

Review of Railways Rehabilitation in Central Asia

for Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan

Working Paper

**Analysis and Forecasting of Traffic on the
Kungrad – Beyneu Line**

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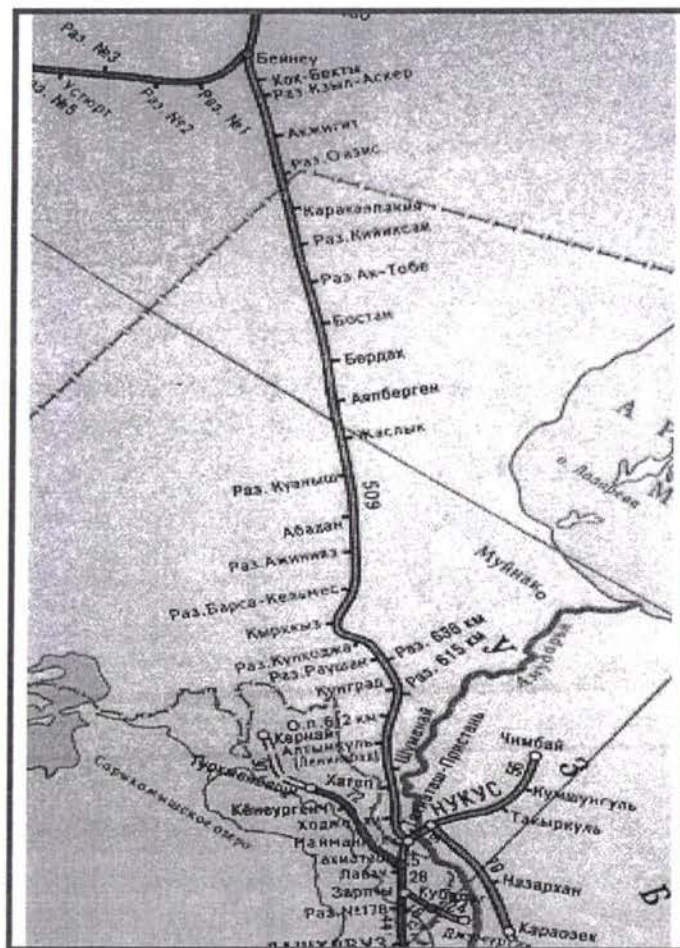


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The Kungrad – Beyneu railway line



1. Role of the Kungrad – Beyneu Railway Line

1.1 Line History

In 1880 the Russians started laying out a railway line from the Turkmen port of Krasnovodsk – now Turkmenbashi – on the Caspian Sea. In 1886 it had reached the western bank of the Amu-Darya River at Chardjau – presently Turkmenabad –. After having crossed the Amu-Darya on a timber bridge in 1888 the line reached Tashkent in 1899. By 1906 Tashkent had been linked to Orenburg in southern Ural.

Seven decades later the 1025 km long Chardjau – Kungrad – Beyneu was built. It was put in exploitation in 1972 linking Turkmenistan and Uzbekistan with Kazakhstan and further in the north with Russia. It was at that time the most west north-south line in Central Asia. Not long after its opening plans were made to build another north-south line right on the eastern coast of Caspian Sea forming a direct link between Turkmenistan and Kazakhstan but they have not materialised yet.

The Kungrad – Beyneu was giving to western Uzbekistan a more direct access to Russia than the older line crossing Kazakhstan on a much longer distance. However after the break-up of the Soviet Union Uzbekistan came to resent depending too much from Turkmenistan since Uzbek goods and passengers had to cross borders both to travel between central or eastern Uzbekistan and the northern regions of Khoresm and Karakalpakstan or the southern region of Sukhandaria. In a move to make it not too dependent on the relation between countries the Uzbek government decided to build a new line between Uchkuduk and Nukus and to rehabilitate the Navoi – Uchkuduk line. The new line opened in 2001. Urgench, the capital city of Khoresm was linked to it only after a bridge was built on the Amu-Darya River in 2003.

1.2 Line Position

The main purpose of the new line was to avoid unnecessary border-crossing. It was also allowing to route trade between Uzbekistan and countries in the north-west by making more use of national network what meant using more national resources and saving hard currency.

There was the expectation that the opening of the new line could reroute the TRACECA traffic passing by the Caucasus from the port of Turkmenbashi to the port of Baku. This fits with to the desire of Uzbekistan to make the sale of its cotton less depend on the infrastructure built in soviet time on the Baltic coast at Riga. In case the Georgian port of Poti could take part of the trade based in Riga the TRACECA route would become a strategic one and it was important not too depend on a single port on the Caspian Sea. However Poti did not live up to the expectations and never saw much over 5% of the cotton trade. Riga did lost traffic but it was for the benefit of Bandar-Abbas in Iran.

It seems that progressively additional aims were taking shape. It was thought that after a railway line was constructed between Kashgar in China and Andijan in the Ferghana Valley as well as a direct railway link between the Ferghana Valley and Tashkent Uzbekistan could expect to see part of the China – Europe traffic crossing its territory and passing by Nukus and Kungrad. However the chance of seeing this happen is much reduced if a Trans-Kazakhstan new railway line linking China to the Caspian Sea is built.

Other development could be linked to the construction of the new line linking the main Uzbek network with Termez and further Afghanistan. The construction is proceeding apace and the

new link will open soon. Beyond that there are plans for the construction of a new line linking Termez with Mazar-i-Sharif in Afghan territory although this project may be delayed as American financing become more elusive. There are even plans to go further by building a new link between Mazar-i-Sharif and the Iranian network.

If those plans are implemented Afghanistan may be saddled with a Russian gauge line carrying almost exclusively a limited traffic with origin and destination in Uzbekistan and Tajikistan. It could be much better for Afghanistan to start building a railway network with a standard gauge from the Iranian network and trying not to depend on a too narrow group of customers. This may mean continuing in direction of Kandahar rather than Mazar-i-Sharif. There is already some traffic linked with Afghanistan passing by Beyneu and Kungrad. But it is rather small and it seems related to humanitarian aid that is by nature temporary.

1.3 The Kungrad-Beyneu Line as Part of the Uzbek Railway Network

The final railway network of Uzbekistan resulting of the implementation of the present plans will look like a five-pronged fork with a common trunk between Tashkent and Samarkand / Marokand.

- Two lines looking north in direction of Kazakhstan and Russia i.e. the line north of Tashkent and the one passing by Nukus and Kungrad.
- In the east the line presently linking with Kyrgyzstan with an extension to China that could be expected in a not too distant future.
- In the west the line linking with Turkmenistan that may lose much of its importance if relations with Turkmenistan do not warm up.
- In the south the new connection with Termez and Afghanistan

The Kungrad – Beyneu link is a strategically important one for Uzbekistan.

- For linking the country with Russia and through it with Europe it presents the advantage on the line north of Tashkent of having a much longer distance on Uzbek territory and of providing revenues to UTY, economic activity along the areas it crosses and savings of foreign currency that is still scarce.
- For using the TRACECA corridor passing by Aktau port as an alternative to Turkmenbashi that could may otherwise take too much advantage of its monopoly situation.

1.4 Importance of the Line for Turkmenistan

The Kungrad – Beyneu railway link is also a vital one for Turkmenistan at least for now. It links this country to Kazakhstan and the Russian Federation. For the time being the alternatives are to use either un-sealed road links with Kazakhstan or ferry links with Makhachkala, Astrakhan or Baku.

The on-going construction of a direct railway line between Ashgabat and Dashoguz not passing by Urgench will not necessarily lead to much change in traffic level for the Kungrad – Beyneu link. However in the longer term it is very likely that Turkmens will implement their plans of building a new line between Turkmenbashi and Kazakhstan east of the Caspian Sea. When the project goes ahead the Turkmen traffic which is today of around one fourth of the freight traffic along the Kungrad – Beyneu line could be diverted to the new line.

1.5 Role of the Hinterland of the Kungrad – Beyneu Line

The normal hinterland of the line is the Low Amu-Darya region consisting of the Khorezm Oblast and the Republic of Karakalpakstan. Socio-economic indicators are shown in the Table 1:

Table 1 - Socio-economic Indicators for the Low Amu-Darya Region

Indicator	Unit	Karakalpakstan Republic	Khorezm Oblast	Total Low AmuDarya	Total Country	ShareLow AmuDarya
Area	Thousand km ²	166.0	6.3	172.2	447.4	38.5%
Population 2003	Million person	1.59	1.44	3.03	26.1	11.6%
GNP 2003	Billion sum	204.6	301.1	505.7	8316	6.1%
Industrial production	Billion sum	63.4	88.2	151.6	5697.2	2.7%
Agricultural production	Billion sum	93.3	240.4	333.7	3519.4	9.5%
Export 2004	Million USD	21.1	33.5	54.6	3526.7	1.5%
Import 2004	Million USD	49.8	22.4	72.2	2711.4	2.7%
Export 2003 through Akjikit	Thousand tons	19.2	14.1	33.3	262.2	12.7%
Import 2003 through Akjikit	Thousand tons	29.3	284.6	313.9	495.9	63.3%
Foreign trade 2003 / Akjikit	Thousand tons	48.5	298.7	347.2	758.1	45.8%

The Amu Darya region covers over one third of the area of Uzbekistan but its population is only of about 11% of the total population. The GDP per capita is relatively low particularly in Karakalpakstan where it is only slightly over one third of the national average. Agriculture is still the main activity whereas industry is not yet well developed.

The share of the region in foreign trade is a low 2% of the national trade. However its importance is unsurprisingly greater in the traffic crossing the Kazakh – Uzbek border at Akjikit – Oasis. In 2003 nearly two third of the import brought into Uzbekistan through that border were directed to the region. However the share was small for export where the dominant position was held by cotton growing oblasts of the west particularly Bukhara, Samarkand and Kashkadarya.

The above considerations point to the importance that may have the region in the future of the Kungrad – Beyneu line. In particular an increase in import could have a significant impact on traffic.

2. Trends in Freight Traffic on the Kungrad – Beyneu Line

2.1 Freight Traffic by Commodity Group in 2000 and 2003

Annex 1 gives traffic volume between Naimankul at the border with Turkmenistan and Beyneu where a line goes north to Makat and further to Russia and another one goes west to the Aktau port on the Caspian Sea. There is little local traffic between Kungrad and Beyneu except mainly for construction materials linked to road construction. Under those conditions border crossing statistics give a good idea of traffic on the Kungrad – Beyneu section.

Annex 1 gives both Uzbek statistics and Kazakh statistics for year 2003. There is a good correspondence between them for most commodity groups except “metal” and “others”. Uzbek statistics include more volume under “metal” and Kazakh statistics more under “others”. Uzbek

data show a higher north-bound traffic, 0.7 million tons versus 0.4 in Kazak statistics. This could be explained by the fact that metals have been included under “others” in Kazakhstan. The opposite happens for south-bound traffic for which Kazak statistics indicate a total of 2.45 million tons versus only 1.38 million in Uzbek statistics. A possible explanation is that some traffic linked to national security was not included in Uzbek statistics.

The order to magnitude is nevertheless the same. Between 2 and 3 million tons crossed the border. The traffic was unbalanced with north-bound traffic representing less than one third of the total. Except for goods under item “others” that represented more than half of the total, the main commodity groups were oil products, ores and metal with volumes between 0.2 and 0,4 million tons, the same order of magnitude as cotton.

2.2 Traffic by Origin or Destination and Commodity according to Uzbek Statistics

The statistics collected by the project made it possible to identify the share of import, export and transit. For transit across Kazakhstan and Uzbekistan it was possible to determine which other border was crossed. This gives an idea on the origin and the destination of goods particularly in dead-end countries such a south Tajikistan and Kyrgyzstan.

The distribution of traffic by commodity group and origin or destination through the Uzbek border at Akjigit in 2003 is given in Annex 2. It is summarised in Table 2.

Table 2 Railway Traffic by Commodity through the Uzbek border at Akjigit in 2003

Unit: Thousand tons

Direction	Ores & Coal	Oil Products	Grain	Chemicals Const.mat.	Metal	Wooden Goods	Others	Total	Country Share
North-Bound									
Export from Uzbekistan		5.5	0.6	1.8	0.2		254.5	262.6	37.1%
Transit to									
Turkmenistan		120.7		1.1	0.5		53.4	175.7	24.8%
Tajikistan					166.8		94.1	260.9	36.8%
Afghanistan							0.2	0.2	0.0%
Kyrgyzstan						0.1	8.8	8.9	1.3%
Total	0.0	126.2	0.6	2.9	167.5	0.1	411.0	708.3	100%
<i>Commodity share</i>	0.0%	17.8%	0.1%	0.4%	23.6%	0.0%	58.0%	100%	
South-Bound									
Import to Uzbekistan	3.2	2.9	6.1	5.2	79.8	3.7	395.2	496.1	36.1%
Transit from									
Turkmenistan		3.3	3.2	28.7	116.6	23.8	140.0	315.6	22.9%
Tajikistan	225.0	122.8	34.7	4.8	7.3	1.3	123.4	519.3	37.7%
Afghanistan		0.4	0.2		4.4	2.3	29.7	37.0	2.7%
Kyrgyzstan		3.4			0.1		4.6	8.1	0.6%
Total	228.2	132.8	44.2	38.7	208.2	31.1	692.9	1376.1	100%
<i>Commodity share</i>	16.6%	9.7%	3.2%	2.8%	15.1%	2.3%	50.4%	100%	
Both Directions									
Total	228.2	259.0	44.8	41.6	375.7	31.2	1103.9	2084.4	
<i>Commodity share</i>	10.9%	12.4%	2.1%	2.0%	18.0%	1.5%	53.0%	100%	

Source: UTY Statistics

It is remarkable that the share of each country is more or less the same for north-bound and for south-bound traffic, except for Afghanistan that hardly export any freight by railway. **Uzbekistan represents only one third of the total** in form of exports as well as imports.

Tajikistan contributes another third that is as much as Uzbekistan. This is not really surprising since Tajikistan has a captive traffic that is directed by whatever route that is the most suitable for Uzbekistan.

Turkmenistan makes another fourth of the total. Indeed the only direct railway link of that country with Russia and Europe is for the time being through Kungrad, the alternative being to ship goods by ferry between Turkmenbashi and Makhachkala or Astrakhan or to carry them by truck to a Kazakh station.

South Kyrgyzstan represents a very small proportion of the total traffic. The share of Afghanistan is significant only in form of imports that mostly correspond to humanitarian aid.

Some particular traffic flows can be identified. 120,000 tons of oil products are shipped from Turkmenistan that has oilfields on its borders with Uzbekistan. 166,800 tons of metal moved north from Tajikistan that is a major producer of aluminium. In turn the country received 225,000 of alumina that is needed for the production of the metal. Tajikistan that has no oilfields needs to import oil products that represented over 120,000 tons in 2003

2.3 Traffic by Origin or Destination and Commodity according to Kazakh Statistics

Kazakh statistics give an idea of what happen with the freight crossing the Kazakh-Uzbek border. The distribution by commodity group and borders of goods crossing the Kazakh border at Oasis in 2003 is given in Annex 3. It is summarized in Table 3.

Table 3 - Railway Traffic by Commodity through the Kazak border at Oasis in 2003

Unit: Million tons

Direction	Ores & Coal	Oil products	Grain	Chemicals Const.mat.	Metal	Wooden Goods	Others	Total
North-Bound								
Import by Kazakhstan								0.00
Transit to Aktau							0.01	0.01
Astrakhan		0.13					0.09	0.22
Other borders							0.17	0.17
Total	0.00	0.13	0.00	0.00	0.00	0.00	0.27	0.40
<i>Commodity share</i>	0.0%	32.5%	0.0%	0.0%	0.0%	0.0%	67.5%	100%
South-Bound								
Export from Kazakhstan		0.04			0.02		0.01	0.07
Transit from Aktau							0.02	0.02
Astrakhan	0.23	0.10	0.04	0.03	0.04	0.02	0.32	0.78
Other borders				0.02	0.01	0.02	1.53	1.58
Total	0.23	0.14	0.04	0.05	0.07	0.04	1.88	2.45
<i>Commodity share</i>	9.4%	5.7%	1.6%	2.0%	2.9%	1.6%	76.7%	100%
Both Directions								
Total	0.23	0.27	0.04	0.05	0.07	0.04	2.15	2.85
<i>Commodity share</i>	8.1%	9.5%	1.4%	1.8%	2.5%	1.4%	75.4%	100%

Source: KTZ Statistics

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Nearly the whole traffic is made of transit. No imports are made by Kazakhstan through Oasis and exports represent only a very small proportion of what is crossing the border.

It is interesting to distinguish the role of the border point of Aktau and Aksaraiskaya – Astrakhan that are easily reached from Beyneu. Over half of the traffic entering Kazakhstan at Oasis was leaving it at Astrakhan. But only one third of the traffic leaving Kazakhstan at that Uzbek border was entering at Astrakhan.

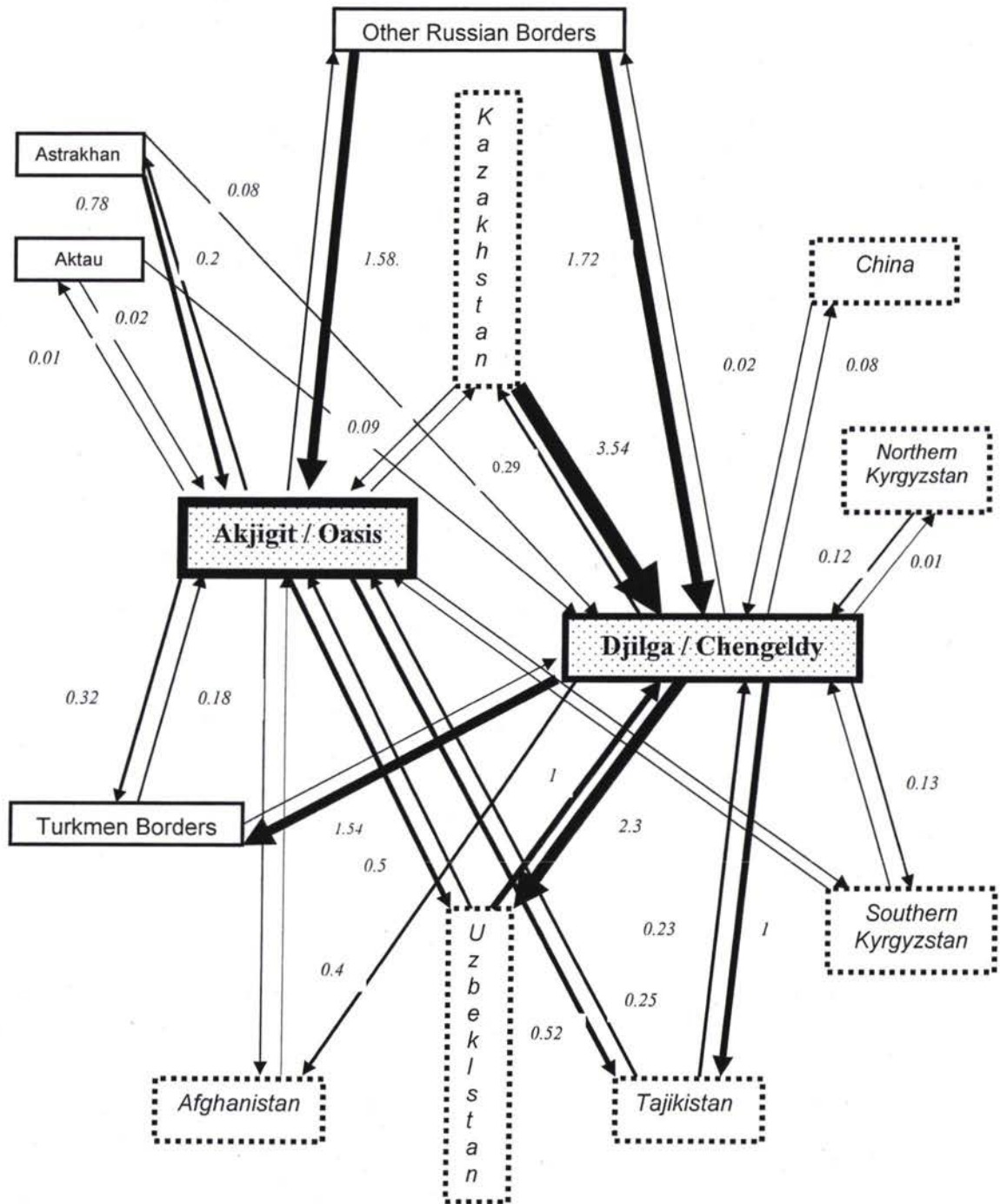
It can be assumed that the traffic passing by the Aktau port use the TRACECA corridor although it could go to ports on the Caspian Sea others than Baku. In any case it is rather small with only 0.02 million tons heading south. An even smaller amount of 0.01 million ton is shipped from Baku, probably cotton going to Poti.

Statistics for the Kazakh border crossing point – that moved from Beyneu to Oasis when the Beyneu-Oasis section was handed over to UTY – are also available for 2000 and 2001. This is very valuable since the new direct link Uchkuduk – Nukus in Uzbek territory opened in 2001.

The distribution of traffic at Oasis in 2000 and 2001 is also given in Annex 3. The comparison of 2001 and 2003 is made in Table 4.

The main traffic flows between countries or border crossing points are represented on the diagram next page. Flows within Kazakhstan are necessarily according to Kazakh statistics and flows within Uzbekistan according to Uzbek statistics. As already mentioned there is complete correspondence between the sources but orders of magnitude are satisfactorily shown.

The diagram also represents the traffic at the other border between Kazakhstan and Uzbekistan as shown in Annex 3 and Annex 4.



2.4 Comparison of Traffic across the two Kazakh – Uzbek Borders

There are two railway border crossings between Kazakhstan and Uzbekistan. One is just north of Tashkent. It is called Chengeldy in the Kazakh statistics and Djilga in the Uzbek statistics. The other is between Kungrad and Beyneu at stations called Oasis in Kazakh statistics and Akjigit in Uzbek statistics. Up to a point the two border crossings are competing. Uzbek Railways tend to ship as much as possible through Kungrad to maximise the distance run on their lines.

Statistics of the traffic crossing Kazakh borders at Oasis and Changeldy are available for both 2001 and 2003. This make possible to analyse the evolution of the distribution of traffic between the two borders. This is particularly useful to evaluate what was the impact of the opening of the new line Uchkuduk – Nukus in 2001.

Traffic volume for each border is shown in Annexes 3 and 5. It is summarised in Table 4.

Table 4 - Railway traffic through the Kazakh border at Oasis and Chengeldy in 2001 and 2003

Unit: Million tons

Direction	Oasis		Chengeldy		Total		Oasis Share	
	Volume (m.ton)		Volume (m.ton)		Volume (m.ton)		(%)	
	2001	2003	2001	2003	2001	2003	2001	2003
North-Bound								
Import by Kazakhstan	0.01	0.00	0.29	0.29	0.30	0.29	3%	0%
Transit to								
Aktau	0.10	0.01	0.00	0.00	0.10	0.01	100%	100%
Astrakhan	0.83	0.22	0.06	0.00	0.89	0.22	93%	100%
Other Russian b.	0.13	0.17	1.48	0.02	1.61	0.19	8%	89%
Lugovaya+Dostyk	0.00	0.00	0.19	0.09	0.19	0.09	0%	0%
Total	1.07	0.40	2.02	0.40	3.09	0.80	35%	50%
<i>Change 2001 – 2003</i>		-63%		-80%		-74%		
South-Bound								
Export from Kazakhstan	0.06	0.07	3.18	3.54	3.24	3.61	2%	2%
Transit from								
Aktau	0.00	0.02	0.00	0.09	0.00	0.11	-	18%
Astrakhan	0.61	0.78	0.10	0.08	0.71	0.86	86%	91%
Other Russian b.	0.01	1.58	1.13	1.72	1.14	3.30	1%	48%
Lugovaya+Dostyk	0.00	0.00	0.19	0.14	0.19	0.14	0%	0%
Total	0.68	2.45	4.60	5.57	5.28	8.02	13%	31%
<i>Change 2001 – 2003</i>		260%		21%		52%		
Both Directions								
Kazakhstan	0.07	0.07	3.47	3.83	3.54	3.90	2%	2%
Aktau	0.10	0.03	0.00	0.09	0.10	0.12	100%	25%
Astrakhan	1.44	1.00	0.16	0.08	1.60	1.08	90%	93%
Other Russian b.	0.14	1.75	2.61	1.74	2.75	3.49	5%	50%
Lugovaya+Dostyk	0.00	0.00	0.38	0.23	0.38	0.23	0%	0%
Grand total	1.75	2.85	6.62	5.97	8.37	8.82	21%	32%
<i>Change 2001 – 2003</i>		63%		-10%		5%		

Source: KTZ Statistics

Actually trends on traffic levels are not that clear. Total north-bound traffic went down in 2003 to one fourth of what it was in 2001. But total south-bound traffic increased by half. As a result the latter was in 2003 ten times bigger than north-bound traffic. In both cases the Oasis share increased substantially from 35% to 50% for the freight entering Kazakhstan and from 13% to 31% for the freight entering Uzbekistan.

This can be seen as a success for the Uzbek policy of channeling as much traffic as possible through its territory. In fact in 2003 all the traffic entering Kazakhstan to leave it through Aktau or Astrakhan was passing by Akjigit – Oasis. However in the other direction the situation is not how could have been expected. Not the whole transit traffic entering Kazakhstan at Astrakhan passed by Oasis. And only less than one fifth of the freight landing in Aktau port did so. This means that UTY was better at influencing through which border freight was sent than at attracting entering freight. In general it could be said that national railways chose the route the most profitable for them.

To better understand the split between Akjigit – Oasis and Djilga – Chengeldy it is necessary to look at what happen on the Uzbek side of the border. Unfortunately statistics are available only for 2003. The data for Djilga is given in Annex 4. It is summarised in Table 5.

Table 5 - Railway Traffic through the Uzbek border at Akjigit and Djilga in 2003

Unit: Thousand tons

Direction	Akjigit		Djilga		Total		Akjigit share
	Volume	Share	Volume	Share	Volume	Share	
	(Th.Ton)	%	(Th.Ton)	%	(Th.Ton)	%	
North-Bound							
Export from Uzbekistan	263	37.1%	1,038	73.9%	1,300	61.5%	20%
Transit from Turkmenistan	176	24.8%	83	5.9%	259	12.3%	68%
Tajikistan	261	36.8%	226	16.1%	487	23.1%	54%
Afghanistan	0	0.0%	0	0.0%	0	0.0%	0%
Kyrgyzstan	9	1.3%	58	4.1%	67	3.1%	13%
Total	708	100.0%	1,405	100.0%	2,113	100.0%	34%
South-Bound							
Import into Uzbekistan	496	36.1%	2,327	41.9%	2,823	40.7%	18%
Transit to Turkmenistan	316	22.9%	1,698	30.5%	2,013	29.0%	16%
Tajikistan	519	37.7%	1,005	18.1%	1,524	22.0%	34%
Afghanistan	37	2.7%	401	7.2%	438	6.3%	8%
Kyrgyzstan	8	0.6%	129	2.3%	137	2.0%	6%
Total	1,376	100.0%	5,559	100.0%	6,935	100.0%	20%
Both Directions							
Uzbekistan	759	36.4%	3,365	48.3%	4,123	45.6%	18%
Turkmenistan	491	23.6%	1,781	25.6%	2,272	25.1%	22%
Tajikistan	780	37.4%	1,231	17.7%	2,011	22.2%	39%
Afghanistan	37	1.8%	401	5.8%	438	4.8%	8%
Kyrgyzstan	17	0.8%	186	2.7%	203	2.2%	8%
Grand Total	2,084	100.0%	6,964	100.0%	9,048	100.0%	23%

Source: UTY statistics

Uzbek statistics gives a less favourable picture of the position of the Akjigit – Oasis border than Kazakh statistics. Its share in 2003 would be of only 23% vs. 32% according to the Kazakh data. The difference is made difficult to interpret due to the discrepancies observed in traffic volume. Uzbek statistics show a north-bound traffic more than two and half times larger than shown by Kazakh figures. On the opposite south-bound traffic is slightly lower.

An overall feature is however made clear. Most of Uzbek imports and exports pass by the southern border crossing. If Uzbek exports are not shipped by the northern border, it can be assumed that it is because the final destination does not make this feasible.

The most favourable situation for the Kungrad – Beyneu line is with Tajikistan since it is chosen by nearly 40% of the traffic related to that country and even 54% for northern-bound traffic for which UTY has more of a say. This confirms the captive position of Tajikistan.

For Turkmenistan a clear distinction should be made between the two directions. Northern-bound traffic is probably mostly made of Turkmen goods going to Russia or Europe. But it is likely that the eight times larger southern-bound traffic is in large part transit traffic leaving Turkmenistan at the Saraks border to go to Bandar-Abbas or Turkey and possibly in a much smaller proportion passing by the Turkmenbashi port.

For Afghanistan the share of the northern border crossing is surprisingly low if traffic mostly corresponds to humanitarian aid coming from western countries. The share could probably increase in the future.

3. Foreign Trade linked to Traffic on the Kungrad – Beyneu Line

3.1 Overall Trends in Foreign Trade since 1995

Traffic across borders is directly linked with foreign trade. It is therefore useful to examine trends in export and import for which forecasts can be done by linking them to the development in national economies and international trade pattern.

Several sources are available for foreign trade. National statistics offices generally publish year books with foreign trade figures. For Central Asia it is the case in Kazakhstan, Kyrgyzstan and Tajikistan. The data is sketchier for Uzbekistan and needs interpretation. More and more data is made available on the websites of those organisations. But there are sometimes unexpected holes. For instead in Tajikistan no detailed information is found on aluminium on the website although it counts for the majority of exports

Time series on foreign trade are compiled and made available through internet by international organisations such the World Bank, ADB or EBRD. Data on CIS countries can be found on the website of the Interstate Statistical Committee of CIS countries. But no recent information is available for Uzbekistan.

OECD keeps updating a foreign trade database that is convenient to use. It covers all OECD countries but also other regions such as China and Central Europe

For analysing traffic on the Kungrad – Beyneu particular attention was given to Uzbekistan, Tajikistan and Kazakhstan.

Table 6 shows foreign trade trends in those countries according to ADB Key Indicators.

Table 6 – Foreign trade of Central Asia by country and by year (million USD)

Country	Flow	1995	1996	1997	1998	1999	2000	2001	2002	2003
Kazakhstan	Exports, fob	5,250	5,911	6,497	5,334	5,872	8,812	8,639	9,670	12,927
	Imports, cif	3,807	4,241	4,301	4,314	3,655	5,040	6,446	6,584	8,409
Kyrgyzstan	Exports, fob	409	505	604	514	454	505	476	486	582
	Imports, cif	522	838	709	842	600	554	467	587	717
Tajikistan	Exports, fob	839	770	746	597	689	784	652	737	...
	Imports, cif	880	668	750	711	663	675	688	721	...
Uzbekistan	Exports, fob	3,720	4,590	4,388	3,528	3,236	3,265	3,170	2,988	3,725
	Imports, cif	2,893	4,721	4,523	3,289	3,111	2,947	3,137	2,712	2,964
Total	Exports, fob	10,218	11,777	12,234	9,973	10,250	13,366	12,937	13,881	
	Imports, cif	8,102	10,468	10,283	9,155	8,029	9,217	10,738	10,603	

Source: ADB Key Indicators 2004

Table 7 presents the same data in form of indicators.

Table 7 – Foreign trade of Central Asia by country (Base year 1995 = 100)

Country	Flow	1995	1996	1997	1998	1999	2000	2001	2002	2003
Kazakhstan	Exports, fob	100	113	124	102	112	168	165	184	246
	Imports, cif	100	111	113	113	96	132	169	173	221
Kyrgyzstan	Exports, fob	100	124	148	126	111	123	116	119	142
	Imports, cif	100	160	136	161	115	106	89	112	137
Tajikistan	Exports, fob	100	92	89	71	82	93	78	88	...
	Imports, cif	100	76	85	81	75	77	78	82	...
Uzbekistan	Exports, fob	100	123	118	95	87	88	85	80	100
	Imports, cif	100	163	156	114	108	102	108	94	102
Total	Exports, fob	100	115	120	98	100	131	127	136	
	Imports, cif	100	129	127	113	99	114	133	131	

The above data show the following trends:

- In Kazakhstan there was an explosion in exports lead by oil in the last four years. Imports have also increased but to a smaller extent.

- Tajikistan trade showed an overall decline on the whole period with however a recovery in 2002.
- In Uzbekistan the 1995 level for exports was reached anew only in 2003. After jumping in 1996 imports took a more moderate course and did not change significantly in recent years.

3.2 Foreign Trade Trends according to OECD Statistics

OECD statistics also give a picture of trends in foreign trade in value with the main trade blocs and countries outside CIS. Summary of OECD data for Uzbekistan, Tajikistan and Kazakhstan are shown in Annex 6, 7 and 8 respectively in two forms:

- In value for all included countries with distribution by geographical area; and
- In weight by commodity group for six major European countries.

Table 8 compares volumes for year 2002 with those for 1996 when exports and imports had already largely recovered from the post-Soviet slump as shown in Table 6.

Table 8 - Trends in the foreign trade of Kazakhstan, Tajikistan and Uzbekistan with OECD countries and others included in OECD statistics

Unit: 10³. USD

Country Group	Kazakhstan			Tajikistan			Uzbekistan		
	1996	2002	Change	1996	2002	Change	1996	2002	Change
Exports									
Europe (not incl. Turkey)	538,343	3,497,972	550%	137,477	239,747	74%	845,702	411,341	-51%
China, Japan, Korea, Aus.	627,506	1,456,035	132%	12,922	7,709	-40%	467,208	101,482	-78%
USA, Canada, Mexico	123,526	6,817	-94%	34,437	241	-99%	178,801	5,164	-97%
Turkey	100,595	201,600	100%	2,786	40,684	1360%	58,054	75,197	30%
TOTAL	1,389,971	5,162,425	271%	187,621	288,381	54%	1,549,765	593,185	-62%
Imports									
Europe (not incl. Turkey)	686,790	1,604,581	134%	54,242	34,326	-37%	966,027	443,752	-54%
China, Japan, Korea, Aus.	237,226	705,931	198%	13,490	8,697	-36%	617,027	124,213	-80%
USA, Canada, Mexico	146,992	24,957	-83%	16,959	492	-97%	355,998	2,494	-99%
Turkey	164,044	158,655	-3%	4,444	10,893	145%	230,492	93,473	-59%
TOTAL	1,235,051	2,494,124	102%	89,135	54,408	-39%	2,169,543	663,931	-69%

Source: OECD Statistics

Between 1996 and 2002 both exports and imports decreased by over 60% in Uzbekistan before recovering in 2003 largely because of the rise in commodity prices. For Europe that is linked with movements on the Kungrad-Beyneu railway line the decrease was still of over 50%. There was also a substantial fall in Tajik imports including to Europe. But exports had increased by over half and even more to Europe. Whereas imports by Kazakhstan have been stable there was a boom in exports essentially due to higher shipments of oil.

3.3 Foreign Trade of Uzbekistan according to National Statistics

Annex 9.a gives exports from Uzbekistan to north-west regions that could logically use the Kungrad – Beyneu railway line section given their geographic position. The same data for import is presented in Annex 9.b. The data come from national statistics.

Unfortunately the classification by commodity was made differently in 2003 than in 2000. In 2003 exports under the “Others” item represent two third of the total and even around 90% for Kazakhstan and Russia versus only 0.1% in 2000. For import it is still of one fourth. This makes it difficult to make comparison by commodity.

Totals all commodities are shown in Table 9.

Table 9 - Uzbek foreign trade likely to use the Kungrad - Beyneu Corridor in 2000 and 2003

Unit : ton

Country	Export				Import			
	2000	2003	Change	Share 2003	2000	2003	Change	Share 2003
Kazakhstan	1,197,210	1,085,956	-9%	38.8%	1,698,522	1,089,043	-36%	47.8%
Russia	845,247	1,051,696	24%	37.6%	563,866	885,045	57%	38.9%
Ukraine	937,961	47,376	-95%	1.7%	191,903	50,499	-74%	2.2%
Belarus	20,590	6,122	-70%	0.2%	28,093	15,913	-43%	0.7%
Baltic States	132,401	84,186	-36%	3.0%	114,606	38,363	-67%	1.7%
Other Europe	548,909	523,424	-5%	18.7%	304,625	198,420	-35%	8.7%
TOTAL	3,682,318	2,798,760	-24%	100.0%	2,901,615	2,277,283	-22%	100.0%

There was an overall decrease of about 25% in the volume of exports as well as imports between 2000 and 2003. However exports to Russia increased by one fourth and imports from Russia by more than half. At the same time there was a very sharp decline of the trade with Ukraine that was receiving more exports than Russia in 2000. The average decline is also in the order of 50% for Belarus and the Baltic States.

3.4 Foreign Trade of Tajikistan according to National Statistics

The National Committee for Statistics of Tajikistan regularly publishes detailed statistics on foreign trade. The evolution between 1997 and 2002 is shown in Table 10 and Annex 10.

Table 10 - Foreign Trade of Tajikistan that may use the Kungrad - Beyneu corridor

Unit: Million USD

Countries	1997	1998	1999	2000	2001	2002	2002/1997
Export							
Kazakhstan	10.0	10.0	3.6	5.7	3.1	3.5	-65%
Russia	63.5	47.9	115.1	258.8	104.7	87.5	38%
Ukraine	4.3	1.7	7.0	1.9	2.8	5.9	37%
Belarus	2.9	2.6	3.1	1.7	1.4	1.5	-48%
Baltic States	7.5	2.1	8.5	14.5	11.7	31.5	320%
Other Europe	191.2	131.0	115.5	174.1	213.2	277.4	45%
TOTAL	279.4	195.3	252.8	456.7	336.9	407.3	46%
All Countries	745.7	596.6	688.7	784.3	651.5	736.9	-1%
% total export	37%	33%	37%	58%	52%	55%	
Import							
Kazakhstan	42.1	51.9	78.8	82.4	89.1	72.2	71%
Russia	115.1	102.1	92.4	105.1	129.4	163.5	42%
Ukraine	20.7	16.6	37.7	84.3	63.6	80.5	289%
Belarus	3.3	7.6	3.1	2.3	2.6	2.9	-12%
Baltic States	3.5	6.1	4.8	6.5	5.4	5.3	51%
Other Europe	226.0	196.8	116.5	76.3	61.3	75.5	-67%
TOTAL	410.7	381.1	333.3	356.9	351.4	399.9	-3%
All Countries	750.3	711.0	663.1	675.0	687.5	720.5	-4%
% total import	55%	54%	50%	53%	51%	56%	

A large proportion of exports consist of aluminium and cotton that represented respectively 35% and 17% of exports in value in 2002. That year nearly 200,000 tons of aluminium was shipped abroad mostly to north-western regions such as Russia and Western Europe.

3.5 Trade Using the Northern Branch of TRACECA Corridor across Caspian Sea

Except possibly for the Khorezm Region and the Karakalpakstan the normal route for goods between Uzbekistan and Azerbaijan is through Turkmenistan and particularly the Turkmenbashi port. However in the early 2000 when the conditions for using the Turkmen route worsened it was accepted that passing by Aktau port could be a satisfactory alternative. The idea was particularly appealing for the export of cotton when it was envisaged that the Poti port could be an alternative to the traditional trading centre of Riga on the Baltic Sea. But the shift never fully materialized after it appeared that it was difficult to develop a cotton trade centre in Poti and that the Bandar-Abbas port offered a better alternative.

As shown in Table 3 and on the diagram traffic flows crossing the Caspian Sea between Baku and Aktau and passing by the Beyneu - Kungrad railway line represents only a small proportion of the total traffic on that line. In 2003 it was of about 1% of the total traffic, namely some 10,000 tons north-bound and 20,000 tons south-bound. However there was also 90,000 tons that were transhipped in Aktau and entered Uzbekistan in Djilga.

For forecasting the traffic that could pass by both Aktau and Kungrad it is appropriate to identify trade flows with a good chance of using this route. It is a fact that with the conditions existing in 2005 the chances are not high that goods carried between Europe and Central Asia will cross the Caspian Sea. For wagons travelling between Turkey and Central Asia passing by Baku is

not attractive either because two transshipments in ports are added to the change in railway gauge. As a result there is therefore only one case in which a TRACECA route across the Caspian Sea presents obvious advantages it is the trade between Central Asia and the three countries of south Caucasus that is Armenia, Azerbaijan and Georgia. It is particularly convenient that the two regions use the same rail gauge.

The Kazakhstan trade is unlikely to use the Kungrad – Beyneu line but the Uzbekistan trade could and even possibly the Tajikistan trade. It is therefore important to estimate trade volume between Uzbekistan and south Caucasus. Table 11 gives the 2003 statistics in both value in USD and volume in tons.

Table 11 - Trade of Uzbekistan with TRACECA Countries in Caucasian Area in 2003

Countries	Export			Import			Total Trade		
	Value m.USD	Volume ton	Share % ton	Value m.USD	Volume Ton	Share % ton	Value m.USD	Volume ton	Share % ton
Armenia	1.82	728	9.9%	0.77	146	2.4%	2.59	874	6.6%
Azerbaijan	5.65	2,106	28.8%	3.86	2,839	47.4%	9.51	4,945	37.2%
Georgia	6.84	4,485	61.3%	3.11	3,005	50.2%	9.95	7,490	56.3%
Total Caucasus	14.31	7,319	100.0%	7.74	5,990	100.0%	22.05	13,309	100.0%
All countries	3725.0	7,068,140		2964.2	4,204,495		6689.2	11,272,635	
<i>Caucasus Share</i>	<i>0.38%</i>	<i>0.10%</i>		<i>0.26%</i>	<i>0.14%</i>		<i>0.33%</i>	<i>0.12%</i>	

According to the above data the trade of Uzbekistan with Caucasian countries is of the same order of magnitude as shown by the Kazakh Railway statistics for the traffic crossing the Kazakh-Uzbek border at Akjigit – Oasis. It is fairly small. Its 13,300 tons represent only 0.12% of the total trade of Uzbekistan in volume. 54% of exports consisted of cotton fiber or cotton goods and 31% of agricultural produces. Over one third of imports were made of ore.

There is not indication that the trade would expand fast in the coming years. This means that the traffic between Uzbekistan and Caucasus cannot be expected to play a significant role in the future of the Kungrad – Beyneu line.

Caucasus represents a larger share of the foreign trade for Tajikistan. For exports the share in value increased from 0.1% in 2000 to 0.4% in 2002. But for imports it shrank from 9.4% to 6.1% during the same period. Most of the imports were coming from Azerbaijan. It consisted mostly of alumina (57% of total value for 81,000 tons), oil products (25% of total for 45,600 tons) and coke (12% for 45,900 tons). The shortest route is obviously through Turkmenbashi port and it is unlikely that those heavy commodities could be diverted by a longer route because transport costs are representing a significant proportion of the total cost.

4. Freight Traffic Forecasts

4.1 Approach to Traffic Forecasting

Different methods can be used to make traffic forecasts on a railway line.

- Extrapolating trends in overall traffic volumes recorded in recent years on the line. This method is not applicable in the present case because of the discontinuity introduced by the opening of a new line between Uchkuduk and Nukus.

- Forecasting physical flows between various origins and destinations for different commodity groups and assigning them to a multimodal network. Although the modal split would generally not rise serious problems it would be difficult to correctly model the decision making pattern of railways that are not following economic logics. For instance when trains from Tajikistan are taken over by the Uzbek Railway they are routed through Nukus although it may be the preferred choice of Tajik operators.
- Identifying flows passing by the line under study and making forecasts for each of them separately. This is the method that was used taking advantage of the existence of statistics in both Kazakhstan and Uzbekistan making it possible to estimate the flows not only on the route under study but also on competing routes as above shown.

It is the statistics on the Uzbek side that make it possible to characterize flows showing for instance that an aluminium shipment originate in Tajikistan or that ores is used by an industry in that country. On the other hand the Kazakh statistics generally don't give much specific information on the flows because goods only transit through Kazakhstan and beyond there go to unspecified destinations that can be Western Europe, Baltic ports as well as Russia. It is fortunate that there was agreement between Kazakh and Uzbek statistics for most flows. However some correction should be introduced to take into consideration observed discrepancies.

4.2 Forecast based on Uzbek Statistics

Forecasting is done according to the following approach:

- Base data as provided for 2003 by Uzbek statistics.
- Four target years as 2010, 2015, 2020 and 2025.
- Two scenarios: "conservative" and "optimistic"
- Ten commodities as defined in the traffic statistics

Change in traffic from a target year to the next one is made dependent on four parameters, the last two being commodity specific.

- Forecast GDP change rate for each of the countries under consideration. Those rates are determined according to past performance and to expected growth estimated by international institutions and national planners.
- Percentage of traffic taking the Beyneu – Kungrad route. This parameter is introduced to take into consideration that addition of competing lines may divert traffic. A typical case is the likely diversion of at least part of the traffic between Turkmenistan and northern countries when a direct railway link is opened between that country and Kazakhstan.
- Elasticity variation in foreign trade in relation with variation in GDP. Growth in foreign trade is generally linked with GDP growth. Exports have often a straightforward relationship with production particularly for those commodities with a limited market in the producing country as is for instance the case for aluminium and cotton in Tajikistan.
- Indicator of trade orientation to a geographical area. Trade relations are subject to changes as above illustrated in the sub-chapter on foreign trade. For instance Tajik aluminium is for the time being mostly shipped to north-western regions. But a larger share could in the future be directed to different countries for instance neighbouring China where demand is growing fast. Such consideration may result in wide change in traffic. A limited use of it was made in the case of the two scenarios under consideration.

The values of the parameters used are shown in the tables in Annex 11 showing forecast traffic for each of the target years. The results of calculation are summarized in Table 12.

Table 12 – Forecast freight traffic in 2010, 2015 and 2025 by commodity group

Unit: thousand ton

Commodity Group	2003	Conservative Scenario			Optimistic Scenario		
		2010	2015	2025	2010	2015	2025
North Bound							
Coal and Coke	0	0	0	0	0	0	0
Ores	0	0	0	0	0	0	0
Oil products	126	247	140	81	302	234	165
Grain	1	1	1	1	1	1	1
Chemicals, Construction mat., Wood	3	4	4	4	5	5	6
Metal	168	272	340	369	318	431	650
Other	411	560	605	712	671	789	984
Total	708	1084	1090	1167	1297	1460	1805
South Bound							
Coal and Coke	38	56	67	70	63	82	124
Ores	191	288	364	379	327	444	682
Oil products	133	241	310	324	289	410	638
Grain	44	63	73	73	71	89	127
Chemicals, Construction mat., Wood	70	112	89	52	130	127	144
Metal	208	327	277	210	386	384	433
Other	693	956	1012	1013	1145	1330	1641
Total	1376	2041	2192	2121	2410	2867	3790
Both Directions							
TOTAL	2084	3126	3283	3288	3707	4327	5596

According to the “conservative scenario” traffic could have increased in half in 2010 assuming that traffic from Turkmenistan passing by Kungrad would still use the line. In the longer term it is likely that Turkmenistan will have built a direct rail link with Kazakhstan and will use it to channel at least part of the traffic presently transiting through Uzbekistan. This would mean that there would be very little growth in traffic level.

In the case of the “optimistic scenario” traffic level would continue to rise after 2010 and may see a doubling in ten years and nearly trebling in 20 years.

4.3 Adjustments based on Kazak Statistics

As already noted there is a discrepancy between Kazakh and Uzbek statistics.

- For north-bound traffic the Uzbek figure of 0.7 million tons is well in line with volumes of 0.7 million recorded on the Kazakh side of the border in 2000 and 0.88 million recorded in 2001. The Kazakh figure of 0.4 million in 2003 looks abnormally low.
- For south-bound traffic level of 1 million tons was recorded in Kazakhstan in 2000 and 0.68 million in 2001. This is much less than the 1.88 million announced for 2003, what means a near doubling. This is by no way impossible since the expected result of opening a new line was precisely to increase traffic. But the steep increase is made

difficult to interpret by the fact that over three fourth of the 2003 Kazakh figure is under the “other” item vs. only half for the 2000 figure and for the 2003 Uzbek figure.

The optimistic assumption could be that the difference will remain in the future. This means that the south-bound traffic level should be higher than above indicated by 1 million ton.

4.4 “Pessimistic Scenario”

It certainly makes sense to also consider a “pessimistic scenario”. Relations between Uzbekistan and Turkmenistan may reach the point when Kungrad will not see much Turkmen traffic anymore. If Turkmenistan builds a new line in direction of Russia Tajikistan may insist that its goods should be rerouted if conditions are favorable. Tajikistan may also redirect a significant part of its foreign trade particularly in direction of China with a substantial loss for Uzbek railway. Exports from Uzbekistan may also be redirected. For instance an even larger proportion of the cotton could be sold through Bandar-Abbas instead of Riga. Under such circumstances traffic would not even in the future be kept at present level.

The above presented scenarios assume that there is some permanence in routing and trade patterns. It is not too far-fetched to imagine less favourable scenarios. Assuming that regional economy will continue to grow pessimistic forecasts would essentially correspond to radical changes in routing or in trade pattern.

Change in trade orientation.

Trade patterns for Central Asian countries in many cases have not radically changed of what they were in soviet times. For instance for Tajikistan in 2000 the share of imports coming from CIS countries was still of 82%, that is the same as in 1991. And it was only down to 78% in 2001 and 76% in 2002.

This could change since that country is a neighbour of China that becomes the larger supplier of goods in the world. China could also possibly attract a large proportion of the commodities produced by Tajikistan particularly aluminium that presently mostly goes to Russia and Western Europe.

The same changes could happen in Uzbekistan that is now reinforcing its links with China. For cotton the reorientation from Riga to Bandar-Abbas could continue reducing flows in direction of the north.

Change in routing

Once Turkmenistan has built a direct railway link with Kazakhstan much of the traffic presently passing by Kungrad may use the new link. This may be the case even for the north-east region that will soon be linked to the center of the country by a direct Ashgabat - Dashoguz railway line.

Southern Tajikistan may also find profitable to cross Turkmenistan rather than Uzbekistan once a new bridge on the Amy-Darya in Atamurat is completed. Cargo would still have to pass by Uzbekistan but it is unlikely that it could be in a position to bar the access to Turkmenistan.

Altogether changes in routing and trade orientation could considerably reduce traffic on the Kungrad - Beyneu where the Uzbek share is presently only slightly over one third.

4.5 Diverted Traffic

Table 4 shows how traffic was diverted from Oasis / Akjigit border to Chengeldy / Djilga border between 2001 and 2003 that is after the opening of the new line linking Uchkuduk to Nukus. The shift is even clearer by adding 2000 as is done in Table 13.

Table 13 - Comparison of freight traffic at Oasis and Chengeldy between 2000 and 2003

Unit: million ton

Direction		Oasis / Beyneu			Chengeldy			Oasis Share		
		2000	2001	2003	2000	2001	2003	2000	2001	2003
North bound	Import	0.0	0.01	0.00	0.1	0.29	0.29	0%	3%	0%
	Transit	0.7	1.06	0.40	1.6	1.73	0.11	30%	38%	78%
	Total	0.7	1.07	0.40	1.7	2.02	0.40	29%	35%	50%
South bound	Export	0.0	0.06	0.07	3.2	3.18	3.54	0%	2%	2%
	Transit	1.0	0.62	2.38	1.9	1.42	2.03	34%	30%	54%
	Total	1.0	0.68	2.45	5.1	4.60	5.57	16%	13%	31%
Total		1.70	1.75	2.85	6.80	6.62	5.97	20%	21%	32%

Source: Kazak statistics

For north-bound traffic during the three-year period the share of the Oasis / Akjigit border in the transit through Kazakhstan doubled to reach 78%. For imports into Kazakhstan it remains negligible because the choice of the border crossing very much depends on the final destination of goods within Kazakhstan. The same remark applies to south-bound traffic and explains why the Oasis / Akjigit share is also negligible for exports from Kazakhstan. But the share for transit has also nearly doubled to 54% of the total.

It is difficult to foresee how further the shift in favor of the Kungrad – Beyneu line can go in the absence of detail information on origins and destinations of the flows passing by Oasis / Akjigit and Chengeldy / Djilga.

Useful conclusions can however be drawn from an analysis of the foreign trade of the six most western regions of Uzbekistan that should have a preference to use the Akjigit rather than the Djilga border crossing. In 2003 it was recorded that 167,000 tons of export left the country through Akjigit (72%) vs. 65,000 tons through Djilga. Regarding imports, 455,000 passed by Akjigit (85%) vs. 80,000 by Djilga. Those figures show that there might not be much room for further shift of traffic in favour of the Kungrad – Beyneu line for now. If the whole traffic generated by the six regions was channeled through Kungrad it would result in a traffic increase of 150,000 ton that is only 5% of the 2003 traffic.

The situation may change if the Kazakh railway builds a new line linking Beyneu with central and north-east Kazakhstan through the Kyzyl-Orda Oblast and Zhezkazgan. In that case if it could become profitable to channel through Kungrad the goods carried between Uzbekistan and Eastern-Kazakhstan or Siberia.

On the basis of the above considerations it has been estimated that the diverted traffic would be substantial only in the south direction and would increase from about 0.15 million ton in 2010 to 0.3 million in 2025

4.6 Locally Generated Traffic

Local traffic along the line is small. Much of it is related to the construction of a highway linking Uzbekistan with Kazakhstan. Traffic growth cannot be very high due to the low population density of the line hinterland.

However Table 1 shows that the Low Amu Darya region counted for nearly half of the traffic linked to Uzbek foreign trade and crossing the Kazakh – Uzbek border. The share of that region was even of 63% for imports. The railway line would therefore substantially benefit from a development of the region that for now lags behind most other regions. There are presently long-term plans to accelerate the development of the region.

The economy of the Republic of **Karakalpakstan** much suffered from the shrinking of the Aral Sea that brought with it not only a reduction in the economic potential but also serious sanitary and sociological problems. In addition to the international effort to mitigate the damage there are also concrete projects to strengthen agricultural and industrial production in the region.

The Karakalpakstan has resources that remained under-exploited. Particularly gas production could be increased by 4-5 times. Several plants are under construction or planned in the Kungrad area, including a soda plant to open in 2005 and facilities for the production of various kinds of constructions materials. Expansion is also expected in the textile industry by using inexpensive local man power to process local raw materials such as cotton, silk and wool. The expansion of the Khodjeilinsk weaving mill should have been carried out by 2010. Small enterprises are encouraged to settle in the area for manufacturing carpets, jewellery or household products.

The reconstruction of the fish-canning combinat of Muynak – formerly a port on the Aral Sea - is envisaged. The expansion of food-processing plants in Nukus is oriented toward export.

There is also room for expanding the production of the agricultural sector. Agriculture is based essentially on irrigation. The main productions are cotton, rice, grain and vegetable. Seeing that cotton yields are not very high there should be a conversion to the production of fodder for cattle breeding

It is estimated that if all the planned projects are implemented the production of Karakalpakstan could have increased by 3 to 4 times within twenty years.

In Khorezm region the accelerated development of industry will be carried out first of all by modernizing available capacities and expanding manufacturing based on processing of local raw materials with production of export-oriented goods. The enterprises of light and food-processing industries should receive high priority.

Concerning light industry it is planned to introduce new enterprises as well as to re-equip the old ones: spinning mills, carpet manufactures, garment and knitting factories. Moreover the presence of raw materials for ceramic production provides opportunities for the development of porcelain manufacturing.

Development of food-processing will be based on the local production of fruits, vegetables and fish. The sugar industry should also be developed. Presently the existing sugar mills in Khazarasp and Koshkupir districts do not work at full capacity due to absence of raw materials. It is therefore necessary to expand the sown areas for sugar beet and increase its yield.

Development of a machine-building will be linked to intensified use and reconstruction of existing facilities for the production of electronic devices, electro technical equipment and

dredges. Activities linked to production and repair of cars and household appliances are also expected to expand.

Regarding agriculture the main crop is still cotton but in recent years the region became the largest producer of rice. In a long-term perspective it is necessary to change cropping pattern and to introduce more efficient forms of management, ownership and social organisation. It seems desirable to reduce the area sown in cotton at the same time as increasing the production by rising yields. The freed area could be used to grow vegetables, melons and the feed-crops necessary to expand cattle-breeding. This will require the rehabilitation of irrigation and drainage infrastructure.

Since the region accounts for over half of the import using the Kungrad – Beyneu railway line rising regional income and production could result in a substantial increase in traffic on the line.

5. Passenger Traffic on the Kungrad – Beyneu Line

5.1 Present Traffic.

Present passenger traffic consists of both local and international traffic. In mid-2005 the situation was as follows:

- Local traffic – Daily service between Kungrad and Beyneu in each direction. Trains leave in the morning and reach destinations in the evening. The trip takes about 11 hours.
- Through traffic – Seven trains a week in each direction
 - o One Uzbek train linking Tashkent with Saratov on the Volga.
 - o Six Tajik trains running between Tajikistan (Dushanbe, Kuliab or Khudjand / Leninabad) and Russia (Saratov in the latter case, Astrakhan in all others). A majority of the Tajik trains carry Tajik people working in Russia and their families. Uzbekistan does not allow taking or leaving passengers in Uzbek station. For the time being trains have to pass by Turkmenistan.

This means that there is an average of two trains a day in each direction, a local one and an international one.

5.2 Forecast Traffic

For local traffic the most likely is that the frequency will be kept at one train per day in each direction. Two trains per day could only make sense if the speed is significantly increased. On the other hand the on-going construction of a modern highway between Kazakhstan and Uzbekistan will tend to divert traffic from the railway.

Concerning international traffic it appears that there is presently a pent-up demand in Tajikistan that cannot be met. However there are limits to what the Tajik Railways can do to meet the demand. The management's present view is that one international train per day in each direction is already a remarkable achievement for a relatively small railway. This is done with a high proportion of old coaches, many of them having been refurbished in Tajik workshops in recent years. Under those circumstances the priority is rather in renewing the fleet rather than expending it. A newer fleet would allow for better service including going further into Russia for instance Saratov rather than stopping in Astrakhan.

It is probably likely that if the demand remains at a high level the Tajik Railway will attempt meeting it by increasing the number of trains. However in the long term when incomes increase substantially it is likely that a larger proportion of travelers will fly. There may still be room for railway transport although procuring new coaches would certainly lead to a substantial increase in railway tariffs. Presently trains carry over 300,000 passengers a year in each direction. This represents more than five daily flights with the largest planes presently owned by the Tajik air company whereas there are presently two daily flights to European Russia.

Forecast for passenger traffic are shown in Table 14.

Table 14 – Traffic forecasts for passenger trains (number of pairs of trains per day)

Train Type	All	Conservative Scenario			Optimistic Scenario		
	2003	2010	2015	2025	2010	2015	2025
International Trains	1.00	1.43	2.00	2.43	2.00	2.43	3.00
Local Trains	1.00	1.00	1.00	1.00	2.00	2.00	2.00

The pessimistic alternative could correspond to the routing of Tajik trains through Kazakhstan that is presently the solution preferred by Tajiks in most cases. Or the trains could possibly pass by Turkmenistan once a railway line links that country to Kazakhstan. Moreover if the train service deteriorates and if local people find more convenient to travel by road there may not be much passenger traffic left on the Kungrad – Beyneu section.

6. Conclusion on Prospects for the Kungrad – Beyneu Line

When the Chardjau – Kungrad – Beyneu was put in exploitation in 1972 it was the main link between Turkmenistan, south Tajikistan and west Uzbekistan on one side and western regions of Soviet Union on the other side. After the Kungrad – Beyneu line was directly linked to the main Uzbek railway network by opening a new link between Uchkuduk and Nukus in 2001 the line played a more important role for Uzbekistan. Part of the traffic with northern regions that traditionally were shipped through the border with Kazakhstan north of Tashkent was diverted in direction of Kungrad.

Even so Uzbek trade represented only slightly over one third of the freight traffic of the line in 2003 at the same level as Tajik trade. Turkmenistan accounted for one fourth of the total.

The future of the line will depend on the prospects of development of foreign trade between southern Central Asia and the Russian Federation or Europe. The fact that trade flows between Uzbekistan and northern regions tended to shrink in recent years and the likelihood of only a moderate development in the near future lead to think that Uzbek freight traffic will not grow fast.

The Kungrad – Beyneu line may not play a major role for Turkmenistan for very long. Once a direct railway link with Kazakhstan is built – probably at the end of the decade – Turkmenistan may want to redirect most of their traffic with northern areas through the new line.

Prospects are more optimistic for Tajik trade. It is likely to grow with the harnessing of hydro power that will lead to increased production of aluminium. As long as trade orientation for that metal, cotton and imports do not undergo radical changes particularly through a reorientation in direction of China Tajikistan will significantly contribute to traffic growth on the Kungrad – Beyneu. At least in the medium term because in the longer term Tajikistan may find profitable to

use other routes provided Uzbekistan don't continue to take advantage of its geographical position to impose routes.

Concerning passenger traffic, local movements will always be limited seeing the very low population density of the area crossed by the railway line. Concerning international traffic six of the seven weekly trains are Tajik. The demand for passenger transport between Russia and Tajikistan will probably remain high as long as incomes of migrant workers are too low to allow them to fly. But the Tajik Railways may not be in a position to meet that demand at the present tariff.

Based on the above consideration traffic was forecast in the case of the two scenarios that seem the most likely. The result is summarized in Table 15.

Table 15 - Forecast number of trains per day

Train Type	2003	Conservative Scenario			Optimistic Scenario		
		2010	2015	2025	2010	2015	2025
Freight trains (*)							
North bound	1.8	2.7	2.7	2.9	3.2	3.7	4.5
South bound	6.1	7.3	7.0	7.6	9.4	9.5	11.4
Total freight (both directions)	7.9	10.1	9.7	10.5	12.6	13.1	15.9
Passenger trains							
Local (one direction)	1	1.0	1.0	1.0	2.0	2.0	2.0
International (one direction)	1	1.3	1.6	2.0	2.0	2.4	3.0
Total passenger (both directions)	2	2.3	2.6	3.0	4.0	4.4	5.0
Total number of trains (both directions)	10	12	12	14	17	18	21
<i>(*) on the basis of trains carrying 1700 tons</i>							

None of the scenarios leads to considering major changes in the characteristics of the line such as building a second track even in the long term.

The possibility of a less favorable evolution cannot be ruled out. Stagnation or even decrease in traffic level could be the consequence of major changes in the geo-political situation. Turkmenistan may withdraw on its own network and try to attract Tajik customers. The traditional trade pattern may also be radically modified with China and the remaining of Asia becoming more important trade partners at the expense of Russia and Western Europe.

In any case the Kungrad – Beyneu railway line will remain for Uzbekistan a major component of its network even after it is reshaped to take into consideration the increased role of Afghanistan and East Asia for that country.

ANNEXES

Annex 1 - Freight traffic on the Naimankul – Kungrad – Beyneu railway line in 2000 and 2003 by commodity

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Annex 11.b.2 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2015 - *OPTIMISTIC SCENARIO*

Annex 11.b.3 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2020 - *OPTIMISTIC SCENARIO*

Annex 11.b.4 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2025 - *OPTIMISTIC SCENARIO*

Annex 11.c.1 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2010 - *CONSERVATIVE SCENARIO*

Annex 11.c.2 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2015 - *CONSERVATIVE SCENARIO*

Annex 11.c.3 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2020 - *CONSERVATIVE SCENARIO*

Annex 11.c.4 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2025 - *CONSERVATIVE SCENARIO*

Annex 12 - Railway traffic through border stations. Kazakhstan (Year 2003)

Annex 13 - Railway traffic through border stations. Uzbekistan (Year 2003)

Annex 1 - Freight traffic on the Naimankul – Kungrad – Beyneu railway line in 2000 and 2003 by commodity

Commodity Group	Year 2000 (1)									Year 2003								
	Naimankul - Kungrad			Kungrad - Jaslik			Jaslik - Beyneu			Naimankul - Akjigit (2)			Crossing border(3)			Oasis-Beyneu (4)		
	North - Bound	South - Bound	Both Directions	North - Bound	South - Bound	Both Directions	North - Bound	South - Bound	Both Directions	North - Bound	South - Bound	Both Directions	North - Bound	South - Bound	Both Directions	North - Bound	South - Bound	Both Directions
Coal						0			0	1	2	3	0	2	2	0.00	0.00	0.00
Coke		109	109		109	109		109	109	0	36	36	0	36	36	0.00	0.03	0.03
Ores		98	98		98	98		98	98	0	191	191	0	191	191	0.00	0.20	0.20
Oil products	179	73	252	122	60	182	122	60	182	138	138	276	126	133	259	0.13	0.14	0.27
<i>From which Crude oil</i>			0			0			0	0	0	0						
Grain	2	62	64		35	35		35	35	2	4	7	1	44	45	0.00	0.04	0.04
Chemicals	49	3	52	31	43	74	31	43	74	15	95	110	0	18	18	0.00	0.01	0.01
<i>From which Fertilizer</i>			9		21	21		21	21	4	18	22						
Construction mat.	314	24	338	56	26	82	56	26	82	673	22	694	3	21	24	0.00	0.04	0.04
<i>From which Cement</i>		2	2	0	0	0	0	0	0	2	8	10						
Metal	7	96	103	2	95	97	2	95	97	168	225	393	168	208	376	0.00	0.07	0.07
<i>From which Scrap</i>		2	2		2	2		2	2	0	3	3						
Wooden goods	2	25	27		35	35		35	35	1	31	32	0	31	31	0.00	0.04	0.04
<i>From which timber</i>		13	13		18	18		18	18	0	0	0						
Other	611	554	1,165	956	555	1,511	956	555	1,511	439	784	1,223	411	693	1,104	0.27	1.88	2.15
<i>From which Cotton</i>			344	349	0	349	349	0	349	255	0	255						
TOTAL	1,164	1,044	2,208	1,167	1,056	2,223	1,167	1,056	2,223	1,436	1,528	2,964	708	1,376	2,084	0.40	2.45	2.85

(1) Data collected by the TRACECA Project "Traffic Forecasts and Feasibility Studies"

(2) Data obtained by processing of UTY statistics

(3) Crossing Uzbekistan - Kazakhstan border according to UTY statistics - Thousand tons

(4) Data obtained by processing of KTZ statistics - Million tons

Annex 2 - Freight traffic crossing the Uzbekistan – Kazakhstan border at Akjigit in 2003 by commodity according to Uzbek statistics

Commodity Group	Border Crossing Uzbekistan - Kazakhstan at Akjigit												
	North (Kazakhstan) – bound						South (Uzbekistan) - bound						Total
	From Uzbekistan (Export)	Transit from				Total	To Uzbekistan (Import)	Transit to				Total	
		Turkmenistan	Tajikistan	Afghanistan	Kyrgyzstan			Turkmenistan	Tajikistan	Afghanistan	Kyrgyzstan		
Coal									2.0			2.0	
Coke						3.1			32.4			35.5	35.5
Ores						0.1			190.6			190.7	190.7
Oil products	5.5	120.7			126.2	2.9	3.3	122.8	0.4	3.4	132.8	259.0	
Grain	0.6				0.6	6.1	3.2	34.7	0.2		44.2	44.8	
Chemicals						0.9		17.2			18.1	18.1	
Construction mat.	1.8	1.1			2.9	4.3	11.5	4.8			20.6	23.5	
Metal	0.2	0.5	166.8		167.5	79.8	116.6	7.3	4.4	0.1	208.2	375.7	
Wooden goods					0.1	0.1	3.7	23.8	1.3	2.3	31.1	31.2	
Other	254.5	53.4	94.1	0.2	8.8	411.0	395.2	140.0	123.4	29.7	4.6	692.9	1103.9
TOTAL	262.6	175.7	260.9	0.2	8.9	708.3	496.1	315.6	519.3	37.0	8.1	1376.1	2084.4

Annex 3 - Freight traffic crossing the Uzbekistan – Kazakhstan border at Oasis according to Kazakh statistics

Year 2003

Commodity Group	Border Crossing Uzbekistan - Kazakhstan at Oasis										
	North (Kazakhstan) - bound					South (Uzbekistan) - bound					Total
	To Kaz	Transit to			Total	From Kaz	Transit from			Total	
		Aktau	Astrakhan	OtherRus			Aktau	Astrakhan	OtherRus		
Coal					0.00						0.00
Coke					0.00			0.03		0.03	0.03
Ores					0.00			0.20		0.20	0.20
Oil products			0.13		0.13	0.04		0.10		0.14	0.27
Grain					0.00			0.04		0.04	0.04
Chemicals					0.00				0.01	0.01	0.01
Construction mat.					0.00			0.03	0.01	0.04	0.04
Metal					0.00	0.02		0.04	0.01	0.07	0.07
Wooden goods					0.00			0.02	0.02	0.04	0.04
Other		0.01	0.09	0.17	0.27	0.01	0.02	0.32	1.53	1.88	2.15
TOTAL	0.00	0.01	0.22	0.17	0.40	0.07	0.02	0.78	1.58	2.45	2.85

Year 2001

Commodity Group	Border Crossing Uzbekistan - Kazakhstan at Beyneu (Oasis)										
	North (Kazakhstan) - bound					South (Uzbekistan) - bound					Total
	To Kaz	Transit to			Total	From Kaz	Transit from			Total	
		Aktau	Astrakhan	OtherRus			Aktau	Astrakhan	OtherRus		
Coal										0.00	0.00
Coke			0.04							0.00	0.00
Ores			0.15							0.00	0.00
Oil products			0.06	0.01	0.07	0.04		0.02		0.06	0.13
Grain		0.09	0.09		0.18					0.00	0.18
Chemicals				0.08	0.08					0.00	0.08
Construction mat.			0.02	0.01	0.03	0.01				0.01	0.04
Metal			0.18	0.01	0.19					0.00	0.19
Wooden goods				0.01	0.01					0.00	0.01
Other	0.01	0.01	0.29	0.01	0.32	0.01		0.59	0.01	0.61	0.93
TOTAL	0.01	0.10	0.83	0.13	1.07	0.06	0.00	0.61	0.01	0.68	1.75

Year 2000

Commodity Group	Border Crossing Uzbekistan - Kazakhstan at Beyneu (Oasis)										
	North (Kazakhstan) - bound					South (Uzbekistan) – bound					Total
	To Kaz	Transit to			Total	From Kaz	Transit from			Total	
		Aktau	Astrakhan	OtherRus			Aktau	Astrakhan	OtherRus		
Coal					0.0					0.0	0.0
Coke					0.0					0.0	0.0
Ores					0.0			0.1		0.1	0.1
Oil products			0.1		0.1			0.1		0.1	0.2
Grain					0.0					0.0	0.0
Chemicals					0.0				0.1	0.1	0.1
Construction mat.					0.0					0.0	0.0
Metal					0.0			0.2		0.2	0.2
Wooden goods					0.0					0.0	0.0
Other			0.6		0.6			0.5		0.5	1.1
TOTAL	0.0	0.0	0.7	0.00	0.7	0.0	0.0	0.9	0.1	1.0	1.7

Annex 4 - Freight traffic crossing the Uzbekistan – Kazakhstan border at Djilga in 2003 by commodity according to Uzbek statistics

Border Crossing Uzbekistan - Kazakhstan at Djilga (<i>Uzbek border north of Tashkent</i>)													
Commodity Group	North (Kazakhstan) – bound					South (Uzbekistan) – bound					Total		
	From Uz	Transit from				Total	To Uz	Transit from				Total	
		Turkme-nistan	Tajkistam	Afghanistan	Kyrgyzstan			Turkme-nistan	Tajkistam	Afghanistan			Kyrgyzstan
Coal					0.0	0.1		5.0		3.6	8.7	8.7	
Coke					0.0	42.1	30.0	7.2			79.3	79.3	
Ores		0.2	2.7		2.9	194.8		23.2			218.0	220.9	
Oil products	104.3	2.9	0.2		116.0	330.7	970.9	126.2	191.1	53.6	1672.5	1788.5	
Grain	1.1	0.3	0.3		1.7	99.8	183.9	365.3	53.4	45.8	748.2	749.9	
Chemicals	17.0	0.9			17.9	183.2	9.8	67.6	8.8	0.1	269.5	287.4	
Construction mat.	42.2	10.3	0.6		53.2	53.1	22.6	73.9	0.1	11.8	161.5	214.7	
Metal	116.7	0.3	6.7		128.0	231.9	343.3	26.9	61.0		663.1	791.1	
Wooden goods	0.8				0.9	381.3	11.1	135.9	62.8	4.3	595.4	596.3	
Other	755.5	68.3	215.8		1084.1	810.1	125.9	173.7	23.8	9.4	1142.9	2227.0	
TOTAL	1037.6	83.2	226.3	0.0	1404.7	2327.1	1697.5	1004.9	401.0	128.6	5559.1	6963.8	

Annex 5 - Freight traffic crossing the Uzbekistan – Kazakhstan border at Chengeldy by commodity according to Kazakh statistics

Year 2003

Commodity Group	Border Crossing Uzbekistan - Kazakhstan at Chengeldy (Kazakh border north of Tashkent)														
	North (Kazakhstan) - bound							South (Uzbekistan) – bound							Total
	To Kaz	Transit to					Total	From Kaz	Transit from					Total	
		Aktau (Caspian)	Astrakhan (Russia)	Others Russia	Lugovaya (Kyrgyzstan)	Dostyk (China)			Aktau (Caspian)	Astrakhan (Russia)	Others Russia	Lugovaya (Kyrgyzstan)	Dostyk (China)		
Coal						0.00	0.01							0.01	
Coke						0.00	0.01			0.08				0.09	0.09
Ores						0.00	0.20			0.07				0.27	0.27
Oil products	0.01			0.01		0.10	1.61			0.05				1.66	1.76
Grain						0.00	0.52			0.07			0.02	0.61	0.61
Chemicals	0.01					0.01	0.30			0.03				0.33	0.34
Construction mat.	0.04					0.04	0.09			0.05		0.12		0.26	0.30
Metal	0.03			0.01	0.01	0.05	0.36			0.23				0.59	0.64
Wooden goods						0.00	0.21			0.61				0.82	0.82
Other	0.20					0.20	0.23	0.09	0.08	0.53				0.93	1.13
TOTAL	0.29	0.00	0.00	0.02	0.01	0.08	0.40	3.54	0.09	0.08	1.72	0.12	0.02	5.57	5.97

Year 2001

Commodity Group	Border Crossing Uzbekistan - Kazakhstan at Chengeldy														
	North (Kazakhstan) - bound							South (Uzbekistan) - bound							Total
	To Kaz	Transit to					Total	From Kaz	Transit from					Total	
		Aktau (Caspian Sea)	Astrakhan (Russia)	Other borders Russia	Lugovaya (Kyrgyzstan)	Dostyk (China)			Aktau (Caspian Sea)	Astrakhan (Russia)	Other borders Russia	Lugovaya (Kyrgyzstan)	Dostyk (China)		
Coal				0.01					0.01	0.02			0.03		
Coke			0.08			0.08							0.00	0.08	
Ores	0.01	0.06	0.02			0.09	0.22						0.22	0.31	
Oil products	0.08		0.05		0.01	0.14	0.28	0.01	0.04	0.09	0.01		0.43	0.57	
Grain			0.13			0.13	1.39						1.39	1.52	
Chemicals			0.04			0.04	0.46						0.46	0.50	
Construction mat.	0.01		0.07		0.07	0.15	0.14						0.14	0.29	
Metal	0.01		0.21			0.22	0.19						0.19	0.41	
Wooden goods			0.09			0.09	0.34						0.34	0.43	
Other	0.18		0.78	0.01	0.10	1.07	0.14	0.09	1.09	0.02	0.04		1.38	2.45	
TOTAL	0.29	0.00	0.06	1.48	0.08	0.11	2.02	3.18	0.00	0.10	1.13	0.14	0.05	4.60	6.62

Annex 6.a - Foreign Trade of Uzbekistan with OECD countries and China

Unit: Thousand USD

Country Group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Exports											
Europe (not including Turkey)	163,074	592,172	769,184	842,980	845,702	830,076	696,626	521,917	528,437	607,382	411,341
China, Japan, Korea, Aust.N.Z	33,674	77,371	265,697	342,967	467,208	500,612	256,434	287,797	194,699	210,287	101,482
USA, Canada, Mexico	769	7,461	14,046	23,934	178,801	47,788	43,531	32,420	53,552	80,713	5,164
Turkey	21,019	31,934	78,625	61,529	58,054	94,773	96,207	47,477	85,795	36,045	75,197
TOTAL	218,537	708,938	1,127,552	1,271,411	1,549,765	1,473,248	1,092,798	889,611	862,483	934,427	593,185
<i>Indice (1996=100)</i>	14	46	73	82	100	95	71	57	56	60	38
Europe (not including Turkey)	74.6%	83.5%	68.2%	66.3%	54.6%	56.3%	63.7%	58.7%	61.3%	65.0%	69.3%
China, Japan, Korea, Aust.N.Z	15.4%	10.9%	23.6%	27.0%	30.1%	34.0%	23.5%	32.4%	22.6%	22.5%	17.1%
USA, Canada, Mexico	0.4%	1.1%	1.2%	1.9%	11.5%	3.2%	4.0%	3.6%	6.2%	8.6%	
Turkey	9.6%	4.5%	7.0%	4.8%	3.7%	6.4%	8.8%	5.3%	9.9%	3.9%	12.7%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Imports											
Europe (not including Turkey)	166,135	331,139	580,669	658,217	966,027	1,017,936	740,490	599,828	512,968	542,262	443,752
China, Japan, Korea, Aust.N.Z	51,877	64,600	330,708	374,424	617,027	795,289	513,220	470,278	295,762	419,512	124,213
USA, Canada, Mexico	50,719	115,772	100,595	63,727	355,998	239,834	150,947	340,651	159,152	156,549	2,494
Turkey	54,492	213,508	64,531	138,542	230,492	210,588	156,181	99,139	82,647	89,725	93,473
TOTAL	323,223	725,020	1,076,503	1,234,911	2,169,543	2,263,647	1,560,839	1,509,897	1,050,530	1,208,048	663,931
<i>Indice (1996=100)</i>	15	33	50	57	100	104	72	70	48	56	31
Europe (not including Turkey)	51.4%	45.7%	53.9%	53.3%	44.5%	45.0%	47.4%	39.7%	48.8%	44.9%	66.8%
China, Japan, Korea, Aust.N.Z	16.0%	8.9%	30.7%	30.3%	28.4%	35.1%	32.9%	31.1%	28.2%	34.7%	18.7%
USA, Canada, Mexico	15.7%	16.0%	9.3%	5.2%	16.4%	10.6%	9.7%	22.6%	15.1%	13.0%	0.4%
Turkey	16.9%	29.4%	6.0%	11.2%	10.6%	9.3%	10.0%	6.6%	7.9%	7.4%	14.1%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Annex 6.b - Foreign Trade of Uzbekistan with six major European countries according to OECD statistics

Unit: ton

Commodity Group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Exports											
Food and live animals	10	574	6,743	12,324	40,841	2,627	5,201	242	386	5,836	1,673
Beverages and tobacco	0	0	1	458	0	0	0	0	0	217	868
Crude materials, inedible, except fuels	52,022	124,421	191,803	142,728	180,437	172,846	164,787	128,011	120,931	86,442	72,664
Mineral fuels, lubricants and related	32,839	64,907	77,499	93,380	100,997	78,587	82,099	53,906	63,346	88,176	43,924
Animal and vegetable oils, fats, waxes	16,643	28,157	6,659	0	20	0	0	8,930	2,600	0	0
Chemicals and related products, n.e.s.	0	2,470	376	1,413	117	154	294	5,442	6,658	5,859	7,454
Manufactured goods classified by mat.	880	10,916	21,690	19,251	3,795	12,902	26,967	17,869	27,178	31,392	26,419
Machinery and transport equipment	189	3,585	1,185	8,980	11,953	14,847	8,503	7,752	5,360	4,216	4,542
Miscellaneous manufactured articles	66	48	26	4	14	85	7	122	130	1,149	528
Others	240	159	54	49	8	0	8	6	7	16	8
TOTAL	102,888	235,238	306,034	278,585	338,181	282,048	287,866	222,281	226,595	223,303	158,081
<i>Indice (1996=100)</i>	30	70	90	82	100	83	85	66	67	66	47
Imports											
Food and live animals	421,236	433,288	779,567	128,924	560,246	287,589	291,061	61,543	30,267	60,159	13,476
Beverages and tobacco	7	2,510	8,578	7,466	15,781	5,985	8,283	1,266	3,630	1,546	1,840
Crude materials, inedible, except fuels	51	1,453	683	1,485	1,376	1,369	1,276	879	4,966	972	664
Mineral fuels, lubricants and related	17	452	446	3,163	850	1,931	1,603	1,102	926	2,098	2,151
Animal and vegetable oils, fats, waxes	0	66	28	5	2,557	26,838	10,082	7,951	2,690	417	340
Chemicals and related products, n.e.s.	1,222	3,235	3,731	8,419	9,018	10,330	6,884	5,993	7,714	8,220	6,238
Manufactured goods classified by mat.	7,170	10,008	15,295	4,085	22,855	17,786	14,299	14,228	11,131	12,965	12,880
Machinery and transport equipment	1,826	6,865	8,309	13,498	16,715	20,786	19,305	16,891	12,741	13,167	12,609
Miscellaneous manufactured articles	294	984	2,431	1,741	2,325	3,331	5,219	4,352	2,822	3,160	5,253
Others	210	263	284	388	1,193	3,683	5,671	2,322	2,161	1,777	2,812
TOTAL	432,032	459,124	819,351	169,173	632,916	379,627	363,682	116,525	79,050	104,481	58,264
<i>Indice (1996=100)</i>	68	73	129	27	100	60	57	18	12	17	9

Annex 7.a - Foreign Trade of Tajikistan with OECD countries and China

Unit: Thousand USD

Country Group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Exports											
Europe (not including Turkey)	16,666	84,743	151,086	115,705	137,477	121,714	111,791	72,121	80,641	147,158	239,747
China, Japan, Korea, Aust.N.Z	14,291	19,043	21,419	31,311	12,922	11,637	11,340	11,489	20,567	12,808	7,709
USA, Canada, Mexico	1,789	19,642	63,770	42,187	34,437	9,042	37,251	26,809	9,123	5,216	241
Turkey	7,762	6,796	2,925	6,342	2,786	3,382	7,853	4,053	16,511	13,662	40,684
TOTAL	40,508	130,224	239,200	195,545	187,621	145,775	168,235	114,471	126,842	178,843	288,381
<i>Indice (1996=100)</i>	22	69	127	104	100	78	90	61	68	95	154
Europe (not including Turkey)	41.1%	65.1%	63.2%	59.2%	73.3%	83.5%	66.4%	63.0%	63.6%	82.3%	83.1%
China, Japan, Korea, Aust.N.Z	35.3%	14.6%	9.0%	16.0%	6.9%	8.0%	6.7%	10.0%	16.2%	7.2%	2.7%
USA, Canada, Mexico	4.4%	15.1%	26.7%	21.6%	18.4%	6.2%	22.1%	23.4%	7.2%	2.9%	0.1%
Turkey	19.2%	5.2%	1.2%	3.2%	1.5%	2.3%	4.7%	3.5%	13.0%	7.6%	14.1%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Imports											
Europe (not including Turkey)	42,174	85,733	44,080	69,583	54,242	44,234	57,345	48,499	31,166	35,325	34,326
China, Japan, Korea, Aust.N.Z	2,815	8,130	2,007	28,737	13,490	19,361	19,069	7,716	11,118	8,506	8,697
USA, Canada, Mexico	8,794	11,652	15,279	17,789	16,959	18,645	12,166	13,984	12,297	29,244	492
Turkey	706	4,805	14,580	6,086	4,444	7,200	9,838	5,250	4,468	15,553	10,893
TOTAL	54,489	110,321	75,946	122,194	89,135	89,440	98,418	75,450	59,048	88,628	54,408
<i>Indice (1996=100)</i>	61	124	85	137	100	100	110	85	66	99	61
Europe (not including Turkey)	77.4%	77.7%	58.0%	56.9%	60.9%	49.5%	58.3%	64.3%	52.8%	39.9%	63.1%
China, Japan, Korea, Aust.N.Z	5.2%	7.4%	2.6%	23.5%	15.1%	21.6%	19.4%	10.2%	18.8%	9.6%	16.0%
USA, Canada, Mexico	16.1%	10.6%	20.1%	14.6%	19.0%	20.8%	12.4%	18.5%	20.8%	33.0%	0.9%
Turkey	1.3%	4.4%	19.2%	5.0%	5.0%	8.0%	10.0%	7.0%	7.6%	17.5%	20.0%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Annex 7.b - Foreign Trade of Tajikistan with six major European countries according to OECD statistics

<i>Unit: ton</i>											
Commodity Group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Exports											
Food and live animals	10	58	7	4	35	26	0	1	2	8	33
Beverages and tobacco	0	0	6	0	0	0	0	2	0	0	0
Crude materials, inedible, except fuels	7,205	41,011	60,610	40,246	49,108	37,954	28,411	15,776	14,449	23,182	23,812
Mineral fuels, lubricants and related	0	19,261	0	0	0	0	0	0	0	0	0
Animal and vegetable oils, fats, waxes	0	0	0	81	0	0	0	0	0	0	0
Chemicals and related products, n.e.s.	115	86	13	0	0	21	0	7	0	0	2
Manufactured goods classified by mat.	2,216	7,742	11,703	8,955	8,156	9,605	9,103	7,931	5,077	4,988	10,205
Machinery and transport equipment	4	10	67	18	94	16	13	6	3	1,156	50
Miscellaneous manufactured articles	3	8	2	0	11	455	531	536	677	656	765
Others	0	0	0	0	0	0	0	0	0	0	0
TOTAL	9,552	68,175	72,407	49,304	57,403	48,076	38,058	24,259	20,208	29,990	34,867
<i>Indice (1996=100)</i>	<i>17</i>	<i>119</i>	<i>126</i>	<i>86</i>	<i>100</i>	<i>84</i>	<i>66</i>	<i>42</i>	<i>35</i>	<i>52</i>	<i>61</i>
Imports											
Food and live animals	164,673	281,148	101,633	45,043	36,709	10,596	7,367	19,944	14,363	38,512	8,926
Beverages and tobacco	66	1,006	4,461	6,934	21,641	27,052	19,737	8,720	4,906	146	100
Crude materials, inedible, except fuels	15	40	11	77	0	72	457	253	71	12,611	7,398
Mineral fuels, lubricants and related	4	11	15	162	33	23	155	221	139	76	83
Animal and vegetable oils, fats, waxes	20	679	1,918	249	1,636	1,120	2,605	1,464	1,460	2,638	664
Chemicals and related products, n.e.s.	339	1,536	1,663	2,337	1,427	2,414	1,231	1,030	401	449	570
Manufactured goods classified by mat.	237	456	487	1,014	722	903	1,553	508	603	738	1,678
Machinery and transport equipment	333	2,620	5,498	6,063	1,211	1,565	740	995	1,199	706	387
Miscellaneous manufactured articles	32	241	81	92	111	268	593	181	254	512	422
Others	21	7	0	3	0	1	59	16	3	6	17
TOTAL	165,739	287,745	115,766	61,973	63,491	44,014	34,496	33,331	23,397	56,395	20,244
<i>Indice (1996=100)</i>	<i>261</i>	<i>453</i>	<i>182</i>	<i>98</i>	<i>100</i>	<i>69</i>	<i>54</i>	<i>52</i>	<i>37</i>	<i>89</i>	<i>32</i>

Annex 8 - Foreign Trade of Kazakhstan with OECD countries and China

Unit: Thousand USD

Country Group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Exports											
Europe (not including Turkey)	142,286	444,137	476,559	530,037	538,343	1,065,831	1,143,964	1,964,615	3,100,367	2,817,095	3,497,972
China, Japan, Korea, Aust.N.Z	157,819	308,922	303,800	437,999	627,506	718,434	601,414	792,754	1,103,370	1,128,638	1,456,035
USA, Canada, Mexico	23,817	42,454	88,044	139,764	123,526	121,675	201,228	283,572	447,926	371,265	6,817
Turkey	10,511	43,739	32,305	86,632	100,595	165,285	253,668	295,911	346,376	90,343	201,600
TOTAL	334,433	839,251	900,708	1,194,431	1,389,971	2,071,226	2,200,274	3,336,852	4,998,039	4,407,340	5,162,425
<i>Indice (1996=100)</i>	24	60	65	86	100	149	158	240	360	317	371
Europe (not including Turkey)	42.5%	52.9%	52.9%	44.4%	38.7%	51.5%	52.0%	58.9%	62.0%	63.9%	67.8%
China, Japan, Korea, Aust.N.Z	47.2%	36.8%	33.7%	36.7%	45.1%	34.7%	27.3%	23.8%	22.1%	25.6%	28.2%
USA, Canada, Mexico	7.1%	5.1%	9.8%	11.7%	8.9%	5.9%	9.1%	8.5%	9.0%	8.4%	0.1%
Turkey	3.1%	5.2%	3.6%	7.3%	7.2%	8.0%	11.5%	8.9%	6.9%	2.0%	3.9%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Imports											
Europe (not including Turkey)	164,310	910,419	936,530	615,655	686,790	1,006,469	1,569,369	1,137,181	1,250,399	1,532,496	1,604,581
China, Japan, Korea, Aust.N.Z	254,892	236,105	172,026	160,781	237,226	221,826	365,637	614,313	754,582	531,623	705,931
USA, Canada, Mexico	14,412	78,079	135,156	78,272	146,992	261,355	121,357	183,828	141,015	188,352	24,957
Turkey	19,379	67,838	131,803	150,775	164,044	210,578	214,307	96,596	118,701	119,795	158,655
TOTAL	452,993	1,292,441	1,375,515	1,005,482	1,235,051	1,700,227	2,270,670	2,031,918	2,264,697	2,372,266	2,494,124
<i>Indice (1996=100)</i>	37	105	111	81	100	138	184	165	183	192	202
Europe (not including Turkey)	36.3%	70.4%	68.1%	61.2%	55.6%	59.2%	69.1%	56.0%	55.2%	64.6%	64.3%
China, Japan, Korea, Aust.N.Z	56.3%	18.3%	12.5%	16.0%	19.2%	13.0%	16.1%	30.2%	33.3%	22.4%	28.3%
USA, Canada, Mexico	3.2%	6.0%	9.8%	7.8%	11.9%	15.4%	5.3%	9.0%	6.2%	7.9%	1.0%
Turkey	4.3%	5.2%	9.6%	15.0%	13.3%	12.4%	9.4%	4.8%	5.2%	5.0%	6.4%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Annex 9.a - Exports from Uzbekistan likely to use the Kungrad - Beyneu Corridor in 2000 and 2003

Countries	All	Coal +Ores	Petroleum prod. +Oil	Chemicals	Construction materials	Metal	Timber +Paper	Cotton	Textiles	Machinery	Agricultural + Foodstuff	Others
Export year 2000												
Kazakhstan	1,197,210	0	1,056,518	5,678	63,469	28,690	946	77	1,475	2,661	37,362	334
Russia	845,247	70	127,060	11,783	3,994	18,381	718	187,758	53,034	17,439	422,233	2,777
Ukraine	937,961	0	912,189	1,821	198	9,114	70	8,808	956	352	4,440	13
Belarus	20,590	0	0	10	0	100	0	5,010	467	65	14,831	107
Baltic States	132,401	0	42,178	300	60	390	5	66,602	1,295	51	21,510	10
Other Europe	548,909	305	16,774	22,286	74	77,046	176	415,382	613	61	16,105	87
TOTAL	3,682,318	375	2,154,719	41,878	67,795	133,721	1,915	683,637	57,840	20,629	516,481	3,328
Export year 2003												
Kazakhstan	1,085,956	0	15,845	16,638	10,205	39,361	3,534	25	1,061	5,640	32,123	961,524
Russia	1,051,696	0	856	0	1,042	4,216	240	50,751	46,281	0	242	948,068
Ukraine	47,376	0	5,463	0	57	11,892	1,158	18,269	2,766	0	4,774	2,997
Belarus	6,122	0	0	0	0	0	0	646	327	0	4,650	499
Baltic States	84,186	0	5,511	0	0	200	246	76,679	0	432	956	162
Other Europe	523,424	0	3,092	102	5	11,070	1,423	256,066	229,512	291	18,396	3,467
TOTAL	2,798,760	0	30,767	16,740	11,309	66,739	6,601	402,436	279,947	6,363	61,141	1,916,717
Export by Railway in 2003												
Kazakhstan	1,049,940	0	15,845	16,638	10,235	39,361	194	25	0	0	28,717	938,925
Russia	1,024,798	0	856	0	1,042	4,216	241	50,751	46,281	0	242	921,169
Ukraine	44,610	0	5,463	0	57	11,892	1,158	18,269	0	0	4,774	2,997
Belarus	6,080	0	0	0	0	0	0	646	327	0	4,650	457
Baltic States	83,779	0	5,511	0	0	200	246	76,583	0	432	648	159
Other Europe	137,934	0	3,092	80	1	5,245	1,420	56,392	64,792	140	4,105	2,667
TOTAL	2,347,141	0	30,767	16,718	11,335	60,914	3,259	202,666	111,400	572	43,136	1,866,374
Source: Year 2000 - TRACECA Project "Traffic Forecasts and Feasibility Studies"												

Annex 9.b - Imports by Uzbekistan likely to use the Kungrad - Beyneu Corridor in 2000 and 2003

Unit: ton

Countries	All	Coal +Ores	Petroleum prod. +Oil	Chemicals	Construction materials	Metal	Timber +Paper	Cotton	Textiles	Machinery	Agricultural + Foodstuff	Others
Import year 2000												
Kazakhstan	1,698,522	204,499	1,996	5,445	500,102	33,097	307,881	0	18	2,072	643,353	59
Russia	563,866	1,747	40,427	120,401	55,496	95,574	166,357	643	3,292	36,873	41,371	1,685
Ukraine	191,903	263	106	8,940	10,560	148,977	4,314	0	25	11,867	5,232	1,619
Belarus	28,093	0	67	672	483	704	3,776	0	237	3,007	18,956	191
Baltic States	114,606	0	26	614	135	14,866	8,768	1	90	1,273	88,484	349
Other Europe	304,625	11,104	2,378	18,231	8,821	18,606	18,142	1	804	20,627	203,360	2,551
TOTAL	2,901,615	217,613	45,000	154,303	575,597	311,824	509,238	645	4,466	75,719	1,000,756	6,454
Import year 2003												
Kazakhstan	1,089,043	169,928	299,713	0	2,755	52,330	12,936	0	81	2,133	257,657	291,510
Russia	885,045	42,979	3,882	7,648	9,002	121,687	438,479	421	4,034	23,620	27,502	205,791
Ukraine	50,499	400	0	833	353	14,021	4,364	0	64	6,037	844	23,583
Belarus	15,913	0	0	252	0	17	7,305	0	170	2,154	4,790	1,225
Baltic States	38,363	0	73	0	1,314	178	13,420	0	136	74	9,543	13,625
Other Europe	198,420	0	17	2,724	324	6,462	21,812	0	476	4,354	135,206	27,045
TOTAL	2,277,283	213,307	303,685	11,457	13,748	194,695	498,316	421	4,961	38,372	435,542	562,779
Import by Railway in 2003												
Kazakhstan	1,049,940	0	15,845	16,638	10,235	39,361	194	25	0	0	28,717	938,925
Russia	865,208	42,979	3,882	7,648	9,002	121,687	438,479	421	4,034	23,620	7,665	205,791
Ukraine	48,392	400	460	833	353	14,021	1,797	0	64	6,037	844	23,583
Belarus	13,759	0	0	252	0	17	7,305	0	170	0	4,790	1,225
Baltic States	34,403	0	73	94	1,314	178	13,420	0	30	74	9,543	9,677
Other Europe	131,496	0	1,510	2,219	314	5,705	21,120	0	398	3,552	76,746	19,932
TOTAL	2,143,198	43,379	21,770	27,684	21,218	180,969	482,315	446	4,696	33,283	128,305	1,199,133

Source: Year 2000 - TRACECA Project "Traffic Forecasts and Feasibility Studies"

Annex 10 – Foreign Trade of Tajikistan that may use the Kungrad – Beyneu corridor by country group from 1997 to 2002

Unit: Million USD

Countries	1997	1998	1999	2000	2001	2002	2002/1997
Export							
Kazakhstan	10.0	10.0	3.6	5.7	3.1	3.5	-65%
Russia	63.5	47.9	115.1	258.8	104.7	87.5	38%
Ukraine	4.3	1.7	7.0	1.9	2.8	5.9	37%
Belarus	2.9	2.6	3.1	1.7	1.4	1.5	-48%
Baltic States	7.5	2.1	8.5	14.5	11.7	31.5	320%
Other Europe	191.2	131.0	115.5	174.1	213.2	277.4	45%
TOTAL	279.4	195.3	252.8	456.7	336.9	407.3	46%
All Countries	745.7	596.6	688.7	784.3	651.5	736.9	-1%
% total export	37%	33%	37%	58%	52%	55%	
Import							
Kazakhstan	42.1	51.9	78.8	82.4	89.1	72.2	71%
Russia	115.1	102.1	92.4	105.1	129.4	163.5	42%
Ukraine	20.7	16.6	37.7	84.3	63.6	80.5	289%
Belarus	3.3	7.6	3.1	2.3	2.6	2.9	-12%
Baltic States	3.5	6.1	4.8	6.5	5.4	5.3	51%
Other Europe	226.0	196.8	116.5	76.3	61.3	75.5	-67%
TOTAL	410.7	381.1	333.3	356.9	351.4	399.9	-3%
All Countries	750.3	711.0	663.1	675.0	687.5	720.5	-4%
% total import	55%	54%	50%	53%	51%	56%	

Source: State Committee for Statistics of the Republic of Tajikistan

Annex 11.a Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis –
Base year 2003 according to Uzbek statistics

Commodity Group	Traffic volume crossing border – Thousand tons												
	North (Kazakhstan) - bound						South (Uzbekistan) - bound						Total
	Export	Transit from				Total	Import	Transit from				Total	
		TUR	TAJ	AFG	KYR			TUR	TAJ	AFG	KYR		
Coal									2.0			2.0	2.0
Coke							3.1		32.4			35.5	35.5
Ores							0.1		190.6			190.7	190.7
Oil products	5.5	120.7			126.2		2.9	3.3	122.8	0.4	3.4	132.8	259.0
Grain	0.6				0.6		6.1	3.2	34.7	0.2		44.2	44.8
Chemicals							0.9	17.2				18.1	18.1
Construction mat.	1.8	1.1			2.9		4.3	11.5	4.8			20.6	23.5
Metal	0.2	0.5	166.8		167.5		79.8	116.6	7.3	4.4	0.1	208.2	375.7
Wooden goods					0.1	0.1	3.7	23.8	1.3	2.3		31.1	31.2
Other	254.5	53.4	94.1	0.2	8.8	411.0	395.2	140.0	123.4	29.7	4.6	692.9	1103.9
TOTAL	262.6	175.7	260.9	0.2	8.9	708.3	496.1	315.6	519.3	37.0	8.1	1376.1	2084.4

Annex 11.b.1 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2010 - OPTIMISTIC SCENARIO

2010	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	No of years	Elasticity Foreign Trade / GDP	Change in Trade Orientation
GDP growth rate	5.5%	9.0%	8.0%	7.0%	5.5%	5.5%	9.0%	8.0%	7.0%	5.5%	7		
Use of Kungrad route		100%	100%	100%	100%		100%	100%	100%	100%			

Commodity Group	Traffic volume crossing border - Thousand tons														
	North (Kazakhstan) - bound						South (Uzbekistan) – bound						Total		
	Export	Transit from				Total	Import	Transit from				Total			
		TUR	TAJ	AFG	KYR			TUR	TAJ	AFG	KYR				
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	3.4	3.4	1	1	
Coke	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	55.5	0.0	0.0	60.0	60.0	1	1
Ores	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	326.7	0.0	0.0	326.8	326.8	1	1
Oil products	9.6	292.9	0.0	0.0	0.0	302.5	5.1	8.0	271.5	0.8	3.4	288.7	591.2	1.5	1
Grain	0.8	0.0	0.0	0.0	0.0	0.8	8.6	5.5	56.5	0.3	0.0	70.8	71.7	0.9	1
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	1.3	31.4	0.0	0.0	0.0	32.8	32.8	1	1
Construction mat.	2.8	2.3	0.0	0.0	0.0	5.1	6.7	23.6	9.1	0.0	0.0	39.4	44.5	1.2	1
Metal	0.3	1.0	316.9	0.0	0.0	318.2	124.8	239.0	13.9	7.7	0.1	385.6	703.8	1.2	1
Wooden goods	0.0	0.0	0.0	0.0	0.2	0.2	5.6	46.1	2.3	3.9	0.0	57.9	58.0	1.1	1
Other	383.9	103.4	169.8	0.3	13.3	670.8	596.2	271.1	222.7	49.9	4.6	1144.5	1815.3	1.1	1
TOTAL	397.5	399.6	486.7	0.3	13.4	1297.5	752.9	624.8	961.6	62.6	8.1	2410.0	3707.5		

Annex 11.b.2 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2015 - OPTIMISTIC SCENARIO

2015	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	No of years	Elasticity Foreign Trade / GDP	Change in Trade Orientation
GDP growth rate	4.5%	8.0%	7.0%	6.0%	4.5%	4.5%	8.0%	7.0%	6.0%	4.5%	5		
Use of Kungrad route		50%	100%	100%	100%		60%	100%	100%	100%			

Commodity Group	Traffic volume crossing border - Thousand tons												Elasticity	Change in Trade Orientation	
	North (Kazakhstan) – bound						South (Uzbekistan) – bound								Total
	Export	Transit from				Total	Import	Transit from				Total			
		TUR	TAJ	AFG	KYR			TUR	TAJ	AFG	KYR				
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.9	0.7	0.5	
Coke	0.0	0.0	0.0	0.0	0.0	5.4	0.0	72.9	0.0	0.0	78.3	78.3	0.8	1	
Ores	0.0	0.0	0.0	0.0	0.0	0.2	0.0	443.4	0.0	0.0	443.5	443.5	1	0.9	
Oil products	12.1	221.6	0.0	0.0	0.0	233.8	6.4	7.3	390.8	1.1	4.3	409.9	643.7	1.2	0.9
Grain	1.0	0.0	0.0	0.0	0.0	1.0	10.2	4.5	74.1	0.4	0.0	89.2	90.3	0.8	1
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	1.6	27.7	0.0	0.0	0.0	29.4	29.4	1	1
Construction mat.	3.5	1.7	0.0	0.0	0.0	5.2	8.4	20.8	12.8	0.0	0.0	42.0	47.1	1	1
Metal	0.4	0.7	430.1	0.0	0.0	431.2	152.2	203.0	18.8	10.1	0.1	384.3	815.5	1	0.9
Wooden goods	0.0	0.0	0.0	0.0	0.2	0.2	7.0	40.6	3.3	5.2	0.0	56.0	56.2	1	1
Other	468.2	73.2	230.5	0.4	16.2	788.6	727.1	230.3	302.3	64.9	5.6	1330.2	2118.7	1	0.9
TOTAL	485.3	297.2	660.6	0.4	16.4	1459.9	918.5	534.2	1322.3	81.7	10.0	2866.7	4326.5		

Annex 11.b.3 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2020 - OPTIMISTIC SCENARIO

2020	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	No of years	Elasticity Foreign Trade / GDP	Change in Trade Orientation
GDP growth rate	4.0%	7.0%	6.0%	5.0%	4.0%	4.0%	7.0%	6.0%	5.0%	4.0%	5		
Use of Kungrad route		30%	100%	100%	100%		40%	100%	100%	100%			

Commodity Group	Traffic volume crossing border - Thousand tons													Elasticity	Change in Trade Orientation
	North (Kazakhstan) – bound						South (Uzbekistan) – bound						Total		
	Export	Transit from				Total	Import	Transit from				Total			
		TUR	TAJ	AFG	KYR			TUR	TAJ	AFG	KYR				
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	4.1	4.1	0.5	0.4
Coke	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	92.2	0.0	0.0	98.5	98.5	0.8	1
Ores	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	560.5	0.0	0.0	560.7	560.7	1	0.8
Oil products	14.4	149.4	0.0	0.0	0.0	163.8	7.6	6.5	505.5	1.4	5.1	526.1	690.0	1.1	0.8
Grain	1.2	0.0	0.0	0.0	0.0	1.2	11.8	3.9	91.6	0.5	0.0	107.7	108.8	0.8	0.9
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	1.9	25.1	0.0	0.0	0.0	27.0	27.0	0.9	1
Construction mat.	4.0	1.1	0.0	0.0	0.0	5.1	9.6	17.6	15.7	0.0	0.0	42.9	48.0	0.7	1
Metal	0.4	0.5	543.7	0.0	0.0	544.6	178.2	177.8	23.8	12.2	0.1	392.1	936.7	1	0.8
Wooden goods	0.0	0.0	0.0	0.0	0.2	0.2	8.5	38.0	4.4	6.6	0.0	57.5	57.7	1	1
Other	531.3	45.6	278.3	0.5	18.4	874.1	825.1	191.1	364.9	76.0	6.4	1463.5	2337.6	0.8	0.8
TOTAL	551.4	196.5	822.0	0.5	18.6	1589.0	1,049.2	459.9	1662.7	96.7	11.6	3280.1	4869.1		

Annex 11.b.4 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2025 - OPTIMISTIC SCENARIO

2025	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	No of years	Elasticity Foreign Trade / GDP	Change in Trade Orientation
GDP growth rate	3.5%	5.5%	5.0%	4.0%	3.5%	3.5%	5.5%	5.0%	4.0%	3.5%	5		
Use of Kungrad route		24%	100%	100%	100%		35%	100%	100%	100%			

Commodity Group	Traffic volume crossing border - Thousand tons													Elasticity Foreign Trade / GDP	Change in Trade Orientation
	North (Kazakhstan) - bound						South (Uzbekistan) – bound						Total		
	Export	Transit from				Total	Import	Transit from				Total			
		TUR	TAJ	AFG	KYR			TUR	TAJ	AFG	KYR				
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	4.3	0.5	0.4
Coke	0.0	0.0	0.0	0.0	0.0	0.0	7.2	0.0	112.2	0.0	0.0	119.4	119.4	0.8	1
Ores	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	681.9	0.0	0.0	682.2	682.2	1	0.8
Oil products	16.6	148.2	0.0	0.0	0.0	164.8	8.7	7.1	615.0	1.6	5.9	638.3	803.1	1	0.8
Grain	1.3	0.0	0.0	0.0	0.0	1.3	13.3	4.1	109.3	0.5	0.0	127.3	128.6	0.8	0.9
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	2.3	27.9	0.0	0.0	0.0	30.2	30.2	0.9	1
Construction mat.	4.5	1.0	0.0	0.0	0.0	5.5	10.7	18.1	18.2	0.0	0.0	47.0	52.5	0.6	1
Metal	0.5	0.5	648.8	0.0	0.0	649.8	201.8	188.9	28.4	14.1	0.2	433.4	1083.2	0.9	0.8
Wooden goods	0.0	0.0	0.0	0.0	0.3	0.3	10.1	43.4	5.6	8.0	0.0	67.1	67.4	1	1
Other	593.6	43.3	325.7	0.6	20.5	983.7	921.7	198.8	427.2	86.2	7.1	1641.1	2624.8	0.8	0.8
TOTAL	616.4	193.0	974.6	0.6	20.8	1805.4	1176.1	488.4	2002.1	110.5	13.2	3790.2	5595.6		

Annex 11.c.1 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2010 - CONSERVATIVE SCENARIO

2010	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	No of years	Elasticity Foreign Trade / GDP	Change in Trade Orientation
GDP growth rate	4.0%	8.0%	7.0%	6.0%	4.5%	4.0%	8.0%	7.0%	6.0%	4.5%	7		
Use of Kungrad route		100%	100%	100%	100%		100%	100%	100%	100%			

Commodity Group	Traffic volume crossing border - Thousand tons													Elasticity Foreign Trade / GDP	Change in Trade Orientation
	North (Kazakhstan) - bound						South (Uzbekistan) – bound						Total		
	Export	Transit from				Total	Import	Transit from				Total			
		TUR	TAJ	AFG	KYR			TUR	TAJ	AFG	KYR				
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.9	0.95	
Coke	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	48.7	0.0	0.0	52.6	52.6	0.9	0.95
Ores	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	287.5	0.0	0.0	287.6	287.6	0.9	0.96
Oil products	7.8	239.1	0.0	0.0	0.0	246.9	4.1	6.5	224.2	0.7	5.0	240.5	487.5	1.35	0.95
Grain	0.7	0.0	0.0	0.0	0.0	0.7	7.5	4.9	50.1	0.3	0.0	62.8	63.5	0.81	0.95
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	1.1	27.3	0.0	0.0	0.0	28.5	28.5	0.9	0.95
Construction mat.	2.4	1.9	0.0	0.0	0.0	4.3	5.7	20.0	7.8	0.0	0.0	33.5	37.8	1.08	0.95
Metal	0.3	0.9	271.0	0.0	0.0	272.2	105.7	202.5	11.9	6.7	0.1	327.0	599.2	1.08	0.95
Wooden goods	0.0	0.0	0.0	0.0	0.1	0.1	4.8	39.5	2.0	3.4	0.0	49.7	49.9	0.99	0.95
Other	322.0	84.9	141.4	0.3	11.5	560.0	500.1	222.5	185.4	42.2	6.0	956.1	1516.1	0.9	0.95
TOTAL	333.2	326.8	412.4	0.3	11.6	1084.3	633.2	523.3	820.5	53.2	11.2	2041.3	3125.5		

Annex 11.c.2 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2015 - CONSERVATIVE SCENARIO

2015	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	No of years	Elasticity Foreign Trade / GDP	Change in Trade Orientation
GDP growth rate	3.8%	7.0%	6.0%	5.0%	4.0%	3.8%	7.0%	6.0%	5.0%	4.0%	5		
Use of Kungrad route		40%	100%	100%	100%		50%	100%	100%	100%			

Commodity Group	Traffic volume crossing border - Thousand tons													Elasticity Foreign Trade / GDP	Change in Trade Orientation
	North (Kazakhstan) - bound						South (Uzbekistan) - bound						Total		
	Export	Transit from				Total	Import	Transit from				Total			
		TUR	TAJ	AFG	KYR			TUR	TAJ	AFG	KYR				
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	3.3	0.63	0.48	
Coke	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	59.5	0.0	0.0	64.0	64.0	0.72	0.95
Ores	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	364.0	0.0	0.0	364.2	364.2	0.9	0.90
Oil products	9.3	130.8	0.0	0.0	0.0	140.1	4.9	4.5	293.5	0.8	6.0	309.8	449.9	1.08	0.86
Grain	0.8	0.0	0.0	0.0	0.0	0.8	8.6	3.1	61.3	0.3	0.0	73.2	74.1	0.72	0.95
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	1.3	18.3	0.0	0.0	0.0	19.6	19.6	0.9	0.95
Construction mat.	2.8	1.0	0.0	0.0	0.0	3.8	6.7	13.4	10.0	0.0	0.0	30.1	33.9	0.9	0.95
Metal	0.3	0.5	339.7	0.0	0.0	340.4	122.1	131.6	14.9	8.1	0.2	276.9	617.3	0.9	0.86
Wooden goods	0.0	0.0	0.0	0.0	0.1	0.1	5.6	26.4	2.6	4.2	0.0	38.8	39.0	0.9	0.95
Other	372.0	44.1	177.1	0.3	11.5	605.0	577.6	144.6	232.3	50.9	7.0	1012.4	1617.4	0.9	0.86
TOTAL	385.2	176.4	516.8	0.3	11.6	1090.3	731.5	341.9	1041.4	64.3	13.2	2192.2	3282.5		

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Annex 11.c.3 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2020 - CONSERVATIVE SCENARIO

2020	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	No of years	Elasticity Foreign Trade / GDP	Change in Trade Orientation
GDP growth rate	3%	5%	5%	4%	3%	3%	5%	5%	4%	3%	5		
Use of Kungrad route		20%	90%	100%	100%		15%	85%	100%	100%			

Commodity Group	Traffic volume crossing border - Thousand tons													0.9	0.95
	North (Kazakhstan) - bound						South (Uzbekistan) – bound						Total		
	Export	Transit from				Total	Import	Transit from				Total			
		TUR	TAJ	AFG	KYR			TUR	TAJ	AFG	KYR				
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	2.9	2.9	0.45	0.38
Coke	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	59.8	0.0	0.0	64.8	64.8	0.72	0.95
Ores	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	369.3	0.0	0.0	369.4	369.4	0.9	0.8
Oil products	10.4	78.7	0.0	0.0	0.0	89.1	5.5	1.6	300.1	1.0	6.7	314.9	404.0	0.99	0.76
Grain	0.9	0.0	0.0	0.0	0.0	0.9	9.4	1.1	60.6	0.4	0.0	71.4	72.4	0.72	0.86
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	1.5	6.6	0.0	0.0	0.0	8.1	8.1	0.81	0.95
Construction mat.	3.1	0.6	0.0	0.0	0.0	3.7	7.3	4.6	9.9	0.0	0.0	21.8	25.5	0.63	0.95
Metal	0.3	0.3	361.7	0.0	0.0	362.3	135.2	46.7	14.9	9.2	0.2	206.3	568.6	0.9	0.76
Wooden goods	0.0	0.0	0.0	0.0	0.2	0.2	6.4	9.8	2.7	4.9	0.0	23.8	24.0	0.9	0.95
Other	403.5	25.2	237.4	0.3	12.4	678.9	626.6	49.6	226.0	56.7	7.6	966.5	1645.5	0.72	0.76
TOTAL	418.2	104.8	599.1	0.3	12.6	1,135.0	797.0	120.1	1,046.2	72.2	14.5	2050.0	3185.0		

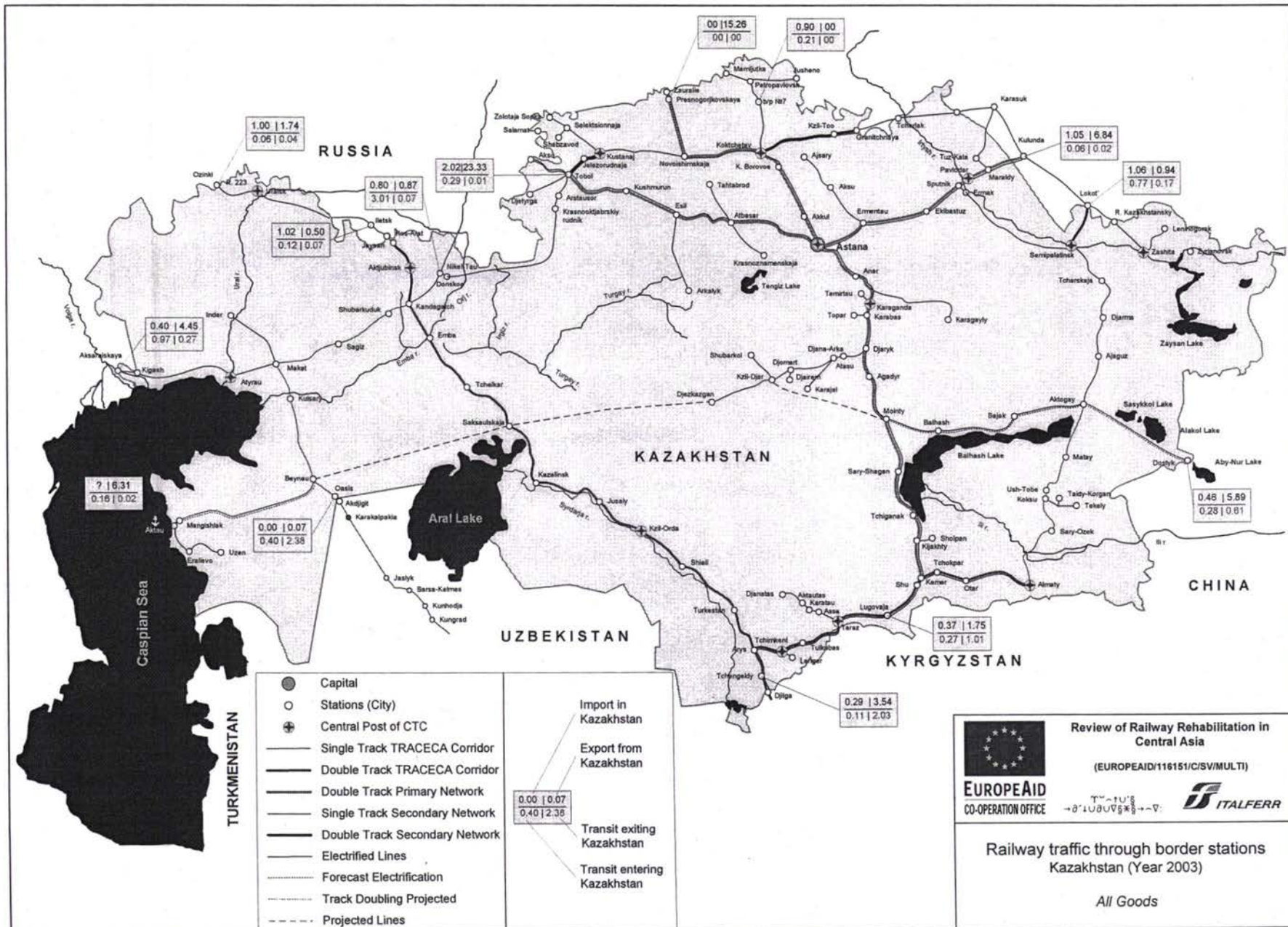
Annex 11.c.4 - Forecast traffic crossing Uzbekistan - Kazakhstan border at Akjigit / Oasis in 2025 - CONSERVATIVE SCENARIO

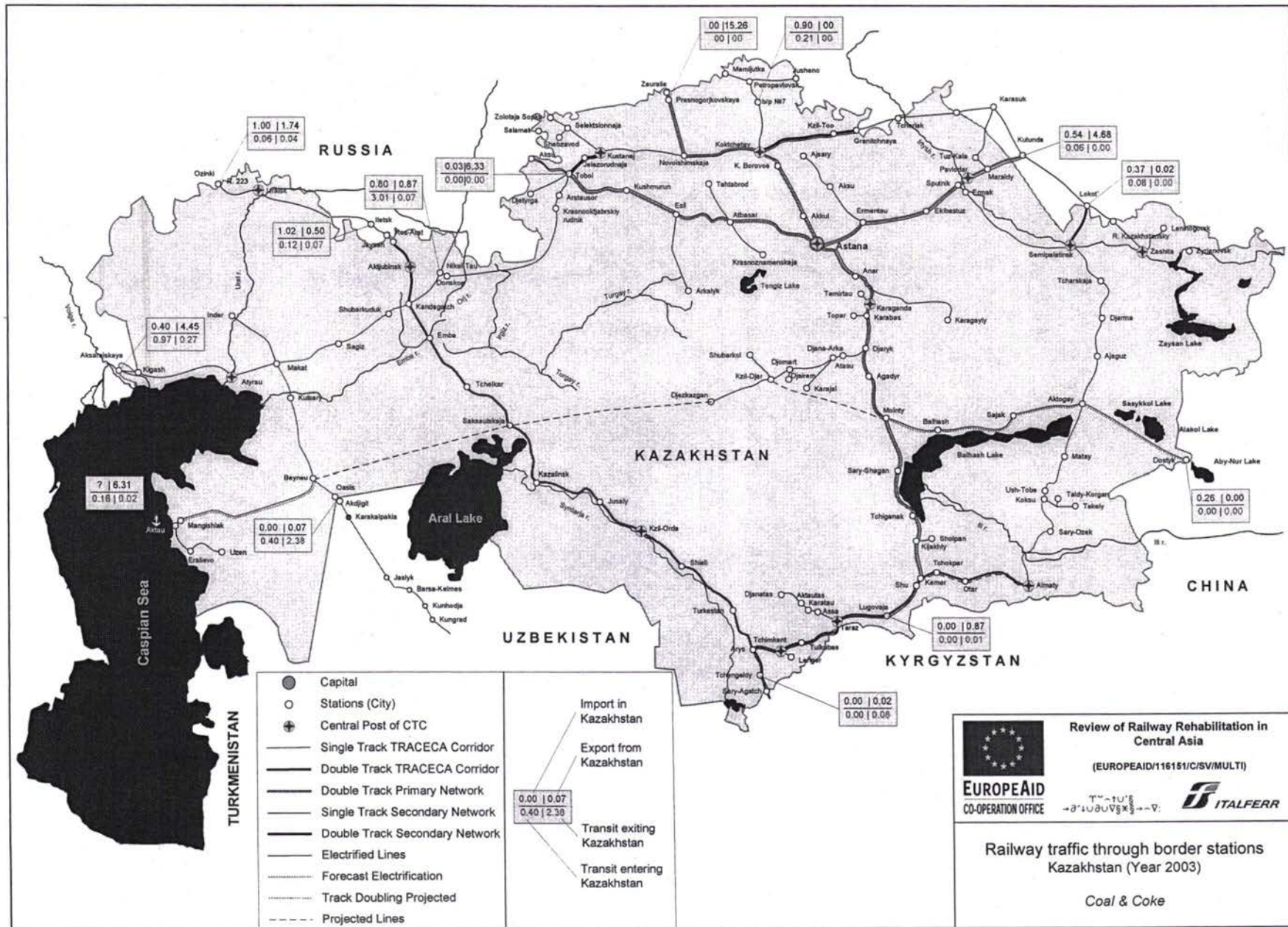
2025	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	Uzbe- kistan	Turkme- nistan	Taji- kistan	Afgha- nistan	Kyrgyz- stan	No of years	Elasticity Foreign Trade / GDP	Change in Trade Orientation
GDP growth rate	3.0%	5.0%	4.5%	3.5%	3.0%	3.0%	5.0%	4.5%	3.5%	3.0%	5		
Use of Kungrad route		15%	80%	100%	100%		10%	75%	100%	100%			

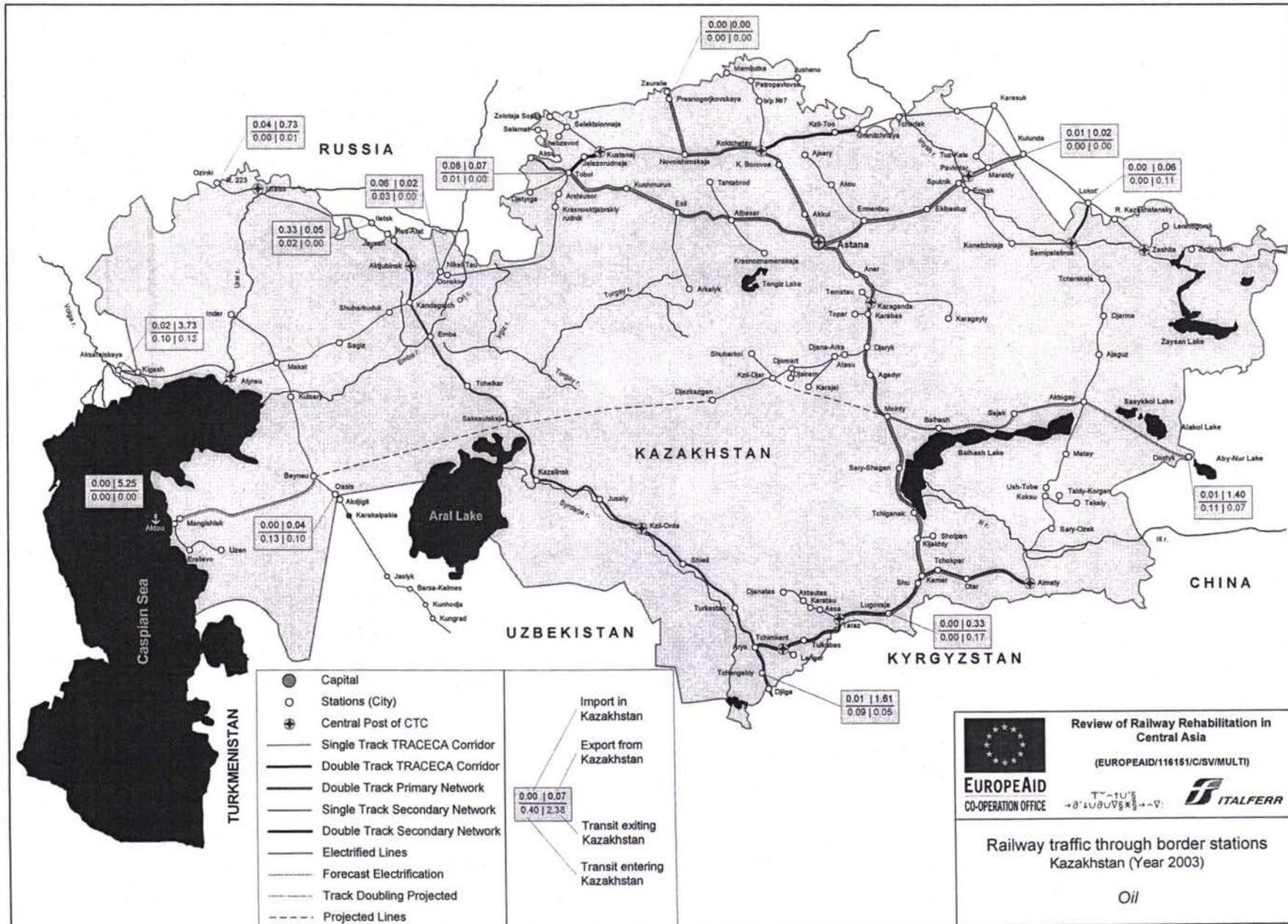
Commodity Group	Traffic volume crossing border - Thousand tons													0.9	0.95
	North (Kazakhstan) - bound						South (Uzbekistan) - bound						Total		
	Export	Transit from				Total	Import	Transit from				Total			
		TUR	TAJ	AFG	KYR			TUR	TAJ	AFG	KYR				
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	2.7	2.7	0.45	0.38
Coke	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	61.4	0.0	0.0	66.9	66.9	0.72	0.95
Ores	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	379.2	0.0	0.0	379.3	379.3	0.9	0.76
Oil products	11.5	69.8	0.0	0.0	0.0	81.3	6.1	1.3	308.1	1.1	7.5	324.0	405.3	0.9	0.76
Grain	1.0	0.0	0.0	0.0	0.0	1.0	10.3	0.8	61.3	0.4	0.0	72.8	73.8	0.72	0.86
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	1.7	5.3	0.0	0.0	0.0	7.0	7.0	0.81	0.95
Construction mat.	3.3	0.5	0.0	0.0	0.0	3.8	7.9	3.5	9.8	0.0	0.0	21.2	25.0	0.54	0.95
Metal	0.4	0.2	368.6	0.0	0.0	369.2	148.2	36.2	15.1	10.3	0.2	210.0	579.2	0.81	0.76
Wooden goods	0.0	0.0	0.0	0.0	0.2	0.2	7.2	8.0	2.9	5.7	0.0	23.9	24.1	0.9	0.95
Other	437.7	21.7	238.3	0.3	13.5	711.6	679.7	37.9	225.2	62.4	8.2	1013.4	1725.0	0.72	0.76
TOTAL	453.9	92.2	606.9	0.3	13.7	1167.0	866.7	93.1	1065.7	79.9	15.9	2121.2	3288.3		

Annex 12

Railway traffic through border stations Kazakhstan (Year 2003)







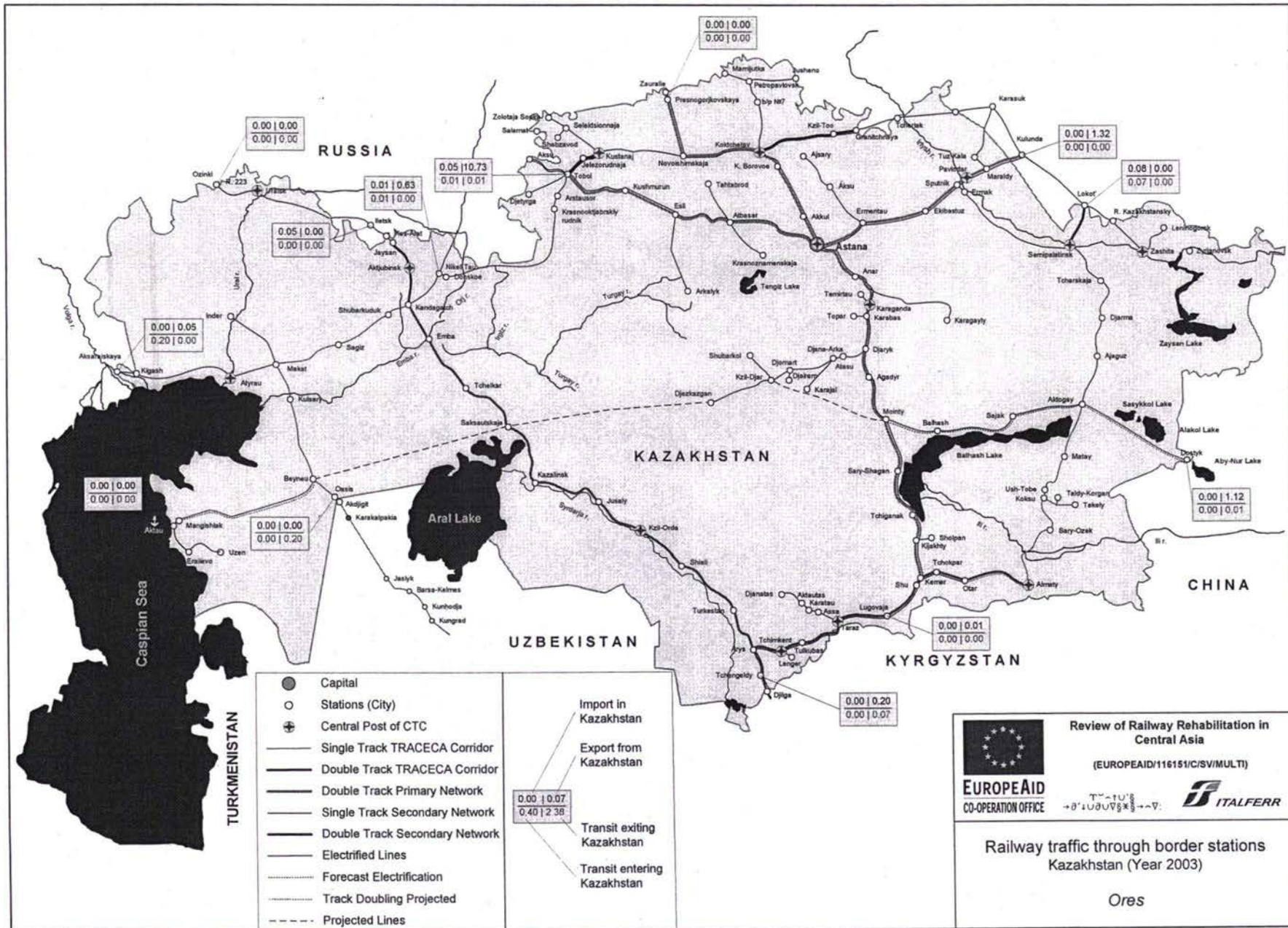
Review of Railway Rehabilitation in Central Asia
(EUROPEAID/116151/C/SV/MULTI)

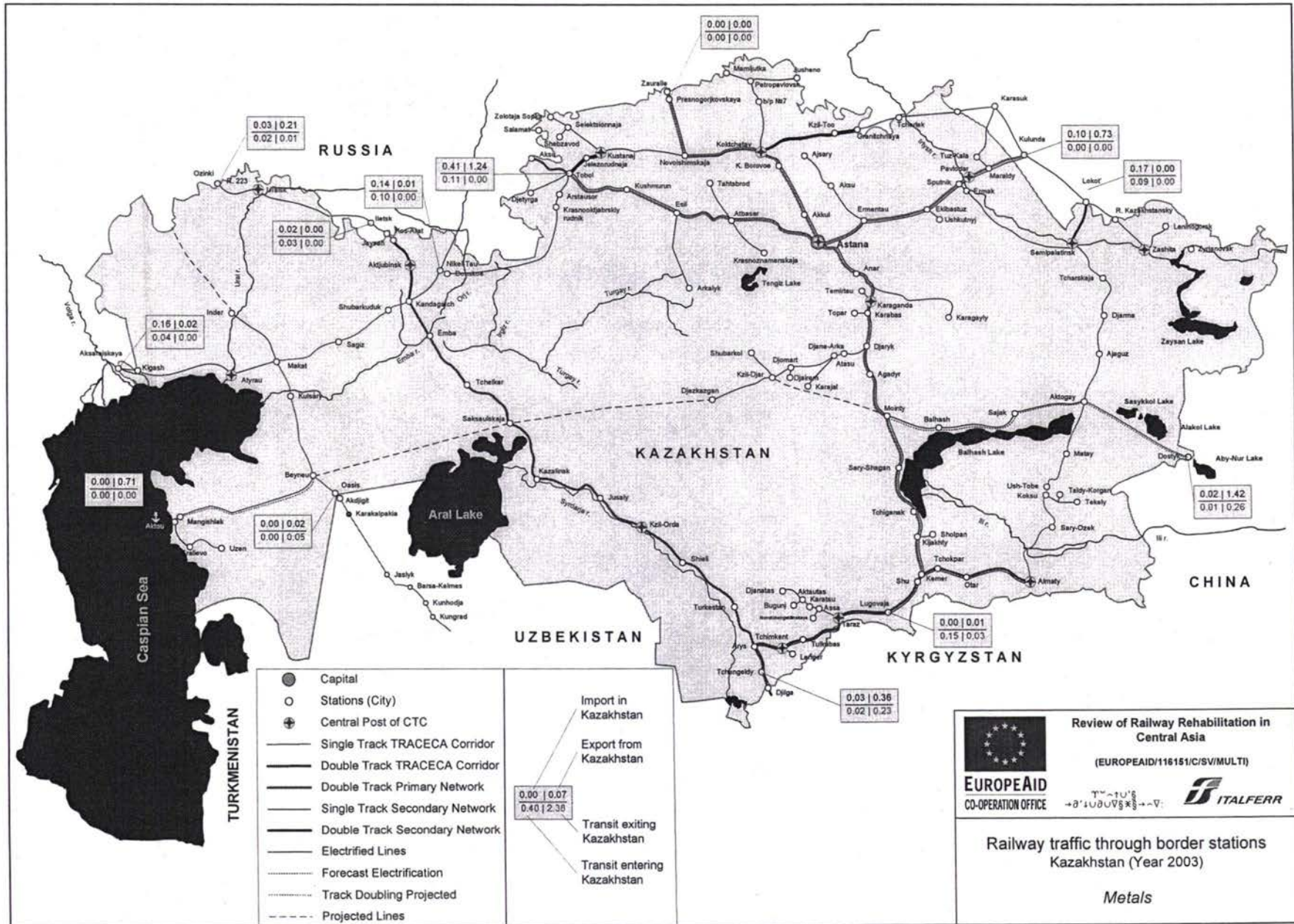
EUROPEAID CO-OPERATION OFFICE

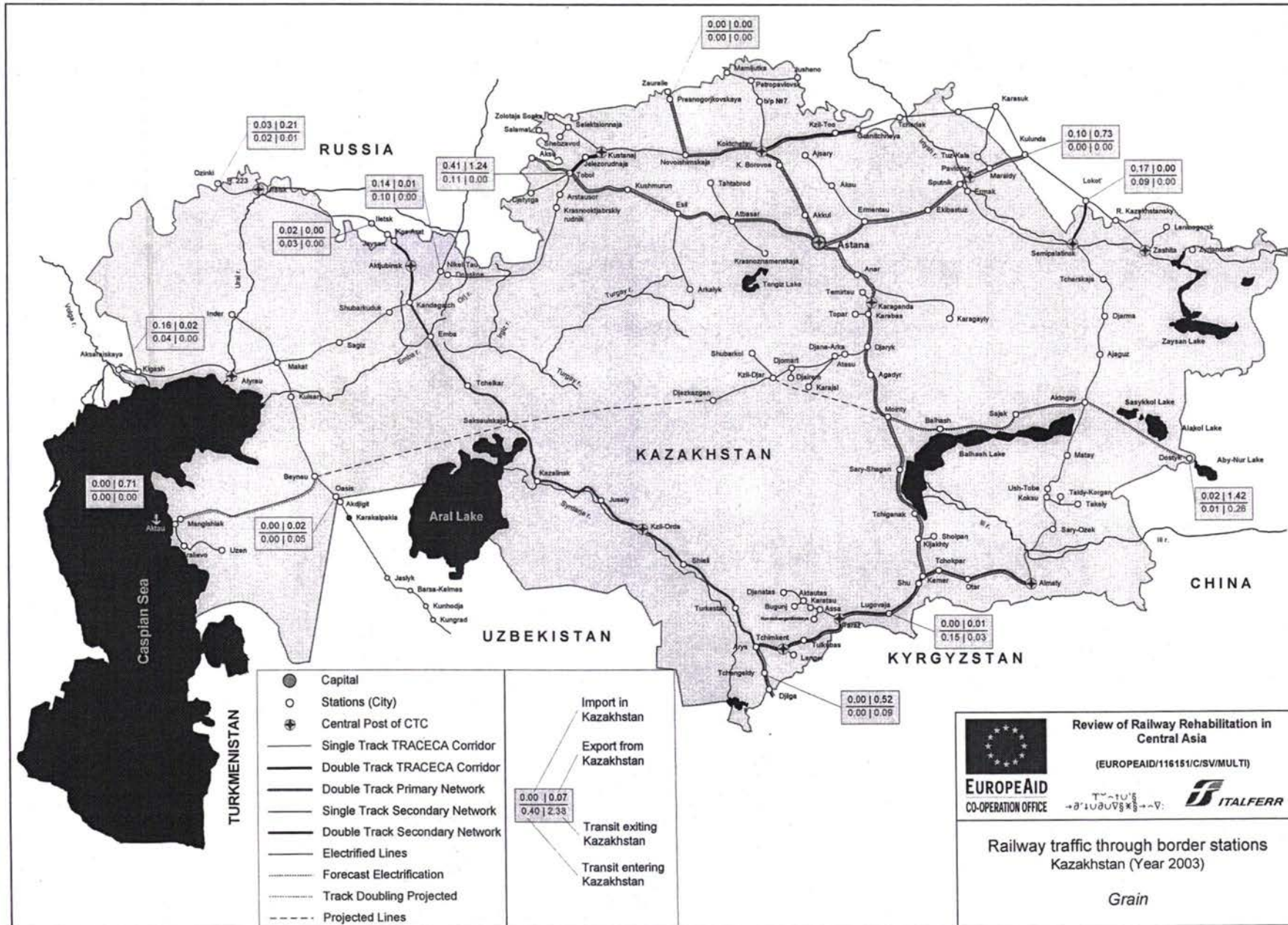
ITALFERR

Railway traffic through border stations Kazakhstan (Year 2003)

Oil







Annex 13

Railway traffic through border stations Uzbekistan (Year 2003)

