of a country's imported and exported goods will not change dramatically within a short term. Exports are mainly determined by natural resources and by the structure of the economy and, especially, by the structure of the capital stock. Imports are influenced by the availability of hard currency, the industrial structure, the needs of the population and, very important, by the development of income.

As stated above, all TRACECA-states are on comparable development standards, measured by GDP per capita. The capital stocks in these countries are mostly in a hopelessly poor condition which will not allow high capacity utilisation like in former times. Agricultural production - with exception of Kazakhstan - does not yet reach self-sufficiency. That is why these countries mainly have to import food, consumer goods and project cargo for industrial investment, and when they have no own energy resources, oil, gas and products thereof.

Exports of the states in the hinterland of Baku are mainly determined by their natural resources, the structure of industrial production and the degree of agricultural production.

Table 5-1 gives an overview over main commodities normally traded by the economies concerned.

Table 5-1: Commodities traded by TRACECA states

Georgia

Exports:	Imports:
grain	oil and gas
aluminium	oil products
ores	food
bauxite	
coal	

Armenia

Exports:	Imports:
machines	oil and gas
food	iron and steel
products of the light industry	chemicals
	machines
	products of the light industry
	food

Azerbaijan

Exports:	Imports:
chemicals	chemicals
mineral products	vegetable oil
non ferrous metallurgy	machines
fibres	mineral products
agricultural products	beverages
machines	tobacco
	meat
	construction materials
	agricultural products

Kazakhstan

Exports:	Imports:
fuel and oil products	fuel and oil products
ferrous metals	machines
copper and copper products	electrical equipment
chemicals	vehicles
grain	ferrous metal products
salt	sugar
ores	chemicals

Turkmenistan

Exports:	Imports:
natural gas	grain
cotton	textiles
oil products	clothing
	pipes
	food

Uzbekistan

Exports:	Imports:
cotton	grain
tractors	rice
non ferrous metals	sugar
	tea
	food

Tajikistan

Exports:	Imports:
cotton	food
aluminium	clothing
agricultural products	sugar
cars	oil; oil products
gold	grain
mineral ores	

Kyrgyzstan

Exports:	Imports:
antimony	oil; oil products
tobacco	natural gas
non ferrous ores	timber
wool	metal products
cotton	chemicals
leather	non ferrous metals
machinery	
electrical goods	
clothing	
sugar	

Source: TACIS Inception Report
 bfai: country reports
 The World Bank

5.2 Estimation of Traded Cargo Volume

Available statistical data concerning foreign trade normally give information about values of traded goods. For traffic purposes these data, however, are without significant relevance.

For a recent feasibility study for the Turkmenbashi port a review of World Bank country reports on the Central Asia region and other published materials was conducted in order to get information about trade volumes in this region. The review was supplemented by interviews with officials of the World Bank and other authorities. Some results of these efforts are figured in table 5-2 (cp. List of Tables).

These data show that roughly 45 million tonnes were exported and 5 million tonnes were imported by six TRACECA states without Armenia and Georgia. In the meantime these quantities may have dropped further, following the rule between traffic demand and development of GDP.

The amounts of 1.4 million tonnes of total imports and about 9.5 million tonnes of total exports in 1994 were oil and oil products. Without these quantities exports totalled 35.5 million tonnes, of which were 30 million tonnes of coal exported by Kazakhstan.

The remainder, i.e. 3.6 million tonnes of imports and 5.5 million tonnes of exports was cargo, that mainly consisted of food, other consumer goods, cotton, cotton fibre, metals, fertilisers and vehicles.

The figures of table 7-3 show the major commodities traded by six countries. There should be more traded quantities, compared to the list of traded goods in Table 5-2. We estimate that about 80% of total trade was identified by this figures. Without the transports of the energy sector total trade thus should be about 11,5 million tonnes. There are no data about Georgia's and Armenia's trade volumes. These countries, however, cover 8,8% of total GDP of all TRACECA states.

Making the assumption that in Armenia and Georgia the part of GDP, that is traded, is similar to the neighbouring countries, a total of 12,6 million tonnes -without energy transports- was traded by all TRACECA-states in 1994.

The handling volume of the port of Baku in this year totalled 1.8 million tonnes, 0.9 million tonnes of which were liquid cargo, and 0.96 million tonnes were dry cargo; i.e. 7.6% of the total non-energy trade of TRACECA was handled in Baku.

5.3 Forecast of Traded Cargo Volume

As stated above, total transport demand will grow considerably until 2015 in some TRACECA states. The global transport demand elasticity of 1.25, which was used to calculate the development of overall demand, cannot be used to forecast the growth of traded goods. In most countries of the world growth of international trade exceeds the growth of GDP considerably. Import and export elasticities range normally between 1.3 and 1.9. In East European countries the trade elasticities, which could be calculated for many goods, even tend to be a little higher.

For the purpose of this study, the transport elasticity for traded goods of TRACECA-states is estimated 1.3, which means that overall growth of traded goods will be 4.6% per year in Azerbaijan and Turkmenistan, 1.3% per year in Armenia, Kazakhstan and Tajikistan, and 0.65% per year in Georgia.

The whole non-energy trade volume for all TRACECA-states was estimated at 12.6 million tonnes in 1994. In 1995 it should have dropped further by another 15% to 10.7 million tonnes. In 1996, it is reported that GDP in the most TRACECA-states is stagnating. That is why growth is estimated to start only in 1997 for most of the countries.

The following figures are calculated for overall development of traded goods in the hinterland of the port of Baku:

Table 5-4: Development of non energy trade of TRACECA-states till 2015.

Country	Percentage share of total GDP	Non energy trade 96 (million tonnes)	annual growth rate in %	Non energy trade 2015 (million tonnes)
Armenia	4.0	0.4	1.3	0.5
Azerbaijan	7.0	0.7	4.6	1.6
Georgia	4.4	0.4	0.65	0.4
Kazakhstan	39.5	4.1	1.3	5.2
Kirghizstan	4.9	0.5	5.2	1.3
Tajikistan	3.6	0.4	1.3	0.7
Turkmenistan	8.4	0.8	4.6	1.9
Uzbekistan	28.2	3.0	3.25	5.5
Total	100	10.7		17.1

Source: own calculations

These figures show that total non energy trade will grow from 10.7 million to 17.1 million tonnes in the year 2015, i.e. about 65 percent within 19 years.

This seems to be slow, but we have to consider the structural change of traffic flows, which accompanies the growth: more light products and less heavy duty products will be traded.

5.4 Estimating the Market Share of the Port of Baku

Obtaining the market share of 1994 the figures would surrender a cargo volume of 1.3 million tonnes in 2015 for the port of Baku.

But in 1994 the geopolitical environment was not peaceful. In this year Russia closed the border to Chechnya. The closure not only disrupted external trade with the FSU; transit cargo coming from or going to the new Baltic states or St. Petersburg could not be routed any longer on this corridor.

The conflict with Armenia over the Nahichivan continued in this year. Armenian forces still occupy Azerbaijan territory that used to produce more than 15% of GDP.

Both, the conflict with Armenia and the closure of borders to Chechnya, brought about a total disruption of the North-South trade, which, consequently, does not exist any longer. Reopening the border crossings will reactivate traditional traffic flows from North to South and vice versa. Parts of these flows will choose traffic links, that are connected by the port of Baku.

That is why we consider the market share of 7.6% of total external trade with the hinterland as too low. A share

of 15% to 20% looks be more realistic, when the geopolitical problems will be solved. This would mean a cargo volume of between 2.5 and 3.4 million tonnes in 2015.

We estimate that within this range the high rate will be more realistic because growth of trade will mainly occur with West Europe, North America and South East Asia. Traffic flows between the hinterland of Baku and West - Europe/North America are likely to choose the TRACECA corridor, when the transport infrastructure is rehabilitated, the political conflicts are solved, and Georgia can guarantee safe transit traffic.

5.5 Commodity Mix of Future Cargo Flows

The trade flows of tomorrow to and from the hinterland of the port of Baku will change dramatically when the economies will recover.

A prerequisite for the recovery is successful exploitation of the natural resources, which are located generously in this region. The international consortia engaged in the exploitation first of all needs project cargo and construction material such as steel, timber, and other building material. Trade flows of these materials will primarily be affected by the level of fixed capital investment in the exploitation industry. When the returns of investment activity begin to flow, hard currency streams will swell, which primarily will be used to import goods, the industry in the hinterland cannot produce competitively. Such goods are in the first phase food and other consumer goods. In the next phase, when the economy begins with the rehabilitation of infra- and superstructure, large quantities of building material including cement, bricks and stone, sand and gravel are needed, which partly will be imported.

For the recovery of the agricultural sector, vehicles, trucks, tractors, and other hardware as well as fertilisers are needed. When production in the rural areas begins to grow, agricultural trade will increase: grain, cotton, fruits and groats will be important.

The rehabilitation of the industrial sector will be accompanied by the dismantling of huge industrial complexes. That is why we expect scrap to be handled across borders in reasonable quantities.

Azerbaijan's industry is concentrated mainly on petrochemicals; after recovery this part of the industry should be able to export petrochemical products as well as it will need inputs from other industries abroad. Petrochemicals, thus, are expected to be handled in the port of Baku, too.

As stated above, the hinterland of Baku is rich in natural resources. Ferrous and non-ferrous ores will be exploited in the future, too. Partly, they will be refined and processed in the hinterland and traded as metal, partly they will be traded as pellets or they will be exported without processing. That is why the port of Baku should be able to handle metals, pallets or ores, ferrous as well as non-ferrous.

To sum up, the following commodities mainly will be important for the port of Baku:

- project cargo
- construction materials
- steel
- timber
- building material
- food
- other consumer goods
- vehicles, trucks, tractors

- fertilisers
- grain
- cotton
- fruits
- groats
- scrap
- petrochemicals
- ores
- metals
- pellets

5.6 Cargo Potential of the Port and Baseline Cargo Forecast for the Year 2000

The above analysis, combined with interviews with shippers and consignees, freight forwarders, officials in ministries and the ports in both Azerbaijan and Turkmenistan, presents an overall picture of the cargo flows that can be expected through the port of Baku both through the cargo terminal as well as the Container Freight Station (CFS) to be established in the port.

Some general observations that can be made based on the observations and analyses in the preceding chapters are:

- The majority of the cargoes that will be handled via the general cargo terminal will in the main be:
 - Cargoes generated from Azerbaijan's trade with countries with ports within the Caspian Sea basin. These can be considered **captive cargoes**, for which water transport will have a competitive advantage.
 - Bulk, neobulk and general cargoes shipped on the inland waterway system to and from Northern Russia, Northern Europe and the Baltic region via St. Petersburg on the waterway system.
 - Transshipment cargoes coming by rail to and from Ukraine and Southern Russia to and from Iranian ports. Some of these cargoes will be transhipped to and from other Middle East countries in addition to India and Pakistan.
 - Cargoes that for reasons of dimensions, weight and other physical characteristics cannot be handled by rail or truck and consequently have to be handled on ships via the Russian waterways and on the Caspian Sea.
- The main volume of cargoes handled will be transit cargoes coming on or destined for transshipment on the TRACECA route and the Chechnya rail corridor. This traffic will be rail cars in addition to increasing volumes of trucks and containers, most of which will be shipped onwards on the ferry connection between Baku and Turkmenbashi.

If the port of Baku is successful in establishing the port as a Container Freight Station (CFS) in co-operation with the railroad and the major container operators, the port will also handle substantial volumes of containerised cargoes destined for or originating in Baku and its hinterland.

In the past the port was allocated cargoes by government fiat or decree according to the plans developed by central authorities. Although the port has a virtual monopoly on port operations in Baku, it is in competition with

other modes of transport (i.e. rail and truck), and for virtually all cargoes handled by the port, the shippers and consignees will have the choice of using other means of transport. Holding onto the current traffic volumes handled and developing future cargo potential will not happen as a result of the mere existence of the port with its virtual monopoly.

The primary business of the port is to provide the cargo handling facilities and services required by the users of the port. Port users are shippers and consignees, ship operators and other providers of transport services such as the railroad companies and trucking companies. In a wider definition the companies serving or representing the primary users, e.g. shipping agents, freight forwarders, ship brokers and other intermediaries engaged in the transport industry can also be defined as part of the users or customers of the port.

The key prerequisites for the future success of the port in attracting cargoes are in the main for the port management and its administrative and operational staff to adopt a commercial attitude to the conduct of its business. In this respect it will be necessary for the port to:

- Market and sell its services to the shippers and consignees both as an independent operation and in close co-operation with ship operators and other transport companies, their representatives and intermediaries serving both the shippers and consignees and the transport companies.
- Market and sell the services of the port to attract shipping companies and other transport companies to use the port as part of their services to serve the needs of the transport users. In this connection it is important for the port to recognise what its primary business is and not enter into competition with its customers/user and their representative. For example, it would be detrimental to the interests of the port to establish freight forwarding, shipping agency or other services in competition with other commercial entities.
- Ensure operation and productivity according to normal world standards. The transport industry is an international business, and as such the user of the port services will expect that the productivity, operating standards and port and cargo handling charges of the port are maintained according to international norms and standards.
- Eliminate of the practice of unofficial payments in the transport chain. Such payments are hidden charges, which increase the cost of transport and have a deterrent effect on the development of trade.

The cargo flows achieved in the recent and current years do not necessarily give correct baselines for projections of the future cargo potential of the port. Given the above and assuming a normally functioning port management structure as well as a rehabilitated port infrastructure, in addition to upgraded and well functioning cargo handling equipment and practices, a baseline cargo volume of existing cargoes and cargoes that can be attracted to the port for the year 2000 has been developed. The baseline existing and future cargo opportunities available to the port of Baku are presented as Table 5-5 and can be summarised as follows:

Dry bulk cargoes - captive cargoes to and from Azerbaijan

Building materials - import

Bulk gravel imported from Turkmenistan used in the construction industry was a major dry bulk cargo handled in Soviet times. The volume dropped from 620,000 tonnes in 1991 to zero in 1995 and in the current year. The reason for the decline is the dramatic reduction in construction activity, and currently the demand for gravel in Azerbaijan is covered by local production. With the expected economic recovery, it is likely that the Azerbaijan domestic production will not be sufficient to cover the total demand for gravel, cement and sand, and imports from Turkmenistan will again be necessary. The base volume for around the year 2000 is expected to be 100,000 tonnes per year and will increase at the average projected growth rate of the transport demand.

Salt - import

This is a raw material imported by the Samib division of HimZavod of Sumgait, and is used as a feedstock in the

production of surface active agents, such as caustic soda, chlorine and chloric acid in addition to various detergents. In recent years, this factory received salt from both the Ukraine and Russia in addition to Turkmenistan. Presently, an agreement has been signed with Turkmenistan for a barter arrangements whereby salt as raw material imports will be paid with the delivery of finished products such as various detergents. The current contract volume is 120,000 tonnes per year, all of which will be carried in bulk by the Caspian Shipping Company from the port of Turkmenbashi to the port of Baku. This volume is also used as the baseline cargo volume for the year 2000.

Grain - imports

The total annual grain import requirement of Azerbaijan is estimated to be approx 800,000 tonnes. Grain is a commodity bought and handled on a competitive basis in the international market, and will be handled in the port of Baku only when water transport is the least expensive mode of transport. Most of the grain is handled from world markets through the Black Sea via the Georgian ports of Poti and Batumi and then shipped by rail to Baku. Grain purchased from the Ukraine and Russia is shipped primarily by rail and to a lesser extent via the Volga Don waterway. Kazakhstan is also a supplier of grain to Azerbaijan. Currently, a long term intergovernmental agreement has been signed between Azerbaijan and Kazakhstan for the import of 100,000 tonnes per year to be shipped. According to officials of the importing organisation, the State Corporation "Azerbreadproduct", their preference would be to ship the entire volume of imports from Kazakhstan via the ports of Aktau in Kazakhstan to Baku, since water transport is the lowest cost alternative. However, due to the poor technical condition of the cargo handling equipment and the port facilities in Aktau, resulting in unexpected delays and extra costs, it is unlikely that it will be feasible to ship more than approx 30,000 tonnes by ship from Aktau in 1997, which is equal to the volume in 1996. The remaining volume will have to be shipped by rail.³ The total volume of grain handled in the port of Baku in 1996 is expected to be 60,000 tonnes, of which 30,000 tonnes has been and will be coming from Aktau and the remaining 30,000 tonnes has arrived via the Volga Don waterway during the navigation season. For the baseline forecast it is expected that the port of Aktau will have been rehabilitated and can handle the full contract volume of 100,000 tonnes. In addition, it is expected that the port of Baku will be able to attract a volume of approximately 10% of the remaining import volume of 700,000 tonnes, i.e. 70,000 tonnes. In 2000 the port is, therefore, expected to handle 170,000 tonnes of grain as the baseline forecast. This volume is expected to remain relatively constant for the forecast period.

Metallurgical products - imports and exports

All business activities of the ferrous and non-ferrous metals and minerals industry is handled by the Azerbaijan state owned company "Metallurgy" State Concern with headquarters in Baku. This industry generates substantial volumes of cargoes both for import and export from its three main divisions:

The ferrous metals division, which has three entities:

- Azerbanda Mining Industries produce ferrous ore concentrates with a sulphuric content of 60%. The production capacity is one million tonnes per year, all of which in prior times were supplied to Georgia by rail. Due to the current situation in Georgia, its only customer, the production has ceased.
- Azerbaijan Pipe making Plant: The production capacity of this plant is 650,000 tonnes of pipe per year, which in previous years were primarily exported to Russia, Ukraine, Kazakhstan and the other republics of the FSU. Due to the slowdown in the economic activity of their customers within the FSU, the annual production volume is now reduced to 50,000 tonnes, which is shipped to their customers in the FSU in addition to Turkey and Iran. All their output has been and is currently shipped by rail. During full production

¹ The cost of ship transport was quoted as being USD 35 per ton, while transport via rail on the Chechnya route would be USD 40 per ton (when the route is available). If the Chechnya route would continue to be unavailable as was the situation in 1996 the only route would be to ship by rail through Turkmenistan and onwards by ferry from Turkmenbashi to Baku. The total cost of the latter route was stated to be USD 80 per ton. In 1996 approximately 60,000 tonnes would be shipped by water from Aktau to Baku, while the remaining volume of 40,000 tonnes would be shipped on the rail route via Turkmenistan and the ferry.

the following raw material quantities were received:

- - 100,000 tonnes of pig iron from Russia and Ukraine
- - 50,000 tonnes of various steel products from Russia and Ukraine
- - 50,000 tonnes of limestone from Ukraine
- - 50,000 tonnes of fire protection stone from Russia and Ukraine
- Dashedlakli Bentonite Clay Plant. The annual production capacity of this plant is one million tonnes per year. In the past its output was exported to the metallurgical industries of primarily Russia and Ukraine and to a lesser extent to Kazakhstan. A dramatic decline in the demand from their former customers have forced the management to find new customers in the world markets. The relatively low value of the product combined with high transport costs have prevented them from securing new contracts. ⁴
- The non-ferrous metals division with three entities as follows:
- Zaglik Aluniti Ore Management plant located in the Dashkestan region of Azerbaijan, in which alumite is mined and converted to alumina. Of the total output, the following volumes are shipped:
 - - About 1.5 to 2.0 million tonnes per year to the Aluminium plant in Gandja
 - - About 60,000 tonnes per year shipped to the Aluminium plant in Sumgait
 - - About 100,000 tonnes per year shipped by rail and ferry from Baku to Turkmenbashi and onwards to an aluminium plant in Tajikistan
 - - Volumes of alumina are also shipped by rail to Russia and to other markets, also primarily by rail. The Russian customers are aluminium plants located in Bratsk, Irkutsk and Krasnojarsk in Siberia, and shipment by a mode of transport other than rail is impractical and costly.
-
- The Gendja Aluminium Plant used to receive between 600,000 to 700,000 tonnes of bauxite from Georgia in addition to the alumina from Zaglik. Currently, the bauxite is received from Australia, and in 1995 the volume received through the port of Poti in Georgia was 77,000 tonnes. The output capacity was stated to be about 450,000 tonnes of aluminium per year shipped to the FSU and other markets by rail.
-
- The Sumgait Aluminium Plant. This plant receives also input materials in addition to the inter-company transfer of raw materials described above from Russia, all of which is shipped in by rail:
 - 20,000 tonnes of anode mass
 - 2,000 tonnes of cryolite
 - 1,500 tonnes of torite

All raw materials and finished goods of the three divisions of this major state owned group are shipped by rail from the respective plants. Russian companies are currently major suppliers of both input materials and major customers of the finished products, all of which are shipped by rail. During the Chechnya conflict and the closing of the northbound rail corridor, the cargoes to and from Russia have been shipped via the Baku - Turkmenbashi ferry and onwards through Turkmenistan and Kazakhstan to Russia. The management would not consider shipment by the Caspian Sea and the Russian waterways as a viable alternative for the following main reasons:

- The Russian waterways are only open six months of the year, which is unacceptable from the point of view of logistics.
- The cargo carrying capacity of river vessels of 3,000 tonnes is small and therefore increase the cost of

2 The product will have to be shipped out by rail to Georgian ports and onwards to world markets. According to the management the current world market price is USD 36/ton, while their production cost is USD 12/ton. The rail transport cost in Azerbaijan is USD 7/ton, and USD 8/ton in Georgia. In addition the cost of handling in the port of Poti is USD 6/ton for a total transport cost FOB Poti of USD 21/ton. The total cost FOB Poti is therefore USD 3/ton, which leaves USD 3/ton for transport and handling in the receiving market. Even at a price of USD 30/ton FOB Poti management has been unable to find interested buyers in world markets.

transport.

- Since none of their customers are located on the Russian waterways, there would be both additional costs and risks associated with multiple cargo handling and cargo transfer operations, (i.e. rail to Baku for loading on a river vessel, transport to a Russian inland river port for trans-loading to rail for transport by rail to the customers' plants.)

Although the cargo volumes generated by these industry could present interesting business opportunities for the port of Baku other than handling via the ferry terminal, no cargo volumes have been included in either the base or the forecasted cargo potential for the port of Baku.

Neobulk cargoes - transit and competitive import/export cargoes

The definition of neobulk cargoes is as follows: "General cargoes that are shipped in sufficiently large quantities to warrant shipment in full or partial shipload lots in general cargo or specialised, purpose-built vessels (e.g., reefer vessels, ro-ro car carriers, open hatch bulk carriers for forest products)". In the port of Baku neobulk cargoes will be represented by both transit and captive cargoes shipped to and from Azerbaijan on the Caspian Sea and on the inland waterway system of Russia to and from the Baltic and the Black Sea. The main neobulk cargo opportunities available to the port of Baku are:

Timber/lumber - transit cargoes

In the past these cargoes were received primarily from northern Russia and Finland. These cargoes arrived by rail and were shipped through the port to Iran and onwards to India and Pakistan. Currently, most of the transit cargoes that are sensitive to transport costs, are shipped by inland waterways to Astrakhan in the Volga delta and onwards by ship to Iran. During the winter, when the waterways are closed, Baku is still receiving these transit cargoes by rail. In addition, cargoes for the domestic construction industry are received both by rail and via the inland waterway system from northern Russia. Total volume expected for 1996 is 15,000 tonnes via the port, most of which will be transit cargoes. Many of the traders handling these cargoes are located in Baku, and the port should have every opportunity to continue to obtain a share of these cargoes, particularly during the winter when the inland waterways are closed. The baseline cargo volume is expected to be 15,000 tonnes in the year 2000. The port should have every opportunity to increase this volume through active marketing of its services.

Timber/lumber - import cargoes

These cargoes were and will continue to be imported from northern Russia and Finland mainly for the construction industry. The total annual volume used by the domestic construction industry is estimated at approximately 100,000 cubic meters per year. As shown in the transport cost analysis, the inland waterway system is the most cost effective system for this route. However, since the waterways are closed due to ice six months of the year and the waterways and port can expect competition from the railroad, it is unrealistic to expect the port to capture more than 30% of the total volume. The baseline volume expected to be handled in the port will there be approximately 30,000 cubic meters per year, representing approx. 15,000 tonnes of cargo.

Metals - transit

In the past years the port handled substantial volumes of metals shipped in transit from Russia to Iran and onwards to other Middle East and Far Eastern countries. These cargoes arrived by rail and were transhipped for water transport to Iranian ports. These transit shipments stopped in 1994. Currently, 15,000 tonnes of the total expected volume for 1996 of 20,000 ton volume of metals to be handled by the port are trial shipments from Ukraine, coming by rail for onward shipment to India and Pakistan via Iranian ports. Given that the trial shipments are successfully and efficiently handled, the transit cargoes of metals on this route can be increased significantly in the future. A conservative estimate is set for 50,000 tonnes as the baseline volume achievable by the port in the year 2000.

Metals - import

The major user of imported metals is the construction industry, which is importing its construction metal requirements from Russia and Ukraine. Kazakhstan can also be a supplier of metals via the port of Aktau, and this year approximately 5,000 tonnes of construction metal was imported by water from Kazakhstan. Currently, the domestic import demand for construction metal is estimated at 250,000 tonnes per year, most of which was imported from the Ukraine and Russia with equal shares for each country. All cargoes are currently arriving by rail. Consequently, the port should have the potential to achieve a reasonable large market share in the future, since the cargoes are coming from areas, where water transport should be competitive with other modes of transport. The port should have the potential to achieve a baseline import volume to be transported on the waterways from Russia and Kazakhstan of approx. 50,000 tonnes per year, representing a 20% market share of the construction metal imports. In addition, the shipyards and oil fabrication industry will be expected to require substantial volumes of steel and metal in future years. Most of it will be shipped directly to the fabrication plants, although the port should have the potential to attract some of these cargoes.

Scrap metal - export

In previous years approx. 50,000 to 60,000 tonnes of scrap metal exported to Pakistan via Iranian ports were handled at the port. This year the volume was reduced to 3,000 tonnes. As a result of dismantling and renewal of the major industrial complexes and oil installations in Azerbaijan, it is expected that exports of scrap metal will be resumed in future years. Scrap metal is a commodity highly sensitive to transport costs, and it can be expected that major portions of this commodity will be handled by water transport, particularly for transport to scrap metal plants in India and Pakistan via Iranian Caspian Sea ports. The base load volume is expected to be similar to previous years, i.e. 60,000 tonnes.

Project cargoes for the oil industry (modules, pipe, equipment etc.) - import cargoes

The current volumes of cargoes is estimated by oil industry sources to be 20,000 to 30,000 tonnes per year, a volume which will increase significantly in future years as the exploration and construction in preparation of full production activities for the industry is going on. A conservative estimate of future cargo volumes is between 200,000 and 300,000 tonnes per year by the year 2000. The freight forwarders have in close co-operation with the oil industry thoroughly tested and found the TRACECA route via Poti to function without problems. As a result, major portions of these cargoes will be shipped on the TRACECA route via the port of Poti directly to the two facilities used the international consortia, i.e. ShelfProektStroi (SPS) and STRIZH yards in Baku. Large and oversized modules, which cannot be handled on the TRACECA route, have been shipped in the past and will in the future be shipped by water via the Volga Don waterway directly to the two yards used by the oil industry. There will, however, be supplies arriving in smaller volumes of cargoes coming via the waterways from Northern Europe via St. Petersburg. They will have the potential of being handled via the port. As a result it will have to be recognised that the port will attract relatively small volumes of the oil project cargoes, since these will in the main for practical reasons be shipped directly to the two module plants. An average of five shipload lots arriving by vessel from Northern Europe representing 10,000 tonnes is a conservative estimate of the port's potential market share of shipload lots in the year 2000, which should be realistically achievable by the port. If the port is established as a CFS for containerised cargoes, the port will in addition have the potential to attract substantial volumes of containerised cargoes shipped to the oil industry via the TRACECA route.

Cotton exports - competitive cargoes

In the past, most of the cotton exports of Azerbaijan have been sold on FOB basis and shipped out by truck and rail to Turkey, Europe and the United States. The total annual export volume of cotton from Azerbaijan is estimated to be between 50,000 and 60,000 tonnes per year. For this commodity water transport to the Mediterranean is a highly competitive transport mode. As such, the port should be able to compete for between 10,000 to 12,000 tonnes per year to be handled during the Volga Don shipping season, all of which would be shipped neobulk in full or partial shipload lots. This represents a market share of 20%, which is a conservative

estimate of what should be achievable by the port. Cotton is also an attractive return cargo for the containers carrying imports to Azerbaijan. Those cargoes not handled by water transport could therefore be captured through the port's CFS.

Miscellaneous food products - imports

To date these cargoes have been handled in relatively small quantities through the port and grouped in the statistics in the category "Miscellaneous general cargoes". The major volumes of these cargoes have arrived primarily by rail and also by trucks. Azerbaijan is a significant importer of food products. The annual import volumes of major food products with sufficient volumes for having the potential of transport in partial or full shipload lots are in the main.⁵

Table 5-6 Estimated imported Food Product Volumes

Commodity	Estimated import volume (tonnes)
Sugar	160,000
Potatoes	180,000
Meat and meat products	130,000
Dairy products (milk, butter, milk powder, cheese etc.)	2,000,000
Flour	350,000
Fish and fish products	30,000
Total	2,850,000

These products are procured in the world markets, and major portions will continue to be imported by rail and truck on the TRACECA route via Georgian ports as well as from Russia, Iran and Turkey. Some of the cargoes have, however, the potential of being shipped also via Iranian ports or via the Russian inland waterways:

- Wheat flour, which to a large extent is imported from India via Dubai and Bandar Abbas. Most of these cargoes are currently trucked in via Iran. Small quantities are also shipped via Iranian Caspian Sea ports to Baku.
- Potatoes are to a large extent now imported from Turkey and Iran, most of which are shipped by rail and truck from Turkey and by truck from Iran. The latter could have the potential to be shipped via Iranian ports as an alternative to transport by truck.
- Cargoes originating from areas in Ukraine and Russia located close to the waterways, e.g. sugar and dairy products from Ukraine and dairy products, fish, meat and dairy products from Russia, could have the potential of being transported by ship through the port of Baku.

With the exception of wheat flour and sugar, the other cargoes will require refrigeration to be handled in the port, and the ships will have to have reefer holds. Presently, proper storage facilities for reefer cargoes are not available at the port, and neither are specialised reefer vessels available in the Caspian Sea to serve the needs of shippers and consignees of reefer cargoes. When such facilities and shipping services are available, the port should be able to compete for such cargoes. As a baseline cargo potential the port should have the potential to attract a share of the sugar and wheat flour trades, and a market share of 10% of these import cargoes should be reasonable target for the port to achieve. The baseline volume forecasted is therefore set at 50,000 tonnes

³ The import volumes are compiled based on data received from the Ministry of Trade and interviews with various commercial import organizations.

in the year 2000.

Fresh and canned fruits and vegetable - exports

Azerbaijan is a major producer of fruits and vegetables, and has an extensive canning industry for these products. Although the vegetable and fruit crops have decreased in recent years, it is expected that the agricultural production of fruits and vegetables and also the canning and preserving industry will be revived in the coming years to a level equal to that achieved in the recent past. These cargoes should have export potential to neighbouring countries, including those with ports in the Caspian Sea and on the waterways (i.e. Russia and Ukraine). The potential export volumes are ⁶:

Table 5-7: Estimated exported Food Product Volumes

Commodity	Estimated export volumes (tonnes)
Fresh vegetables	300,000 to 350,000
Fresh fruits	70,000 to 100,000
Canned and preserved vegetables and fruits	350,000
Total	720,000 to 800,000

The fruits and vegetables will require refrigerated facilities and reefer holds on the vessels, similar to the import cargoes described above. The canned and preserved vegetables can, however, be handled without such facilities, and a market share of 10% representing a baseline cargo volume of 35,000 tonnes should be achievable by the port.

Neobulk cargoes are general cargoes, most of which are also containerisable. Many of these cargoes are perishable and sensitive to transit time. As such it can be expected that volumes of these cargoes, and particularly those to and from Western Europe, United States and New Zealand (imports of dairy products), will be containerised in the future. As a consequence, those neobulk cargoes not handled by ship in the port will have the potential of being routed as container cargoes via the CFS to be established in the port of Baku. The level of containerisation will to a large extent depend on the number of containers made available by the container liner operators serving the trade. The container trade will most likely be import driven, and consequently the availability of containers for the export trades will to a large extent depend on the number and types of containers brought in to serve the import trades of Azerbaijan.

General cargoes (captive and transit cargoes)

The cargo statistics of the port do not contain a detailed breakdown of the commodity composition or the origin/destination of these cargoes. The cargo volume dropped dramatically from 1994 to 1995 (i.e. 118,400 tonnes in 1994 to 33,300 tonnes in 1995). The expected volume in 1996 of 124,000 tonnes indicates that the port is recovering market shares and cargo volumes lost in 1994. A wide variety of commodities are included in this category. The major commodities and expected developments of these cargoes are:

Equipment and machinery

⁴ These volumes are compiled based on data received from the Ministry of Trade.

This category includes all types of equipment from tractors and farm machinery to industrial machinery and plants. With the recovery of the economy, which will be driven by the oil industry following the resurgence of oil production following the turn of the century, major volumes of cargoes in this category can be expected as a result of the major renewal requirements in the both agriculture and in the industry.

Chemicals and petrochemicals

This category includes a wide variety of chemicals and petrochemicals produced at the major chemical, refinery and petrochemical complexes at Sumgait and the Absheron peninsula. Immediate cargo opportunities for the port include handling of difficult cargoes, such as caustic soda and sulphuric acid, to be shipped to Turkmenistan. In the longer term, refurbishment of the chemical and petrochemical industries using the increased output of oil and gas as feedstock will represent interesting opportunities, although the major cargo waterborne volumes will most likely be shipped out from dedicated and specialised terminals at the respective plants.

Other general cargoes

These include a wide variety of cargoes, which in the main are cargoes such as:

- Fertiliser - imports and transit.
- Various ores and metals
- Miscellaneous foods and consumables
- Miscellaneous containerised cargo

In 1996, the total volume of miscellaneous cargoes is expected to be around 120,000 tonnes, while containerised cargoes is expected to be 4,000 tonnes. It should be noted that in the baseline forecast for the year 2000 several of the cargoes counted in this category are included among the neobulk category. The baseline cargo volume for the year 2000 is conservatively estimated to be 100,000 tonnes, evenly divided between containerised and break bulk cargoes.

The major general cargo trade routes in addition to the dry bulk and neobulk trades described above are:

- To and from Aktau, Kazakhstan: Current cargo volumes include in addition to the dry bulk grain imports described above, imports of various metal products. Transit export cargoes coming from Kazakhstan include various chemicals. Transit imports include Lada automobiles re-exported from Turkey and miscellaneous general cargoes. Interviews with freight forwarders have indicated future potential of increasing volumes of containerised cargoes and requirement of truck ferry transport to and from Kazakhstan, if regularly scheduled ferry or container feeder/ro-ro liner service had been available on this route. In future years the oil industry operating both offshore Aktau and onshore in the immediate hinterland will require substantial volumes of supplies. Currently, most of the supplies for the oil industry is for oil exploration. When the development of the fields will be started shortly after the turn of the century, the volumes required by the oil industry will increase substantially. The TRACECA route via Baku is expected to be a preferred transport route based on interviews with freight forwarders serving the oil industry.
- To and from Iranian ports: This trade is served by Iranian vessels, which in addition to the transit cargoes described under "Neobulk" above, also handle various general cargo imports, such as wheat flour, rice and other general cargoes from Iran and from India and Pakistan. With increased marketing efforts, larger volumes of general cargoes, containers in addition to neobulk cargoes should have the potential of being attracted to this route.

At the present time containerisation of the Azerbaijan trade is so minimal to be equivalent to be non-existent. One of the major reasons is a general lack of equipment and facilities to handle containers. Experience from other developing and emerging economies and trades indicates that the containerisation of the general cargo will reach international levels within a time period of between five to seven years. In the time period between 2000 and 2005 the level of containerisation of the Azerbaijan general cargo trade will be expected to have reached the world level of approximately 80% .

Liquid bulk cargoes

Crude oil - cabotage

The volume of cargoes handled at the liquid bulk terminal has declined dramatically. The current cargoes, which are cabotage crude oil cargoes handled in domestic trades to the refineries on the Absheron peninsula, were 91,000 tonnes in 1995 and are expected to reach 160,000 tonnes this year. Volumes to be used as feedstock for the local refineries will most likely increase in the future.

Crude oil - transit

It is reported that a contract to transport crude oil in transit from Aktau, Kazakhstan, through the port of Baku's oil terminal and onwards through the existing pipeline to Poti, Georgia, is currently being negotiated between the governments of Azerbaijan and Kazakhstan. The shipments are scheduled to start this year. The volume of oil to be transported is reported to be of a minimum of 10 million tonnes per year. These oil cargoes will be transported across the Caspian Sea in tankers from Aktau to Baku. If such a volume is to be handled, an average of six tankers of 5,000 dwt will have to be discharged at the oil terminal every day of the year. In order to handle such a volume, the oil terminal will have to be upgraded.

Crude oil - new oil and main oil from the international oil consortium

The early oil is expected to start flowing around the turn of the century, and existing pipelines to the Black Sea will be upgraded for the purpose of this transport. Several pipeline alternatives are being considered for the main oil. It is expected that this oil will be handled in dedicated facilities, and not through the port's oil terminal.

Refined products and petrochemicals

Azerbaijan has an extensive refinery industry located on the Absheron peninsula and large petrochemical and chemical plants at Sumgait. Liquid bulk refined products and petrochemicals from these plants will most likely not be shipped through the port's liquid bulk terminal, but rather through dedicated terminals at the respective plants.

As the baseline forecast for the year 2000, it is assumed that the contract between Kazakhstan and Azerbaijan described above is signed, enabling the shipment of 10 million tonnes per year. Given that a contract of a such a volume is entered, it will enable the port to obtain the funds for the oil port to be rehabilitated or reconstructed. Without a long term contract the rehabilitation of the oil port will most likely not be feasible.

CFS terminal cargoes

The CFS terminal will function as a multimodal handling terminal serving primarily the needs of containerised import and export cargoes to and from Baku and its hinterland. As the containerisation of the Azerbaijan foreign trade of general cargoes, including neobulk cargoes not handled in partial and full shipload lots, is at a very low level, the cargo volumes of this terminal will have the potential of reaching significant sizes. The cargo potential of the CFS would be the neobulk cargoes and other general cargoes destined to or shipped from Baku and its hinterland not handled to and from the port by vessels, most of which will be containerised in the future. Thus, the CFS will enable the port to attract cargoes that otherwise would not be handled by the port.

The general cargo import and exports of Azerbaijan are expected to be containerised to a level comparable to the rest of the world, where an average of 80% of the general cargo volume is containerised. Based on interviews with freight forwarders and representatives of major container lines serving the region currently, it is estimated that the initial potential volume of such a CFS could be a minimum of between 2,500 to 3,000 TEU (twenty-foot equivalent units) in 1997 increasing to at least 25,000 TEU by the year 2000. Increased cargo volumes will be created for the CFS with the expected rapid recovery and growth of the Azerbaijan economy

following the year 2000, with increased import demand for consumer goods and industrial equipment, and with the additional general supplies and equipment for the oil industry,.

In addition to the containerised cargo volumes generated by the CFS and the cargo flows generated by the general cargoes through the port, the CFS will also have the potential of handling the containers shipped in transit by the ferry service between Baku and Turkmenbashi.

Ferry traffic

The ferries operating between Baku and Turkmenbashi handle a major part of the cargo flow between Azerbaijan and the Central Asian Republics as well as to transit cargoes. The ferry traffic is, however, outside the scope of this study and a forecast for the ferry traffic has therefore not been developed as part of this project. Rehabilitation of the ferry terminal and thus the forecast of the cargo flows through this terminal is handled by a separate contract under the TACIS program granted to a consortium led by Ramboll. Reference is therefore made to the report developed by Ramboll with respect to the forecast of cargoes to be transported by the ferry. It should be noted that the ferry traffic will be complementary and not competitive to the traffic to be handled via the bulk and general cargo terminals of the port.

Passenger traffic

Other than the ferries operating between Baku and Turkmenbashi, all of which have passenger transport facilities, the potential for developing passenger traffic other than recreational and sight seeing tours with small boats in the Baku Bay, is considered to be minimal or non-existent. A separate forecast of passenger traffic has therefore not been made.

5.7 Scenario Description

From the baseline cargo forecast developed for the year 2000, three separate forecast based, on three different scenarios of the potential development of factors having an impact on the future cargo volumes to be handled through the port, have been made. These are:

- A most likely scenario
- An optimistic/high growth scenario
- A pessimistic/low growth scenario.

It should be noted that these scenarios are developed on the same basis as those presented in the forecast of the ferry between Baku and Turkmenbashi.

5.7.1. Most Likely Scenario

This scenario describes the overall situation expected by a majority of observers of the region, and should represent a development trend with a probability of more than 50%.

Macro-economic development

Under this scenario it is expected that the uncertainties associated with respect to key political issues, which has

clouded the economic situation of Azerbaijan in the recent past, are resolved in the near future:

- Creation of peace with Armenia over Nagorny Karabakh. The current cease fire agreement achieved in this conflict, which has displaced more than 900,000 people and caused massive destruction of the infrastructure, is replaced with a permanent peace agreement brokered by international mediators. The lingering uncertainty and the possibility of resumption of open warfare is superseded by optimism and an UN supported program to rebuild the devastation in the war zone.
- The Chechnya conflict is ended with a cease fire followed by a peace agreement ensuring lasting peace in the region. The Russian government and the separatists reached an agreement whereby the republic is gaining a more independent status while still being a part of Russia.
- A policy of liberalisation of the economy and attraction of foreign investments is implemented by the Azerbaijan government. With its long history of oil and gas exploration and strong influence of the private sector in the economy, the entrepreneurial spirit has survived the many years of communist regime, and the reform program of the government has rekindled the spirit. The private sector flourishes as a result of the increased activities in the oil and gas sector and creates new employment opportunities and increasing incomes among the population. Economic output will be, however, not at a level similar to the peak output of previous years until approximately the year 2005.
- Development of the oil and gas reserves. The agreement signed in September 1994 with an international oil consortium to develop the Azerr, Chirag and Guneshli oil and gas fields is followed by similar agreements with other international oil consortia. These agreements are based on an understanding reached between the Caspian Sea oil producing countries, covering the sharing of the oil resources following the break-up of the FSU. The major issue of the investment in the construction of alternate pipelines to export the increased output to countries outside the FSU has been settled, and the construction will start around the turn of the century.

The expected economic development of the Azerbaijan economy is summarised in Table 5.7.1 (Table section).

The direction of trade

The strong ties to, the transport infrastructure and the past history of trade with the FSU countries will continue at least for the first part of the scenario planning period (i.e. to the time period 2003 - 2005) to cement their relation as the major trading partners of Azerbaijan. The close cultural ties and the geographic proximity to Turkey and Iran will ensure that these countries will grow rapidly in importance as trading partners. In the Azerbaijan foreign trade, the Caspian Sea and Volga Don waterways will continue to be major transport routes. The bulk of the trade growth, however, will be accounted for by Western Europe, United States and Japan, and by the end of the scenario planning period these countries will have surpassed the FSU in importance as trading partners.

Development of alternative transport patterns and routings

The investments by the EU in the TRACECA corridor including the port of Baku and the ferry terminals in Baku and Turkmenbashi, combined with the resolution of the Nagorny Karabakh and the Chechnya conflicts, ensure the success of the TRACECA route as a major transport corridor of the Central Asian countries' foreign trade.

The main developments on the alternative routes that will influencing the use of the port of Baku under this scenario are:

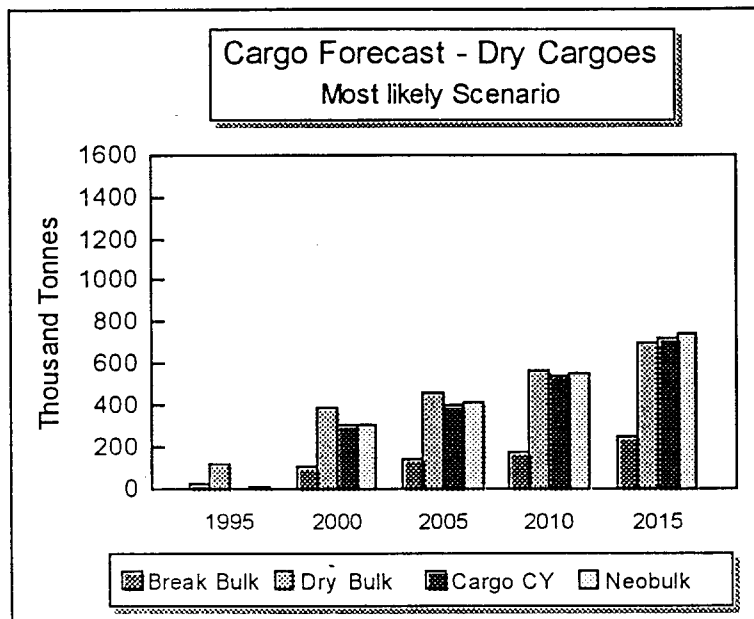
- The Volga-Don waterway is upgraded and is operational with the extended draft and improved locks, ensuring minimal delays and the use of the full draft and loading capacity of the vessels. The waterway is

also opened to international traffic. During the navigation season this route is primarily used for bulk shipments, while shippers and consignees of general cargoes will prefer to use of the TRACECA route both due to lower transport costs and shorter transit times.

- Cargoes to and from Europe and the US are shipped on the more cost and time efficient TRACECA route, and major portions of the containerised and general cargo trades to and from Azerbaijan are shipped on this route.
- The Russian government proceeds with the development of the port of Olya near Astrakhan and start of alternative ferry services from this port to Aktau, Turkmenbashi and Iran. The opening of the Chechnya route causes this route to be considered a contingency in the event that the more efficient route through Chechnya should for any reason be closed for political or other reasons in the future. The cargo volumes on this route are, therefore, relatively limited.
- The Iranian connection through Bandar Abbas and overland transit through Iran continue to be developed as an important route for cargoes to and from the Far East. Improved infrastructure by the reopening of the rail connection in the previously occupied territories of Azerbaijan and improvements of the road infrastructure makes this an attractive route primarily for local and Far East cargoes. The Iranians improve the shipping services between Iranian ports and Baku, making water transport on the Caspian Sea more attractive to shippers and consignees. The Iranian route is, however, experiencing increased competition from the rail connection via the Russian Far East ports, particularly for general cargoes to and from the Far East (primarily Japan and Korea).
- The peace agreement between Armenia and Azerbaijan enables the reopening of the Jolfa border crossing station to Iran, and this route regains its importance as a rail border crossing.
- The Chechnya overland connection is reopened, and rapidly regains its previous importance as an important route for transit cargoes between the Central Asian republics and Central and Northern Russia, Ukraine and the Baltic countries. Transit of cargoes via the port of Baku is as a consequence becoming an attractive and cost effective option, and this route is preferred to the considerably longer route through Kazakhstan. Most of these transit cargoes are attracted to the Baku - Turkmenbashi ferry link, while the general cargo, neobulk and dry bulk volumes of transit cargoes are increasingly handled through the port of Baku.
- The landbridge rail link between Central Asia and the Russian Far East ports is reopened and increasing volumes of general and containerised cargoes to and from the Far East markets are shipped on this route in competition with the Iran route via Bandar Abbas. Its popularity is spurred by both being faster and more cost effective compared to the Arabian Gulf route. Increasingly, cargoes between Azerbaijan and the Far East are shipped on this route via the ferry. As a result container volumes through the port of Baku CFS increase.

The cargo flows under this scenario are expected to experience an average annual growth rate of between 5% and 7 % from the baseline cargo volumes expected in the year 2000, reflecting both the general increase in the overall economy and increasing market shares of the port. (Please also refer to Sections 5.3 and 5.4 for a general discussion of the growth factors that can be expected). It should be particularly noted that the grain imports and the market share of the port of grain imports will remain constant over the forecast period.

Figure 1



The most likely forecast volume of the port to the year 2015 is presented as Table 5-9. In the list of tables

5.7.2 Optimistic/High Growth Scenario

This scenario describes a more optimistic development compared to the "Most Likely Scenario", and is assessed to have a probability of occurring of approximately 20%. The expected developments are similar to those of the most likely scenario described in Section 5.7.1.

Macro-economic development

Under this scenario it is expected that macro-economic developments in Azerbaijan will be identical to that of the "Most Likely Scenario". The government is, however, expected to speed up the process of privatisation and liberalisation of the industrial and agricultural sectors resulting in a considerably faster growth in the private sector of the economy.

The direction of trade

The development will in the main follow the trends of the "Most Likely Scenario" described above. The privatisation and liberalisation of economic policies of the government will tend to redirect the trade more in favour of Europe and the United States, which will imply more cargoes via the TRACECA route.

Development of alternative transport patterns and routings

The investments by the EU in the TRACECA corridor including the port of Baku and the ferry terminals in Baku and Turkmenbashi, combined with the resolution of the Nagorny Karabakh and the Chechnya conflicts, ensure the success of the TRACECA route as a major transport corridor of the Central Asian countries' foreign trade.

The main developments on the alternative routes that will influencing the use of the port of Baku under this scenario are:

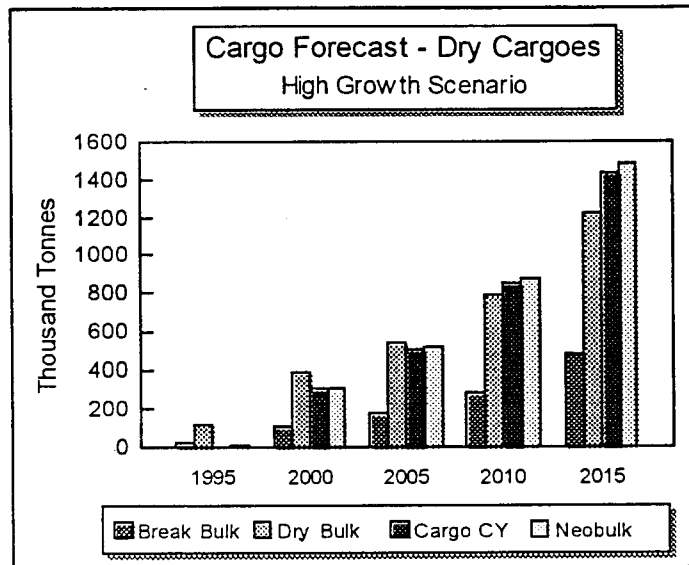
- The peace agreement between Armenia and Azerbaijan enables the reopening of the Jolfa border crossing

station to Iran, and this route regains its importance as a rail border crossing.

- The Chechnya overland connection is reopened, and rapidly regains its previous importance as an important route for cargoes between the Central Asian republics and Central and Northern Russia, Ukraine and the Baltic countries. This route is preferred to the considerably longer route through Kazakhstan. Cargoes from Ukraine are also shipped in increasing quantities through the port of Baku via this rail link.
- The Volga-Don waterway is opened by the Russian authorities as an international waterway with unlimited access for ships of all nations. Safe passage is assured for ships of all nationalities, and the traffic on the waterway increases.
- The planned developments of the Alia port near Astrakhan is postponed by Russian authorities, and resources are redirected to rebuild and upgrade the transport infrastructure destroyed during the Chechnya conflict. Priority is given by the Russian authorities to use this route for cargoes both to and from Central Asia and Iran. The port of Baku is re-emerging as a major transshipment port for both Ukrainian and Russian cargoes.
- The landbridge rail link between Central Asia and the Russian Far East ports is reopened, and increasing volumes of general and containerised cargoes to and from the Far East markets are shipped on this route. This route is preferred by shippers and consignees for cargoes between Azerbaijan and the Far East, both due to lower costs and faster transit times compared to shipment via Arabian Gulf ports. The port of Baku CFS is benefiting by receiving increasing volumes of containerised cargoes to and from the Far East via this route.
- The Iranian connection through Bandar Abbas and the combination overland transit through Iran and by water via Iranian ports continue to be developed. The Iranian route is, however, experiencing increased competition from the rail connection via the Russian Far East ports, particularly for general cargoes to and from the Far East (primarily Japan and Korea).
- Containerised general cargoes to and from Europe and the US are almost exclusively shipped on the more cost and time efficient TRACECA route and are handled at the Baku port CFS. The port of Baku with the ferry terminal is the major transshipment port for cargoes to and from ports on the Caspian Sea and the Central Asian republics.

Under this scenario an average cargo growth of between 10 to 12% per year is expected.

Figure 2



The cargo flow and modal split is expected as described in Table 5-10 in the list of tables.

5.7.3 Pessimistic/Low Growth Scenario

The pessimistic/low growth scenario presumes failure to reach a lasting peace agreement with Armenia with respect to the Nagorny Karabakh area. At the same time the Russian government fails to create a lasting peace in Chechnya, and continued guerrilla fighting prevents efforts to restart the peace negotiations. The probability of this scenario happening is evaluated to be approximately 30%.

Macro-economic developments

The macro-economics development of Azerbaijan and the other Central Asian republics is negatively affected by the failure to reach peace and political stability in the region:

- Under the pretext of the unstable political situation brought about by the failure to reach an agreement with Armenian over Nagorny Karabakh and the continued fighting in the neighbouring Chechnya, the Azerbaijan government slows down the democratisation process, the privatisation of government enterprises and overall liberalisation of the economy.
- The consortium of oil companies having committed themselves at developing the oil reserves of Azerbaijan continue to honour their commitment, but the rate of development is slowed down compared to the original plans. Plans for the construction of new pipelines are postponed, pending a peaceful resolution of the conflicts in the region.
- The international banks are becoming more restrictive with funding investment projects in Azerbaijan and the Central Asian republics, and Western government grants and aid funds are reduced considerably. Foreign investment activity in all the Central Asian economies slows down both in the important oil and gas industry as well as in other industries.

Although the downward trend of the economic development of the Azerbaijan and other Central Asian republic economies is stopped by the year 2000, the overall economic growth of the region from the year 2000 measured by the GDP is maintained at a level between 0 and 3% per year.

The direction of trade

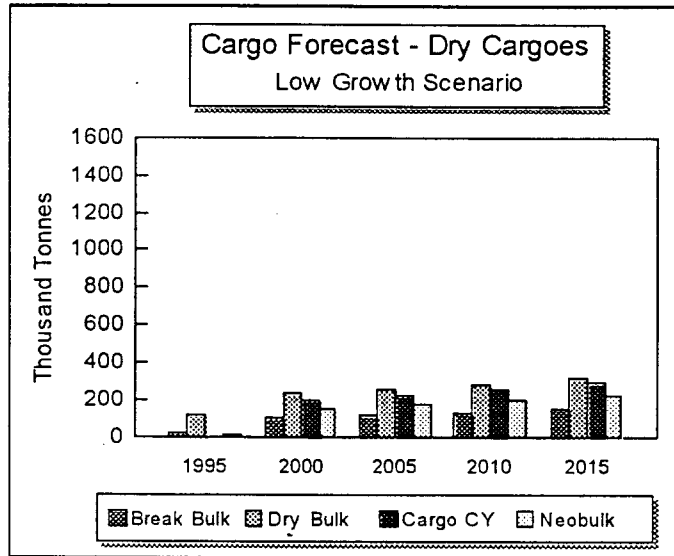
The development under this scenario will in the main follow the trends of the "Most Likely Scenario" described above. The more restrictive political and economic policies of both the Azerbaijan and other Central Asian republic governments will tend to redirect their trade more in favour of Iran, the People's Republic of China and the FSU, which will imply less cargoes via the TRACECA route and on all other trade routes.

Development of alternative transport patterns and routings

The investments by the EU in the TRACECA corridor including the port and ferry terminals of Baku ensure the success of the TRACECA route. As a result the TRACECA route maintains its position as an important transport corridor of the Central Asian countries' foreign trade, despite the lack of a lasting resolution of the Nagorny Karabakh and the Chechnya conflicts. The main developments on the alternative routes that will influencing the use of the port of Baku under this scenario are:

- The continuation of hostilities between Armenia and Azerbaijan casts shadows over the stability of the TRACECA route through Azerbaijan and Georgia, and possible sabotage and terrorist attacks reduce the cargo flows on this route.
- The Russian government takes advantage of the unstable political situation and allocates the necessary funds to upgrade and improve the navigability of the Volga-Don waterway with the extended draft and improved locks ensuring minimal delays and the use of the full draft and loading capacity of the vessels. The waterway is also actively marketed to and cargoes are solicited from both local and international liner and bulk operators, and the cargo volumes of both general cargoes and bulk cargoes are shipped on this waterway. The cargo volumes are, however, low due to the slowdown of economic activity in the region.
- As a result of the continued conflict in Chechnya, the Russian government speeds up the development of the port of Alia near Astrakhan followed by the establishment of alternative ferry services from this port to Aktau, Turkmenbashi and Iranian ports. The cargo volumes on this route are growing rapidly following the opening of the port of Alia, and the volume of Russian and Ukrainian transit cargoes through the port of Baku is reduced dramatically.
- The reopening of landbridge rail link between Central Asia and the Russian Far East ports is followed by upgrading of the handling capacity of the border crossings with the People's Republic of China. Increasing volumes of both imports and exports are carried on these routes to compensate for the lowered trade volumes to and from the Europe and the United States.
- The Iranian and Turkmenistan governments allocates additional resources to upgrade both rail and road links to Bandar Abbas, and overland transit through Iran is becoming a serious challenge to the TRACECA route.
- The reduced cargo volumes to and from Europe and the US continue to be shipped on the more cost and time efficient TRACECA route, although some shippers and consignees also select alternative routes due to the uncertainties surrounding the security situation on the route.

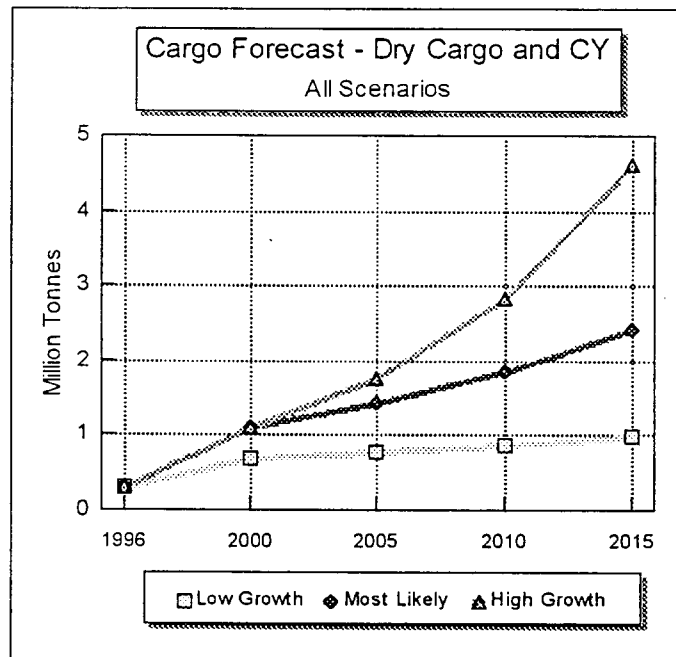
Figure 3



Under this scenario the cargo volumes are expected to grow at a low rate of 2 to 3% per year as presented in Table 5-11.

A summary for all three scenarios is presented in figure 4

Figure 4



5.8 Mode of Transport and Composition- CFS Containers.

The key issue for the International Seaport of Baku will be to gain acceptance of the port's CFS as the handling station for all containerised rail traffic, both by block trains and by regular cargo trains. In the event that the port should fail to secure this acceptance, the volume of containers handled additionally to those handled over the

berth to and from ships will be limited to transit containers handled via the ferry. In the following discussion it is assumed that the Baku CFS is located in the port area

As discussed in Section 4.3.1 the CFS will function as a multimodal terminal facility for the handling of containers, and as such the CFS will handle containers arriving and departing by rail, truck and ships operating on the Caspian Sea. In the case of Baku, most of the containers handled will be coming from or destined to the port of Poti, Georgia, to and from where the containers will be transported by container feeder vessels. Currently, two of the largest container operators in the world, Sea-Land Service, Inc. of the USA and P&O Containers of the UK, are in the process of establishing Poti as their seaport of entry and departure for all their container traffic to and from the Central Asian Republics and the Southern region of the other CIS nations and Georgia.

P&O has handled their containers between Europe and the Central Asian region via Dubai and Bandar Abbas, while it has not been able to handle the container traffic to and from the US, as a result of the breakdown of trade relations between the US and Iran. A representative of P&O has estimated that by bringing cargoes to and from Europe through Poti, Georgia, the transit time is expected to be reduced by 20 days and the overall freight charges by 40 - 45% compared to the Gulf route via Dubai/Bandar Abbas. In addition, the opening of the new route via Poti will open the market for container traffic to and from the US, which will bring substantial new volumes of traffic. The container traffic to and from the Far East, South East Asia, India and Pakistan and Australasia (i.e. Australia and New Zealand plus the islands in the Pacific) will continue to be handled via the Dubai and Bandar Abbas and transported by truck between Bandar Abbas and Baku.

Other container operators are expected to follow the precedence established by Sea-Land and P&O, and it can be envisaged that they also establish Poti, Georgia, as their main Central Asian and CIS transshipment hub. In this way, Poti will challenge St. Petersburg's current role as the main gateway to the CIS.

As discussed in Annex II of this report, the lowest cost and fastest transport mode between Baku and Poti is rail transport. The most efficient and least cost rail transport alternative is by block trains. Thus, one of the key prerequisites for the Inland Container Yard (CY) or for the Container Freight Station (CFS) to function as an attractive CFS for the container operators and for attracting the number of containers identified in the above forecasts, is for the national railroads of Azerbaijan and Georgia in close co-operation with the ports of Baku and Poti and the container operators to establish regularly scheduled, frequent container block trains operating in the transport corridor between Poti and Baku. The unavailability of container block trains or dependable, regularly scheduled train service and proper handling equipment has forced the container operators at the present time to depend entirely on truck transport between Baku and Poti. Between Baku and the Iranian port of Bandar Abbas truck transport is the only alternative, since all rail transport is blocked by the Armenian occupation of the Julfa border station.

Hence, one of the central assumptions in developing the cargo volume forecast for the CFS is the establishment of regularly scheduled container block trains between Poti and Baku, shuttling large volumes of containers between these ports. It is furthermore expected that the regularly block train service will be operational and functioning efficiently by the year 2000 (the baseline year). At that time a major proportion of all containers transported between Poti and the CFS in Baku will be handled by rail, both as a result of lower cost and faster transit time compared to truck transport. It is expected that the railroads should be able to capture a market share of between 60% and 70%, while trucks will handle between 30% and 40%. The rail traffic will be divided between block trains and containers transported in regular cargo trains. While it can be expected that a major proportion of the containers transported by rail will be handled by block trains and will be handled in the CFS, there will be instances where container traffic will be included in regular freight trains as part of project

shipments or for shipments directly to and from industrial companies or freight forwarders. The distribution of the traffic by train to and from the CFS is expected to be:

- Rail transport in block trains - 70 - 80% of volume
- Rail transport in regular cargo trains - 20 - 30% of volume

Those containers that will be transported by truck will primarily be delivered directly by truck operators, which will carry the same container empty or loaded with new cargoes back to Poti without entering the CFS. Thus, the truck traffic in the CFS will be local distribution of the containers between the CFS and shippers and consignees located in Baku and in the near hinterland of the port. In addition there will be traffic of distribution trucks handling LCL (i.e. Less Than Container Load shipments grouped into one container) cargoes between the LCL warehouse and the shippers and consignees.

A small, but growing trade will also be represented by containerised cargoes to and from the Russian ports in the Far East and the People's Republic of China, transported by the rail landbridge via Siberia and Central Asia and then via the ferry. These containers are also expected to be handled through the Baku CFS.

A business opportunity that can be and most likely will be developed by the CFS is the handling of containers to and from Bandar Abbas, currently transported exclusively by truck by Iranian transport companies. At the present time the truckers bring the containers to a truck terminal in Baku, where they are customs cleared and then brought to the consignee, and then either loaded with return cargoes destined for transshipment via Bandar Abbas and Dubai or returned empty. As long as the Julfa border station is closed and truck transport is the only alternative, the CFS could initially assume the role currently performed by the truck terminal. In addition, it would be possible for the truckers and the container operators to interchange containers at the CFS. Following a peace settlement with the Armenians and reopening of the Julfa border station, increasing volumes of containers can be expected to be shifted to rail transport. When container block trains are established between Baku and Bandar Abbas, the bulk of the container traffic will be taken over by the block trains and handled through the CFS. It should be noted that the container traffic to and from Bandar Abbas has not been included as part of the forecasted traffic volume for the CFS and would therefore be an additional cargo opportunity.

In addition to the cargoes handled through the CFS destined and originating in Azerbaijan, the International Seaport of Baku will also handle transit container traffic to and from Central Asia transported by the ferry between Baku and Turkmenbashi. In this connection the port will in the main be required to handle containers arriving in or departing from Baku by rail, which are shipped or have arrived by the ferry by truck or unaccompanied on chassis or on a Mafi-type trailer. Since no specific handling area has been defined in the ferry terminal for the handling of such traffic, these transit containers will have to be handled in the container handling area of the port. The extra handling of the containers in the port between rail and truck/chassis/Mafi-type trailer will, however, add a cost element for additional handling and require more time, plus that it will also imply the necessity of additional follow-up and administration of the part of the freight forwarder or transport company. As a consequence it is expected that the major portion of the transit container traffic via the ferry will be handled directly on a through basis on rail cars or trucks/chassis to avoid extra container handling in the port.⁷

⁷ This situation will, however, to a large extent be driven by the rate structure and policy of both the ferry company and the railroads. The current rate structure of the ferry favors the transport of rail cars, i.e. the ferry cost of transporting a rail car is less than for a tractor/trailer. If the ferry charges are changed to reflect the true economic cost of the transport of rail cars and trucks/chassis, freight forwarders and transport companies may find it advantageous to use the Baku CFS as a transshipment point whereby they would elect to use block trains between Poti and Baku, ship the containers unaccompanied on Mafis or chassis on the ferry and use truck or rail transport between Turkmenbashi and other points in the Central Asian republics.

As discussed in Section 5.6 with respect to the baseline, cargo volume to be handled through the CFS it is expected to be 300,000 tonnes in the year 2000. This container trade will be import driven and the predominance of the containers will be coming from the regions outside Central Asia. A large proportion of imported products arriving in containers from the industrialised countries outside the CIS will be relatively high value products in the form of equipment, machinery and supplies for the burgeoning oil industry and to rebuild the industrial infrastructure, miscellaneous supplies and materials to the industrial complexes (which previously was primarily supplied from Russia) in addition to various consumer products.

Once the import containers are discharged at their destination in Azerbaijan or one of the Central Asian nations, the container operators will seek cargoes suitable for containerisation among the export cargoes. A prime example will be to carry a commodity such as cotton, which in other world trades are almost exclusively containerised. This commodity can be handled in both in 40 ft. as well as in 20 ft. containers. Azerbaijan also has the potential to export significant quantities of industrial goods, such as air conditioners and oil equipment plus various chemical and petrochemical products. All these are also containerisable commodities.

It is, however, unlikely that the container operators and freight forwarders shipping containers to Azerbaijan and the other Central Asian republics will be able to find sufficient return export cargoes to ship out all their containers full and, therefore, there will inevitably be containers that will be returned empty. In connection with the empty container trades the following central assumptions are made:

- The container shipments of cargoes handled by the liner operators in the Caspian Sea basin arriving and departing by ships will be balanced, i.e. all containers coming in will also be shipped out with cargoes.
- The cargoes arriving via the Far East landbridge will almost exclusively be freight forwarder cargoes. These forwarders will have to balance the usage of their containers in order to operate with profitability and will find return cargoes for their containers on the same route (e.g. cotton).
- The intermodal containers handled via the CFS will also be balanced, so that all containers shipped out will return with cargoes. The rationale is that the container operators and forwarders will only send the containers to Central Asia with the clear expectation to be able to secure return cargoes. Their alternative would be to strip the containers either in Poti or in Baku to avoid empty handling of the containers.
- The empty positioning will in the main occur from the CFS in Baku to Poti. These containers will be excess containers over and above the strategic stock of empties that will be kept by the container operators to secure return cargoes.
- The overall distribution and balance of the total container trade between Poti and the Baku CFS, based on experience from other trades, is expected to be 60% imports and 40% exports.

The overall distribution of the modal split of the container traffic for the baseline of the most likely forecast in the year 2000 is illustrated in Figure 1 for the import trades and in Figure 5 for the export trade.

Modal Split on Import Container Traffic Cargo Flow

Most Likely Scenario - Estimate for Year 2000
Full Container

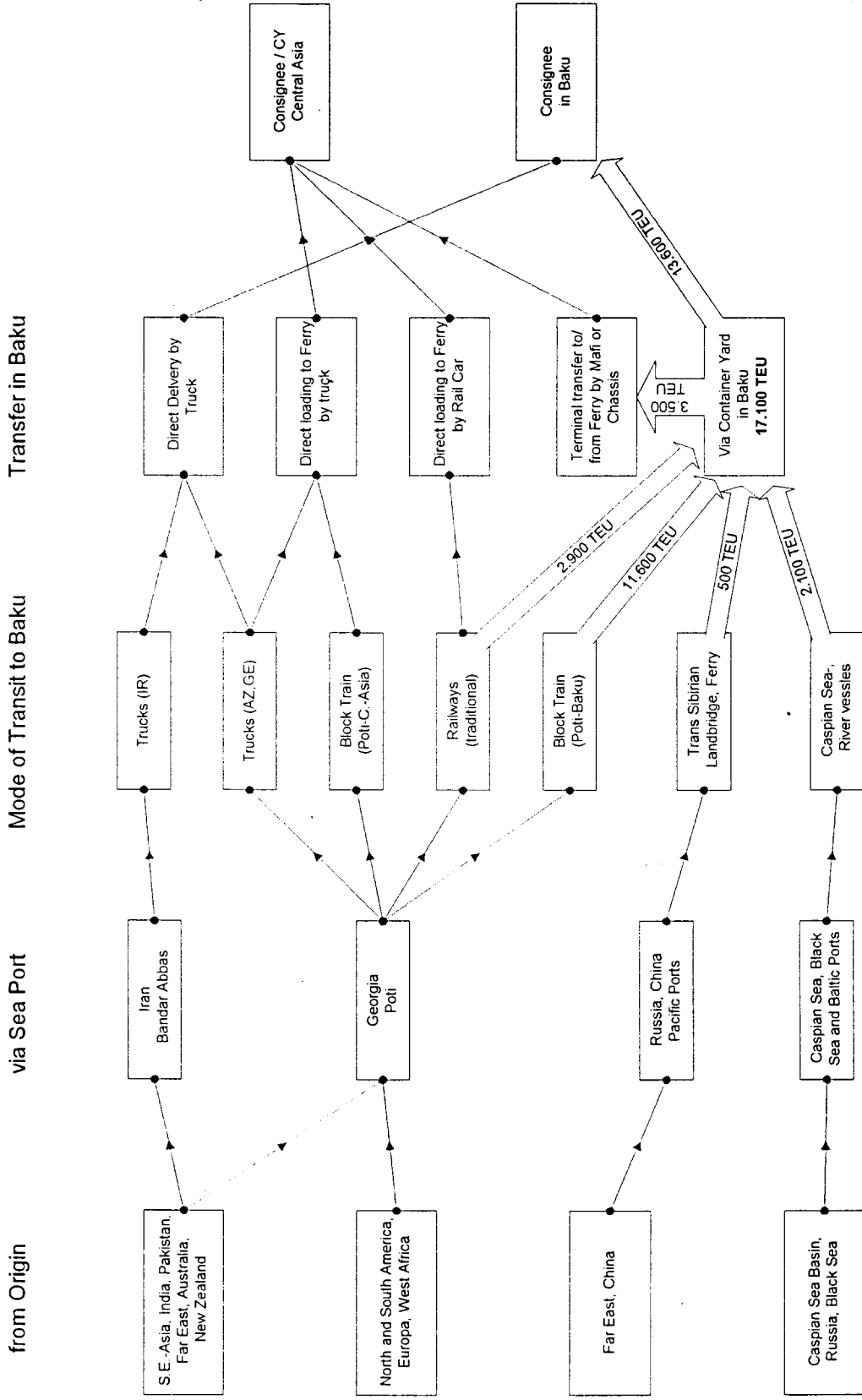
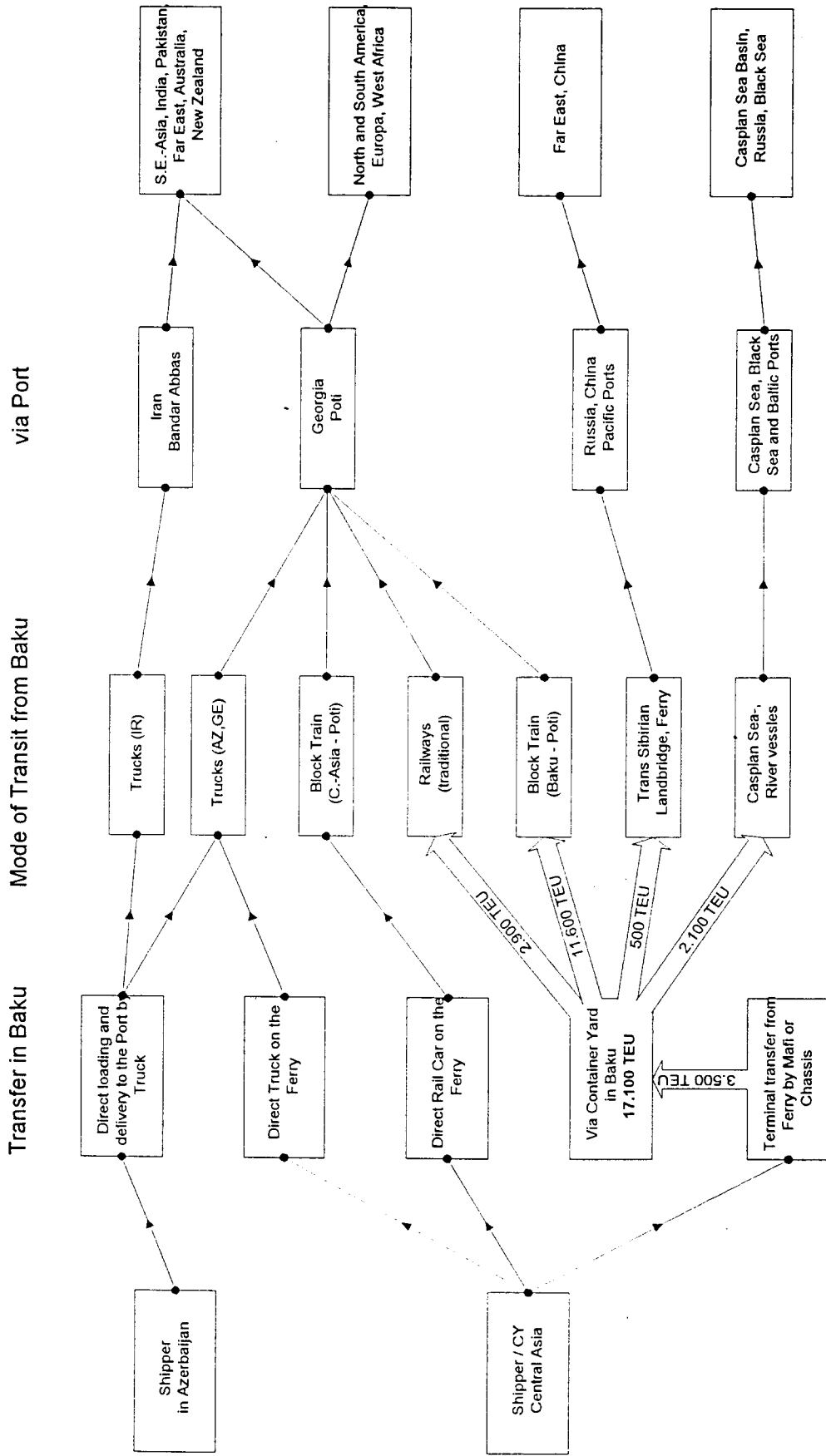


Figure 6

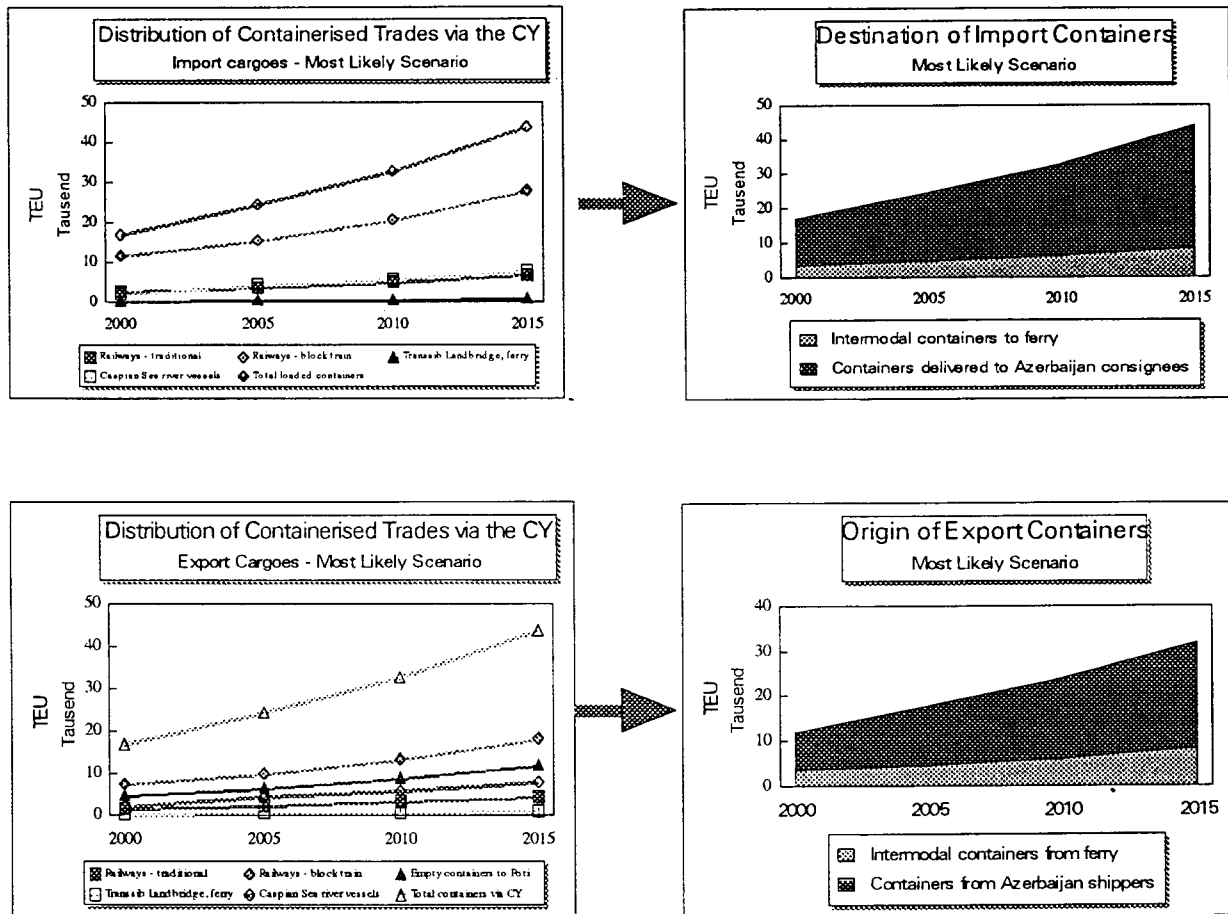
Modal Split on Export Container Traffic Cargo Flow

Most Likely Scenario - Estimate for Year 2000
Full and Empty Container



The forecasted modal split of the container trade, to be handled through the CFS, is presented in detail in Tables 5-12 in the list of tables, a graphical presentation is shown in Figures 7 to 9 hereunder..

Figure 7



Another issue is the expected distribution between size of containers, i.e. 20 ft. vs. 40 ft. containers. In the former Soviet Union and currently in the CIS countries the container trade has been minimal, and to the extent that a container transport trade has existed it has been handled almost exclusively 20 ft. containers. The primary reason is that specialised equipment for handling containers has been and still is virtually non-existent. Outside the ports in the CIS, only two or three inland railroad stations have equipment to handle 40 ft. containers, one of the rail freight stations in Moscow is one. Some major rail stations are equipped with cranes or large fork lifts with lifting capacity sufficient to handle loaded 20 ft. containers. (All Soviet 20 ft. containers were equipped with fork lift pockets.)

When the container trade to and from Baku and the other industrialised countries, which, as stated above, will be import driven, is firmly established (i.e. in the time frame after the year 2015), the split between 20 ft. and 40 ft. containers is expected to be similar to that of other developed container trades, i.e. between 70% and 80% 40 ft. and between 20% and 30% 20 ft. containers. Prior to that period, the containerised trade to and from Azerbaijan and the Central Asian countries can be expected to be similar to other developing container trades, where the proportion of 20ft. containers tend to be considerably higher as a result of a higher proportion of small lot shipments, heavy project cargoes and large proportion of raw and semi-processed export cargoes (which generally are relatively heavy). The assumptions made with respect to the development of the distribution of container sizes are:

<u>Time frame</u>	<u>% 20ft.</u>	<u>% 40ft.</u>
Now to 2005	80	20
2005 - 2010	60	40
2010 - 2015	50	50

After this time a gradual development in the direction of the of world-wide split 20% to 30% 20 ft and 70% to 80% 40 ft. containers can be expected.

The following figures illustrate the development of containerised trade in the low growth and in the high growth scenario.

Figure 8: Low Growth Scenario

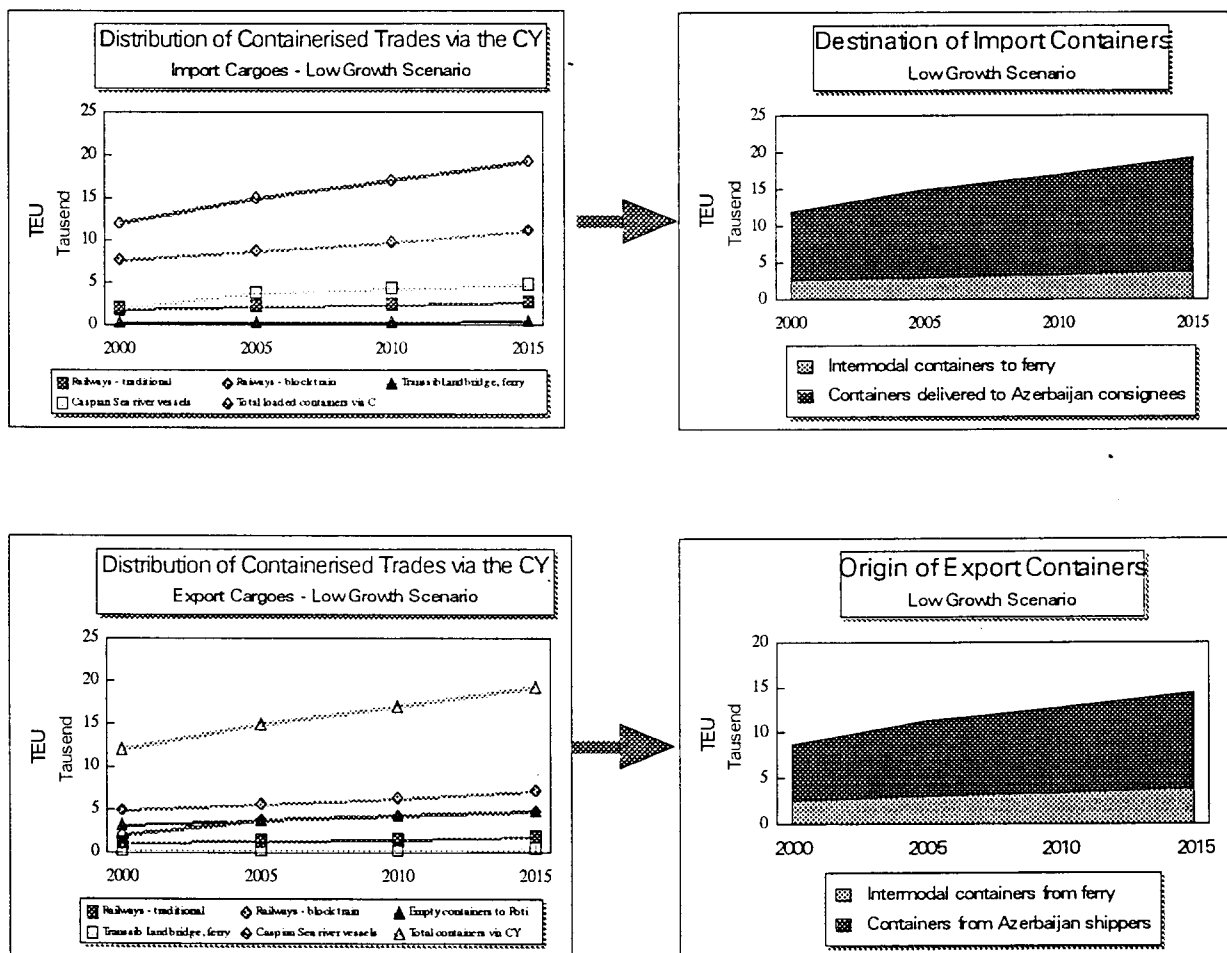
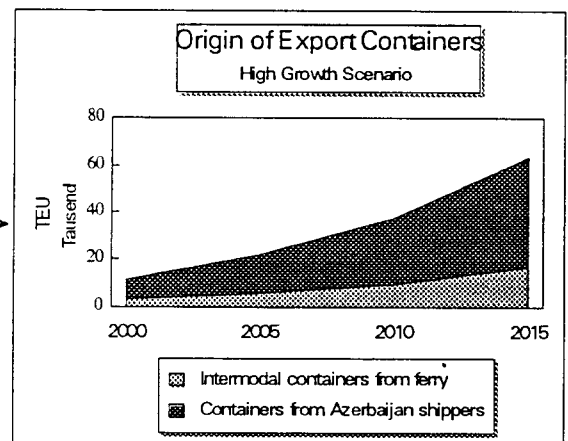
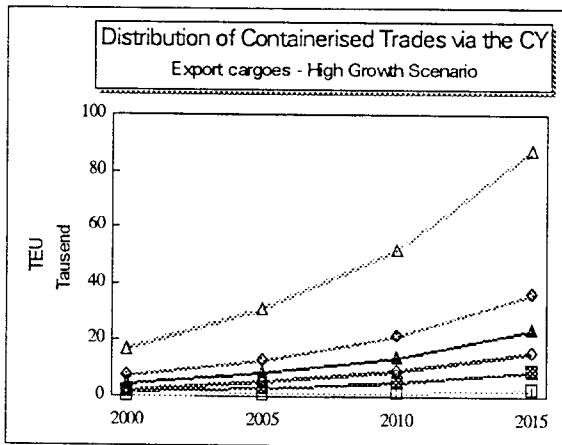
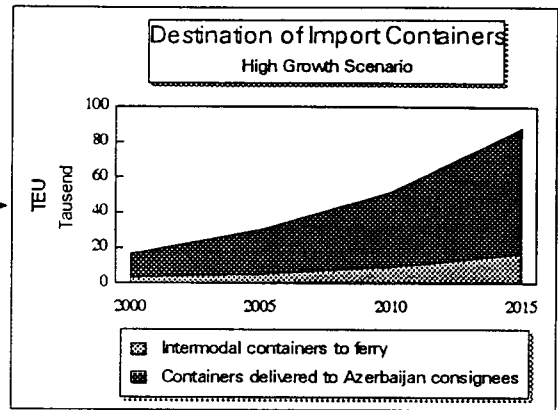
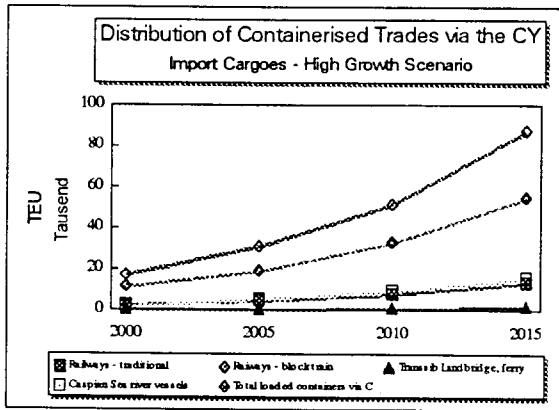


Figure 9: High Growth Scenario



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Table 1-1: Development of GDP in Azerbaijan since 1990

	1990	1991	1992	1993	1994	1995
GDP at current prices (billion manat)	1.5	2.7	24.1	157.1	1676.4	-
GDP constant prices (mio manat)	1466.0	1455.7	1126.8	866.4	676.7	575.2
Index 1990=100 of which by sector:	100	99.3	76.9	59.1	46.2	39.2
industry	100	92.2	75.4	59.2	43.9	-
agriculture	100	97.1	72.8	61.2	53.1	-
construction	100	102.7	76.5	51.1	27.1	-
transport & communication	100	90.3	43.0	28.8	23.0	-

Source: Azstat: Azerbaijan in figures, 1994
Azerbaijan - country profile

Table 2-1: Development of the Freight Transport- Railway and Ships - in Azerbaijan (million tons)

Mode	1985	1991	1993	1994
Railway	n.a.	31.0	25.0	16.35
Sea	26.7	15.1	6.47	6.3
Total	n.a.	46.1	31.47	22.65
Index 1991=100		100	68	49

Source: Caspian Sea Water Level, Final report
Stat. Bundesamt; L@nderbericht GUS-Staaten 1994
own calculation

Table 2-2: Handling Volume of the Port of Baku (1000 tons) since 1987

Types of Cargoes/Year	1987	1991	1992	1993	1994	1995	1996 *)	Estimate 1996
Building Materials	691.6	620.0	279.3	78.9	15.1	--	--	
Salt	238.3	19.4	81.5	35.0	34.4	111.4	60.0	80.0
Grains	0.0	0.0	20.6	0.0	34.5	4.2	15.0	60.0
Timber/Wood	67.1	22.0	19.2	20.2	12.4	0.8	6.0	15.0
Metal	48.2	172.0	208.3	225.3	202.5	11.6	10.0	20.0
Equipment	3.8	2.5	9.7	3.5	2.6	2.2	3.5	5.0
Chemicals	133.4	5.0	4.6	23.4	0.9	--	--	--
Container	0.0	5.6	12.63	51.6	7.2	4.8	3.0	4.0
Other General Cargo	55.7	50.9	57.9	80.2	107.7	7.0	95.0	115.0
TOTAL DRY CARGO	1,238.1	897.4	688.5	518.1	417.3	142.0	192	299
TOTAL FERRY TRAFFIC	5,850.0	1,920.1	1,094.8	638.5	553.7	781.5	565.0	800
TOTAL LIQUID CARGO (**)	n.a.	8,671.5	3,556.0	3,370.7	869.4	91.0	104.0	100
TOTAL TURNOVER	n.a.	11,489.0	5,339.3	4,527.3	1840.4	1014.5	861.5	1199

Notes: *) = estimate on 9 month basis

**) = data of Caspian Shipping Company (Port of Absheron)

Source: Port of Baku

Table 5-2: Central Asian Countries Imports by Major Commodities and Origin, 1994

Country	Commodity	Unit	From CIS	From other countries	Total	
Azerbaijan	Bread grain	Thousand tons		149.0	149.0	
	Grouts	Thousand tons	0.7	0.5	1.2	
	Sugar	Thousand tons	69.0	4.7	73.7	
	Vegetable oils	Thousand tons	1.8	12.7	14.5	
	Potatoes	Thousand tons	1.1	28.0	29.1	
	Raw oil, condensation gas	Million tons	0.7	0.0	0.7	
	Mineral or chemical fertilizer	Thousand tons	12.0		12.0	
	Cotton fabric	Million meters	2.0		2.0	
	Leather shoes	Thousand pairs	1.0	11.0	0.0	
	TV sets	Thousands	0.0	0.0	12.0	
	Buses	Thousands	1.0	1.0	0.0	
	Cars	Thousands -			2.0	
	Kazakhstan	Bread grain	Thousand tons		0.3	0.3
		Vegetable oils	Thousand tons	5.2	15.0	20.2
Sugar		Thousand tons	40.0		40.0	
Gasoline		Thousand tons	332.0		332.0	
Diesel		Thousand tons	703.0	0.0	703.0	
Furnace oil		Thousand tons	380.0	0.0	380.0	
Leather shoes		Thousand pairs	0.1	0.2	0.3	
Refrigerators		Thousands	16.0	0.9	16.9	
TV sets		Thousands	23.0	11.9	34.9	
Buses		Thousands	0.6	0.1	0.7	
Cars		Thousands	4.2	0.5	4.7	
Trucks		Thousands	2.9	0.0	2.9	
Kirghizstan		Bread grain	Thousand tons			
	Vegetable oils	Thousand tons	3.6		3.6	
	Sugar	Thousand tons	5.0		5.0	
Tajikistan	Bread grain	Thousand tons		296.0	296.0	
	Vegetable oils	Thousand tons	2.6		2.6	
	Sugar	Thousand tons	0.1	8.4	8.5	
Turkmenistan	Potatoes	Thousand tons	0.4		0.4	
	Bread grain	Thousand tons		338.0	338.0	
	Vegetable oils	Thousand tons	35.0	19.0	54.0	
Uzbekistan	Potatoes	Thousand tons	9.7	71.0	80.7	
	Bread grain	Thousand tons		1,478.0	1,478.0	
	Sugar	Thousand tons	48.0	173.0	221.0	
	Cotton fabric	Million meters	17.0	0.3	17.3	
	Cars	Thousands	0.6	0.3	0.9	
	Trucks	Thousands	0.4	0.1	0.5	

Source: Feasibility Study: Turkmenbashi Port Development, Phase I, Draft Report

Table 5-3: Central Asian Countries and Azerbaijan Exports by Major Commodities and Origin, 1994

Country	Commodity	Unit	To CIS	To other countries	Total
Azerbaijan	Gasoline	Thousand tons	0.6		0.6
	Diesel	Thousand tons	386.0	1,083.0	1,469.0
	Furnace oil	Thousand tons	27.0	42.0	69.0
	Cotton fibre	Thousand tons	13.0	66.0	79.0
	Buses		25.0		25.0
Kazakhstan	Bread grains	Thousand tons	1,867.0	22.0	1,889.0
	Coal	Million tons	30.0	0.6	30.6
	Raw oil, condensation gas	Million tons	5.7	0.1	5.8
	Gasoline	Thousand tons	136.0	16.0	152.0
	Diesel	Thousand tons	61.0	873.0	934.0
	Furnace oil	Thousand tons	19.0	356.0	375.0
	Cotton fibre	Thousand tons		41.0	41.0
	Refined copper	Thousand tons		122.0	122.0
	Raw zinc	Thousand tons		91.0	91.0
	Tractors	Thousands	1.4	0.1	1.5
Kirghizstan	Mineral or chemical fertilizers	Thousand tons		7.5	7.5
	Cotton fibre	Thousand tons		9.7	9.7
	Refined copper	Thousand tons		1.6	1.6
	Unrefined aluminium	Thousand tons		1.8	1.8
Tajikistan	Cotton fibre	Thousand tons	7.0	64.0	71.0
	Unrefined aluminium	Thousand tons		205.0	205.0
Turkmenistan	Natural gas	Billion cubic meters	25.0		25.0
	Mineral or chemical fertilizers	Thousand tons	0.4		0.4
	Cotton fibre	Thousand tons	18.0	237.0	255.0
Uzbekistan	Raw oil, condensation gas	Thousand tons	636.0	28.0	665.0
	Mineral or chemical fertilizers	Thousand tons	220.0	288.0	508.0
	Cotton fibre	Thousand tons	530.0	563.0	1,093.0

Source: Feasibility Study: Turkmenbashi port development
Phase I, Draft Report

Table 5-5: Recent History and Baseline Cargo Forecast to the Year 2000 for the Port of Baku

(in thousands of tons)				Estimate	Baseline
Commodity:	1993	1994	1995	1996	2000
Dry bulk cargoes					
Building materials	78,9	15,1	0	0	100
Salt	35	34,4	34,4	80	120
Grains	0	34,5	34,5	60	170
Total	113,9	84	68,9	140	390
Neobulk cargoes					
Timber and lumber, transit	20,2	12,4	0,8	15	15
Timber and lumber, imports					30
Metals, import				5	50
Metals, transit	225,3	202,5	11,6	15	50
Scrap metal, exports					60
Project cargoes for oil industry					10
Cotton exports					10
Misc. food products, imports					50
Fruits and vegetables, export					35
Total	245,5	214,9	12,4	35	310
General Cargoes					
Misc. general cargoes, break bulk	107,1	111,2	2,9	120	50
Containerized cargoes	51,6	7,2	4,8	4	50
Total	158,7	118,4	7,7	124	100
Total dry bulk, neobulk and general cargoes	518,1	417,3	89	299	800
Liquid bulk cargoes					
Crude oil, total	3370,7	869,4	91	160	
Grand total, excl. ferry traffic	3730	1168	172,3	335	800
CFS - Container handling					
Cargo tons					300
TEU, number					25000

Note: Cells with the number 0 indicate no cargo volume, while cells with no date indicate that no date was available

Table 5-8: Azerbaijan: Projected Trends 1994 - 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Percent Changes in Real Output										
GDP	-21.9	-8.9	-1.3	-0.8	-0.3	3.5	6.3	11.5	10.9	10.0
Oil and Gas	-8.2	-3.5	-7.1	-7.0	-7.0	6.3	13.6	29.0	23.2	17.8
Rest of Economy	-24.2	-10.0	-10.0	0.5	1.0	3.0	5.0	8.0	8.0	8.0
Balance of Payments (Mio.USS)										
Exports	637	613	464	468	512	577	891	1412	1982	2552
Imports	849	839	739	919	1139	1365	1800	2434	2863	3384
Resource Gap	-212	-226	-275	-451	-626	-788	-908	-1010	-881	-831

Source: Azerbaijan, Economic Update, World Bank, April 24, 1995

Table 5-9: Recent History and Cargo Forecast to the year 2015 for the Port of Baku
Most likely scenario (thousand tons)

	Actual	Actual	Actual	Estimate	Baseline			
Commodity:	1993	1994	1995	1996	2000	2005	2010	2015
Dry bulk cargoes								
Building materials	78.9	15.1	0	0	100	134	179	240
Salt	35	34.4	111.4	80	120	161	215	288
Grains	0	34.5	4.2	65	170	170	170	170
Total	113.9	84	115.6	145	390	464	564	697
Neobulk cargoes								
Timber and lumber, transit	20.2	12.4	0.8	15	15	20	27	36
Timber and lumber, imports					30	40	54	72
Metals, import				5	50	67	90	120
Metals, transit	225.3	202.5	11.6	15	50	67	90	120
Scrap metal, exports					60	80	107	144
Project cargoes for oil industry					10	13	18	24
Cotton exports					10	13	18	24
Misc. food products, imports					50	67	90	120
Fruits and vegetables, export					35	47	63	84
Total	245.5	214.9	12.4	35	310	415	555	743
General Cargoes - seaborne								
Misc. general cargoes, break bulk	107.1	111.2	9.2	120	50	27	36	48
Containerized cargoes	51.6	7.2	4.8	4	50	107	143	192
Total, tons	158.7	118.4	14	124	100	134	179	240
Total dry cargoes, seaborne	518.1	417.3	142	304	800	1013	1298	1680
Liquid bulk cargoes								
Crude oil, total	3370.7	869.4	91	160	10000	10000	10000	10000
Grand total, excl. ferry traffic	3730.1	1168.3	172.3	335	10800	11013	11298	11680
CFS - Intermodal Container Handling								
Cargo tons					300	401	537	719
Grand total dry cargo and CFS (tons)	518.1	417.3	142	304	1100	1415	1835	2399
Thereof containerized cargo					350	508	680	911

Note: Cells with the number 0 indicate no cargo volume, while cells with no data indicate that no data was available
Import volume of grain and the market share of the port is expected to remain constant over the forecast period

Table 5-10: Recent History and Cargo Forecast to the Year 2015 for the Port of Baku
Optimistic/ high growth scenario (in thousand tons)

Commodity	Actual	Actual	Actual	Estimate	Baseline		2010	2015
	1993	1994	1995	1996	2000	2005		
Dry bulk cargoes								
Building materials	78.9	15.1	0.0	0	100	169	284	478
Salt	35.0	34.4	111.4	80	120	202	341	574
Grains	0.0	34.5	4.2	65	170	170	170	170
Total	113.9	84.0	115.6	145	390	541	795	1223
Neobulk cargoes								
Timber and lumber, transit	20.2	12.4	0.8	15	15	25	43	72
Timber and lumber, import					30	51	85	144
Metals, import				5	50	84	142	239
Metals, transit	225.3	202.5	11.6	15	50	84	142	239
Scrap metal, export					60	101	170	287
Project cargoes for oil industry					10	17	28	48
Cotton, export					10	17	28	48
Misc. food products, import					50	84	142	239
Fruits and vegetables, export					35	59	99	167
Total	245.5	214.9	12.4	35	310	522	880	1483
General Cargoes								
Misc. general cargoes, break bulk	107.1	111.2	9.2	120	50	34	57	96
Containerized cargoes	51.6	7.2	4.8	4	50	135	227	383
Total	158.7	118.4	14	124	100	169	284	478
Total dry cargoes	518.1	417.3	142	304	800	1232	1959	3184
Liquid bulk cargoes								
Crude oil, total	3370.7	869.4	91.0	160	10000	10000	10000	10000
Grand total, excl. ferry traffic	3730.1	1168.3	172.3	335	10800	11232	11959	13184
CFS - Intermodal Container Handling								
Cargo tons					300	506	852	1435
Grand total dry cargo and CFS (tons)	518.1	417.3	142	304	1100	1737	2811	4620
Thereof containerized cargo					350	641	1079	1818

Note: Cells with the number 0 indicate no cargo volume, while cells with no data indicate that no data was available
Import Volume of grain and the market share of the port is expected to remain constant over the forecast period

Table 5-11: Recent History and Cargo Forecast to the Year 2015 for the Port of Baku
Pessimistic/low growth scenario (in thousand tons)

Commodity:	Actual	Actual	Actual	Estimate	Baseline		2010	2015
	1993	1994	1995	1996	2000	2005		
Dry bulk cargoes								
Building materials	78,9	15,1	0,0	0	50	57	64	72
Salt	35,0	34,4	111,4	80	120	136	154	174
Grains	0,0	34,5	4,2	65	65	65	65	65
Total	113,9	84,0	115,6	145	235	257	283	311
Neobulk cargoes								
Timber and lumber, transit	20,2	12,4	0,8	15	5	6	6	7
Timber and lumber, import					15	17	19	22
Metals, import				5	15	17	19	22
Metals, transit	225,3	202,5	11,6	15	25	28	32	36
Scrap metal, export					30	34	38	43
Project cargoes for oil industry					10	11	13	14
Cotton, export					10	11	13	14
Misc. food products, import					25	28	32	36
Fruits and vegetables, export					20	23	26	29
Total	245,5	214,9	12,4	35	155	175	198	224
General Cargoes - Seaborne								
Misc. general cargoes, break bulk	107,1	111,2	9,2	120	50	23	26	29
Containerized cargoes	51,6	7,2	4,8	4	50	91	102	116
Total	158,7	118,4		124	100	113	128	145
Total dry cargoes - Seaborne	518,1	417,3	142,0	304	490	546	609	681
Liquid bulk cargoes								
Crude oil, total	3370,7	869,4	91,0	160	10000	10000	10000	10000
Grand total, excl. ferry traffic	3730,1	1168,3	219,0	340	10490	10546	10609	10681
CFS -Intermodal Container handling								
Cargo tons					200	226	256	290
Grand total dry cargo and CFS (tons)	518,1	417,3	142,0	304	690	772	865	970
Total tons containerized cargo, seaborne and CFS					250	317	358	406

Note: Cells with the number 0 indicates no cargo volume, while cells with no data indicates that no data was available.

Import volume of grain and the market share of the port is expected to remain constant over the forecast period.

Table 5-12: Container cargo forecast to the year 2015 for the port of Baku
Most likely scenario (cargoes in thousands of tons/containers in TEU=12 tons)

	Baseline			
	2000	2005	2010	2015
General Cargoes - seaborne				
Misc. general cargoes, break bulk	50	27	36	48
Containerised cargoes	50	107	143	192
Total tons	100	134	179	240
CY - Intermodal Container Handling				
Cargo tons	300	401	537	719
Total tons containerised cargo, seaborne and CY				911
Number of containers in TEU				
General cargoes - seaborne	4.167	8.922	11.939	15.977
CY - Intermodal Container Handling	25.000	33.456	44.771	59.914
Total TEU, seaborne and CY	29.167	42.377	56.710	75.891

Distribution of containerised trades via the CY in TEU:				
	Baseline			
	2000	2005	2010	2015
Import cargoes:				
Railways - traditional	2.900	3.881	5.193	6.950
Railways - block train	11.600	15.523	20.774	27.800
Trans-siberian Landbridge, ferry	500	669	895	1.198
Caspian Sea river vessels	2.083	4.461	5.969	7.989
Total loaded containers via CY	17.083	24.534	32.832	43.937
Intermodal containers to ferry	3.500	4.684	6.268	8.388
Containers delivered to Azerbaijan consignees	13.583	19.850	26.564	35.549
Export cargoes:				
Railways - traditional	1.900	2.543	3.403	4.553
Railways - block train	7.600	10.171	13.610	18.214
Empty containers to Poti	5.000	6.691	8.954	11.983
Trans-siberian landbridge via ferry	500	669	895	1.198
Caspian Sea vessels	2.083	4.461	5.969	7.989
Total containers via CY	17.083	24.534	32.832	43.937
Total loaded containers via the CY	12.083	17.843	23.878	31.954
Intermodal containers from ferry	3.500	4.684	6.268	8.388
Containers from Azerbaijan shippers	8.583	13.159	17.610	23.566

Distribution of containerised trades via the CY actual container units (20ft or 40 ft):				
	2000	2005	2010	2015
Import cargoes:				
Railways - traditional	2.610	3.105	3.895	5.213
Railways - block train	10.440	12.419	15.580	20.850
Trans-siberian Landbridge, ferry	450	535	672	899
Caspian Sea river vessels	1.875	3.569	4.477	5.991
Total loaded containers via CY	15.375	19.627	24.624	32.953
Intermodal containers to ferry	3.150	3.747	4.701	6.291
Containers delivered to Azerbaijan consignees	12.225	15.880	19.923	26.662
Export cargoes:				
Railways - traditional	1.710	2.034	2.552	3.415
Railways - block train	6.840	8.136	10.208	13.660
Empty containers to Poti	4.500	5.353	6.716	8.987
Trans-siberian landbridge via ferry	450	535	672	899
Caspian Sea vessels	1.875	3.569	4.477	5.991
Total containers via CY	15.375	19.627	24.624	32.953
Total loaded containers via the CY	10.875	14.274	17.908	23.966
Intermodal containers from ferry	3.150	3.747	4.701	6.291
Containers from Azerbaijan shippers	7.725	10.527	13.208	17.675

Distribution of containers total	2000	2005	2010	2015
Container in TEU through CY - loaded	29.167	42.377	56.710	75.891
Containers in TEU through CY - empty	5.000	6.691	8.954	11.983
Total TEU through CY	34.167	49.068	65.664	87.874
Total containers through the CY	30.750	39.255	49.248	65.905
20 ft. containers	24.600	23.553	24.624	32.953
40 ft. containers	6.150	15.702	24.624	32.953
Number of containers - loaded	26.250	33.902	42.533	56.918
Number of containers - empty	4.500	5.353	6.716	8.987
Containers handled in CFS				
Total number of containers in TEU	4.433	6.602	8.835	11.823
Total number of 20 ft. containers	3.547	3.961	4.417	5.912
Total number of 40 ft. containers	443	1.320	2.209	2.956
Total number of containers	3.990	5.282	6.626	8.867
Total number of tons handled	53.200	79.223	106.018	141.876
Assumptions:				
Imports CFS 60% of total	0,60000	0,60000	0,60000	0,60000
Exports CFS 40% of total via Poti	0,40000	0,40000	0,40000	0,40000
Proportion 20 ft.	0,80000	0,60000	0,50000	0,50000
Proportion 40 ft.	0,20000	0,40000	0,50000	0,50000
Growth factor	1,33823	1,33823	1,33823	1,33823
Block train 80%	0,80000	0,80000	0,80000	0,80000
Traditional train 20%	0,20000	0,20000	0,20000	0,20000
Seaborne, imports of total 50%	0,50000	0,50000	0,50000	0,50000
Seaborne, exports of total 50%	0,50000	0,50000	0,50000	0,50000
Import containers handled in CFS	0,2	0,2	0,2	0,2
Export containers handled in CFS	0,2	0,2	0,2	0,2

Table 5-13: Container cargo forecast to the year 2015 for the port of Baku
 Optimistic scenario (cargoes in thousands of tons/containers in TEU=12 tons)

	Baseline 2000	2005	2010	2015
General Cargoes - seaborne				
Misc. general cargoes, break bulk	50	34	57	96
Containerised cargoes	50	135	227	383
Total tons	100	169	284	478
CY - Intermodal Container Handling				
Cargo tons	300	506	852	1.435
Total tons containerized cargo, seaborne and CY				
Number of containers in TEU				
General cargoes - seaborne	4.167	11.234	18.929	31.897
CY - Intermodal Container Handling	25.000	42.126	70.986	119.615
Total TEU, seaborne and CY	29.167	53.360	89.915	151.512

Distribution of containerised trades via the CY in TEU

	Baseline 2000	2005	2010	2015
Import cargoes:				
Railways - traditional	2.900	4.887	8.234	13.875
Railways - block train	11.600	19.547	32.937	55.501
Trans-siberian Landbridge, ferry	500	843	1.420	2.392
Caspian Sea river vessels	2.083	5.617	9.465	15.949
Total loaded containers via CY	17.083	30.893	52.056	87.717
Intermodal containers to ferry	3.500	5.898	9.938	16.746
Containers delivered to Azerbaijan consignees				
Export cargoes:				
Railways - traditional	1.900	3.202	5.395	9.091
Railways - block train	7.600	12.806	21.580	36.363
Empty containers to Poti	5.000	8.425	14.197	23.923
Transsiberian landbridge via ferry	500	843	1.420	2.392
Caspian Sea vessels	2.083	5.617	9.465	15.949
Total containers via CY	17.083	30.893	52.056	87.717
Total loaded containers via the CY	12.083	22.467	37.859	63.795
Intermodal containers from ferry	3.500	5.898	9.938	16.746
Containers from Azerbaijan shippers	8.583	16.570	27.921	47.048

Distribution of containerised trades via the CY actual container units (20ft or 40 ft):

	Baseline 2000	2005	2010	2015
Import cargoes				
Railways - traditional	2.610	3.909	6.176	10.406
Railways - block train	10.440	15.637	24.703	41.626
Trans-siberian Landbridge, ferry	450	674	1.065	1.794
Caspian Sea river vessels	1.875	4.493	7.099	11.961
Total loaded containers via CY	15.375	24.714	39.042	65.788
Intermodal containers to ferry	3.150	4.718	7.453	12.560
Containers delivered to Azerbaijan consignees				

	Baseline 2000	2005	2010	2015
Export cargoes:				
Railways - traditional	1.710	2.561	4.046	6.818
Railways - block train	6.840	10.245	16.185	27.272
Empty containers to Poti	4.500	6.740	10.648	17.942
Trans-siberian landbridge via ferry	450	674	1.065	1.794
Caspian Sea vessels	1.875	4.493	7.099	11.961
Total containers via CY	15.375	24.714	39.042	65.788
Total loaded containers via the CY	10.875	17.974	28.394	47.846
Intermodal containers from ferry	3.150	4.718	7.453	12.560
Containers from Azerbaijan shippers	7.725	13.256	20.941	35.286

Distribution of containers total

	2000	2005	2010	2015
Containers in TEU through CY - loaded	29.167	53.360	89.915	151.512
Containers in TEU through CY - empty	5.000	8.425	14.197	23.923
Total TEU through CY	34.167	61.785	104.112	175.435
Total containers through the CY	30.750	49.428	78.084	131.576
20 ft. containers	24.600	29.657	39.042	65.788
40 ft. containers	6.150	19.771	39.042	65.788
Number of containers - loaded	26.250	42.688	67.436	113.634
Number of containers - empty	4.500	6.740	10.648	17.942
Containers handled in CFS				
Total number of containers in TEU	4.433	8.313	14.008	23.604
Total number of 20 ft. containers	3.547	4.988	7.004	11.802
Total number of 40 ft. containers	443	1.663	3.502	5.901
Total number of containers	3.990	6.650	10.506	17.703
Total number of tons handled	53.200	99.755	168.094	283.248
Assumptions:				
Imports CFS 60% of total	0,60000	0,60000	0,60000	0,60000
Exports CFS 40% of total via Poti	0,40000	0,40000	0,40000	0,40000
Proportion 20 ft.	0,80000	0,60000	0,50000	0,50000
Proportion 40 ft.	0,20000	0,40000	0,50000	0,50000
Growth factor	1,68506	1,68506	1,68506	1,68506
Block train 80%	0,80000	0,80000	0,80000	0,80000
Traditional train 20%	0,20000	0,20000	0,20000	0,20000
Seaborne, imports of total 50%	0,50000	0,50000	0,50000	0,50000
Seaborne, exports of total 50%	0,50000	0,50000	0,50000	0,50000
Import containers handled in CFS	0,20000	0,20000	0,20000	0,20000
Export containers handled in CFS	0,20000	0,20000	0,20000	0,20000

Table 5-14: Container cargo forecast to the year 2015 for the port of Baku
Pessimistic scenario (cargoes in thousands of tons/containers in TEU=12 tons)

	Baseline 2000	2005	2010	2015
General Cargoes - seaborne				
Misc. general cargoes, break bulk	50	23	26	29
Containerized cargoes	50	91	102	116
Total tons	100	113	128	145
CY - Intermodal Container Handling				
Cargo tons	200	226	256	290
Total tons containerized cargo, seaborne and CY				
Number of containers in TEU				
General cargoes - seaborne	4.167	7.543	8.534	9.655
CY - Intermodal Container Handling	16.667	18.857	21.335	24.138
Total TEU, seaborne and CY	20.833	26.400	29.869	33.794

Distribution of containerized trades via the CY in TEU

	Baseline 2000	2005	2010	2015
Import cargoes:				
Railways - traditional	1.930	2.184	2.471	2.795
Railways - block train	7.720	8.734	9.882	11.181
Transsiberian Landbridge, ferry	350	396	448	507
Caspian Sea river vessels	2.083	3.771	4.267	4.828
Total loaded containers via CY	12.083	15.085	17.068	19.311
Intermodal containers to ferry	2.700	3.055	3.456	3.910
Containers delivered to Azerbaijan consignees	9.383	12.031	13.612	15.400
Export cargoes:				
Railways - traditional	1.263	1.429	1.617	1.830
Railways - block train	5.053	5.717	6.469	7.319
Empty containers to Poti	3.333	3.771	4.267	4.828
Transsiberian landbridge via ferry	350	396	448	507
Caspian Sea vessels	2.083	3.771	4.267	4.828
Total containers via CY	12.083	15.085	17.068	19.311
Total loaded containers via the CY	8.750	11.314	12.801	14.483
Intermodal containers from ferry	2.700	3.055	3.456	3.910
Containers from Azerbaijan shippers	6.050	8.259	9.345	10.573

Distribution of containerised trades via the CY actual container units (20ft or 40 ft):

	Baseline 2000	2005	2010	2015
Import cargoes:				
Railways - traditional	1.737	1.747	1.853	2.096
Railways - block train	6.948	6.988	7.412	8.386
Trans-siberian Landbridge, ferry	315	317	336	380
Caspian Sea river vessels	1.875	3.017	3.200	3.621
Total loaded containers via CY	10.875	12.068	12.801	14.483
Intermodal containers to ferry	2.430	2.444	2.592	2.933
Containers delivered to Azerbaijan consignees	8.445	9.625	10.209	11.550
Export cargoes:				
Railways - traditional	1.137	1.143	1.213	1.372
Railways - block train	4.548	4.574	4.852	5.489
Empty containers to Poti	3.000	3.017	3.200	3.621
Trans-siberian landbridge via ferry	315	317	336	380
Caspian Sea vessels	1.875	3.017	3.200	3.621
Total containers via CY	10.875	12.068	12.801	14.483
Total loaded containers via the CY	7.875	9.051	9.601	10.862
Intermodal containers from ferry	2.430	2.444	2.592	2.933
Containers from Azerbaijan shippers	5.445	6.607	7.008	7.929

Distribution of containers total

	2000	2005	2010	2015
Containers in TEU through CY - loaded	20.833	26.400	29.869	33.794
Containers in TEU through CY - empty	3.333	3.771	4.267	4.828
Total TEU through CY	24.167	30.171	34.136	38.621
Total containers through the CY	21.750	24.137	25.602	28.966
20 ft. containers	17.400	14.482	12.801	14.483
40 ft. containers	4.350	9.655	12.801	14.483
Number of containers - loaded	18.750	21.120	22.401	25.345
Number of containers - empty	3.000	3.017	3.200	3.621
Containers handled in CFS				
Total number of containers in TEU	3.087	4.058	4.591	5.195
Total number of 20 ft. containers	2.469	2.435	2.296	2.597
Total number of 40 ft. containers	309	812	1.148	1.299
Total number of containers	2.778	3.246	3.443	3.896
Total number of tons handled	37.040	48.696	55.095	62.335
Assumptions:				
Imports CFS 60% of total	0,60000	0,60000	0,60000	0,60000
Exports CFS 40% of total via Poti	0,40000	0,40000	0,40000	0,40000
Proportion 20 ft.	0,80000	0,60000	0,50000	0,50000
Proportion of 40 ft. containers	0,20000	0,40000	0,50000	0,50000
Growth factor	1,13141	1,13141	1,13141	1,13141
Block train 80%	0,80000	0,80000	0,80000	0,80000

	2000	2005	2010	2015
Traditional train 20%	0,20000	0,20000	0,20000	0,20000
Seaborne, imports of total 50%	0,50000	0,50000	0,50000	0,50000
Seaborne, exports of total 50%	0,50000	0,50000	0,50000	0,50000
Import containers handled in CFS	0,20000	0,20000	0,20000	0,20000
Export containers handled in CFS	0,20000	0,20000	0,20000	0,20000

Annex I

The Macro-Economic Environment of the International Seaport of Baku

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The Economic Environment of the International Seaport of Baku

Until 1990 the port of Baku was a main link in the overall railway system of the former Soviet Union as well as an important base for the Soviet shipping fleet. The Baku - based Caspian Shipping Co. (CSC) was the sole local owner of vessels - as well as of ports and shipyards - transporting more than 95% of the whole annual cargo volume shipped via the Caspian Sea, which was, concerning the port of Baku, mainly national and transit cargo.

Table 2-2 shows the development of cargo handled in the port of Baku since 1990.

But the old patterns of trade flows through the port of Baku will not be restored.

Future cargo flows through the port of Baku will mainly be influenced by economic activity in the hinterland of the port

- the economic activity in the transit countries
- the quality and structure of the traffic links to the hinterland
- the quality and structure of the competing traffic corridors.

1. The hinterland of the port of Baku

The hinterland of a port can normally be defined by the region, from where the goods, which are handled in the port, come or to where they go. As the port of Baku is located at the Caspian Sea it is not so easy to define the hinterland of Baku. For other ports with direct access to the oceans the hinterland can be defined much easier.

In this study we can define the three countries: Armenia, Georgia and Azerbaijan as the hinterland of Baku for goods coming from the East or going to the East (mainly Turkmenistan, Kazakhstan, Uzbekistan, Tajikistan and Kirghizstan). These countries on the east side of the Caspian Sea, however, can be defined as the hinterland of Baku for goods which come from the West or go to the West out of these countries.

That is why we define the hinterland of Baku by the eight TRACECA - states.

Table I-1 (overleaf) shows main indicators concerning population and area of the TRACECA-states. These figures show that, with the exception of Armenia, all countries have a relatively low population density.

Table I-1: Population and area of TRACECA-States

Country	Population (Mio)	Area (1000 km ²)	Inhabitants / km ²
Georgia	5.4	69.7	77.5
Armenia	3.5	29.8	116.7
Azerbaijan	7.3	86.6	84.6
Kazakhstan	16.9	2717.3	6.3
Turkmenistan	3.9	488.1	8.0
Uzbekistan	21.6	447.4	48.4
Tajikistan	5.6	143.1	39.2
Kirghizstan	4.5	198.5	22.8

Source: Stat. Bundesamt

Gross domestic product in all TRACECA countries is - compared to international standards - very low in these countries. The standard of living, as shown by the population's per capita GDP, varies between 400 and 1500 USD per year. These figures are even below figures for developing countries like Tunisia (1800) or Mexico (3300). Table I-2 shows the GDP and GDP per capita figures for all TRACECA-states in 1993. Current figures would show, that the standard of living decreased in the meantime.

Table I-2: GDP and per capita income in TRACECA-States 1993

Country	GDP/capita 93 (USD)	GDP 1993 USD billion
Georgia	500	2.8
Armenia	700	2.5
Azerbaijan	600	4.4
Kazakhstan	1500	24.9
Turkmenistan	1400	5.3
Uzbekistan	900	17.8
Tajikistan	400	2.3
Kirghizstan	700	3.1

Source: Prognos

Low GDP and low per capita income in underdeveloped countries is normally preceded by a high share of agriculture and low share of the service industries relating to GDP. This rule is confirmed by the special figures concerning the TRACECA- states, which are shown in Table I-3.

Table I-3: Distribution of GDP at current prices (%) 1993

Country	Agriculture	Industry	Other (services)
Georgia	52.3	23.7	22.9
Armenia	49.3	25.8	15.0
Azerbaijan	27.1	32.4	35.6
Kazakhstan	12.9	40.2	51.0
Turkmenistan	n.a	n.a	n.a
Uzbekistan	28.7	26.8	34.1
Tajikistan	19.0	47.7	34.4
Kirghizstan	34.7	28.0	30.9

Source: World Bank: Statistical Handbook 1995

Azerbaijan, Kazakhstan and Tajikistan have high shares of the industrial sector relating to GDP, whereas Georgia, Armenia, Uzbekistan and Kirghizstan show high shares of the agricultural sector relating to GDP. Only Kazakhstan has a considerable share of the service industry, which results probably from Kazakhstan's role in the former Soviet Union.

2. Future economic activity in the hinterland of Baku

It is presumptuous to try and make a long-term forecast of economic developments in the TRACECA - countries. The uncertainties regarding political stability are too great; slumps and radical changes in the production, employment and liquidity too dramatic. The transition has not yet progressed far enough and the danger of war and latent problems with minorities is very critical.

On the other hand, there have often been such dramatic changeover situations in the past for groups of countries, for instance west European reconstruction after World War II. There are many other countries; which have been devastated by wars, revolutions or government overthrows in the past and many examples for successful economic recovery of these countries.

One of the few certainties in quantitative empirical research on long term economic growth is that political instability has a negative effect on growth and investment. But that is the limit of certain knowledge.

For the purposes of the forecasts in this study the thesis is, that the economic future of TRACECA states is already indicated to a large extent by how far they have today progressed in the process of transition, i.e. the creation of general conditions that allow for private-sector activities¹.

¹ See Prognos: Economic and Demographic Development in Europe; Basel 1995

The following criteria to measure a country's position in the process of transition

- privatisation of companies
- restructuring of major companies
- price liberalisation, freedom of trade
- protection of competition
- liberalisation of foreign trade and currency system
- reform of banking system
- existing EU trade restrictions
- foreign direct investment received

were used by Prognos in order to make a ranking list of the states.

When categorising the countries the base of work to a large extent were studies carried out by EBRD². In this study the countries were assessed according to the above criteria on a scale of 1= very poor to 4 = very good. Better knowledge about single countries was used to correct the EBRD estimates. The results are shown in Table I-4.

Table I-4: Assessment of the position of the countries in the transition process and estimated average change of GDP in % p.a. 1995 - 2015

Country	Average position	Estimated growth rates (% p.a.)
Armenia	1,6	1,0
Azerbaijan	2,5	3,5
Georgia	1.3	0,5
Kazakhstan	1.5	1,0
Kirghizstan	2.4	4,0
Tajikistan	1,5	1,0
Turkmenistan	2,5	3,5
Uzbekistan	1,8	2,5

Source: Prognos as well as own estimations

The good position of Azerbaijan and Turkmenistan in this ranking list is a result of the good prospects for the oil and gas industry in this countries. Different international consortia, partly even with Russian membership, made contracts with the Azerbaijan authorities, which guarantee heavy investment in the exploration of new oil fields of the country.

A major boost has been given to the sector by USD 8 billion investment agreement signed in 1994 to exploit the Azeri, Chirag and Guneshli deep water fields.

The government of Azerbaijan has now signed a second agreement for a USD 1,7 billion project concerning

² EBRD: Transition Report

the exploitation of the Karabakh field. Further negotiations are in progress concerning the Shakhdeniz field.

3. Development of the Transport Sectors in TRACECA - States

As stated above growth in transport levels is closely related to growth of GDP.

Forecasts for Eastern European states assume the ratio of transport demand to GDP will be 1 to 1 for rail and road transport until the economy begins to grow. Thereafter it is assumed that transport demand will grow at 1,25 to 1 ratio, in other words the elasticity of transport demand is estimated to be 1.25.

We will use this elasticity to estimate the overall growth of transport demand in the TRACECA - states till 2015, which is shown in the following table:

Table I-5: Growth of transport demand till 2015 in the TRACECA - states

Country	annual growth rate of GDP (% p.a.)	annual growth rate of transport demand (% p.a.)	total growth of transport demand in % 1995-2015
Armenia	1,0	1,25	28,2
Azerbaijan	3.5	4.40	125,0
Georgia	0.5	0,60	12,7
Kazakhstan	1.0	1,25	28,2
Kirghizstan	4.0	5,00	165,0
Tajikistan	1.0	1.25	28.2
Turkmenistan	3.5	4.40	125.0
Uzbekistan	2.5	3.30	91,4

Source: Prognos and own calculations

According to these figures the strongest growth of transport demand will occur in Kirghizstan followed by Azerbaijan, Turkmenistan and Uzbekistan. In the other TRACECA - states future growth in transport demand will be low and beneath 50 percent for the whole period.

4. Structural Changes in Transport Demand

In broad terms, the shift to a market economy will significantly reduce the level and composition of rail traffic as the economy as a whole will shift away mainly from the production of basic commodities and toward production of higher value goods. An additional shift will come with the growth of competition from the trucking industry, a shift that will be enhanced by increased shipper choice. The railway authorities will have to undergo a major change in operations and services in order to be able to respond to coming changes.

For the reasons described above freight road traffic is likely to increase faster than rail traffic, thus putting increased demands on the highway infrastructure.

As a market economy develops and shippers become free to choose modes of transport, short-haul rail traffic will be highly vulnerable to competition from trucking, which offers door-to-door service, more flexibility, and greater reliability. Moreover, it is probably unprofitable for rail to carry such short distance traffic, a conclusion railways will undoubtedly reach when they measure market costs and revenues according to the lines of business.

Former trade and traffic patterns, based on traditional sources of supply and consumption, have been greatly disrupted. Much traffic that used to flow as a result of the larger planned economy no longer flows, and traffic will never return to the patterns of the past. For the scope of this study mainly harbour related traffic is of importance. That is why we have to develop ideas about future traffic and trade patterns in the hinterland of the port of Baku.

5. Future Trade and Traffic Pattern in the TRACECA-States

As stated above it is presumptuous to make long term forecasts of economic developments in the TRACECA-states. To predict future traffic and trade flows is hazardous, too. But, nevertheless, we can try to formulate some expected trends, which are likely to develop during the process of integration into international labour division.

Until 1989 the TRACECA states were satellites in the COMECON-system. Their trade was mainly oriented towards this system. Trade with hard currency countries hardly took place. Even in 1994 - five years after disruption - the extra republic trade of TRACECA-states is relatively unimportant.

Table I-6: Extra republic trade of TRACECA states in 1994 (million U.S. dollars)

Country	Exports	Imports
Georgia	43	94
Armenia	57	187
Azerbaijan	362	292
Kazakhstan	1095	514
Turkmenistan	n.a.	n.a.
Uzbekistan	1.006	1.127
Tajikistan	382	374
Kirghizstan	7.0	18

Source: The World Bank: Statistical Handbook 1995 States of the Former USSR

Only Kazakhstan and Uzbekistan export reasonable volumes of goods to economies outside the CIS-states (Commonwealth of Independent States). Azerbaijan exports totalled 362 million USD in that year, the imports 292 million USD.

It can be expected that as a consequence of the integration into international trade the volumes of traded goods with partners outside CIS will grow considerably. That is why the traffic flows from West to East (Import from Western Europe and America to TRACECA) and from East to West (exports) will increase. Traffic flows between TRACECA and South East Asia are expected to grow as well.

The chances, however, for the integration process are quite different for the single TRACECA-states.

They depend mainly on

- the existing trade and exchange rate regimes
- the availability of natural resources
- the quality and competitiveness of industrial goods and
- the infra- and supra structure, which is necessary to handle international trade.

5.1 Trade Regulations

In Azerbaijan the dominant role of central government in foreign trade has been reduced.

All quotas and licensing restrictions for both imports and exports were removed by spring 1995 with the exception of some "strategic goods" such as oil and cotton.

Tariffs on imports from non FSU countries had been eliminated by August 1992. Since 1994 the official manat rate has been set weekly based on weighted average of exchange rates quoted by commercial banks. Both current and capital account convertibility is still heavily restricted.

Armenia has signed agreement on free trade with Russia, Ukraine, Turkmenistan and Georgia, which envisage exemption from customs, tariffs, and taxes. Agreements on trade-economic collaboration are signed on an

annual basis. There is no export tax and import taxes are low on most products. Till now Armenia is not a member of the TIR-Convention. Certain formalities over payment problems still need to be resolved.

In Georgia the trade regulations have been liberalised since 1994. There are no heavy import restrictions. From former times some existing export restrictions should have been eliminated till end of 1995.

Kazakhstan is part of a common customs area with Russia, Belarus and Kirghizstan which has been politically adopted, but the implementation of which is still being worked out. This will give exemption from customs tariffs and taxes.

In 1995 a new customs code was adopted which was based on a combination of Russian and international standards. However, this does not appear to have been fully implemented with work still needing to be undertaken to provide the necessary regulatory documentation.

Kirghizstan is not a member of the TIR-Convention. However, it has an arrangement with Russia for allocation of carnets. They have approached the JRU and they are expected to become members by late 1996, subject to negotiation and legislation.

In Tajikistan duties on imports are considered low. Only 10 export items are taxable and import tax varies between 2% and 10%. Tajikistan is not a member of the JRU but has applied for CMR.

Uzbekistan was expected to join the TIR system in March 1995, following ratification last year. Ratification of the CMR convention was also indicated to come soon.

In Turkmenistan all exports and imports have to be registered and managed by a new stock exchange. The aim of this new law is to get an general overview about external trade relations.

For all TRACECA-states it can be recorded that liberalisation of external trade more or less takes place. Since accession to the International Monetary Fund the TRACECA countries were pledged to strict macro-economic stabilisation programmes which included liberalisation of trade regimes and unification of the exchange rates.

5.2 Availability of Natural Resources

The TRACECA-states partly possess rich natural resources, which can enable them to earn considerable amounts of hard currency in the future, a prerequisite for growing and stable imports of goods which have to be imported for the reformation and restructuring process in the various sectors of the economies. The two most important sectors in the TRACECA-states are agriculture and energy. In the energy sector, oil, gas and partly coal are the prime commodities. Ores and salts are major commodities, too. In agriculture, grain and cotton are the dominant commodities.

Table I-7 overleaf gives an overview about the main national resources of TRACECA states.

Table I-7: National Resources of TRACECA states

Georgia	Armenia	Azerbaijan	Kazakhstan	Turkmenistan	Uzbekistan	Tajikistan	Kirghistan
manganese, coal, timber	agricultural land	agricultural land, oil, gas, iron ore	chrome, lead, wolfram, cop-per, zinc, gold, iron ore, coal, oil	natural gas, oil, iodinebromine, sodium sulphate salts	natural gas, oil, coal, gold, silver, copper, lead, zinc, wolframite, tungsten	cotton, wheat	hydroelectricity, coal, gold, mercury, uranium

Source: The World Bank: Statistical Handbook States of the Former USSR

Concerning the agricultural sector Table I-8 shows the major agricultural products grown in the TRACECA-states.

Table I-8: Major agricultural products of TRACECA states

Georgia	Armenia	Azerbaijan	Kazakhstan	Turkmenistan	Uzbekistan	Tajikistan	Kirghistan
tea, citrus, citrus products	grain, potatoes, vegetables, grapes	grapes, cotton, tobacco, fruits, vegetables	grain, wool, meat	cotton, grain, vegetables, fruits, livestock	cotton, grain, vegetable, fruit, silk, cocoon	cotton, fruit, grapes, wheat	livestock, cotton, wool, silk, hemp, fodder, vegetable, fruit, grain

Source: The World Bank: Statistical Handbook States of the Former USSR

5.3 Industrial Activities in the TRACECA-states

Until 1989 the TRACECA-states were integrated into the COMECON-system of labour division. For Soviet economic planning purposes the former Soviet Union was divided into twenty planning regions - Azerbaijan, Georgia and Armenia belonging to the Trans-Caucasus, which were selected for special purposes within the whole complex. Azerbaijan, for instance, was i.a. dedicated to produce most of the oil production hardware, or, as a second example, to manufacture the air conditioning machines for the whole union.

As a consequence special industrial structures were developed in the planning regions. The main industrial activities of TRACECA-states are figured in Table I-9:

Table I-9: Main industrial activities of TRACECA States

Georgia	Armenia	Azerbaijan	Kazakhstan	Turkmenistan	Uzbekistan	Tajikistan	Kirghizstan
light industry, iron, steel, teak tobacco	light industry, metallurgy, machine building, food processing, chemical production	oil production, equipment for oil products, petrochemicals, food and beverages, textiles, electrical equipment	metallurgy, heavy machinery, machine tools, petrochemicals, food processing, textiles	textiles, oil and gas products, chemicals, electricity-generating	cotton harvesters, textile-machinery, chemicals, metallurgy, aircraft	agroprocessing, labour intensive industries, machine building	metallurgy, agricultural machinery, food processing, tobacco processing, textile, sugar refineries, leather

Source: The World Bank: Statistical Handbook States of the Former USSR 1992

However, most of the industrial plants in the TRACECA states are in a bad shape, because of the shortage of reinvestment, obsolete equipment and lack of maintenance. Low productivity is typical for the whole stock of capital in these countries, and the goods produced in these plants often fail in international competition.

5.4 Transportation Infrastructure in the TRACECA-States

A prerequisite for a successful economic recovery of the TRACECA-states is the rehabilitation of the transport infrastructure. Without a system of railways, streets, channels, ports etc. in working order no economy can recover. Traffic infrastructure has the same importance for an economy as blood vessels have for the human body. If they are in bad condition parts of economy or even the total economy will languish forever. Bad traffic links can endanger the whole recovery process.

An economy with rich natural resources needs exports to earn hard currency. Dollars are needed to import the goods the economy cannot produce or other economies can produce better because of comparative cost advantages.

For trading purposes good transportation infrastructure is an inescapable condition.

Railway

The international seaport of Baku is connected with its hinterland in the west by three railway lines

- the railway connection between Azerbaijan and Georgia and the Black Sea ports of Poti and Batumi via Tbilisi. This line is also connected to the Russian rail system at the Black Sea and the port of Sochi and Tuapse and further to the Russian rail system via Krasnodar. From Tbilisi via Armenia it is also connected to the Turkish rail system
- the rail system between Azerbaijan and Armenia, with links to the Iranian and the Turkish rail system
- the rail system between Azerbaijan and Chetchnya with links to the Russian rail system both to the north to Azerbaijan and to the west to Grozny and Krasnodar.

The Turkmenbashi port rail terminal is connected to the Central Asian railway system via Ashkhabad to the Central Asian republics. The system is linked to the Russian system via Kazakhstan providing connections to the Russian Far East and also to the Peoples Republic of China. The Turkmenistan railway system is also connected to the Iranian system, which provides links to Teheran and the port of Bandar Abbas. There are also several east-west lines through Kazakhstan providing alternate routes between the Central Asian republics and Central and European Russia and northern Europe.

Two additional railway infrastructure projects are planned

- a rail line round Lake Van planned by the Turkish government
- a rail line along the east side of the Caspian Sea connecting Bandar Torkmen, Kizyl-Artek via Turkmenbashi to Astrakhan.

Both lines, if they are constructed, could catch cargo flows to and from Turkey via Iran and Central Asian republics or to Russia on the west side of the Caspian Sea without touching the port of Baku.

Road

Most of the roads in the TRACECA-states are in poor shape. Nevertheless the road transportation system is extensive and long distance road haulage is possible in several directions from the port of Baku:

- trucks to the west mainly choose the highway passing Evlakh, Gandja to Georgia and Turkey
- cargo to and from Iran and to the port of Bandar Abbas at the Arabian Gulf is shipped via the highway touching Lenkoran and Astara
- road traffic to and from the Russian Federation and to the new Baltic States Estonia, Latvia, and Lithuania is shipped via the highway at the western coast of the Caspian Sea.

The port of Turkmenbashi is connected with the hinterland by different roads to Kazakhstan, Uzbekistan, Tajikistan and Kirghizstan.

Major Inter-Central-Asian Highways are:

H 34 Tashkent-Dushanbe

H 37 Turkmenbashi-Ashgabad-Mary-Cardzaev-Bukhara-Samarkand

H 39 Almaty-Bishkek-Shikment-Tashkent-Samarkand-Termez

H 41 Bishkek - Djalal-Abad - Uzbekistan - Osh the Pamir - Dushanbe -Termez

The Trans Caucasian route connects the Central Asian transportation system via Turkmenistan, the ferry-connection between Turkmenbashi and Baku with the Georgian ports of Poti and Batumi. This sea link provides competitive access from Central Asia to Western Asia, Ukraine and Europe via Chechnya and via Georgian and Turkish rail and road corridors. Additionally, it provides road connections to Iran.

Waterway

The Russian inland waterway system connects the ports at the Caspian sea with the Black Sea and the Baltic Sea.

Main restrictions reduce the importance of this waterway connections

- the Volga-Don is only open six months a year due to ice conditions,
- the normal fully loaded draft of 3,5 meters of a typical inland waterway vessel cannot be utilised, because of problems in the Nizniy Novgorod area and at the Kochetovsky lock and dam.

It is reported that Russian and Turkmenian authorities have concluded an agreement about a new ferry terminal in a new port at Asia near Astrakhan. This terminal could be a strong competition for most of the transport chains, which could be connected by the port of Baku. Also, additional port capacities are planned by Russia and Iran near Astara. It is reported that a common Russian and Iranian joint venture was founded, to finance new facilities for 10 million tons of cargo in Olja. This new port could be a strong competitor for Baku especially for transit cargo from Russia to Iran.

Conclusions

The port of Baku could be a main link of different transport chains which are needed to handle

- the regional trade within the TRACECA states,
- the exports and imports of Central Asian TRACECA states with Europe and America
- the exports and imports of Georgia, Armenia and Georgia to and from the Far East, i.e. China, Korea, Japan etc.

There are different main traffic corridors, which compete for potential cargo flows with and within new trade patterns of TRACECA-states.

The most important competing routes, which divert traffic from the traffic chains concerning Baku are the corridors from Bandar Abbas through Iran and the different corridors through Russia mainly directed to the new Baltic States and Western Europe.

Annex II

The Costs of Transportation by Alternative Routes and Means of Transportation

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The Costs of Transportation by Alternative Routes and Means of Transportation

The purpose of this section is to review the costs of transportation for cargoes originating in and destined for Azerbaijan as well as transit cargoes to and from the Central Asian Republics. Two alternative methods could be used for this purpose:

- Use current transportation tariffs and rates quoted by the operators of the various modes of transportation, i.e. rail, truck and water
- Estimate the actual production costs of the various modes of transportation.

An observation with respect to the transportation tariffs of the FSU countries is that these tariffs did not reflect the actual cost of the transportation work performed, and substantial subsidies or rebates compared to actual cost were reflected in these rates. As a result there have been numerous rate changes and increases in the transportation tariffs to eliminate the subsidies and to make the rates reflect the actual production costs. In addition it is difficult to obtain reliable quotes for transportation. Another factor to be considered in this connection is that cargoes may be transported on routes that currently are not available, but may be opened in the future. It was therefore concluded that this analysis should be based on estimates of the actual transportation costs rather than on existing tariffs. For this purpose the transportation costs were developed based on the evaluation of transportation costs performed for Lois Berger International Inc. for the port of Turkmenbashi using the Transportation Cost Module developed by the National Ports and Waterway Institute of the Louisiana State University.¹

It will have to be recognised that cargoes will continue to be routed based on government fiat or decrees, or that transportation of some vital commodities will be subsidised and thus mode of transportation will be directed regardless of cost advantages or disadvantages. It is expected, however, that such activities will be gradually reduced to a minimum in the future.

The main assumptions made with respect to the development of the transportation costs are as follows:

Rail transportation.

- The costs are based on non-specialised rail cars operated in block trains between terminals, and both variable and fixed costs were included. It was assumed that 50% of the cars were returned empty, while 50% were loaded on the return leg.
- No border crossing charges other than to change the bogies from Russian to European gauge were included. Other charges are however considered to be negligible.
- The cost were based on standard rates of USD 1.58 per ton -km in the FSU and USD 1.80 in the EU countries based on German railway data.
- Routings were based on norms derived from railway specialists, while distances were obtained from railways and various railway publications

Truck transportation.

- A typical Euro standard tractor and semitrailer with a maximum payload of 25 tons driven an average of

¹ Feasibility Study: Turkmenbashi Port Development, Phase 1 Draft Report, submitted by Louis Berger International, Inc. et al.

80,000 km per year was used as the basis for the calculations.

- 20% empty hauls were assumed
- Distances were derived from transportation companies and from various publications, and the most common routings were used based on discussions with transportation companies.
- A transportation cost of USD 0.027 per ton-km was used for the basis of the calculations.

Water transportation

- The cost were calculated based on a typical vessel trading on the Russian inland waterway system, the Black Sea and the Caspian Sea of 2,700 dwt.
- Draft limitations on the Russian waterway system were considered for vessel voyages on these routes. These are:
 - On the Volga river the draft is limited in the Niznyi Novgorod area. Due to low water level in the Cheboksary hydroelectric station, the maximum draft of 3.5 meters is only maintained once a day for several hours
 - On the Don river system lack of maintenance and erosion at the Kochetovsky Lock and Dam built in 1920 allows passage of vessels with a draft of 3.0 meters or less.

As a result typical utilisation rates of 0.6 for outbound shipments and 0.3 for inbound shipments were used for estimation of costs on the Russian waterway system. Significant cost advantages can be obtained if these "bottlenecks" are removed. There are, however, no indications that Russian authorities are planning to make the necessary investments to remove these obstacles to efficient water transportation.

- Shipping companies have indicated average utilisation rates of 0.8 for outbound movements and 0.6 for inbound movements in other areas.
- Canal charges used in the calculations were USD 9,800 for the Volga-Caspian Canal, USD 13,300 for the Volga-Don Canal, USD 4,000 for the Azov Canal and USD 10,000 for the Volga-Balt Canal.
- Cargo handling charges vary considerably between the various ports. For the purpose of these calculations, handling charges of USD 5 per ton were assumed for bulk cargoes, while USD 20 per ton were used for general cargoes.
- Water transportation distances and thereby total transportation costs are assumed to be virtually the same for Baku and Turkmenbashi.

The costs for transit cargoes to and from the Central Asian republics represented by Ashgabad, Turkmenistan and to and from Baku, Azerbaijan were calculated for transportation of both bulk and general cargoes. The routes analysed were only those where alternative transportation modes are available. Consequently cost calculations of movements within the Caspian Sea region where other modes of transportation will by definition not be competitive and can thus be considered "captive cargoes" for the ports on the Caspian Sea were not included. The analysis was therefore limited to encompass transportation costs to and from the following regions:

- The Black Sea
- Northern Europe and the Baltic Region
- Western Europe represented by Frankfurt, West Germany
- Southern Europe represented by the Adriatic Sea
- The United States

In addition the impact of eliminating the "bottlenecks" on the Volga Don waterway was evaluated. This is described below.

1. Shipments to and from the Black Sea Region

The following transportation route alternatives were considered for transport to and from the Black Sea region:

- By water - Novorossisk
- By rail - Novorossisk
- By water - Odessa
- By rail - Odessa (Ashgabat only)
- Via the TRACECA route by rail - Novorossisk
- Via the TRACECA route by rail - Poti
- Via the TRACECA route by truck - Poti
- Via the TRACECA route by rail and water - Odessa
- Via the Transcaucasian route by rail - Odessa (Baku only)

The results of this analysis is presented as Tables II-1 and II-2.

Table II-1 Transportation Costs for Bulk and General Cargoes between the Black Sea Region and Ashkhabat

Origin/destination	Mode of transportation	Distance (km)	Transit time (days)	Rate per ton - USD
Novorossisk	Water, bulk	3299	16	49,00
Novorossisk	Water, general cargo	3299	16	64,00
Novorossisk	Rail	3579	11	56,50
Novorossisk	TRACECA rail/ferry/rail via Poti	2165	8	35,80
Odessa	Water, bulk	3755	18	49,70
Odessa	Water, general cargo	3755	18	64,70
Odessa	Rail	4456	14	70,40
Odessa	TRACECA rail/ferry/rail via Poti/water	2685	8	43,20
Poti	TRACECA rail/ferry/rail	1685	7	28,20
Poti	TRACECA truck/ferry/truck	1685	6	43,90

Table II-2 Transportation Costs for Bulk and General Cargoes between the Black Sea Region and Baku

Origin/destination	Mode of transportation	Distance (km)	Transit time (days)	Rate per ton - USD
Novorossisk	Water, bulk	3299	14	35,20
Novorossisk	Water, general cargoes	3299	14	50,20
Novorossisk	Rail	1330	5	2100,00
Odessa	Water, bulk	3755	18	35,90
Odessa	Water, general cargo	3755	18	50,90
Odessa	TRACECA rail to Poti/water	1850	5	28,40
Poti	TRACECA rail	850	5	19,40
Poti	TRACECA truck	850	3	23,00

As shown in this table the TRACECA route is highly competitive both for bulk and general cargoes to all destinations analysed compared to all water transportation. The cost advantage of the TRACECA route by water and rail between both Ashkhabat or Baku and Novorossisk for bulk cargoes compared to all water transportation is USD 14, i.e. a cost advantage of 39 %, while for general cargoes on the same route the cost advantage of the TRACECA route is approx. 50% compared to all water transportation. With the exception of cargoes that cannot be moved overland and via the ferry, such as oversize and special cargoes, the all water transportation route to and from the Black Sea will not be able to compete with the TRACECA route.

2. Northern Europe and the Baltic Region

The following routings were considered for shipments to and from Northern Europe represented by the port of St. Petersburg as the gateway to this region:

- By water via the Volga/Balt river and canal systems
- By rail through Kazakhstan and northern Russia (from Ashkhabat only)
- By rail through Chetchnya
- By rail ferry via Turkmenistan and Kazakhstan through northern Russia (Baku only)

As shown in Tables II-3 and II-4 water transportation via Baku for both bulk and general cargoes to and from this region will be competitive only as long as the Chetchnya rail link is closed.

Table III -3 Transportation Costs for Bulk and General Cargoes between the Northern Europe/ Baltic (St. Petersburg) Region and Ashkhabat

Origin/ destination	Mode of transportation	Distance (km)	Transit time (days)	Rate per ton - USD
St. Petersburg	Water, bulk	5354	27	55,50
St. Petersburg	Water, general cargo	5354	27	70,50
St. Petersburg	Rail	4551	15	71,90
St. Petersburg	Rail- ferry - rail via Tchetchniya	3635	13	55,50

Table IV-4 Transportation Costs for Bulk and General Cargoes between the Northern Europe/ Baltic (St. Petersburg) Region and Baku

Origin/ destination	Mode of transportation	Distance (km)	Transit time (days)	Rate per ton - USD
St. Petersburg	Water, bulk	5354	25	41,70
St. Petersburg	Water, general cargo	5354	27	56,70
St. Petersburg	Rail via Tchetchniya	2800	9	44,20
	Rail via ferry to Turkm. and Kazakhstan	5386	18	86,70

When and if this rail link is reopened, water transportation will still be competitive for bulk cargoes. For general cargoes on the other hand the rail link via Tchetchniya will have a cost advantage of approx. USD 11 per ton or 19% compared to water transportation.

3 Western Europe represented by Frankfurt, West Germany

The following transportation routes were considered as alternatives for cargoes to and from Western Europe:

- By water via a north Adriatic port and by rail to Frankfurt
- By rail via Kazakhstan and Russia (Ashkhabat only)
- By rail via Tchetchniya and Brest to Frankfurt
- By rail via the TRACECA route to Poti and then by water to a north Adriatic port and then onwards by rail to Frankfurt
- By truck via the TRACECA route to Poti and then by water to a north Adriatic port and then onwards by truck to Frankfurt

The results of the analysis is shown as Tables II-5 and II-6 overleaf.

Table II-5 Transportation Costs for Bulk and General Cargoes between the Western Europe Region and Ashkhabat

Origin/destination	Mode of transportation	Distance (km)	Transit time (days)	Rate per ton - USD
Frankfurt	Water, bulk Adriatic/rail	7355	28	89,50
Frankfurt	Water, general cargo d.o.	7355	28	119,50
Frankfurt	Rail	6700	19	109,30
Frankfurt	Rail- ferry - rail via Tchetchnya	4985	18	83,40
Frankfurt	TRACECA Poti/water Adriatic/rail, bulk	6235	23	94,80
Frankfurt	TRACECA Poti/water Adriatic/truck, bulk	6235	22	121,30
Frankfurt	TRACECA Poti/water Adriatic/rail, gen. cargo	6235	23	124,80
Frankfurt	TRACECA Poti/water Adriatic/truck, gen cargo	6235	22	15130.00

Table II-6 Transportation Costs for Bulk and General Cargoes between the Western Europe Region and Baku

Origin/destination	Mode of transportation	Distance (km)	Transit time (days)	Rate per ton - USD
Frankfurt	Water, bulk Adriatic/rail	6800	26	75,70
Frankfurt	Water, general cargo d.o.	6800	26	105,70
Frankfurt	Rail via Tchetchnya	4150	15	68,60
Frankfurt	TRACECA Poti/water Adriatic/rail, bulk	5400	20	94,80
Frankfurt	TRACECA Poti/water Adriatic/truck, bulk	5400	19	100,30
Frankfurt	TRACECA Poti/water Adriatic/rail, gen. cargo	5400	20	124,80
Frankfurt	TRACECA Poti/water Adriatic/truck, gen. cargo	5400	19	130,30

As long as the Tchetchnya rail corridor is closed, bulk water transportation is competitive for cargoes both to and from Baku and the Central Asian republics. If and when this route is reopened and considered safe by cargo owners, it will represent the low cost alternative and will have the potential to attract significant cargo volumes both to Baku and the Central Asian republics. In the latter case the Port of Baku will attract these cargoes through the ferry service.

It should be noted however that a cost effective transportation solution for both bulk and general cargoes to and from areas located close to the major ports of Western Europe and the UK would be to ship the cargoes by deep sea vessels to and from Poti and then use the TRACECA route to and from Azerbadjian and the

Central Asian republics.

The cost of the alternative of shipping cargoes to and from Western Europe on the inland waterways systems, i.e. the Rhine, Main and Danube rivers and further across the Black Sea for transshipment in Poti or through the Volga Don waterway system, has not been evaluated in this analysis. Given that the conflict in the former Yugoslavia is resolved and unrestricted navigation is possible, this route could represent an interesting routing alternative for cargoes to and from the central regions of Western Europe.

4. Southern Europe represented by the Adriatic Sea

The following routes were analysed in relation to shipments to and from this region:

- By all water
- By all rail (from Ashkhabat only)
- By TRACECA rail via Poti and onwards by water
- By TRACECA truck via Poti and onwards by water

As shown in Table II-7 the all water route is competitive both for bulk and general cargoes compared to the TRACECA route.

Table II-7 Transportation Costs for Bulk and General Cargoes between the Southern Europe Region and Ashkhabat

Origin/destination	Mode of transportation	Distance (km)	Transit time (days)	Rate per ton - USD
North Adriatic	Water, bulk	6355	25	66,50
North Adriatic	Water, general cargo d.o.	6355	25	81,50
Venice	Rail	6145	17	99,30
North Adriatic	TRACECA Poti/water Adriatic rail, bulk	5035	17	73,20
North Adriatic	TRACECA Poti/water Adriatic truck, bulk	5035	16	88,90
North Adriatic	TRACECA Poti/water Adriatic rail, gen. cargo	5035	17	88,20
North Adriatic	TRACECA Poti/water Adriatic truck, gen. cargo	5035	16	103,90

Table II-8 Transportation Costs for Bulk and General Cargoes between Southern Europe Region and Baku

Origin/ destination	Mode of transportation	Distance (km)	Transit time (days)	Rate per ton - USD
North Adriatic	Water, bulk	5800	23	52,80
North Adriatic	Water, general cargo	5800	23	67,80
North Adriatic	TRACECA rail Poti/water Adriatic, bulk	4200	14	58,40
North Adriatic	TRACECA truck Poti/water Adriatic, bulk	4200	13	68,00
North Adriatic	TRACECA rail Poti/water Adriatic, gen. cargo	4200	14	73,40
North Adriatic	TRACECA truck Poti/water Adriatic, gen. cargo	4200	13	83,00

The cost advantage of the water route is, however, only 10% for bulk cargoes and 8% for general cargoes. With its reduced transit time and possibility of operating all year, the TRACECA route will most likely be considered as an alternative route for shippers and consignees of both bulk and general cargoes.

5. The United States

In this respect two alternative transshipment ports were considered:

St. Petersburg is the northern gateway to the FSU states for both bulk and general cargoes. From this gateway the following routes were considered:

- All water via the port of St. Petersburg
- All rail via Kazakhstan and northern Russia (Ashkhabat only)
- Rail via the Chetchnya route
- Piraeus is one of the major transshipment points in the Mediterranean for containerised cargoes, and was therefore selected as the southern transshipment point for general cargoes. The following routes were analysed:
 - All water via the Volga Don waterway
 - Transshipment by water to Poti and via the TRACECA route
 - Poti was selected as the southern transshipment point for bulk cargoes. To and from Poti the cargoes would be carried via the TRACECA route

For bulk cargoes the sailing distance and thus the deep sea transportation costs for cargoes via St. Petersburg and Poti to and from the United States is expected to be at a similar level. Given this fact, the lowest cost alternative by far is transshipment in Poti via TRACECA route with a cost per ton of USD 28.20 to Ashkhabat and USD 13.40 to Baku. The cost difference for all water bulk shipments via the port of St. Petersburg compared to Poti is so significant that St. Petersburg would never be considered as the transshipment point for bulk cargoes as long as the TRACECA route is open for traffic.

For general cargoes the St. Petersburg can be a competitive transshipment port, if the rail route via Chetchnya is operational. In this case the cargoes would under any circumstance be routed via the ferry link between Baku and Turkmenbashi to and from the Central Asian republics. When the Chetchnya rail connection is unavailable, the lowest cost alternative route is the TRACECA route via Piraeus and Poti. The freight rates of the container lines serving the ports of Piraeus and St. Petersburg will also be a factor that may influence the routing of containerised cargoes.

6. Cost impact of elimination of draft restrictions on the Volga Don Waterway

As pointed out under the assumptions in the introduction to this section there are draft restrictions on the Niznyj Novgorood areas on the Volga River and at the Kotchekovsky lock and dam on the Don River, both of which reduces significantly the carrying capacity of vessels operated on the river system. The cost impact of these "bottlenecks" has been evaluated assuming that the vessels operating would achieve the same average utilisation as if they were operated outside these obstructions.

The results of this analysis is presented as Table II-9 .

Table II-9 Effect of Restricted Draft on the Russian River Systems for Vessel to and from Baku and Turkmenbashi

Cost with Draft Restrictions

To/from	Kilo-meters	Vessel cost	Canal fees	Total cost	Outbound utiliz. rate	Cargo tons	Inbound utliz. rate	Cargo tons	Total cargo	Cost per ton	Cost per ton/km
St. Petersburg	4799	61768	39600	101368	0,6	1620	0,3	810	2430	41,72	0,0087
Novorossisk	2744	38528	47020	85548	0,6	1620	0,3	810	2430	35,20	0,0128
Odessa	3200	40320	47020	87340	0,6	1620	0,3	810	2430	35,94	0,0112
North Adriatic	5800	81200	47020	128220	0,6	1620	0,3	810	2430	52,77	0,0091

Cost without Draft Restrictions

To/from	Kilo-meters	Vessel cost	Canal fees	Total cost	Outbound utiliz. rate	Cargo tons	Inbound utliz. rate	Cargo tons	Total cargo	Cost per ton	Cost per ton/km
St. Petersburg	4799	61768	39600	101368	0,8	2160	0,4	1080	3240	31,29	0,0065
Novorossisk	2744	38528	47020	85548	0,8	2160	0,4	1080	3240	26,40	0,0096
Odessa	3200	40320	47020	87340	0,8	2160	0,4	1080	3240	26,96	0,0084
North Adriatic	5800	81200	47020	128220	0,8	2160	0,4	1080	3240	39,57	0,0068

Reduction in Vessel Transport Cost without Draft Restrictions

To/from	Cost per ton	Percent reduction
St. Petersburg	10.43	25
Novorossisk	8.80	25
Odessa	8.99	25
North Adriatic	13.19	25

Source for Cost Data: Feasibility Study Turkmenbashi Port Development
Phase 1 Draft Report, submitted by Louis Berger International, Inc. et al. March 1996

As shown in this table the transportation costs between Baku/Turkmenbashi and the major origins and destinations would be reduced by between USD 9 and USD 13 equivalent to 25% of the ship transportation costs. If these "bottlenecks" were eliminated, the competitive situation of the all water transportation would be affected as follows:

- For bulk cargoes to and from the Black Sea region the competitive advantage of the TRACECA route will be reduced and water transportation will improve its competitive position, particularly to and from Odessa. For general cargoes on the other hand the competitive situation of the TRACECA route will not be changed in any significant way.
- For the Northern Europe and the Baltic Region water transportation both for bulk and general cargoes will be reduced by close to USD 10.50 and will become a highly competitive transportation alternative even when the Chetchnya rail route is open.
- For transportation to and from Western Europe represented by Frankfurt, West Germany the ship transportation cost reduction will be more than USD 13 per ton, which will make water transportation the lowest cost alternative even when the Chetchnya corridor is open. For general cargoes the Chetchnya rail route will still remain the lowest cost alternative. As a consequence elimination of the draft restrictions will greatly enhance the competitive position of the water transportation route for general cargoes compared to the TRACECA route.
- To and from Southern Europe represented by the Adriatic Sea water transportation is the low cost alternative for bulk and general cargoes even with the draft restrictions. A cost reduction of more than USD 13 as a result of the elimination of the draft restrictions will greatly enhance the competitive position of all water transportation.
- For cargoes to and from the United States the removal of the "bottlenecks" will have no impact on the competitive situation.

7. Overall observations and conclusions.

The observations and conclusions that can be drawn from this analysis for bulk cargoes are in the main:

- Water transportation is the competitive alternative for cargoes to and from the Southern European region represented by the North Adriatic and Northern Europe/Baltic region represented by St. Petersburg.
- The rail corridor through Chetchnya is the lowest cost alternative for bulk cargoes to and from Western Europe represented by Frankfurt and is also a serious competitor to water transportation to and from St. Petersburg. Cargoes on this route to and from the Central Asian republics will use the ferry service between

Baku and Turkmenbashi.

- The TRACECA route is the lowest cost transportation alternative for bulk cargoes to and from the Black Sea region and the United States, and will represent the best alternative transportation route for bulk cargoes to and from Southern Europe when the waterways are closed during the winter.
- Elimination of the draft restrictions will change the competitive position for bulk cargoes to and from Western Europe represented by Frankfurt and will make water transportation the low cost alternative for this region. Furthermore it will make water transportation to and from Northern Europe represented by St. Petersburg even more competitive.

For general cargoes the following observations and conclusions can be drawn:

- The TRACECA route is the lowest cost alternative for the Black Sea region and the United States. Like for bulk cargoes, the TRACECA route will be the alternative route to water transportation to and from Southern Europe.
- The Chetchnya corridor is the lowest cost alternative for general cargoes to and from Northern Europe (St. Petersburg) and Western Europe (Frankfurt). In both cases the Baku - Turkmenbashi ferry will be used to and from the Central Asian republics.
- Water transportation is the most cost effective mode of transportation for general cargoes to and from Southern Europe represented by the North Adriatic region. The TRACECA route will represent a competitive alternative when the inland waterways are closed during the winter.
- The elimination of the draft restrictions on the inland waterways will shift the competitive position of general cargoes to and from the Northern Europe/Baltic route in favour of water transportation and further increase the existing competitive advantage for general cargoes to and from Southern Europe. For the other regions the elimination of draft restrictions will not change the competitive situation.

It is impossible to evaluate all possible routes and origins and destinations. The analysis should nevertheless present an overview of and guideline to the competitive position of various routes and modes and transportation

Annex III

The Conceptual Framework for the Baku Free Port

1. THE CONCEPTUAL FRAMEWORK OF THE BAKU FREE PORT

1.1 Conceptual Objectives of the Baku Free Port

The Baku Free Port will take a special position in Azerbaijan's development towards market economy and will enhance the trade links to central Asian countries along the TRACECA corridor.

The role of the Baku Free Port shall be to strengthen Azerbaijan's international trading position by establishing new and reinforcing existing trade contacts and networks. In order to achieve these aims, the future services of the Baku Free Port shall support international trading and transit trading by liberalising customs procedures within the Free Port and offering sufficient cargo handling, storage and warehousing facilities by the operators.

1.2 Classification of the Baku Free Port Concept

The terms 'free port' or 'free trade zone' is not implicitly defining a clear cut concept but is one term, inter alia, expressing exemption from legal rules and regulations for economic regions. Other often used terms are: export processing zone, customs free zone, foreign trade zone, free zone, special economic zone, etc. All these terms stand for economic regions in which some kind of preferential policies is applied. Yet, they do not necessarily stand for the same concept. But as the common denominator of all concepts is that certain laws and regulations otherwise applied to the domestic economy are not in force in these specific regions, such areas can be summarized under the term >free zones=.

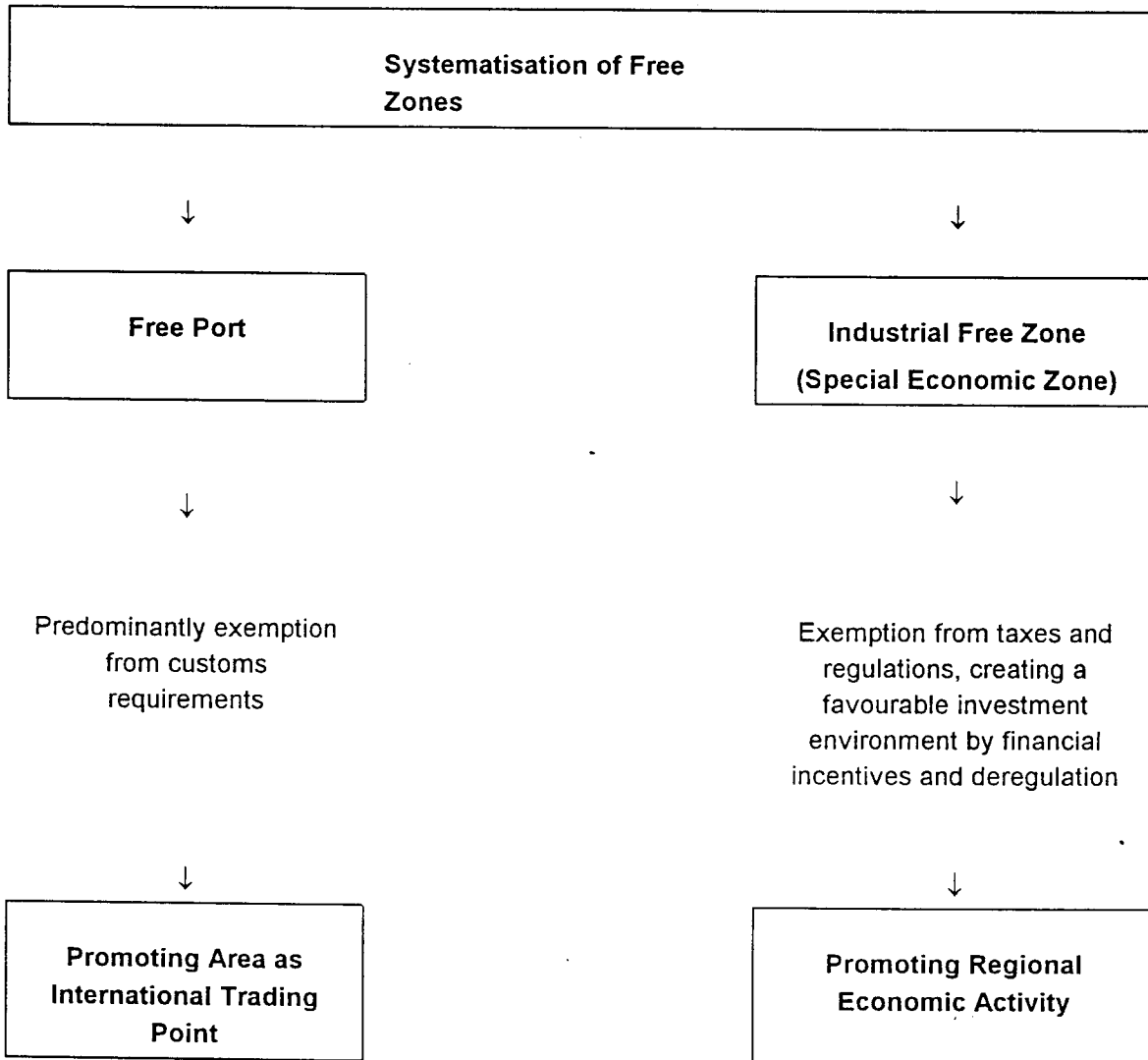
The most suitable approach to classify the various types of free zones, under whichever name they might be run, is according to their main objectives. The objectives are, besides the local conditions, the major determinant for defining an efficient, successful policy.

There are three main reasons for establishing "free zones":

- promoting international trade
- furthering regional economic development
- facilitating and speeding-up the unhindered international exchange of commodities.

There is no clear and common usage of terminology for concepts following these objectives. Therefore, the systematisation given below uses definitions based on the historical origins.

Figure 1:



The historically oldest concepts of applying preferential rules to an economic region are free ports or free trade zones. Free ports or free trade zones are generally defined as areas in which goods can be stored, handled and processed without imposition of customs requirements. Often, exemption from customs control is associated with freedom from taxes and other non-operational charges. The free port status is not always extended to all port facilities of a seaport, but may be restricted to a limited area. A concept almost identical to free ports are free trade zones, although there is no common definition. A "free trade zone" usually designates an area that lies within a port or in its immediate neighbourhood, enjoying preferential customs regulations very similar to a free port. The traffic operations are, however, hampered by the fact that the waterfront facilities are outside the 'free' area, i.e. the ship/shore cargo handling takes place within the customs area. A free port / free trade zone usually offers office accommodation and warehouse space on the 'free' side of the customs fence to shipping and forwarding agents, merchants, ships chandlers and related trades, granting them certain advantages. Thus, the businesses involved in foreign trade are promoted, distinguishing multi-functional free port / free zones from bonded warehouses dedicated to single purposes.

1.3 Review and Evaluation of Experiences Made with Free Port / Free Trade Zone

Before discussing the implementation of a free zone in Baku port the potential benefits and experiences made in other places should be known.

The basic concept of a free port/free trade zone is very simple by defining an area which is outside customs authority. Benefits derived from the resultant trade facilitation occur to both, the users of the free port/free trade zone and to the host country/region establishing such a preferential area.

From the user's point of view the following advantages result from a free port:

- accelerated landing and storing of goods
- goods can be transhipped or stored in transit sheds or warehouses without being subject to customs formalities
- increased cash-flow for the traders as goods can be held duty-free until reaching their markets
- favourable for commission business, i.e. for storage of commodities not yet sold. Unrestricted access at all times to goods stored in the free ports is of considerable importance for the importer or the foreign exporter. Prompt delivery from the warehouse combined with the possibility of prior inspection of goods by the purchaser is a definite advantage which increases sales prospects and strengthens the market position of the importer/foreign exporter.

These advantages for the customers can induce increased cargo volumes. The resulting benefits for the country implementing a free port/free trade zone include:

- utilization of excess port capacity, reducing average unit cost of cargo handling and storage
- cost reductions by economies of scale, i.e. increased cargo volumes allow the use of more productive and cost-efficient handling techniques
- generation of additional shipping traffic, leading to increased competition and lower shipping costs
- increased demand for locally based international trade services such as customs brokers, freight forwarders, cargo repacking, goods exposition, shipping services, etc.
- creation or safe-guarding of employment. Employment is generated in the port for stevedores, tally clerks, cargo surveyors, security personnel, and warehouse staff.

The net effects of the benefits can only be roughly assessed, but they are usually considered to be positive. In connection with the continuously increasing degree of containerization, this positive assessment is even enhanced, as containerized cargo, compared to general cargo, can be easily customs sealed, allowing easily controlled duty-free movements of transit goods within customs territory.

In order to illustrate the practical aspects and resultant benefits further, it might be of interest to briefly review the history and structure of other free ports / free trade areas like the Free Port of Hamburg and the Colon Free Zone. The first has a long history as trading point while the establishment of the latter is closely related to the construction of the Panama Canal.

The Free Port of Hamburg

This free port is one of the largest in the world and has served as a model after which free ports in North America and Scandinavia have been designed. Its foundation dates back to the Customs Union Agreement signed in 1881 by the German Empire and the Free and Hanseatic City of Hamburg. Through this agreement Hamburg was, with the exception of its port, which became designated as 'Free Port', integrated into the German customs territory of the German Empire. This was the first step in the transition from a Free Port City, as it was originally, to a city with a Free Port. Inaugurated in 1888, the free port has meanwhile coined the character of the Port of Hamburg and, in particular, has significantly strengthened its function as a commercial, transit and traffic centre.

Ever since its foundation more than 800 years ago the Port of Hamburg has been a place of trade due to its favourable geographic location: it is situated at the cross-roads of Continental Europe, Scandinavia and the Baltic States, and Central and Eastern Europe. Today, Hamburg is home for more than 2,500 foreign-trade firms and over a thousand companies have set up factories or distribution depots along the river Elbe. Besides transport and property insurance companies, numerous banks specialised in overseas trade are based in Hamburg. Hamburg's international rôle is further enhanced by hosting consulates of some 90 countries, many of them having commercial offices. Thus, the city of Hamburg and the activities of its port are inextricably linked.

The Free Port of Hamburg today covers an area of about 16 square kilometres, accounting for roughly one sixth of the total port area. The land in the free port is owned by the city state of Hamburg. In this way, speculation in land with its undesirable consequences for the cost and price structure in the port is impeded. The city government reserves the right to select those warehousing companies, quay operators and other enterprises for locating their business operations in the port area that appear particularly suited from the point of view of port policy.

The following advantages are granted to the users of the Free Port of Hamburg:

- on the river Elbe between the Free Port of Hamburg and the open sea, vessels are not required to submit customs declarations or cargo documents and are in no way restricted by customs procedures - provided they are carrying a customs pennant
- import, export and transit goods can freely enter the free port, be loaded, unloaded, transhipped and stored without any customs restrictions or formalities. The storage of goods is neither

restricted in time nor in quantity. Goods in storage may be inspected, sampled, and, to a certain degree, manipulated, provided it serves to conserve the goods or to improve their appearance or commercial quality and does not reduce the customs duty to be paid. No provision of security is required

- goods are only subject to customs clearance when entering the German customs territory, that is part of the internal market of the fifteen member states of the European Union.
- shipbuilding activities can be carried out without customs restrictions
- treatment and processing of goods is allowed
- trade within the free port is only restricted in so far as ship chandlers require a special permission. Retail trading, street vending and peddling is prohibited

The Federal Customs Administration keeps offices at various points along the border of the free port area, where customs control is exercised and where goods are cleared for import and, in exceptional cases, for export. There are 37 land, rail and water crossing points along the 28 km Freeport perimeter which can be passed at any time, day and night. In general, persons and goods entering the free port are not subject to control. Sixteen customs offices carry out customs examinations. For practical reasons, some offices are in charge of imports only, others for exports. To some customs offices specially qualified officers are assigned for the examination of commodities which require expert knowledge or which have to undergo particular checking procedures. The customs offices are among the most modern facilities of their kind in Germany.

In order to safeguard customs interests,

- cargo movements within the free port area must be accompanied by transport or dispatch documents,
- a special form of bookkeeping is required by companies engaged in storage, trading, refining or processing of goods, listing receipt and delivery, allocation and the origin of goods.

The freedom which exists in the free port is also subject to limits when goods endanger public safety and order, or the health of people, plants and animals.

Tax treatment within the free port is in principle identical to the rest of Germany. In other words, there are no tax exemptions, benefits, incentives to investment or similar inducements to firms to settle in the free port area. Only as far as turnover tax is concerned, the free port is deemed to be foreign territory. Regarding excise duties, the relevant legislation is in force, yet the excise duties are not levied in the free port. Excise duty legislation prohibits the use and consumption of untaxed goods in the free port area.

With the progressing integration of the European Union the status of the Free Port of Hamburg is undergoing changes, but its main functions derive continued strong support from the free port status.

The Free Zone of Colon

Colon Free Zone lies at one side of the Atlantic entrance of the Panama Canal. The free port status was established in 1948. Thoughts about establishing a free port had already come up as early as 1917, three years after the opening of the Panama Canal. By that time Colon began to be viewed as a centre for international distribution of goods by taking full advantage of its geographic location and its strong position as the Atlantic terminal for the canal.

Any person or corporate body may operate in the Colon Free Zone. There are no restrictions in the form of required minimum capital investment or business licence. However, the employment of at least ten Panamanian workers must be guaranteed. Authorisation is required by the Administration of Colon Free Zone and obtained by submitting documentary proof of all statements, including, in the case of corporate bodies, the relevant articles of association and commercial and bank references.

In the Colon Free Zone it is permitted to store, exhibit, pack, unpack, manufacture, bottle, mount, assemble, refine, purify, mix, convert, and, generally speaking, operate and manipulate all types of goods, products, raw materials, containers and other articles of trade, with the sole exception of those articles which are prohibited by national law to be imported.

The goods and all other commercial articles and items that have entered the Colon Free Zone and been stored, or which have been manufactured, modified, assembled, packed or converted there, may leave the area to the following destinations:

- for sale to official organisations established in the Canal Zone
- for sale to ships that cross the Panama Canal destined to foreign ports, or which are sailing between any registered port in the Republic of Panama and foreign ports
- for re-exportation
- for the customs-controlled territory of Panama.

The customers of the Colon Free Zone profit from the following conditions and arrangements:

- goods imported or re-exported are not subject to customs formalities
- goods entering or leaving the Free Zone destined for foreign ports are free from taxes, duties or any other trade charges
- there are no controls on foreign exchange and no restrictions on the transfer of profits and dividends
- the companies established in the Free Zone pay a preferential income tax
- dividends or remittances of capital are exempt from tax on invested capital when the property or security sold has been held for over two years

The Colon Free Zone provides about 7,000 permanent jobs and generates a considerable level of indirect income. The free port makes a large contribution to air, sea and land shipping activities as well to the insurance, banking, hotel and building sector, and it is an important consumer of shipping-related supplies, stationery, furniture, office equipment and other necessities.

1.4 Key Factors of Success for Free Ports / Free Zones

The most important prerequisite for a successful free port/free trade area is a strategic geographic location with respect to international cargo routes.

There are only development chances for free ports in regions which provide favourable conditions for traffic and trade policies, i.e. they are located at major shipping routes and/or very central to supply and trading areas, either for the domestic market or for neighbouring/ landlocked countries.

Granting a free port/free trade zone status to an area and, thus, being able to provide unhindered cargo throughput which is not burdened by duties and administrative procedures, is strengthening the competitive position of the port.

Yet, the free port status is only one of important port characteristics. Other basic determinants besides the geographic location are:

- port access
- port facilities
- efficiency and reliability
- port and harbour dues
- hinterland connections
- communication lines

Disadvantages of these other determinants cannot simply be compensated by establishing a free port status. Under market conditions the cargo takes the route which minimizes overall transport costs. This includes as well costs in terms of time, risks regarding reliability and efficiency, uncertainties and delays caused by administrative procedures etc. Insufficient port access and berth facilities are usually knock-out criteria. In this context, a free port/free trade zone status has a cost reducing effect on the overall transport costs, but it does not influence the other cost elements, apart from cost reductions through economies of scale which become possible through larger volumes of cargo handled.

The presence of experienced and efficient forwarding agents, customs brokers etc., in the free port/free trade zone and the local availability of financing facilities offered by banking institutions is adding to a favourable trading climate.

Nevertheless, it has to be clearly stated that cargo throughput is depending on the economic situation of the countries involved in the international trading activities. A free port/free trade zone status does not generate traffic by itself but helps to attract cargo to be shipped through this port and not through competing ports on this route.

2. Establishing a Free Port in Baku Port

2.1 General Provisions

The port of Baku is well suited to be converted into a free port. The port has ample facilities, personnel knowledgeable and experienced in cargo handling, good transport connections to all means of transport (rail, road, ferry, shipping), established international communications, and can realise economies of scale through integrating free port activities with its ongoing port activities.

Especially, the port's position as an intermodal transport node in the TRACECA transport corridor qualifies it particularly well as a free port. The new free port function will benefit from existing civil structures and mechanical equipment (that will not need new construction but only rehabilitation), from established cargo handling and warehousing expertise gained over many years of successful operations, from a professionally skilled and experienced workforce and management (that does not need to be newly hired and then extensively trained), from established business contacts with all transport mode operators, and from an unbiased disposition towards all transport suppliers.

2.2 Customs Supervision of the Free Port in Baku

The establishment of a free port regime in Baku port does not constitute a change of functions and duties of Azerbaijan Customs Office with regard to control of foreign trade and collection of customs duties and excise taxes.

The changes envisaged for the Customs Office with the institution of the free port status are in the fields of new locations for customs dispatch offices and in altered ways and means of supervision of activities in the free port and of the security of its borders, including:

- the introduction of a suitable set of regulations for customs supervision of the Free Port and installation of clearance facilities at the free port gate(s).
- the improvement of transfer procedures in customs bond (under customs seal), especially for transports between the industrial free zone of Sumgait and the Free Port as well as on the inland transit routes from Georgia to the Free Port in Baku.

In the free port only cargo handling and storage as well as permitted treatment of those cargoes are allowed. All these activities must be related to discharging and loading of vessels and river craft and to direct and indirect delivery to and from consignees and shippers. Consequently, goods will be left in their original condition as described in manifests and shipping orders. For this reason, cargo stored in the free port need not be recorded in special stock accounts, as orderly files and lists are kept by the port operators. The operators will serve all purposes of correct and complete documentation required by Customs Office. The recording and reporting routines required by Customs Office from the port operators in support of indirect customs supervision of the Free Port are usually available as a by-product of normal administrative

and operational documentation procedures undertaken in the customary course of port business.

As long as inbound goods are staying in the Free Port, customs declarations will not be required. Export declarations and export licences will be required when goods are loaded on board vessels. This means that goods can be stored in the Free Port with undeclared destination.

2.3 Port Accesses and Customs Border Points

Road Access

At the port gates facilities of customs examination have to be installed as required by Customs Office for dispatch of all types of cargo and containers handled through the port.

Access for vessels and coastal craft

Vessels entering and leaving the free port are exempt from registering and clearing with customs. The same applies to service vessels working on behalf of port operators and the Port Administration, duly registered with the Port Administration.

Pilotage to and from the free port has to be carried out as a purely technical service. Pilots will not act as customs representatives. Nevertheless, the presence on board of an official pilot of the Port Administration will be the guarantee to Customs Office that vessels' cargoes and stores are not tampered with during passage of the access channels on arrival to or departure from the Port of Baku. Domestic coastal and cargoes will be treated by Custom Office either

- as 'cargo in customs bond' if it is coming from or going to a free zone or bonded warehouse
- as 'import' if goods of foreign origin are customs cleared for free circulation in the national customs territory before departure of the vessel.

In any case, cabotage traffic into and out of the Free Port will require regular customs declaration and dispatch. It has to be investigated, whether a customs border checkpoint for coastal vessels and river craft has to be installed at the perimeter of the free port. Alternatively, if little traffic is expected in these transport modes, the dispatches of coasters can be effected upon special application during discharge and loading operations in the free port.

Access of persons

Apart from the staff of port operators and the Port Administration and the crews of vessels berthed at the terminal, only persons engaged in rendering services to vessels and cargoes will be allowed to enter the free port. This restriction of access will enhance security and will facilitate the customs supervision of the port.

2.4 Cargo Handling and Documentation

Goods handled and stored in the free port shall be regarded as not being under customs bond. Cargo in the free port has to be completely and correctly documented by the terminal operator. For cargo incoming by sea Customs Office will not receive manifests and container lists.

Import and transit cargo will be stored in the port sheds and areas, unless directly or semi-directly delivered to on carrying means of transport.

Export cargo has to be cleared for shipment to Customs Office. To this effect, the forms serving as shipping order, loading advice, etc. must indicate that Customs Office has cleared the shipment for export. The port operator is held to load only such cargo which is cleared by customs.

2.5 Storage and Delivery In and Out

In the free port goods are kept in storage in the condition as received. Only inventories of stored goods, in a form prescribed by the Port Administration, will be kept by the port operator, but no special records and transformation accounts for customs purposes.

For ensuring smooth cargo flows through the terminal, the port operator will assist Azerbaijan Customs Office and other government institutions engaged in supervision of foreign trade in clearance and inspection tasks prior to delivery.

3. Regulatory Framework for the Free Port Status

The regulatory framework and governing rules have to be set up by Azerbaijan legislation, the existing rules and regulations for the Port of Baku and customs excise have to be amended accordingly. As a legal framework for the Baku Free Port it is recommended to adopt regulations according to the European Union Customs Code "Commission Regulation (EEC) No. 2454/93 of 2 July 1993 laying down provisions for the implementation of Council Regulation (EEC) No. 2913/92 establishing the Community Customs Code".

4. Framework Principles for Establishment and Operation of Baku Free Port

4.1 Principles of Free Port Use

- Cargo entering the Free Port from abroad shall be exempt from all customs duties, procedures, documentation requirements, and restrictions of movement and treatment as far as the nature of the goods in question is not altered.
- Cargo to be introduced into free circulation in the national customs territory has to undergo the prescribed customs procedures when leaving the free zone.
- Cargo in transit from and to origins and destinations outside the national customs territory, but being transported through the national customs territory, is subject to customs transit procedures as soon as the cargo is leaving the Free Port area by road, rail or river craft or until such transports are entering the free port.

In case special treatment or allocation of goods are required that are not explicitly cited as being permitted, Customs Office will enter into deliberations about the admittance of such activities on request of the interested parties. Customs office being relieved from burdensome duties of directly registering and controlling cargo movements and storage inside the port, retains authority to demand that

- all goods that are leaving the Free Port to the national consignees' destinations are completely and correctly declared to the competent customs office;
- transit cargoes over inland routes are being securely and swiftly dispatched;
- trade goods in the free port are not consumed for private purposes.

For these reasons, the users of the free port have to adhere to the rules and regulations set by the Customs Office. The use of the free port is subject to restrictions. Such obligations and restrictions are imposed in the interest of realising the optimum of freedom of handling, storing and treatment of goods in the free port whilst maintaining the security required by Customs Office to exercise full control over goods passing in and out of the port from and to the national customs territory.

4.2 Rules and Regulations Pertaining to the Free Port Status

4.2.1 Borders and Accesses

The landward boundary of the Free Port is closed in by a perimeter fence with accesses that are dedicated to distinct uses of entry and exit of vehicles and persons.

The seaward boundary is indicated in the official sea or port charts. The crossing of this boundary by vessels is subject to the rules governing port calls and falls under the competence of the Port Administration.

The accesses and gates of the free port must not be used for other purposes than for those assigned. Entry points for cargo and containers carried by means of land transport are directly leading to or from customs control yards or checkpoints.

Passenger vehicles and pedestrians have to use the gates prescribed for them. They must have a special free port entry permission. The crossing of free port borders outside the official accesses and the use of accesses without presenting the requisite permissions and declarations is strictly prohibited.

4.2.2 Permissions and Clearances to Enter and Leave the Free Port

Waterborne Traffic

Deep Sea Vessels

Vessels coming from and bound to international waters of the Caspian Sea pass the port boundaries subject to the clearance procedures with the Port Administration.

Vessels are not allowed to load cargo for which shipping orders have not been issued as required by regulations and usage.

Vessels are not allowed to discharge cargo for which manifests and container lists according to international standards or in the form prescribed by the Port Administration have not been submitted to the port operator, prior to discharge. Discharge of cargo not manifested and destined for the port has to be documented immediately by the port operator handling the cargo, and the shipping agency has to submit additional manifests without delay. Goods destined to other ports which are unloaded erroneously from a vessel, have to be documented and kept separately from other cargo. Such cargo has to be reloaded to the vessel as soon as possible, in any case before clearing the vessel for departure.

Besides the vessel, shipping agencies and port operators are held responsible for compliance to this rule. Customs Office does not require the submission of manifests of cargo staying on board for foreign destinations.

Coastal Traffic

River craft and vessels engaged in domestic coastal trade have to advise Customs Office about their cargo and itinerary before arrival or departure. Customs Office will inform such vessels and craft before or on arrival or departure, whether they will be inspected.

Before loading cargo, shippers, shipping agents, forwarders and port operators are held to prepare the required documents and to enter into the prescribed procedures for transit and import cargo.

Pleasure craft and sport boats are not allowed to enter the free port. Exceptions to this rule will be granted for being loaded or discharged to and from vessels.

Service vessels working on behalf of port operators or the Port Administration and which are duly registered with the Port Administration are free to enter and leave the free port without customs clearance, provided,

these vessels are carrying only such provisions and materials which are not subject to trade controls by customs or other organisations.

Customs Office retains the right to stop service vessels for spot checks in co-ordination with the Azerbaijan Maritime Administration.

Railway

The schedule of train arrivals and departures is routinely communicated to Customs Office by the railway unit in charge of port railway movements. Upon submission of the requisite documents for customs clearance, Customs Office will decide whether rail cars have to be inspected before discharging in the Free Port.

Road Traffic

Trucks and two drivers or one driver and one assistant per truck are allowed to enter and leave the free port if in possession of valid transport documents covering the cargo to be loaded or unloaded.

Persons

Permanent permissions to enter the free port will be issued by the Port Administration. In accordance with pertinent laws and regulations, permanent permissions are granted to:

- Managers, staff and labour of operators working in the free port,
- Port Administration personnel whose tasks are directly related to port operations,
- Shipping and business representatives and staff who are regularly engaged in operations of the free port.

Short-term permissions will be given to persons on occasional free port business. Vessels' crews pass freely when in possession of valid seaman's books.

4.2.3 Obligation to Declare Goods

When entering or leaving the free port to the customs territory, all persons have to declare goods in their possession or custody at that moment.

Goods have to be presented to Customs Office for inspection and verification in an orderly way which permits easy counting or volume assessment and identification of marks and numbers.

Besides the truckers, port operators are held responsible for the orderly loading of vehicles for the purposes of customs inspection.

Containers, the contents of which - in exceptional cases - are required by Customs Office to be inspected in the customs dispatch yard, must be loaded on trucks and trailers with the doors easily accessible.

All empty containers and trucks will be opened at customs checkpoints and have to be presented with the doors easily accessible.

4.3 Rules for Port Users

Commercial Activities Permitted in the Free Port

Handling, Storage, Disposition and Treatment of Goods

Goods may be freely moved and stored in the Free Port. Such activities are not subject to direct supervision and permission by Customs Office.

Goods can be treated during storage as far as their nature is not altered. The main types of permitted treatment are:

- Repackaging,
- Neutralisation,
- Marking,
- Classification,
- Grouping and Repartition,
- Consolidation and de-consolidation,
- Sorting, Mixing and Grading.

Provision of Ships (Ship's Chandling)

Entry, storage and sale of ships' stores are granted free from customs duties and excise taxes to vessels engaged in international sea trade. The establishment of this type of business in the Free Port is subject to the approval of Customs Office.

Ship Repair

Repairs on board ships is permitted under the free port status. The enterprises engaging in this business must be approved by Customs Office.

Ship's chandlers, ship repair shops and port workshops have to keep stock records of materials and parts in store as prescribed by Customs Office for tenants of the Free Port.

Restrictions of Commercial Transactions

In the free port are prohibited:

- Retail trade,
- Restaurant catering, except for staff canteens,
- Consumption and use of goods not declared for customs and excise purposes,
- Sale of ship stores and private property by masters, crews and passengers of vessels.

Constructions and Installations

The Customs Office has to be advised on any construction or erection of buildings and other superstructure and constructional changes of existing structures in the Free Port as part of the application procedure to other competent authorities. The applications must state, besides technical details, the type of activity to be carried out on the building project. Customs Office will grant entry permission for labour and materials in accordance with customs rules and regulations.

Restrictions Pertaining to Special Commodities

Legal and regulatory provisions of transport, handling and storage of hazardous and dangerous goods prevail over the freedom of movement and storage of goods in the free port.

Documentation and Reporting Duties of Port Users

Records on Cargo Received, Stored and Delivered

Port operators, terminal and stevedoring enterprises in the Free Port are held to keep complete, correct and up-to-date records on goods handled, stored, received and delivered, consignment by consignment and separate for each storage place. This inventory keeping can be realised in the form of orderly files of manifests, tally records, shipping orders and delivery orders. The record files must be easily accessible to Customs Office for checking purposes in exceptional, justified cases. The keeping of separate stock accounts and submission of records to Customs Office are not required.

The original papers and electronic files which document receipt and delivery of goods, such as manifests, copy of the shipping application, delivery orders, tally sheets showing discharge and loading data, orders for re-packing, re-marking, mixing and other treatment of goods, have to be kept by port operators in well ordered files for the period of time required by national law for the keeping of financial accounts.

Assistance of Trade Controls

Port operators are obliged to facilitate the control and inspection activities of state organisations exercising trade controls and commodity inspections as decreed by Government. Port operators have to submit information on goods requested by control organisations and have to make goods accessible to them for inspection during storage and handling.

In co-operation between the parties concerned, controls and inspections shall be organised in a way which avoids interference with operational performance.

Co-operation between Maritime Administration and Customs Office

Vessel and Cargo Data

The port captain will routinely communicate to Customs Office vessels and their cargo, indicating estimated and actual time of arrival and departure. The information will contain the vessel's name, flag, port of registry, ship owner and operator, master's name, last and next port of call, name and address of the shipping agent and types and quantities of cargo carried in summary form.

Supervision and Direction of River Craft and Coastal Vessels

The Port Administration will co-operate with customs office in identifying and communicating with vessels and craft subject to customs inspection in order to assure that river craft and coasters will not enter or leave the free port without being registered and/or cleared by customs office.

5. Intervention of Customs Office inside the Free Port

Customs Office, within its legal competence, has the right to supervise activities in the Free Port by means of spot checks directed to persons, vehicles, vessels, storage facilities, goods and to any building and area. Customs Office has the right to check at random storage inventories and movable assets and the requisite registers.

The principles of frequency and scope of spot checks inside the Free Port are determined by internal customs regulations, but will be kept to the indispensable minimum.

6. Sanctions

Customs Office is entitled to bar persons and enterprises from entering and working in the Free Port. This sanction can be applied in cases of severe infractions of the rules and regulations governing the use of the Free Port and when the conduct of persons engaged in activities in the port gives rise to serious doubts as to their reliability and trustworthiness.

In all other respects, system and norms of sanctions as regularly practised by the customs authorities are applicable to infractions of these rules and regulations.