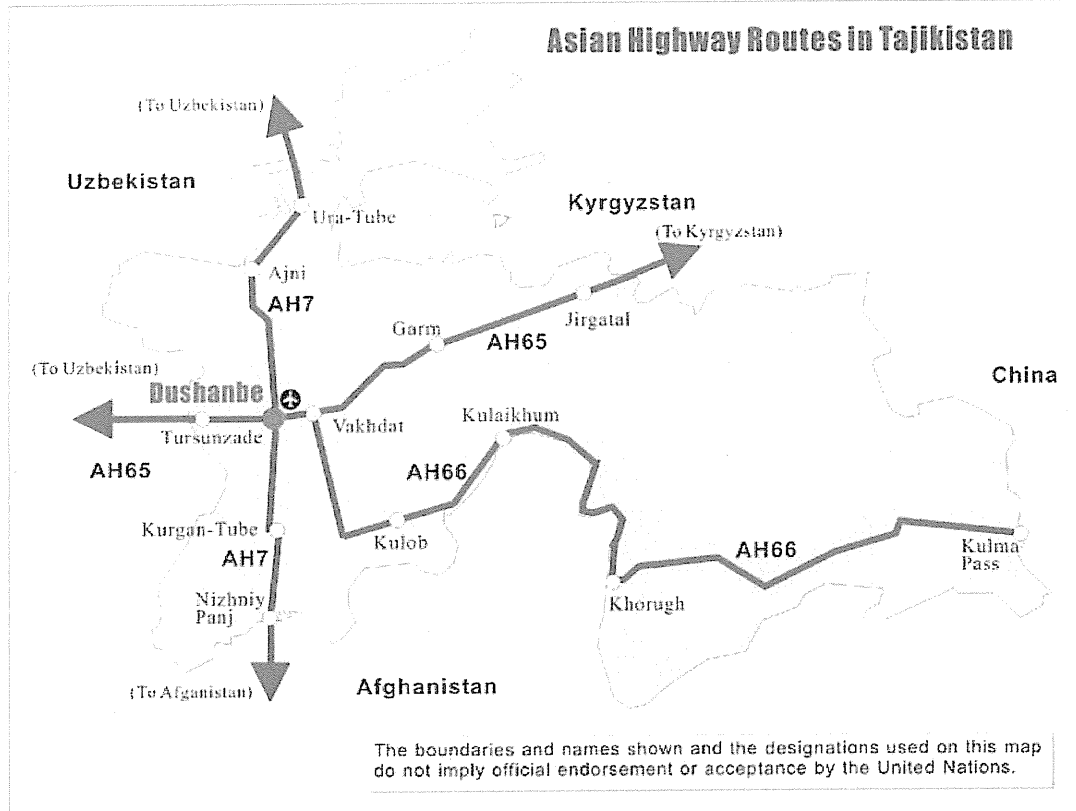


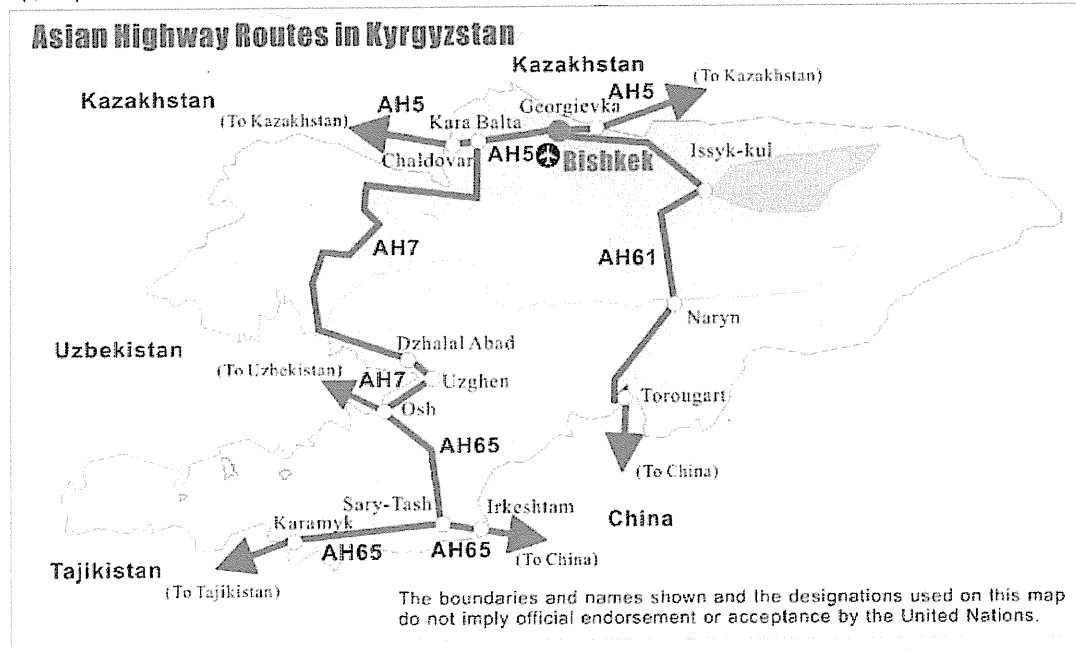
3. アジア・ハイウェイ及びトランス・アジアン・レイルウェイネットワーク  
 中央アジア諸国のアジア・ハイウェイネットワーク

出所: <http://www.unescap.org/ttd/>

タジキスタン

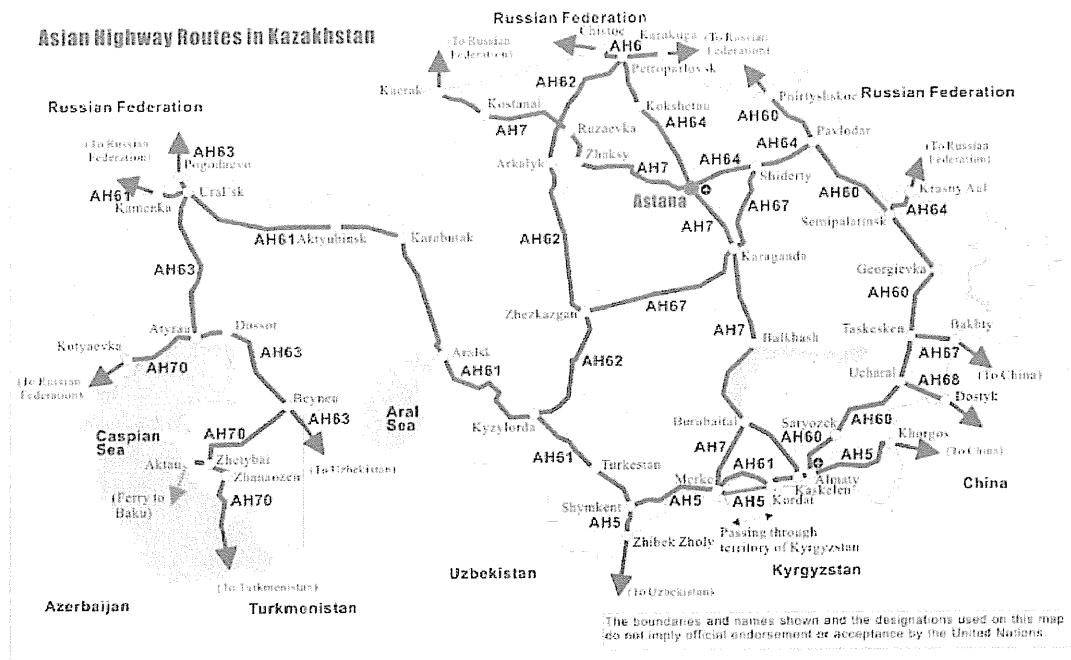


キルギス

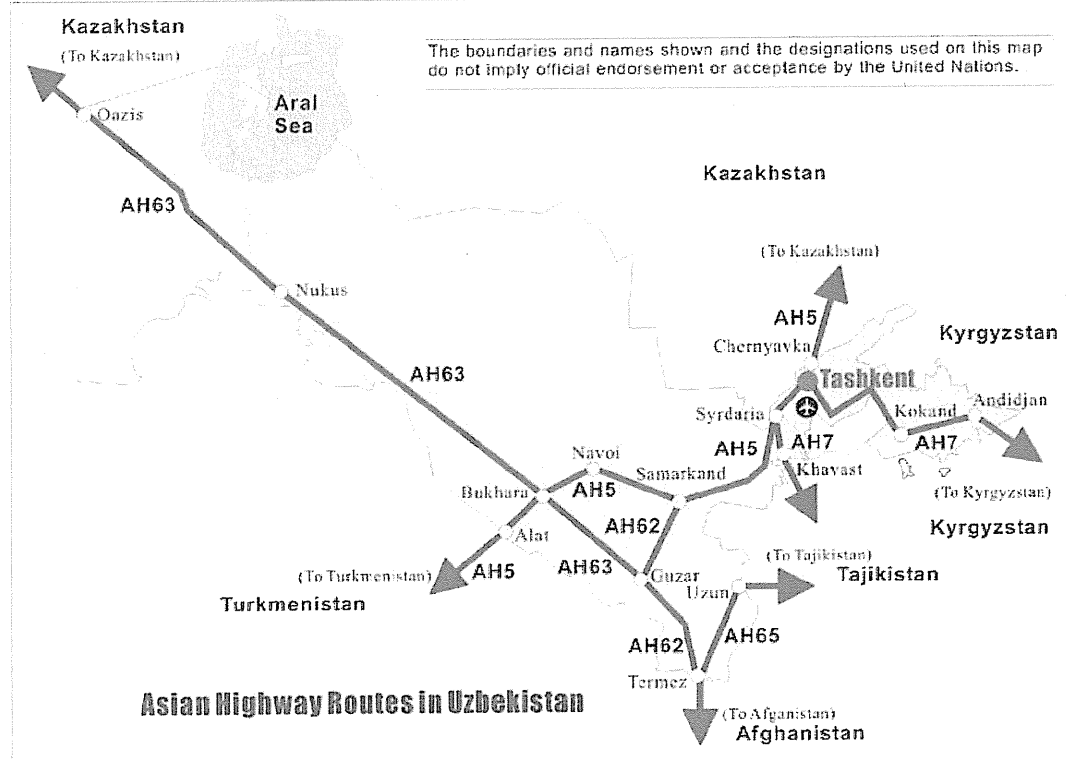


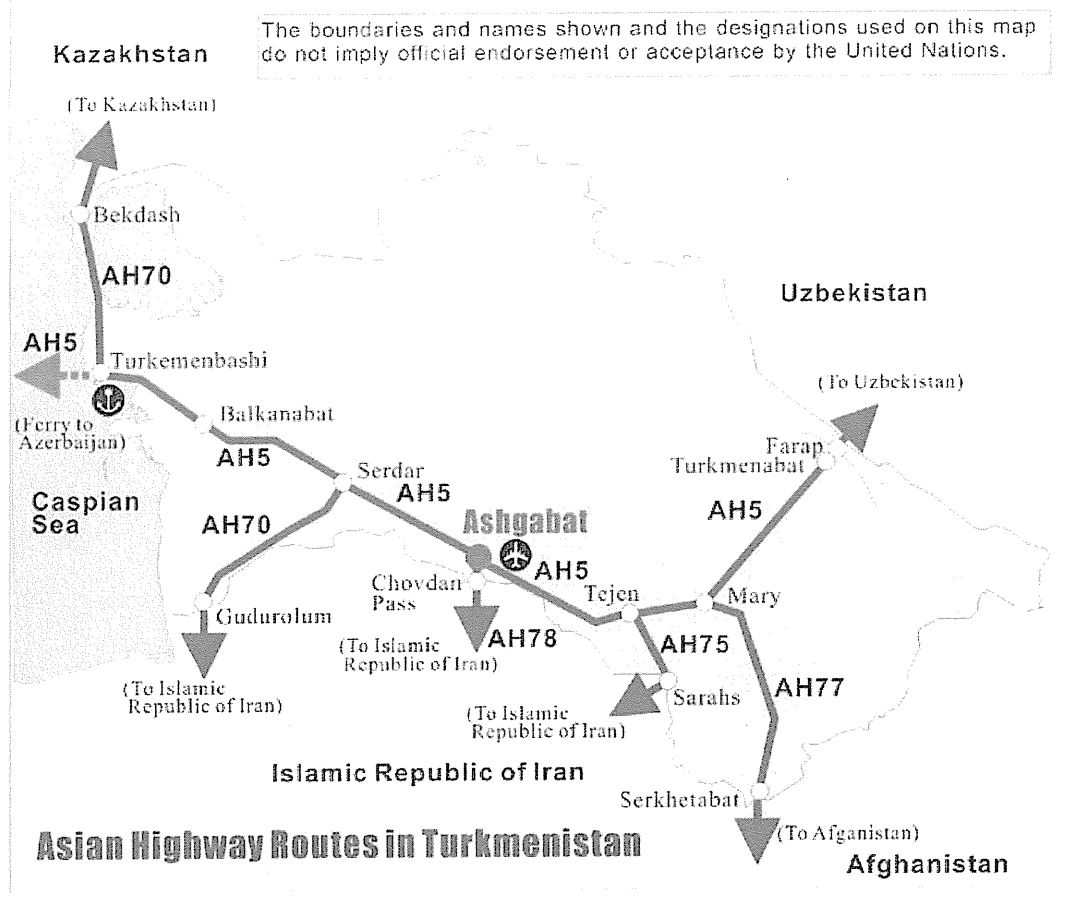
カザフスタン

Asian Highway Routes in Kazakhstan

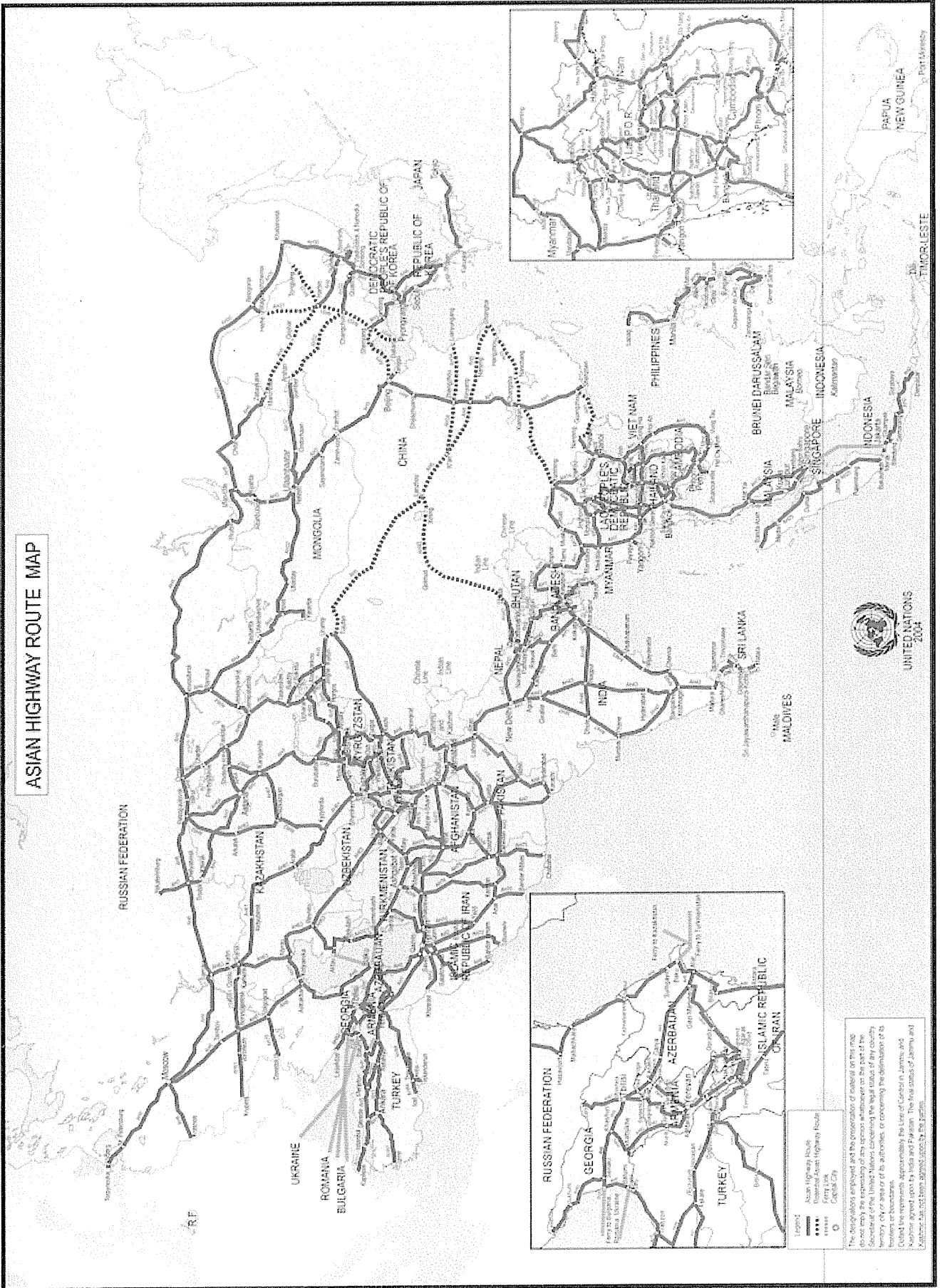


ウズベキスタン

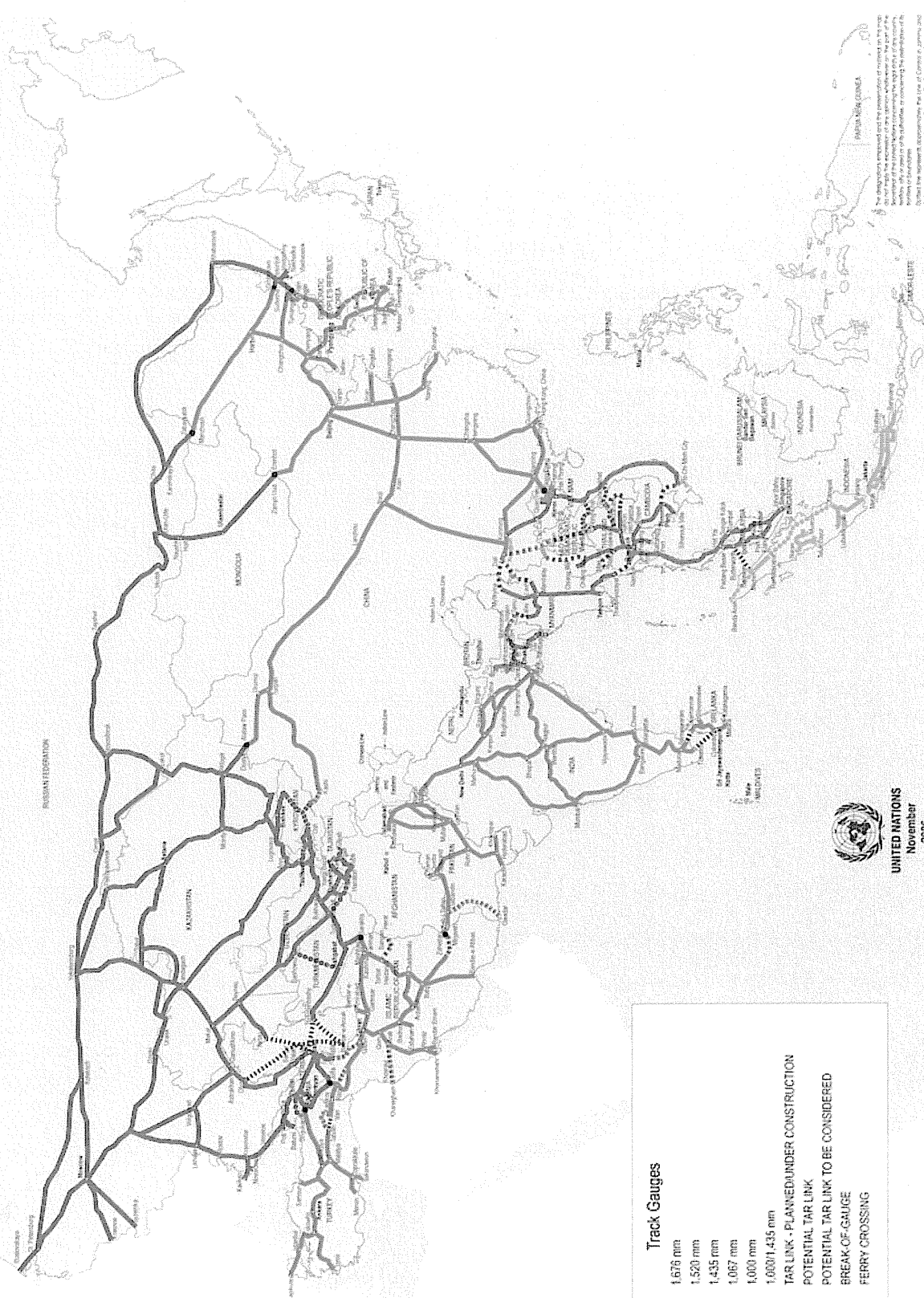




ASIAN HIGHWAY ROUTE MAP



TRANS-ASIAN RAILWAY NETWORK



**Track Gauges**

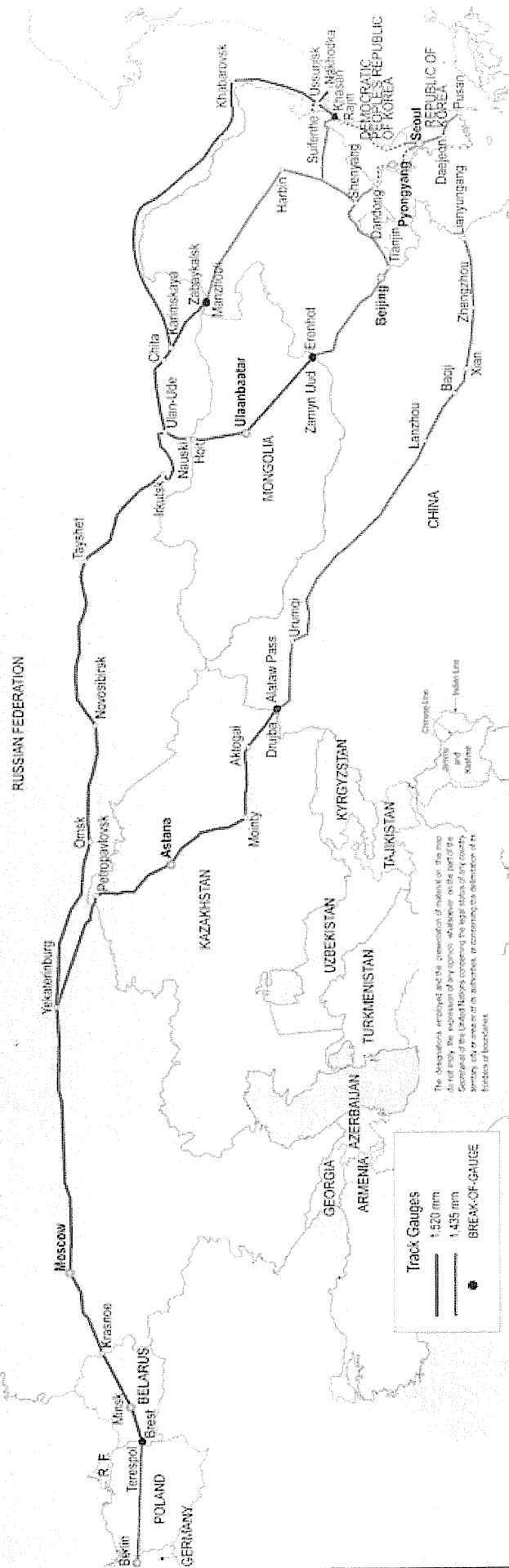
- 1,676 mm
- 1,520 mm
- 1,435 mm
- 1,067 mm
- 1,000 mm
- 1,000/1,435 mm
- TAR LINK - PLANNED/UNDER CONSTRUCTION
- POTENTIAL TAR LINK
- POTENTIAL TAR LINK TO BE CONSIDERED
- BREAK-OF-GAUGE
- FERRY CROSSING



The information contained in this publication is intended to provide a general overview of the railway network in the region. It is not intended to be used as a basis for any specific project. The information is provided for informational purposes only and is not intended to be used for any other purpose. The information is provided for informational purposes only and is not intended to be used for any other purpose.



# TRANS-ASIAN RAILWAY NORTHERN CORRIDOR



#### 4. 各国の輸出入統計—品目及び相手国別 (ADB)

カザフスタン commodity composition of merchandise exports 1999-2004

	1999	2000	2001	2002	2003	2004
Animal and animal products	21.7	10.5	18.1	19.2	30.8	41.1
Vegetable products	378.5	559.7	392.7	408.2	659.5	640.7
Animal or vegetables fats	1.0	1.5	4.2	3.8	8.5	12.7
Prepared foodstuff(including alcohol and nonalcoholic beverages, tobacco, and substitutes)	22.8	33.2	43.5	39.1	79.3	119.6
Mineral products(including energy resources)	2,731.1	4,790.6	5,028.8	5,917.5	8,316.3	13,727.2
Plastics and rubber	8.3	4.6	6.2	8.4	13.7	20.5
Chemical products(including pharmaceutical products, fertilizers, perfume, and detergent products)	335.3	378.2	405.9	418.6	440.0	634.1
Hides and skins	25.4	23.2	21.5	32.8	74.6	138.0
Wood and wood products	6.2	7.4	8.4	5.2	0.3	0.3
Wood pulp products	9.2	3.9	9.1	6.5	7.9	11.5
Textile and textile articles	62.7	97.9	94.9	115.4	155.4	188.9
Footwear and headgear	6.7	1.5	2.8	0.8	3.0	3.3
Articles of stone ,plaster, cement, and asbestos	2.5	2.6	3.4	1.9	2.8	5.3
Pearls, precious or semi-precious stones, and metals	285.5	387.6	264.6	269.5	249.9	345.6
Base metals and articles thereof	1,817.2	2,273.7	2,109.9	2,234.1	2,635.0	3,897.2
Machinery, mechanical appliances, and electrical equipment	104.3	146.2	132.8	112.2	154.8	193.1
Transportation equipment	36.8	52.8	69.0	52.6	74.9	76.0
Instruments-measuring and musical	7.1	29.1	17.6	16.6	16.0	30.9
Arms and ammunition						
Miscellaneous manufactured articles	1.4	3.5	3.5	1.9	3.2	3.4
Works of art						
Others	7.9	4.5	2.2	6.0	0.8	6.6
Total	5,871.6	8,812.2	8,639.1	9,670.3	12,926.7	20,096.2

カザフスタン Commodity composition of merchandise imports 1999-2004

	1999	2000	2001	2002	2003	2004
Animal and animal products	44.5	69.1	75.7	70.4	103.4	145.3
Vegetable products	53.3	60.6	69.0	76.9	104.7	116.5
Animal or vegetables fats	37.4	46.2	55.5	62.2	50.7	54.4
Prepared foodstuff(including alcohol and non-alcoholic beverages, tobacco, and substitutes)	241.6	289.9	331.0	333.0	426.0	611.1
Mineral products(including energy resources)	421.7	657.6	904.4	822.9	1,007.3	1,873.5
Plastics and rubber	116.1	193.2	239.8	267.9	362.8	504.2
Chemical products(including pharmaceutical products, fertilizers, perfume, and detergent products)	341.8	545.8	667.1	715.7	909.5	1,128.3
Hides and skins	2.6	3.0	4.2	6.3	9.5	19.3
Wood and wood products	27.6	52.3	71.5	62.9	100.9	158.5
Wood pulp products	89.3	132.6	166.1	167.3	209.6	277.7
Textile and textile articles	55.0	65.6	75.6	102.1	146.6	162.6
Footwear and headgear	24.7	22.7	15.0	23.4	23.3	22.9
Articles of stone, plaster, cement, and asbestos	7.3	110.2	114.2	136.2	183.5	311.0
Pearls, precious or semi-precious stones, and metals	14.3	14.5	12.3	6.3	8.9	13.8
Base metals and articles thereof	339.5	562.9	889.5	738.0	993.3	1,666.1
Machinery, mechanical appliances, and electrical equipment	961.0	1,402.4	1,852.2	1,881.7	2,152.6	3,421.9
Transportation equipment	619.8	563.0	625.0	803.2	1,222.8	1,777.2
Instruments-measuring and musical	97.1	134.9	159.3	165.7	208.4	274.8
Arms and ammunition						
Miscellaneous manufactured articles	88.9	102.3	115.4	139.3	178.2	234.4
Works of art		3.2	0.1	0.1	0.1	0.7
Others						
Total	3,655.1	5,040.0	6,446.0	6,490.5	8,408.7	12,781.2

カザフスタン geographical distribution of merchandise exports 1999-2004

	1999	2000	2001	2002	2003	2004
CIS sub-total	1,510.5	2,336.7	2,644.6	2,194.4	2,980.5	4,097.2
CARs	199.3	291.2	367.7	368.1	483.5	847.0
Azerbaijan	30.9	46.8	69.3	112.7	113.5	287.1
Kyrgyz Republic	59.1	58.3	87.0	108.6	156.4	222.1
Tajikistan	43.3	52.6	61.2	45.8	75.7	136.1
Uzbekistan	66.0	133.5	150.2	101.0	137.9	201.7
Rest of CIS	1,311.2	2,045.5	2,276.9	1,826.3	2,497.0	3,250.2
Russian Federation	1,146.5	1,751.4	1,759.5	1,497.8	1,967.9	2,838.1
Turkmenistan	12.6	7.1	14.2	15.3	37.2	26.1
Others	152.1	287.0	503.2	313.2	491.9	386.0
Non-CIS	4,361.1	6,475.5	5,994.5	7,475.9	9,946.2	15,999.0
EU-15	1,309.4	2,063.0	1,991.2	1,537.0	1,980.5	6,309.7
East Asia						
PRC	469.8	673.7	659.6	1,023.0	1,653.1	1,967.3
Japan	23.4	9.7	19.1	23.0	10.4	29.7
Korea, South	35.8	36.4	43.4	48.9	55.5	162.9
Mongolia	3.8	12.2	9.8	8.3	12.0	29.3
South Asia						
Afghanistan	11.4	57.9	18.2	31.1	49.4	86.4
India	26.4	29.8	9.7	5.1	5.9	10.7
Pakistan	2.1	1.5	0.5	0.4	0.7	0.8
Other major trading partners						
Iran	91.6	203.3	208.9	309.9	411.1	712.0
Turkey	36.4	62.3	74.2	97.4	99.2	147.1
US	81.3	209.5	159.0	116.9	99.1	274.0
Rest of the world	2,269.7	3,116.2	2,800.9	4,274.9	5,569.3	6,269.1
total	5,871.6	8,812.2	8,639.1	9,670.3	12,926.7	20,096.2

カザフスタン geographical distribution of merchandise imports 1999-2004

	1999	2000	2001	2002	2003	2004
CIS	1,603.8	2,731.7	3,309.5	3,043.2	3,932.3	6,117.9
CARs	132.5	115.2	127.6	36.8	165.5	338.5
Azerbaijan	4.3	9.9	10.7	15.5	13.7	16.1
Kyrgyz Republic	32.5	30.1	33.5	31.8	54.8	91.3
Tajikistan	3.0	4.7	2.3	3.0	7.3	3.5
Uzbekistan	92.7	70.5	81.1	86.5	89.7	227.6
Rest of CIS	1,471.3	2,616.5	3,181.9	2,906.4	3,766.8	5,779.4
Russian Federation	1,351.8	2,439.2	2,891.9	2,548.8	3,282.1	4,812.5
Turkmenistan	17.8	43.4	77.5	74.6	49.1	75.5
Others	101.7	133.9	212.5	283.0	435.6	891.4
Non-CIS	2,051.3	2,308.3	3,136.5	3,540.8	4,476.0	6,663.3
EU-15	913.5	1,025.2	1,554.1	1,572.7	2,061.3	2,983.8
East Asia						
PRC	79.8	151.0	172.0	313.0	523.7	758.2
Japan	118.2	105.1	142.0	164.6	212.0	398.2
Korea, South	49.0	83.6	110.6	110.2	114.6	247.7
Mongolia	0.6	0.2	0.2	0.8		0.7
South Asia						
Afghanistan	0.2					0.3
India	30.8	45.9	45.0	55.1	73.0	86.0
Pakistan	1.5	2.1	1.0	1.2	2.0	2.2
Other major trading partners						
Iran	7.8	13.3	11.0	12.4	12.8	13.0
Turkey	106.1	1,440.0	137.0	173.7	209.0	342.4
US	344.8	277.4	349.1	461.4	470.4	562.0
Rest of the world	399.0	460.5	614.5	675.7	797.6	1,268.8
total	3,655.1	5,040.0	6,446.0	6,584.0	8,408.7	12,781.2



## キルギス Commodity composition of merchandise exports 1999-2004

	1999	2000	2001	2002	2003	2004
Animal and animal products	1.5	1.8	3.2	3.8	8.1	12.0
Vegetable products	18.0	14.4	13.3	19.9	18.9	26.2
Animal or vegetables fats	0.5	0.5		0.2	0.1	0.1
Prepared foodstuff(including alcohol and non-alcoholic beverages, tobacco, and substitutes)	53.4	37.3	32.7	30.1	25.8	42.9
Mineral products(including energy resources)	57.2	86.8	58.4	62.4	74.7	94.1
Plastics and rubber	4.0	6.1	4.0	5.1	6.9	12.6
Chemical products(including pharmaceutical products, fertilizers, perfume, and detergent products)	14.6	14.5	18.0	25.2	9.7	22.5
Hides and skins	2.8	7.6	10.3	24.2	11.5	9.3
Wood and wood products	0.4	0.6	0.3	0.4	0.4	0.5
Wood pulp products	0.6	0.4	1.2	0.6	1.4	2.5
Textile and textile articles	32.0	42.8	29.5	59.8	69.9	79.5
Footwear and headgear	0.2	0.2	0.5	0.2	0.7	1.2
Articles of stone, plaster, cement, and asbestos	5.3	4.2	5.2	8.9	26.2	38.0
Pearls, precious or semi-precious stones, and metals	183.6	196.9	226.7	164.8	262.1	291.2
Base metals and articles thereof	27.0	34.8	15.3	23.4	19.8	31.7
Machinery, mechanical appliances, and electrical equipment	27.5	33.4	28.5	26.9	28.2	35.5
Transportation equipment	16.3	14.9	26.5	21.2	14.5	14.8
Instruments-measuring and musical	1.5	3.3	1.3	1.8	1.1	1.5
Arms and ammunition						
Miscellaneous manufactured articles	7.4	4.0	1.2	6.5	1.7	2.3
Works of art				0.2		
Others			0.1			0.7
Total	453.8	504.5	476.2	48.5	581.7	718.8

## キルギス Commodity composition of merchandise imports 1999-2004

	1999	2000	2001	2002	2003	2004
Animal and animal products	3.7	4.2	3.3	3.3	5.9	7.9
Vegetable products	37.5	42.3	15.5	21.7	16.2	23.0
Animal or vegetables fats	6.7	3.7	3.9	4.9	10.8	13.8
Prepared foodstuff(including alcohol and non-alcoholic beverages, tobacco, and substitutes)	34.5	31.0	35.8	47.4	59.5	83.0
Mineral products(including energy resources)	128.7	133.3	129.5	163.4	195.6	273.3
Plastics and rubber	16.6	22.8	22.0	24.9	38.3	55.7
Chemical products(including pharmaceutical products, fertilizers, perfume, and detergent products)	60.9	59.3	67.3	78.4	91.7	112.9
Hides and skins	0.6	2.3	4.1	2.6	1.3	1.9
Wood and wood products	4.5	7.0	5.2	6.6	10.5	17.2
Wood pulp products	12.3	15.8	12.8	13.4	17.5	22.6
Textile and textile articles	34.2	35.2	28.8	38.9	47.3	42.6
Footwear and headgear	5.7	5.2	5.1	5.9	7.6	5.8
Articles of stone, plaster, cement, and asbestos	5.5	4.9	5.1	6.2	8.6	10.8
Pearls, precious or semi-precious stones, and metals	0.2	0.2	0.1	0.1	0.1	0.2
Base metals and articles thereof	32.0	27.6	27.3	29.3	29.7	65.0
Machinery, mechanical appliances, and electrical equipment	148.9	98.2	56.5	89.6	89.1	107.3
Transportation equipment	29.9	41.8	31.8	32.1	51.2	70.3
Instruments-measuring and musical	27.2	10.8	8.0	10.6	12.2	14.9
Arms and ammunition						
Miscellaneous manufactured articles	10.1	8.5	5.1	6.9	10.1	10.5
Works of art				0.2		
Others						2.3
Total	599.7	554.1	467.2	586.8	717.0	941.0

キルギス geographical distribution of merchandise exports 1999-2004

	1999	2000	2001	2002	2003	2004
total	453.8	504.5	476.2	485.5	581.7	718.8
CIS	182.8	207.4	168.2	168.7	200.9	275.1
CARs	102.5	134.3	95.9	80.4	94.3	125.8
Azerbaijan	1.5	4.0	2.1	5.6	2.0	1.8
Kazakhstan	45.0	33.4	39.0	36.8	57.1	87.3
Tajikistan	9.5	7.5	6.7	10.2	18.9	22.1
Uzbekistan	46.6	89.4	48.0	27.8	16.3	14.7
Rest of CIS	80.3	73.1	72.3	88.2	106.6	149.2
Russian Federation	70.7	65.1	64.5	80.0	97.0	137.7
Turkmenistan	2.8	2.7	1.5	2.4	2.3	4.0
Others	6.8	5.3	6.3	5.8	7.3	7.5
Non-CIS	271.1	297.1	307.9	316.9	380.8	443.8
EU-15	173.3	171.1	117.5	18.7	17.6	15.2
East Asia						
PRC	25.3	44.1	19.4	41.1	23.3	39.3
Japan	0.5	0.7	0.5	0.2	0.1	
Korea, South	0.2	0.4	0.6	1.1	0.4	0.5
Mongolia	1.2	2.5	1.2	1.1	1.0	1.2
South Asia						
Afghanistan	2.4	4.5	1.6	4.4	6.1	8.0
India	5.9	0.8	1.4	6.1	0.7	0.6
Pakistan	0.4	0.1	0.1			
Other major trading partners						
Iran	7.6	6.7	8.2	4.7	2.1	3.5
Turkey	4.6	7.2	13.8	16.4	11.0	17.0
US	11.2	2.8	7.1	36.1	6.5	3.2
UAE	1.1	1.4	0.5	68.8	144.3	189.3
Switzerland	18.1	34.1	124.2	96.4	117.9	101.8
Czech Republic	7.0	2.7	2.1	1.9	2.3	1.3
Rest of the world	12.2	17.8	9.9	19.9	47.4	62.8

キルギス geographical distribution of merchandise imports 1999-2004

	1999	2000	2001	2002	2003	2004
total	599.7	554.1	467.2	586.8	717.0	941.0
CIS	259.3	298.6	257.0	322.5	410.5	582.1
CARs	130.1	136.2	150.5	189.9	213.6	257.5
Azerbaijan	3.4	2.4	0.4	2.4	0.4	0.4
Kazakhstan	72.7	57.4	81.8	123.9	170.9	202.9
Tajikistan	4.0	1.9	1.5	3.5	3.1	2.4
Uzbekistan	50.0	74.6	66.7	60.1	39.2	51.9
Rest of CIS	129.1	162.3	106.5	132.6	196.9	324.6
Russian Federation	109.4	132.6	85.1	116.7	176.1	293.7
Turkmenistan	7.8	18.7	9.0	1.7	0.4	1.4
Others	12.0	11.0	12.5	14.2	20.4	29.6
Non-CIS	340.5	255.6	210.3	264.2	306.5	358.9
EU-15	109.9	66.3	54.8	76.1	79.6	98.6
East Asia						
PRC	36.9	36.9	48.5	59.1	77.7	80.1
Japan	12.0	10.3	5.8	6.4	11.8	11.6
Korea, South	27.1	6.8	7.8	7.0	11.7	25.1
Mongolia						
South Asia						
Afghanistan	0.1	0.1			0.1	0.3
India	4.7	2.9	4.3	2.9	3.7	4.0
Pakistan	0.2	0.2	0.2	0.3	0.5	0.4
Other major trading partners						
Iran	8.6	8.7	6.7	4.3	5.9	7.0
Turkey	23.1	26.8	15.8	17.0	26.0	33.2
US	54.2	53.8	26.8	47.4	47.9	44.6
UAE	9.6	7.0	6.8	7.3	7.8	7.6
Switzerland	2.1	3.1	1.2	3.5	2.5	2.9
Brazil	1.2	0.3	1.8	0.2	0.3	2.0
Rest of the world	50.8	32.4	29.8	32.5	30.9	41.4

タジキスタン commodity composition of merchandise exports 1999-2004

	1999	2000	2001	2002	2003	2004
Animal and animal products	0.1		0.1		0.3	0.3
Vegetable products	15.8	19.2	18.1	15.3	18.5	22.4
Animal or vegetables fats				0.1		
Prepared foodstuff(including alcohol and	11.7	11.6	8.8	7.5	7.3	6.5
Mineral products(including energy resources)	176.5	93.8	80.9	72.0	59.8	63.9
Plastics and rubber	0.1	0.1	0.1	0.1		0.1
Chemical products(including pharmaceutical	9.0	9.5	5.4	2.3	4.8	8.8
Hides and skins	0.4	0.8	0.4	0.8	1.3	1.4
Wood and wood products	0.1		0.1		0.1	
Wood pulp products	0.1	0.1	0.2	0.9	0.1	0.2
Textile and textile articles	129.6	130.2	104.3	161.9	231.2	199.0
Footwear and headgear	0.1		0.1	0.1		
Articles of stone, plaster, cement, and asbestos	0.2			1.7	0.1	0.4
Pearls, precious or semi-precious stones, and						24.0
Base metals and articles thereof	312.9	436.6	399.9	401.3	436.0	572.8
Machinery, mechanical appliances, and electrical	2.5	15.2	2.5	2.7	2.9	6.3
Transportation equipment	4.4	42.0	7.7	49.2	9.8	8.0
Instruments-measuring and musical	0.4	0.1		0.2	0.2	0.2
Arms and ammunition						
Miscellaneous manufactured articles	0.2	0.2	0.2		0.3	0.4
Works of art			0.1		0.1	0.1
Others	24.6	24.9	22.6	20.8	24.4	0.1
Total	688.7	784.3	651.5	736.9	797.2	914.9

タジキスタン Commodity composition of merchandise imports 1999-2004

	1999	2000	2001	2002	2003	2004
Animal and animal products	0.6	1.1	0.9	1.0	3.2	4.3
Vegetable products	48.2	46.9	40.0	38.9	36.9	55.6
Animal or vegetables fats	4.2	6.5	7.4	4.8	8.9	10.5
Prepared foodstuff(including alcohol and	16.3	14.9	10.6	21.1	32.1	44.4
Mineral products(including energy resources)	388.2	254.0	256.8	225.4	218.4	279.1
Plastics and rubber	5.5	5.6	9.6	9.6	14.6	20.2
Chemical products(including pharmaceutical	86.0	243.5	242.0	230.5	310.8	369.6
Hides and skins	3.3	3.0	9.2	19.2	33.4	192.8
Wood and wood products	7.8	6.9	9.7	7.7	12.3	13.3
Wood pulp products	2.7	2.2	2.8	2.8	4.7	4.7
Textile and textile articles	5.0	5.3	6.5	9.5	18.8	27.2
Footwear and headgear	17.4	10.3	12.7	12.9	25.5	14.6
Articles of stone, plaster, cement, and asbestos						55.2
Pearls, precious or semi-precious stones, and	44.8	39.3	37.0	43.5	82.1	132.1
Base metals and articles thereof	26.5	26.3	32.8	83.8	59.0	98.3
Machinery, mechanical appliances, and electrical	0.8	1.8	3.2	3.1	4.1	7.8
Transportation equipment						
Instruments-measuring and musical	4.3	4.9	4.7	6.3	12.9	43.9
Arms and ammunition	0.1		0.1		0.1	0.1
Miscellaneous manufactured articles	1.4	2.5	1.5	0.4	3.0	0.6
Works of art	0.1				0.1	0.5
Others	0.5			0.3		
Total	663.1	675.0	687.5	720.5	880.8	1,375.2

タジキスタン geographical distribution of merchandise exports 1999-2004

	1999	2000	2001	2002	2003	2004
total	688.7	784.3	651.5	736.9	797.2	914.9
CIS	316.0	373.8	211.4	188.3	138.5	159.2
CARs	189.5	106.6	92.8	80.6	76.1	73.9
Azerbaijan		0.4	0.5	0.5	0.7	0.1
Kazakhstan	3.6	5.7	3.1	3.5	4.6	3.5
Kyrgyz Republic	3.9	2.7	2.0	3.7	3.7	4.4
Uzbekistan	182.0	97.8	87.2	72.9	67.1	65.9
Rest of CIS	126.5	267.2	118.6	107.7	62.4	85.3
Russian Federation	115.1	258.8	104.7	87.5	52.2	60.5
Turkmenistan	1.3	4.7	0.7	10.0	2.2	7.5
Others	10.1	3.7	4.2	10.2	8.0	17.3
Non-CIS	327.7	410.5	440.1	548.6	658.7	755.7
EU-15	248.3	220.2	213.5	238.9	224.2	402.7
East Asia						
PRC	2.6	3.4	1.4	2.1	5.7	6.1
Japan					0.7	0.3
Korea, South	7.4	10.9	7.0	4.1	3.2	3.2
Mongolia						
South Asia						
Afghanistan	2.2	2.6	3.1	6.3	5.8	7.7
India						0.2
Pakistan	0.1	0.1	0.2		0.1	0.1
Other major trading partners						
Iran	13.5	12.5	29.9	28.4	51.4	29.6
Turkey	1.0	58.4	75.1	118.5	193.2	139.7
US	0.8	0.6	1.0	0.7	0.6	0.5
Switzerland	70.0	72.2	52.2	68.7	77.0	63.4
Slovak Republic	6.3	9.9	2.6	1.5	0.4	0.4
Rest of the world	20.5	19.7	54.1	79.4	96.4	101.8

タジキスタン geographical distribution of merchandise imports 1999-2004

	1,999.0	2,000.0	2,001.0	2,002.0	2,003.0	2,004.0
total	663.1	675.0	687.5	720.5	880.8	1,375.2
CIS	514.7	559.7	537.8	547.4	598.9	957.8
CARs	366.0	338.6	278.9	250.9	318.3	516.9
Azerbaijan	15.6	63.1	33.5	41.1	62.3	86.0
Kazakhstan	78.8	82.4	89.0	72.2	95.8	209.7
Kyrgyz Republic	7.2	7.5	5.7	5.2	27.5	52.6
Uzbekistan	264.4	185.6	150.7	132.4	132.7	168.6
Rest of CIS	148.7	221.1	258.8	296.5	286.0	440.9
Russian Federation	92.4	105.1	129.4	163.5	178.1	332.8
Turkmenistan	15.2	29.3	62.3	47.1	31.6	33.7
Others	41.1	86.7	67.1	85.9	76.3	74.4
Non-CIS	148.4	115.3	149.7	173.1	281.9	417.4
EU-15	83.0	29.1	41.4	57.4	51.8	62.0
East Asia						
PRC	2.5	11.9	6.0	7.6	26.7	57.0
Japan	0.7	0.3	1.2	0.8	0.6	1.1
Korea, South	1.6	2.1	4.2	3.3	2.6	4.1
Mongolia						
South Asia						
Afghanistan	0.1	0.1	0.1	0.3	1.6	3.9
India	1.0	0.1	34.4	31.5	3.2	3.3
Pakistan	0.2	1.0	0.1	0.1		0.3
Other major trading partners						
Iran	10.4	7.6	10.0	15.6	23.7	26.2
Turkey	1.4	4.0	9.3	10.5	29.5	37.9
US	1.7	1.3	2.8	6.1	5.3	79.2
Switzerland	24.9	0.6	2.1	1.0	2.9	2.7
UAE	4.0	2.8	4.9	6.9	13.8	16.2
Virgin Islands						0.1
Rest of the world	16.9	54.4	33.2	32.0	120.2	123.4

## ウズベキスタン commodity composition of merchandise exports 1999-2004 (in Million US\$)

	1999	2000	2001	2002	2003	2004
Animal and animal products						
Vegetable products						
Animal or vegetables fats						
Prepared foodstuff (including alcohol and	206.7	176.4	124.9	105.7	102.2	186.7
Mineral products (including energy resources)	371.5	335.2	322.9	243.1	364.3	601.6
Plastics and rubber	1.6	2.4	5.8	3.4	19.9	58.5
Chemical products (including pharmaceutical	100.2	90.9	80.5	85.4	95.0	171.4
Hides and skins	1.0	2.0	3.8	2.2	1.6	1.7
Wood and wood products	0.1	0.2	0.1	0.7	0.4	0.5
Wood pulp products	1.1	1.6	2.1	4.4	3.3	4.0
Textile and textile articles	1,066.0	1,134.7	1,018.2	862.1	985.0	1,124.0
Footwear and headgear						
Articles of stone, plaster, cement, and asbestos						
Pearls, precious or semi-precious stones, and	884.8	707.2	868.2	873.0	1,121.0	1,300.5
Base metals and articles thereof	9.3	19.0	20.5	26.8	46.4	108.5
Machinery, mechanical appliances, and electrical	50.6	40.3	34.2	42.3	44.3	40.1
Transportation equipment	52.6	71.5	88.2	74.2	174.0	317.4
Instruments-measuring and musical						
Arms and ammunition						
Miscellaneous manufactured articles						
Works of art						
Others	182.4	234.2	234.2	190.2	232.7	364.5
Total	2,927.9	2,815.6	2,803.6	2,513.5	3,190.1	4,279.4

## ウズベキスタン Commodity composition of merchandise impost 1999-2004(in Million US\$)

	1999	2000	2001	2002	2003	2004
Animal and animal products						
Vegetable products						
Animal or vegetables fats						
Prepared foodstuff(including alcohol and	408.1	361.1	337.6	339.3	293.5	260.9
nonalcoholic beverages, tobacco, and substitutes)						
Mineral products(including energy resources)	66.6	112.7	58.7	35.1	79.8	81.0
Plastics and rubber	120.2	175.6	153.1	131.0	133.6	177.1
Chemical products(including pharmaceutical	242.7	223.9	244.6	279.5	246.3	300.7
products, fertilizers, perfume, and detergent						
products)						
Hides and skins	12.6	12.2	12.4	8.7	8.4	2.3
Wood and wood products	48.3	45.6	33.3	32.8	56.4	109.8
Wood pulp products	69.0	68.1	65.4	57.8	65.0	53.4
Textile and textile articles	45.8	43.0	47.2	36.5	39.2	41.9
Footwear and headgear						
Articles of stone, plaster, cement, and asbestos						
Pearls, precious or semi-precious stones, and	22.9	21.6	43.4	22.5	28.6	30.2
metals						
Base metals and articles thereof	222.5	232.0	299.9	193.7	206.7	362.9
Machinery, mechanical appliances, and electrical	966.5	718.2	998.5	874.0	945.9	1,100.0
equipment						
Transportation equipment	426.9	325.8	294.5	248.9	369.1	653.3
Instruments-measuring and musical						
Arms and ammunition						
Miscellaneous manufactured articles						
Works of art						
Others	189.0	356.6	226.0	165.9	191.0	218.0
Total	2,841.1	2,696.4	2,814.6	2,425.7	2,663.5	3,391.5

## ウズベキスタン geographical distribution of merchandise exports 1999-2004(in Million US\$)

	1999	2000	2001	2002	2003	2004
total	2,927.8	2,815.6	2,803.5	2,513.5	3,190.1	4,279.4
CIS	879.9	974.5	933.0	581.9	717.9	1,245.7
CARs	282.8	233.1	257.2	200.5	210.9	452.3
Azerbaijan	1.3	2.0	1.9	3.3	3.5	142.7
Kyrgyz Republic	48.6	47.6	71.9	69.8	43.8	36.5
Tajikistan	113.6	93.7	78.3	65.2	83.5	113.5
Rest of CIS	597.1	741.4	675.8	381.4	507.0	793.4
Russian Federation	379.3	500.9	477.9	258.1	301.9	537.2
Turkmenistan	75.5	54.4	37.2	47.5	58.3	128.4
Others	142.3	186.1	160.7	75.8	146.8	127.9
Non-CIS	2,047.9	1,841.1	1,870.5	1,931.6	2,472.2	3,033.7
EU-15	668.3	583.6	495.9	520.6	544.8	673.4
East Asia						
PRC	16.9	19.2	9.8	9.0	44.5	87.8
Japan	5.4	11.2	6.6	5.6	6.5	7.8
Korea, South	93.2	67.4	96.4	43.9	33.0	43.3
Mongolia	0.1		0.1		0.1	
South Asia						
Afghanistan	5.0	10.8	10.9	54.9	78.4	119.3
India	0.5	2.0	11.5	16.4	79.9	113.4
Pakistan	1.6	3.1	1.6	1.7	3.4	1.8
Other major trading partners						
Iran	39.6	69.2	78.3	157.7	261.1	323.5
Turkey	62.7	94.2	75.3	95.8	120.9	207.2
US	34.8	36.9	74.0	58.1	78.8	112.7
Rest of the world	1,119.8	943.5	1,010.1	967.9	1,220.8	1,343.5

## ウズベキスタン geographical distribution of merchandise imports 1999-2004(in Million US\$)

	1999	2000	2001	2002	2003	2004
total	2,841.0	2,696.5	2,814.7	2,425.8	2,663.4	3,391.5
CIS	748.5	954.3	1,058.2	897.1	1,033.3	1,351.9
CARs	189.3	316.5	248.9	200.4	217.0	253.2
Azerbaijan	1.8	3.8	7.7	4.8	3.1	3.9
Kazakhstan	116.0	208.4	182.4	159.8	179.4	222.5
Kyrgyz Republic	43.9	90.4	44.7	27.0	18.2	19.2
Tajikistan	27.6	13.9	14.1	8.8	16.3	7.6
Rest of CIS	559.2	637.8	809.3	696.7	816.3	1,098.7
Russian Federation	393.5	423.2	549.5	542.7	632.9	860.7
Turkmenistan	9.6	14.9	8.3	7.6	9.3	10.1
Others	156.1	199.7	251.5	146.4	174.1	227.9
Non-CIS	2,092.5	1,742.2	1,756.5	1,528.7	1,630.1	2,039.6
EU-15	809.0	618.5	677.0	545.2	604.9	603.0
East Asia						
PRC	59.0	70.3	89.4	103.0	154.7	252.4
Japan	149.9	51.4	126.1	16.8	49.5	45.8
Korea, South	386.3	268.1	322.7	234.2	220.9	341.3
Mongolia					0.1	2.5
South Asia						
Afghanistan	0.1	0.3	0.3	0.2	0.6	2.7
India	22.7	10.7	11.0	10.1	12.4	21.4
Pakistan	5.7	3.7	1.8	3.8	5.5	6.2
Other major trading partners						
Iran	26.7	44.6	43.6	31.4	27.7	34.5
Turkey	109.4	91.9	101.8	83.0	138.3	161.0
US	218.1	234.9	185.1	308.4	186.4	312.3
Rest of the world	305.6	347.8	197.7	192.6	229.1	256.7

## 5. 主要マクロ経済指標 (CIS 統計委員会)

### Main Macroeconomic Indicators of Kazakhstan as % of the previous year

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Gross domestic product	91,8	100,5	101,7	98,1	102,7	109,8	113,5	109,8	109,3	109,6	109,7	110,6
Industrial production	92	100,3	104	98	103	116	114	110	109	110	105	107
Agricultural production	76	95	99,2	81	128	96	117	103	101	99,5	107	107
Capital investments	57	60	112	142	133	149	145	111	117	123	134	111
Freight carried	73	104	105	98	101	145	113	113	109	109	104	105
Retail trade turnover <sup>1)</sup>	103	133	129	119	102	107	116	108	110	118	114	114
Industrial producers price index	240	124	116	100,8	119	138	100,3	100,3	109	117	124	118
Consumer price indices	276	139	117	107	108	113	108	106	106	107	108	109
Export to CIS countries	154	110	94	71	72	155	113	83	136	137	99,3	137
Export to other countries	174	115	129	92	135	148	93	125	133	161	149	137
Import from CIS countries	122	111	79	88	78	170	121	92	129	156	133	136
Import from other countries	83	112	152	115	91	113	136	113	126	149	138	137

### Main Macroeconomic Indicators of Kyrgyz as % of the previous year

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Gross domestic product	94,6	107,1	109,9	102,1	103,7	105,4	105,3	100,0	107,0	107,0	99,8	102,7
Industrial production	75	104	140	105	96	106	105	89	117	105	88	90
Agricultural production	98	115	112	103	108	103	107	103	103	104	96	102
Capital investments	182	119	96	64	122	137	86	90	93	102	106	118
Freight carried	70	108	94	99	115	105	97	105	109	104	91	99,6
Retail trade turnover	94	102	109	111	100,8	107	106	109	111	117	114	116
Industrial producers price index	143	132	130	109	151	130	110	106	107	109	103	115
Consumer price indices	143	132	123	110	136	119	107	102	103 1)	104 1)	104 1)	106
Export to CIS countries	121	146	81	72	79	113	81	100,1	119	137	110	125
Export to other countries	119	80	254	99	96	110	104	103	120	117	83	113
Import from CIS countries	169	138	90	101	59	115	86	126	127	142	117	146
Import from other countries	157	208	78	147	85	75	82	126	116	117	117	172

<sup>1)</sup> According to classification on individual consumption by purpose (COICOP).

Main Macroeconomic Indicators of Tajikistan  
as % of the previous year

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Gross domestic product	87,6	83,3	101,7	105,3	103,7	108,3	109,6	110,8	111,0	110,3	106,7	107,0
Industrial production	86	76	98	108	106	110	115	108	110	115	110	105
Agricultural production	84	91	100,2	106	103	113	111	...	...	...	...	...
Capital investments	...	...	...	...	...	...	...	...	...	150	112	155
Freight carried	74	71	105	126	89	105	100,8	99,3	121	117	115	114
Retail trade turnover	77	94	109	109	104	79	102	118	125	123	110	112
Industrial producers price index	376	355	178	130	144	144	127	109	115	117	99,0	122
Consumer price indices	543	370	172	143	126	124	137	110	117	107	108	112
Export to CIS countries	272	132	82	74	155	119	57	89	74	115	112	105
Export to other countries	124	88	108	83	95	110	107	125	120	115	97	166
Import from CIS countries	205	80	126	93	115	109	96	102	109	129	112	127
Import from other countries	106	86	94	99	56	78	130	116	163	148	112	134

Main Macroeconomic Indicators of Uzbekistan  
as % of the previous year

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Gross domestic product	99,1	101,7	105,2	104,3	104,3	103,8	104,2	104,0	104,4	107,7	107,0	107,3
Industrial production	100,1	103	104	104	106	106	108	108	106	109	107	110 2)
Agricultural production	102	94	106	104	106	103	105	106	106	110	106	107 2)
Capital investments	104	107	117	115	102	101	104	104	105	105	107	110 2)
Freight carried	99	106	100,2	99,9	100,4	...	...	...	...	...	...	...
Retail trade turnover	96	122	113	114	110	108	110	102	105	105	108	112 2)
Industrial producers price index	934	233	154	141	138	170 1)	142	...	...	...	...	...
Consumer price indices	416 *	...	...	...	...	...	127 1)	122 1)	104 1)	104 1)	108 1)	...
Export to CIS countries	70	80	150	59	...	...	...	...	...	...	...	...
Export to other countries	177	194	81	90	...	...	..	...	...	...	...	...
Import from CIS countries	80	136	75	76	...	...	...	...	...	...	...	...
Import from other countries	136	196	95	74	...	...	...	...	...	...	...	...

<sup>1)</sup> December to December

<sup>2)</sup> January-September 2006 as % of January-September 2005.

\* estimate

... data are missing (not presented).

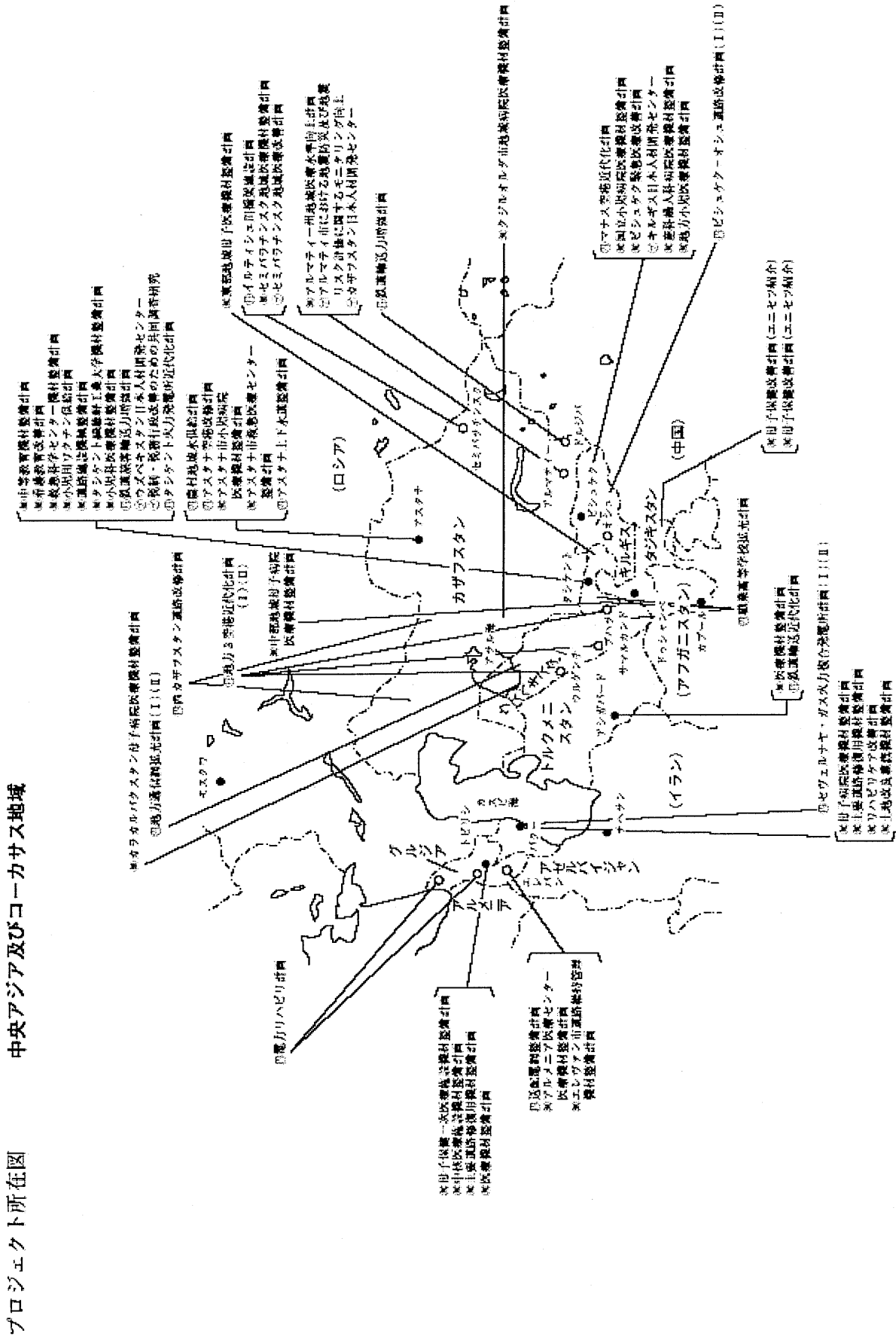


6. 各国の社会経済指標と開発指標 (外務省)

開発指標	カザフスタン		キルギス		タジキスタン		トルクメニスタン		ウズベキスタン	
	最新年	1990年	最新年	1990年	最新年	1990年	最新年	1990年	最新年	1990年
極度の貧困の削減と飢餓の撲滅	-	-	7.8	-	7.9	-	6.1	-	9.2	-
5歳未満児栄養失調割合 (%)	-	-	-	-	-	-	-	-	-	-
普遍的初等教育の達成	99.5 (2003年)	98.8	98.7 (2003年)	98.2 (2003年)	99.5 (2003年)	98.2 (2003年)	98.8 (2003年)	99.3 (2003年)	98.7 (1990年)	98.7 (1990年)
初等教育就学率 (net, %)	92 (2002/2003年)	88 (1990/1991年)	89 (2002/2003年)	92 (1990/1991年)	94 (2002/2003年)	77 (1990/1991年)	-	-	-	78 (1990年/1991年)
ジェンダーの平等の推進と女性の地位の向上	99 (2002/2003年)	-	96 (2002/2003年)	-	94 (2002/2003年)	-	-	-	-	-
女子生徒の男子生徒に対する比率 (初等教育) (%)	100 (2003年)	100 (2003年)	100 (2003年)	100 (2003年)	100 (2003年)	100 (2003年)	100 (2003年)	100 (2003年)	100 (2003年)	100 (2003年)
女性識字率の男性に対する比率 (15-24歳) (%)	63 (2003年)	-	59 (2003年)	-	92 (2003年)	-	79 (2003年)	-	57 (2003年)	-
乳児死亡率 (出生 1000 件あたり)	73 (2003年)	-	68 (2003年)	-	118 (2003年)	-	102 (2003年)	-	69 (2003年)	-
5歳未満児死亡率 (出生 1000 件あたり)	210 (2000年)	-	110 (2000年)	-	100 (2000年)	-	31 (2000年)	-	24 (2000年)	-
妊産婦の健康改善	0.2 [0.1-0.3] (2003年)	-	0.1 [<0.2] (2003年)	-	<0.1 [<0.2] (2003年)	-	<0.1 [<0.2] (2003年)	-	0.1 [0.0-0.2] (2003年)	-
HIV/エイズ、マラリア、その他の疾患の蔓延防止	152 (2003年)	-	140 (2003年)	-	267 (2003年)	-	83 (2003年)	-	156 (2003年)	-
結核患者数 (10 万人あたり)	-	-	-	-	303 (2000年)	-	1 (2000年)	-	1 (2000年)	-
マラリア患者数 (全年齢) (10 万人あたり)	86 (2002年)	86	76 (2003年)	86	58 (2002年)	71	71 (2002年)	89 (2002年)	89 (2002年)	89
改善された水源を継続して利用できる人口 (%)	72 (2002年)	72	60 (2002年)	72	53 (2002年)	62	62 (2002年)	57 (2002年)	57 (2002年)	58
改善された衛生設備を継続して利用できる人口 (%)	3 (2003年)	-	7.7 (2003年)	-	7.7 (2003年)	-	5.7 (2003年)	-	19.6 (2003年)	-
開発のためのグローバルパートナーシップの確保	0.761 (2003年)	0.767	0.702 (2003年)	0.767	0.652 (2003年)	0.738 (2003年)	0.694 (2003年)	0.694 (2003年)	0.694 (2003年)	0.694 (2003年)
人間開発指数 (HDI)	-	-	-	-	-	-	-	-	-	-

出所: 外務省

7. 日本政府プロジェクト所在地図—中央アジア及びコーカサス地域



8. ウズベキスタン税関における麻薬押収量

ウズベキスタン共和国における過去2年間の不正薬物(麻薬等)の押収量

麻薬の種類	2005 年		2006 年	
	件 数	押収量 (重量)	件 数	押収量 (重量)
ヘロイン	49	35kg90. 086グラム	44	82kg734. 35グラム
あへん	17	3kg470. 270グラム	8	24kg766. 29グラム
Kuknar(麻薬の1種)	4	302. 81グラム及び4bushes(個?)	6	13. 11グラム及び126bushes
ハッシシュ (大麻草の花穂や葉を樹脂で固めたいわゆる大麻樹脂)	4		3	86. 76 グラム
マリファナ、カンナビス (乾燥した大麻草を砕いたいわゆる乾燥大麻)	58	8kg612. 890グラム及び83bushes(個?)	65	26kg524. 410グラム及び44bushes
<b>総 量</b>	<b>132</b>	<b>47kg691. 410グラム及び87bushes(本・個)</b>	<b>126</b>	<b>134kg124. 92グラム及び170bushes</b>

注1: 過去2年間のデータの比較で、2006年の押収件数は2005年に比較して6件減少しているが、押収量(重量)は約86. 5kg増加している。

**OZBEKISTON RESPUBLIKASI  
DAVLAT BOJXONA  
QOMITASI**

700003, Toshkent shahri,  
Uzbekistan shoh ko'chasi 3,  
tel.: (998 71) 120-76-31  
faks : (998 71) 120-76-41



**STATE CUSTOMS COMMITTEE  
OF THE REPUBLIC  
OF UZBEKISTAN**

Uzbekistan Avenue 3,  
Tashkent 700003, Uzbekistan  
tel.: (998 71) 120-76-31  
fax: (998 71) 120-76-41

« \_\_\_\_\_ » \_\_\_\_\_ 2007 yil

№ \_\_\_\_\_

**Главе Представительства ЛСА  
в Республике Узбекистан  
г-ну Н. Нишимия**

**Уважаемый г-н Нориаки Нишимия,**

Государственный таможенный комитет Республики Узбекистан, исходя из устной договоренности между экспертной группой ЛСА и специалистами Центральной таможенной лаборатории ГТК во время встречи 7 марта с.г., направляет проспект деятельности ЦТЛ для ознакомления.

Просим рассмотреть возможность предоставления необходимого лабораторного оборудования и научно-публицистических изданий указанных в прилагаемом списке, для дальнейшего совершенствования деятельности Центральной таможенной лаборатории.

Приложение: на 26 л.

С уважением,

**Заместитель Председателя**

**Р. Мансуров**

TO: Mr.Nishimiya N., Representative, JICA in the Republic of Uzbekistan

Dear Mr.Noriaki Nishimiya,

Following the agreement between expert group of JICA and specialists of Central Customs Laboratory of the State Customs Committee reached during the meeting on March 7, 2007, the State Customs Committee of the Republic of Uzbekistan hereby sends you brochure on the Central Customs Laboratory activity for your information.

We request you to consider a possibility to provide necessary laboratory equipment and scientific and research materials, specified in the List attached for further improvement of the operation of Central Customs Laboratory.

Attachment: 26 pages

Sincerely,

Deputy Chairman,

R.Mansurov

**Technical assistance in supplying with necessary literature and laboratory facilities of Central Customs Laboratory of SCC of Uzbekistan**

**Information about Central Customs Laboratory**

**List of expected technical assistance**

1. Main apparatus and equipments
2. Glassware
3. List of Technical literature and reference books

**1. Summary of Customs laboratory**

Name of country	<b>UZBEKISTAN</b>
Name of Customs laboratory	Central Customs Laboratory of the Central Customs Administration
Address of Customs laboratory	Khalklar Dustligi Avenue, 35, Tashkent - 700185 Uzbekistan
Tel. No. Fax No.	(371) 120-76-70 (371) 120-76-29
Main functions of Customs laboratory	Analysis of traded goods sent to the Laboratory Analysis of samples in pre-entry classification inquiry. To provide classification opinions on traded goods
Main commodities analysed	fabrics, cereals and their products, precious metals, chemical products, animal and vegetable fats and oils and their products, foodstuff, cosmetics preparations.
Size of Customs laboratory	Analysis rooms: (1); Offices (1), library (1), sample or reagent storage room (1), classroom 1, Other rooms: 11
Main instruments/equipment	UV/VIS, GCMS, FT-IR; ICP; HPLC; potentiometers, microscopes, sterilizing and drying cabinets
Number Of staff (1 January 2007)	Analysts: Total staff 12; Technicians: Director General Mr. B. Abduganiev Clerical staff: Doctor of Science

## 1. Basic instruments and apparatus

Instruments	Main uses
Gas chromatograph	Organic chemicals, petroleum, food, perfumes
Air compressor	For GC
Vibrator for column packing	For GC
X-ray diffractometer	Inorganic chemicals, minerals
Secondary ion mass spectrometer (SIMS, enc.)	Organic chemicals, polymers, etc.
Accumulator	Quantitative analysis of metal, etc. (electrolytic method)
Hydrometer (1 set)	General purpose
Photometer	Quantitative analysis
Polarograph	Quantitative analysis of metal, etc.
Potentiometer	Quantitative analysis of metal, etc.
Tester	General purpose
Melting-point apparatus	Organic chemicals
Petroleum-oil distillator	Petroleum oil
Nitrogen analyser system	Foods
Refractometer	General purpose
Surface-tension balance	Surface-active agents
Automatic water distillation or 1 Water purify	Purifying water
Oil bath	General purpose
Stereo-microscope	Textiles, minerals
Centrifuge	Food, paint, other separation
Rotary evaporator	For concentration or evaporation of organic solvents
Mixer	General purpose
Resistance box	General purpose
Stopwatch	General purpose
Timer	General purpose
UV light	For TLC
Nuclear magnetic resonance spectrometer (NMR)	Organic chemicals, polymers, drugs, etc.
Heavy ion eliminator	Elimination of heavy metals from effluent
Capillary electrophoresis apparatus	Proteins, etc.

## 2. Glassware

<b>Glassware</b>	<b>Piece</b>	<b>Remarks</b>
<b>Beaker</b>	10 ml 20 ml 50 ml 100 ml 200 ml 300 ml 500 ml 1000 ml 2000 ml	<b>30</b> <b>30</b> <b>30</b> <b>30</b> <b>30</b> <b>30</b> <b>20</b> <b>10</b> <b>10</b>
<b>Conical beaker</b>	200 ml 300 ml 500 ml 1000 ml	<b>30</b> <b>30</b> <b>10</b> <b>5</b>
<b>Tall beaker</b>	100 ml 200 ml	<b>15</b> <b>15</b>
<b>Erlenmeyer flask</b>	10 ml 50 ml 100 ml 200 ml 300 ml 500 ml 1000 ml 2000 ml	<b>50</b> <b>50</b> <b>50</b> <b>50</b> <b>30</b> <b>20</b> <b>10</b> <b>10</b>
<b>Filtering flask</b>	100 ml	<b>30</b>
<b>Long-neck Kjeldahl flask</b>	200 ml	<b>30</b>
<b>Round-bottom flask</b>	50 ml 100 ml 200 ml 500 ml 1000 ml	<b>20</b> <b>20</b> <b>10</b> <b>10</b> <b>5</b>
<b>Short-neck Kjeldahl flask</b>	10 ml 25 ml 50 ml 100 ml 200 ml 500 ml 1000 ml	<b>20</b> <b>10</b> <b>10</b> <b>20</b> <b>10</b> <b>10</b> <b>5</b>
<b>Volumetric flask, clear</b>	10 ml 25 ml 50 ml 100 ml 200 ml 250 ml 500 ml 1000 ml	<b>30</b> <b>30</b> <b>30</b> <b>30</b> <b>15</b> <b>15</b> <b>30</b> <b>30</b>



<b>Volumetric flask, amber</b>	50 ml	<b>30</b>	
	100 ml	<b>30</b>	
	250 ml	<b>30</b>	
	500 ml	<b>20</b>	
<b>Culture dish</b>		<b>30</b>	
<b>Graduated cylinder</b>	10 ml	<b>15</b>	
	25 ml	<b>15</b>	
	50 ml	<b>15</b>	
	100 ml	<b>15</b>	
	250 ml	<b>10</b>	
	500 ml	<b>10</b>	
	1000 ml	<b>10</b>	
<b>Colour comparison</b>		<b>30</b>	
<b>Watch glass</b>	60 mm	<b>30</b>	
	120 mm	<b>30</b>	
<b>Centrifuge vessel</b>		<b>10</b>	
<b>Dropping bottle with bulb and pipette</b>		<b>15</b>	
<b>Drying tube, straight</b>		<b>10</b>	
	U bend	<b>10</b>	
<b>Reagent bottle, narrow mouth, amber</b>	60 ml	<b>30</b>	
	250 ml	<b>30</b>	
	500 ml	<b>30</b>	
<b>Reagent bottle, wide mouth, plain</b>	30 ml	<b>15</b>	
	120 ml	<b>15</b>	
	500 ml	<b>15</b>	
<b>Reagent bottle, narrow mouth, plain</b>	60 ml	<b>30</b>	
	250 ml	<b>30</b>	
	500 ml	<b>30</b>	
<b>Reagent bottle, wide mouth, amber</b>	30 ml	<b>15</b>	
	120 ml	<b>15</b>	
	500 ml	<b>30</b>	
<b>Specific gravity bottle</b>		<b>10</b>	
<b>Specimen bottle</b>		<b>100</b>	
<b>Test tube</b>	18 mm	<b>1500</b>	
	30 mm	<b>500</b>	
<b>Vial, with polyethylene stopper</b>		<b>300</b>	
<b>Weighing bottle</b>	30 x 30 mm	<b>30</b>	
	40 x 40 mm	<b>30</b>	
<b>Burette, plain</b>	10 ml	<b>30</b>	
	50 ml	<b>30</b>	
	10 ml	<b>30</b>	
	50 ml	<b>30</b>	

<b>Measuring pipette</b>	1 ml	<b>30</b>	
	2 ml	<b>30</b>	
	5 ml	<b>30</b>	
	10 ml	<b>30</b>	
<b>Volumetric pipette</b>	0.5 ml	<b>60</b>	
	1 ml	<b>60</b>	
	2 ml	<b>60</b>	
	3 ml	<b>60</b>	
	4 ml	<b>60</b>	
	5 ml	<b>60</b>	
	10 ml	<b>60</b>	
	15 ml	<b>60</b>	
	20 ml	<b>60</b>	
	25 ml	<b>60</b>	
	30 ml	<b>60</b>	
	50 ml	<b>60</b>	
	100 ml	<b>60</b>	
<b>Komagome pipette</b>	1 ml	<b>50</b>	
	2 ml	<b>50</b>	
	5 ml	<b>50</b>	
	10 ml	<b>50</b>	
<b>Desiccator, plain</b>	150 mm	<b>50</b>	
	plain 300 mm	<b>50</b>	
	amber 300 mm	<b>50</b>	
<b>Desiccator plate</b>	150 mm	<b>50</b>	
	300 mm	<b>50</b>	
<b>Developing vessel (large size)</b>		<b>30</b>	For TLC (thin-layer chromatography)
<b>Developing vessel (small size : sample bottle)</b>		<b>50</b>	For TLC
<b>Capillary, disposable</b>		<b>300</b>	For TLC
<b>Nebulizer, amber</b>		<b>30</b>	For TLC)
<b>Developing vessel</b>		<b>30</b>	For PC (paper chromatography)
<b>Filtering funnel, long stem</b>	45 mm	<b>30</b>	
	75 mm	<b>30</b>	
<b>Filtering funnel</b>	30 mm	<b>30</b>	
	75 mm	<b>30</b>	
	120 mm	<b>30</b>	
	180 mm	<b>30</b>	
<b>Glass funnel, cylindrical type, fused-in fritted glass disc (30 ml)</b>	G0	<b>60</b>	
	G1	<b>60</b>	
	G2	<b>100</b>	
	G3	<b>60</b>	
	G4	<b>60</b>	
	G5	<b>60</b>	

<b>Separating funnel</b>	50 ml	<b>50</b>	
	100 ml	<b>30</b>	
	300 ml	<b>50</b>	
	500 ml	<b>10</b>	
	1000 ml	<b>10</b>	
<b>Aspirator</b>		<b>10</b>	
<b>Condenser (Liebig)</b>		<b>10</b>	
<b>Glass tubing</b>	1.2 m	<b>60</b>	
<b>Glassware for soxhlet extraction</b>		<b>20</b>	
<b>Glassware for distillation</b>		<b>50</b>	
<b>Quartz cuvette (6 pairs)</b>		<b>20</b>	For UV-VIS (Ultraviolet and visible) spectrophotometer
<b>Vessel for quartz cuvette</b>		<b>20</b>	For UV-VIS spectrophotometer
<b>Chromatographic column with stopcock</b>		<b>20</b>	For column chromatography
<b>Glass wool</b>		<b>20</b>	For GC (gas chromatography)
<b>Glass insert</b>		<b>20</b>	For GC
<b>Glass column</b>	50 cm	<b>5</b>	For GC
	1 m	<b>10</b>	
	2 m	<b>10</b>	
	4 m	<b>10</b>	
<b>Glass syringe</b>	1 ml	<b>30</b>	
	2 ml	<b>30</b>	
	5 ml	<b>30</b>	
	10 ml	<b>30</b>	
<b>Stopcock</b>		<b>60</b>	
<b>Glass stirring rod</b>		<b>20</b>	
<b>Cover glass</b>		<b>300</b>	For microscopes
<b>Slide glass</b>		<b>150</b>	For microscopes
<b>Spherical ampoule</b>		<b>200</b>	

### 3. TECHNICAL LITERATURE AND REFERENCE BOOKS

#### CONTENTS

1. General technical references
2. Polymer references
3. Textile references
4. Paper references
5. Wood references
6. Food references
7. Pharmaceutical and cosmetic references
8. Mineral and metal references
9. Spectral references
10. Chromatography references
11. Other references

	Title	Author	Publisher
1	Analytical Chemistry, 4th edition	Gary D. Christian	John Wiley & Sons, Inc.
1	ASTM (American Society for Testing and Materials) standards		ASTM
1	BSI (British Standards Institute) standards		BSI:
1	Chemical and Process Technology Encyclopedia	D.M. Considine	McGraw-Hill
1	Colour Index		The Society of Dyes and Colour Chemists
1	Concise Etymological Dictionary of Chemistry	S.C. Bevan	Applied Science Publishers
1	Concise Encyclopedia of Biochemistry	T. Scott	de Gruyter
1	Dictionary of Scientific and Technical Terms	S.P. Parker	McGraw-Hill
1	Dictionary of Organic Compounds		Chapman and Halls
1	Encyclopedia of Industrial Chemical Analysis	F.D. Snell	Interscience
1	Encyclopedia of Chemical Technology	Kirk-Othmer	John Wiley & Sons, Inc.
1	Encyclopedia of Science and Technology		McGraw-Hill
1	General Chemistry in the Laboratory, 2nd edition	J.L. Roberts Jr., et al.	Freeman
1	Handbook of Chemistry	Adolph Lange	McGraw-Hill
1	Hawley's Condensed Chemical Dictionary	G.G. Hawley	Van Nostrand Reinhold Company
1	ISO (International Organization for Standardization) standards		ISO

1	IUPAC (International Union of ' Pure and Applied Chemistry) standards		Butterworths
1	IUPAC Nomenclature of Organic Chemistry		Butterworths
1	IUPAC Nomenclature of Inorganic Chemistry		Butterworths
1	Molecular Biology and Biotechnology 2nd Edition	J,M Walker & E.B- Gingold	Royal Society of Chemistry 1988
1	Official Method of Analysis, Association of Official Analytical Chemists (AOAC)		Association of Official Analytical Chemists, Inc.
1	Official Methods of Chemical Analysis		Association Of Official Analytical Chemists
1	Quality Assurance Principles for Analytical Laboratory	Frederick M. Garfield	AOAC
1	Standard Methods of Chemical Analysis	Frank J. Welcher	Robert E.; Kringer; Publishing Co.
1	The Merck Index, 11th edition		Merck & Co., Inc.
2	Encyclopedia of Polymer Science and Technology	H.F. Mark	John Wiley & Sons, Inc.
2	Encyclopedia of Polymer Science and Engineering, 2nd edition (1987)		John Wiley & Sons, Inc.
2	Handbook of Common Polymers		Rolf and Scott
2	Identification and Analysis of Plastics		Illife Books
2	Modern Plastics Encyclopedia		McGraw-Hill
2	Plastic Additives & Modifiers Handbook	Jesse Edenbaum	Van Nostrand Reinhold Company
2	Plastics Analysis Guide, Chemicals and Instrumental Methods	A. Krause, etc.	Hanser Publishers
3	Fairchild's Dictionary of Textiles, 6th edition	I.B. Wingate	Fairchild Publications
3	Guide to The Identification of Animal Fibres, 2nd edition, 1978	H.M. Appleyard	WIRA
3	Identification of Textile Materials, 9th edition		The Textile Institute
3	Identification of Vegetable Fibres, 1982	D. Catling & J. Grayson	Chapman and Hall
3	Introductory to Textile Science	Marjory L. Joseph	Holt, Rinehart and Winston
3	Textile Terms and Definitions, 1981		The Textile Institute
4	Analysis Of Paper, 2nd edition	B.L, Browning	Mercel Dekker, Inc.
4	Handbook of Pulp and Paper Technology, 2nd edition	Kenneth W. Britt	Van Nostrand Reinhold Company

4	The Dictionary of Paper, 4th edition, 1980		American Paper Institute
5	The Practical Identification of Wood Pulp Fibres	R.A. Parham, R.L. Gray	TAPPI Press
5	Wood Structure and Identification, 2nd edition, Syracuse Wood Science Series 6, 1979	H.A. Core, W.A. Cote, A.C. Day	Syracuse University Press
6	Bailey's Industrial Fat and Oil Products		John Wiley & Sons, Inc.
6	Chocolate, Cocoa and Confectionery Science & Technology 3rd Edition (1989)	Bernard.W Minifie	Van Nostrand Reinold
6	Encyclopedia of Food Science		Food Technology and Nutrition
6	Food Composition and Nutrition Tables (in three languages)		Wissenschaftliche Verlagsgesellschaft GmbH
7	Analysis of Drug Manual		Drug Enforcement Administration in USA
7	Basic Tests for Pharmaceutical Dosage Forms		WHO
7	Basic Tests for Pharmaceutical Substances		WHO
7	Clarke's Isolation and Identification of Drugs		The Pharmaceutical Press
7	Clandestine Manufacture of Substances under International Control		UNDCP
7	Cosmetic Bench Reference		Allured Publishing Corp.
7	CTFA International Cosmetic Ingredients Dictionary	Nikitakis, J.M.MC.Ewen, G.N. Eds	The Cosmetic Toiletry and Fragrance Association
7	Dictionary of Drugs		Chapman and Halls
7	European Pharmacopoeia		Maisonneuve S.A.
7	Flavor and Fragrance Materials		Allured Publishing Corp.
7	Flavor Science and Technology 1990	Y. Bessiere and J.P. Thomas	John Wiley & Sons, Inc.
7	Glossary of Terms for Quality Assurance and Good Laboratory Practices		UNDCP
7	Instrumental Data for Drug Analysis		Elsevier
7	Multilingual Dictionary of Narcotic Drugs and Psychotropic Substances under International Control		The United Nations
7	Perfume and Flavor Chemicals	S, Arctander	Allured Publishing
7	Perfume and Flavor materials of Natural Origin	S, Arctander	Allured Publishing

7	US Pharmacopoeia		United States Pharmaceutical Convention
7	USP Dictionary of USAN and International Drugs Names		United States Pharmaceutical Convention
7	Good laboratories practices in governmental drug control laboratories and Training programme in drug analysis		WHO
7	Validation of analytical procedures used in the examination of pharmaceutical materials		WHO
8	A Concise Introduction to Ceramics (1991)	George Phillips	Van Nostrand Reinhold 
8	Industrial Minerals and Rocks, 6th edition		Society of Mining, Metallurgy If and
8	Metals Handbook		American Society for Metals
9	An Infra-red Spectroscopy Atlas for the Coatings Industry, 2nd edition		Infra-red Spectroscopy Committee of the Chicago Society for
9	Atlas of Polymer and Plastic Analysis	Deiter Hummel	0. Hanser Publishers
9	Infra-red Spectra Handbook of Common Organic Solvents		Sadtler Research Laboratories
9	The Infra-red Spectra Atlas of Monomer and Polymer		Sadtler Research Laboratories
9	The Infra-red Spectra Atlas of Surface Active Agents		Sadtler Research Laboratories
9	The Infra-red Spectra Handbook of Mineral and clays		Sadtler Research Laboratories
9	The Infra-red Spectra Handbook of Inorganic Compounds		Sadtler Research Laboratories
9	UV and IR Spectra of Pharmaceutical Compounds		Association of Official Analytical Chemists
10	Chromatographic Science Series (Vol.II)	K.H. Altgelt and T.H. Gouw	Marcel Dekker, Inc.
10	Chromatography : Concept and Contrasts	James M. Miller	John Wiley & Sons
10	Handbook of Analytical Derivatization Reactions	Daniel R. Knapp	John Wiley & Sons, inc.
10	Handbook of Chromatography General Data and Principles	G. Zweig and J. Sherma	CRM Press
10	High Performance Liquid Chromatography	Csaba Horvath	Academic Press
10	Modern Practice of Gas Chromatography, 2nd edition	Robert L. Grob	John Wiley & Sons, Inc.
10	Practice of High-Performance Liquid Chromatography, 1986	H.Engelhardt	Springer-Verlag
10	Practice of Thin-Layer Chromatography	J.C. Touchstone	John Wiley & Sons, Inc. 

10	Quantitative Analysis Using Chromatographic Techniques, 1987	E. Katz	John Wiley & Sons, Inc.
10	The Analysis of Gases by Chromatography	C.J. Cowper and A.J. DeRoae	Pergamon Press
10	Thin-Layer Chromatography, 2nd edition	Bernard Fried and Joseph	Marcel Dekker, Inc.
11	Enzyme Handbook» Supplement I, 1974	T.E. Barman	Springer-Verlag
11	Handbook of Adhesives	Irving Shiest	Van Nostrand Reinhold Company
11	Handbook of Industrial Chemical Additives, 1991	Michael Ash	VCH Publishers
11	Industrial Chemical Thesaurus,, 1992	Michael Ash	VCH Publishers
11	NIC Cutcheon's Functional Materials, 1994	MC Cutcheon's Division	MC Publishing Co.
11	MC Cutcheon's Emulsifiers and Detergents, 1994	MC Cutcheon's Division	MC Publishing Co.
11	Paint Handbook	Guy E. Weismantel	McGraw-Hill
11	Refractory Materials Chemical Technology Review No. 76 (1976)	Rothenberg	Noyes Data Corporation
11	Rubber Worl Magazine's 1995 Blue book		Lippincot & Peto Inc.
11	The Pesticide Manual 9th Edition	CH R. Worthing	The British Crop Protection Council
11	Handbook of Laboratory Waste Disposal	Martin J. Pitt and Eva Pitt	Ellis Horwood Limited, England 1985
11	Hazards in the Chemical Laboratory 4th edition	L. Bretherick	The Royal Society of England, London, 1986
11	Managing Safety in the Chemical Laboratory	James P. Dux and Robert P. Stalzer	Van Nostrand Reinhold Co. New York 1988
11	Prudent Practices for Handling Hazardous Chemicals in Laboratories	National Research Council	National Academy Press, Washington, DC 1981
11	Prudent Practices for Disposal of chemicals from Laboratories	National Research Council	National Academy Press, Washington, DC 1983
11	CRC Handbook of Laboratory Safety, 3rd edition	A. Keith Furr	CRC (Chemical Rubber Company) Pree, Boston, MA
11	Dangerous Properties of Industrial Material 5th edition (This publication is also Available on CD ROM)	N, Irving Sax	Van Nostrand Reinhold, Co., New York 1979
11	Chemistry of Hazardous Materials	Eugene Meyer	Prentice-Hall, Inc, Englewood Cliffs, New Jersey, 1977



11	Rapid Guide to Hazardous Chemicals in the Workplace 2nd edition	Richard J. Lewis, Jr.	Van Nostrand Reinhold, 1990
11	Laboratory Spill Response	J.T. Baker Co.	Phillipsburg, N.J. 1995
11	Hazardous Chemical Safety	J.T. Baker CO.	Phillipsburg N. J. 1995

## ウズベキスタン国家関税中央委員会の関税中央分析所の必要な文献

### (図書)及び分析所の設備の提供支援

#### 関税中央分析所に関する情報

#### 期待する技術的支援

1. 主要な分析装置等
2. ガラス器具
3. 技術的な文献と関連図書類

#### 1. 税関分析所の概要

項 目	内 容
国	ウズベキスタン
税関分析所名	関税中央委員会の関税中央分析所
分析所の住所	Khalklar, Dustligi Avenue, 35, Tashkent-700185 Uzbekistan
Tel.No. Fax No	(371)120 -76-70, (371)120-76-29
税関分析所の主な役割	事前分類照会におけるサンプルの化学分析に送られてくる貿易品の分析、貿易商品の分類意見の提供
分析する主要商品	繊維類、穀類及びそれらの製品、貴金属、化学製品、動植物油脂及びそれらの製品、食料品類、化粧品
税関分析室の規模	分析室:1; 事務室(1)、図書室(1)、試料/試薬貯蔵庫(1)、Classroom(1), その他の部屋:11
主要分析機器/分析装置	紫外・可視分光器、ガスクロマトグラフ・質量分析装置、フェリー変換赤外分光光度計、高周波誘導結合プラズマ発光分析装置、高速液体クロマトグラフ、電位差滴定装置、顕微鏡、攪拌器、乾燥機
職員数(2007年1月1日)	分析担当者:12人、 技術官:所長 Mr. B. Abduganiev 事務職員: Doctor of Science

## 1. 分析機器と分析装置

詳細に記載されているが、ここで強調している分析装置は、同分析所に設置されていないか、あるいは設置されているが、台数の増加を含めて同所が我が国に提供支援を要求している分析装置と考えられ、次のものである。

(この資料は、訪問調査を終えた後に手渡されたものである。)

分析機器・装置名	コメント	備考(注)
ガスクロマトグラフ装置	比較的、設置が容易な安価な分析装置であるが、ヘリウム等のガスが必要である。	3百万円前後
二次イオン質量分析装置	主に、無機材料(セラミック)の元素の種類や分布、半導体材料、電子デバイス、有機材料の表面上の元素の種類や存在状態の確認に利用される。	かなり高価である。
X線回折分析装置	同所の無機化合物、陶磁器製品等の無機製品の分析に有用である。設置に安全の面での配慮が必要、放射線の知識が必要である。国により安全面での法令と使用者の限定などが異なる可能性がある(以前より、安全面に配慮されて設計・製造されている)。	2千万円前後(付属設備や情報の種類と質により異なる)
核磁気共鳴分析装置(NMR分析装置)	有機化合物、麻薬類、プラスチック類の分析に有用な装置であるが、厳密な温度制御が可能で、他の分析装置に支障を与えないような特別な部屋への設置が必要となる。運転費も必要である。	かなり高価(5~6千万円)な分析装置である。付帯施設の設置等を伴う
キャピラリー電気泳動装置	たんぱく質、アミノ酸やビタミン類の分析に有用である。	3百万円前後
蒸留水製造装置	化学分析の基本である蒸留水製造装置が設置されていない。(他のところから供給を受けているとのことである)。こちらは、優先的に設置する必要がある	2百万円前後

注：分析メーカーからの調査はしていないので、今後、価格、設置上の問題、利用性の面(対費用効果)などについて、更なる調査が必要である。

## 2. ガラス器具

分析実験用のガラス器具が一覧に示されている。種類と数が多いので、かなりの費用がかかる可能性がある。

## 3. 分析執務参考文献及び書籍類

分析執務参考と書類が要求されており、予算の面を考慮すると、同分析所の優先順位、価格(紀伊国屋、丸善などの販売店を通じての見積もり)などを更に調査する必要がある。