

CHAPTER 13

INFRASTRUCTURE DEVELOPMENT

13.1 Water Supply and Wastewater Treatment

Water supply and wastewater treatment are decisive factors for tourism and other industrial development, as well as for the livelihood of people in the Issyk-Kul zone. The current situation of the water supply and sewerage systems has been reviewed and some projects are proposed for improvement of the services.

(1) Current Situation and Issues to be Addressed

Seven urban centres in Issyk-Kul have treated water supply systems while rural water supply systems operate in small towns and villages. Most systems were installed during the Soviet era and have been maintained in an inefficient manner. Groundwater is the main water source, while surface water is considered where groundwater is insufficient. Simple purification by chlorination, filtering or sedimentation is utilized. Groundwater in wells is pumped from about 100 m depth, resulting in high consumption of electricity and associated costs and high service prices, particularly in Balykchy and Cholpon-Ata. In rural areas, the access rate to safe water has been decreasing due to lack of maintenance of infrastructure providing the services. The water supply systems in three major cities (Karakol, Cholpon-Ata and Balykchy) are summarized as follows.

Table 13.1 Water Supply and Sewerage Systems in Major Cities

City	Karakol	Cholpon-Ata	Balykchy
Water Supply			
Main Water Resources	Surface Water	Surface Water (Aral River) Groundwater	Groundwater (15 wells)
Facilities	Intake, Sedimentation Pond	Intake, Well (70 m-100 m depth)	Well (70 m-200 m Depth)
Total Length of Distribution Pipeline	176 km	84 km	165 km
Number of user	41,700 users	6,930 Households (77% of population)	13,971 (21 Entities)
Price (per m ³)	1.07 som (Personal) 10.4 som (Entities)	(Personal) 1.0-2.3 Som (Entities) 9.0-20.58 Som	3.88 Som
Daily Consumption	Maximum Capacity, 30,000 m ³ /day	5,000 m ³ /day (Off-peak)	15,000 - 20,000 m ³ /day
Number of staff	150	70	80

City	Karakol	Cholpon-Ata	Balykchy
Sewerage System			
Treatment Plant Type	Mechanical Biological	Mechanical Biological (not working)	Mechanical Biological (not working)
Capacity of Treatment Plant	22,000 m ³ /day	35,000 m ³ /day	36,000 m ³ /day
Discharge	River (Issyk-Kul Water shed)	Farm Garden (Issyk-Kul Water shed)	Farm Garden (Chui River Basin)
Length of Trunk Sewer	110 km	47 km	122 km
Record of Treatment	--	12,000 m ³ /day (Summer) 1,500 m ³ /day (Winter)	20,000 m ³ /day
No. of Clients	13,362	3,309	10,000
Tariff Rate (KGS/m ³)	1.07 (Domestic)	2.3 (Domestic) 19.12 (Entities)	2.61 (Domestic) 15.80 (Entities)

Source: JICA Study Team and Profile of Karakol City

Centralized wastewater treatment systems are operated in only three major cities, and septic tanks are common for households in rural areas. The centralized sewerage system consists of a sewerage and treatment plant located at a higher elevation than the service areas. Treated water is sprayed on farmlands or orchards for irrigation. Only filtered wastewater is permitted to be discharged into the Issyk-Kul Lake. The sewerage system design is uneconomic, with a high pumping head resulting in high electricity costs under the elevated power tariff. BOD levels of discharged water from the treatment plants are as high as 150 ppm, or five times larger than the design quality. The secondary treatment facilities are not serviceable in Cholpon-Ata and Balykchy.

The water supply and sewerage systems in each municipality and rayon are operated by Voda Canal, which is organized as a public corporation for respective service areas. Their operation, in general, is profitable for water supply and

Table 13.2 Financial Status of Voda Canal (2002)

		Som		
		Karakol	Cholpon-ata	Balykchy*
Water Supply	Income	7,436,299	2,105,696	4,238,531
	Expenditure	3,207,228	1,698,148	4,012,080
	Balance	4,229,071	407,548	226,451
Waste Water Treatment	Income	3,507,242	1,395,626	2,448,369
	Expenditure	7,717,232	2,352,316	2,674,720
	Balance	-4,209,990	-956,690	-226,451
Total	Income	10,943,541	3,501,322	6,686,800
	Expenditure	10,924,460	4,050,464	6,686,800
	Balance	19,081	-549,142	0

* Inclusive of subsidy

unprofitable for sewerage services, as tabulated in Table 13.2. Separate systems are applied for water supply and sewerage services, and coverage for sewerage services has decreased due mainly to the elevated service tariff.

Major constraints in the water supply and sewerage sector include the following:

- (i) Access rates to safe water are low, particularly in rural areas
- (ii) Dependence on groundwater in urban areas has resulted in supply shortages and high costs due mainly to the elevated power tariff, requiring alternative

- water resources to reduce water costs
- (iii) Sewerage treatment facilities have been damaged, particularly in Cholpon-Ata, requiring urgent renovation to protect the environment around the Lake
 - (iv) Collection of water and wastewater charges remains at low rates, resulting in inadequate maintenance and management capacity

To improve the water supply and sewerage systems in the Issyk-Kul zone, several projects have been and are currently under implementation with the support of international donors, as summarized in the following table:

Table 13.3 Water Supply and Sewerage Projects Supported by Donors

Donor	Project/ Program	Period	Target Area	Activity	Remarks
Swiss Development Cooperation	Karakol Water Supply Project	2005 -	Karakol Town	Rehabilitation of Water Supply Facilities and Capacity Building	10 mil. USD Grant
World Bank (ARIS)	Small Town Infrastructure Development Project	2005 -	Cholpon-Ata Town	Capacity Building for Town Hall, Improvement of Water Supply Facilities	25 thousand USD Loan, Cooperation with Urban Institute
World Bank	Rural Water Supply and Sanitation Project	2001-2008	Rural area of Naryn oblast, Talas oblast and Issyk-Kul oblast	Community-based Construction and Management of Small Scale Water Supply	15 mil. USD Loan
DFID	Rural Water Supply and Sanitation Project	2001-2008	Ditto	Ditto, Technical Assistance for Hygiene Education	Cooperation with WB Project
USAID (Urban Institute)	Efficient Water Supply Operations	2004-	Balykchy Town	Capacity Building for Voda Canal	-

(2) Development Plan for Water Supply and Sewerage

Demand for water supply and sewerage will increase with the increased number of tourists and improvement in livelihoods of the local people. It is estimated water consumption for residential use would increase from the current level of 65 liters/day to 120 liters/day in 2025 and from 250 liters/day to 300 liters/day for tourists. The future demand in major urban centres is projected as summarized below:

Table 13.4 Maximum Demand for Water and Sewerage in Major Urban Centres

	Water Supply			Sewerage		
	2003	2010	2025	2003	2010	2025
Karakol	15,000	23,000	37,000	7,500	13,800	25,900
Balykchy	4,000	7,000	12,000	3,600	6,300	10,800
Cholpon-Ata	12,000	16,000	33,000	11,000	14,000	30,000

Although development of surface water for municipal supply is being promoted in the Issyk-Kul zone with support from the World Bank and UNDP, further improvement is

required for water treatment facilities. More urgent is the rehabilitation of sewerage treatment facilities. Particularly in Cholpon Ata, treatment facilities have remained damaged causing a threat to the environment. Karakol sewerage treatment facilities also require improvement but this is less urgent provided the activated sludge treatment facilities remain serviceable. Balykchy sewerage treatment facilities should be rehabilitated, although treated water is discharged outside the Issyk-Kul Lake catchment area.

Management of water supply and sewerage services by Voda Canal should be improved to ensure their proper maintenance. Although the World Bank will assist in capacity building of Voda Canal for improvement of the water supply system, further improvement would be required for the wastewater treatment system.

The following projects are therefore recommended for implementation in the Issyk-Kul zone:

- (i) Surface water resource development for municipal water supply in Karakol, Cholpon-Ata and Balykchy, with the construction of water intake, purification plant and pipeline to the existing system
- (ii) Rehabilitation of Cholpon-Ata sewerage treatment plant together with pumping station and trunk sewer pipes
- (iii) Renovation of Voda Canal management in each municipality
- (iv) Sanitation improvement in rural areas through construction of small wastewater treatment facilities

An outline of the proposed projects is presented in the Attachment to this report. It is again emphasised that rehabilitation of Cholpon-Ata sewerage treatment facilities is urgently required to protect the environment of Issyk-Kul Lake.

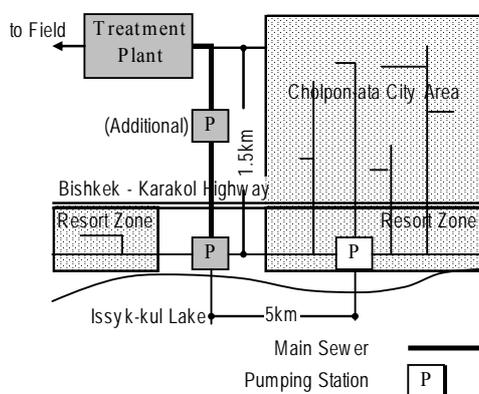


Figure 13.1 Diagram of Cholpon-Ata Sewerage System

Photo 13.1 Damaged Pumps for Sewerage Treatment in Cholpon-Ata

13.2 Solid Waste Management

Solid waste management is another issue to be addressed to ensure the health of the environment of the Issyk-Kul zone. The current situation and requirements for future improvements are assessed and proposed as follows.

(1) Current Situation and Issues to be Addressed

A public company, named Tazalyk, is in charge of solid waste collection, as well as collection of sludge from septic tanks. Facilities and equipment for solid waste disposal were found to be in poor condition for both domestic and industrial waste. Insufficient numbers of trucks and collecting boxes are available. Collected waste is disposed at dumping sites that are not maintained adequately. Separation by waste category has not been practised, and industrial and hazardous waste are dumped in the same dumping sites as household waste.

Public awareness of solid waste disposal requires substantial improvement, although students are mobilized for cleaning of road verges. Separate waste collection, which had been in practice during the Soviet era, should be revived to properly treat solid waste from inhabitants, hotels and other tourism facilities, industries and hospitals. Final disposal sites should be improved and managed effectively.

Management of Tazalyk, which is in charge of solid waste disposal, should also be improved despite the decreased budgeting, collection of charges and income generation. Capacity building for Tazalyk is required in order to meet the rising demand for solid waste disposal due to increasing numbers of tourists and visitors in the Issyk-Kul zone.



Photo 13.2 Solid Waste Collection Truck Station



Photo 13.3 Dumping Site in Karakol

(2) Development Plan for Solid Waste Disposal

Future demand for solid waste disposal in the Issyk-Kul zone is estimated on the basis of the current situation, as summarized in the following table:

Table 13.5 Estimated Generation and Collection Volume of Solid Waste (ton/year)

	Generation			Collection		
	2003	2010	2025	2003	2010	2025
Karakol	38,300	51,400	72,000	26,800	46,300	68,400
Balykchy	23,700	31,500	48,000	16,600	28,400	45,600
Cholpon-Ata	5,000	8,800	21,400	3,500	7,900	20,300
Others	173,400	227,000	283,200	121,400	204,300	269,000
Total	240,400	318,700	424,600	168,300	286,900	403,300

Source: JICA Study Team

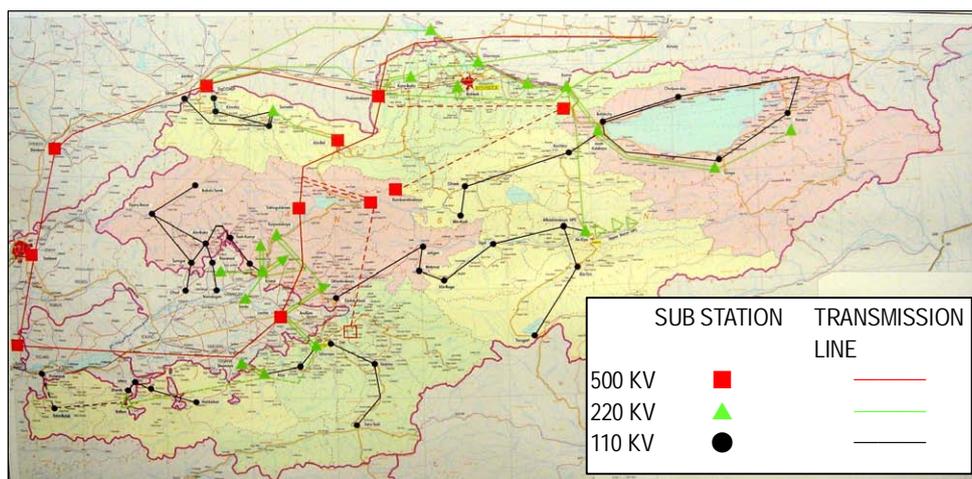
To cope with the increased volume of solid waste disposal, particularly due to the increased number of tourist arrivals and industrial development, the system for solid waste management should be improved in the Issyk-Kul zone. Basically, large establishments like hotels and industrial estates such as FEZs should install a solid waste disposal system in their complexes. Installation of small units for waste compost will be recommended for hotel complexes. Efforts should also be made to minimize the generation of solid waste for disposal by means of public campaigns and factory management.

From the viewpoint of protecting the health of the environment in the Issyk-Kul zone, it is recommended that the following projects be implemented:

- (i) Cleanup campaign of garbage in tourism centres, including the Lake shore, trunk roads by local communities, and so on
- (ii) Improvement of solid waste management by Tazalyk through proper budgeting, procurement of equipment, improvement of dumping sites and capacity building for management
- (iii) Promotion of development of solid waste disposal by means of compost at hotel complexes

13.3 Power Supply and Heating System

Electric power is used as sources for domestic and industrial energy as well as for heating in the Issyk-Kul zone, which is integrated into the national power supply grid. Electric power, mainly generated by a cascade of hydropower stations along the Naryn river (including the Toktogal power station with an installed capacity of 1,200 MW), is transmitted via Balykchy substation, which was reconstructed with adequate capacity in 1997.



Source: RITAB

Figure 13.2 Transmission Grid in the Kyrgyz Republic

(1) Electric Power Situation and Issues to be Addressed in Issyk-Kul

Electric power is distributed in the Issyk-Kul zone via 110 kV and 35 kV distribution networks (220/110/35 kV step-down at Balykchy sub-station). In 2002, household customers totalled 161,950 and enterprises 3,310. Power consumption in Issyk-Kul is shown in the following table, and is estimated to be increasing at a rate of 2 to 3% per annum.

Table 13.6 Electric Power Consumption (2001)

Category	Supply MWh
Agriculture	318,879.1
Private	269,580.4
Industry	234,123.5
Recreation house and health center	60,880.0
Others	44,635.0
Total	928,098.0

Source: RITAB

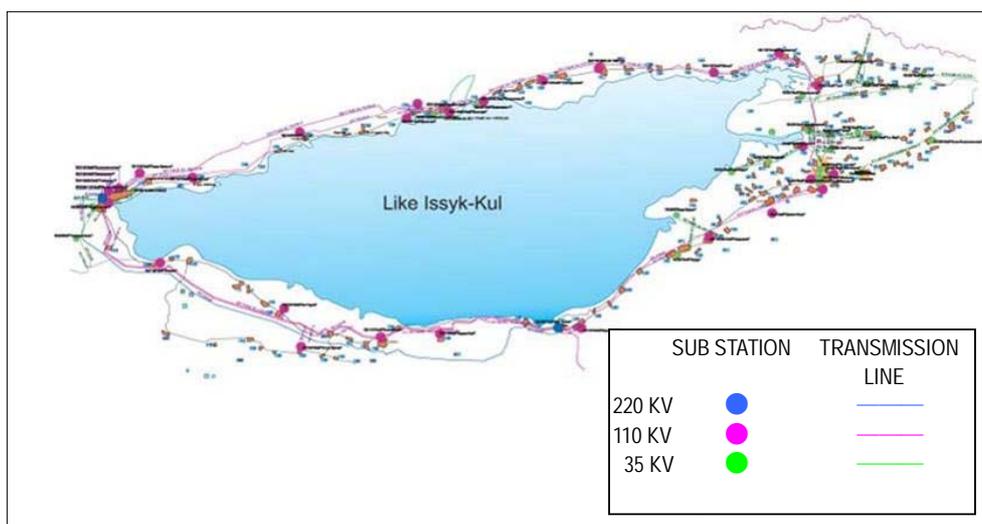


Figure 13.3 Distribution Network in Issyk-Kul Zone

The power tariff is structured as shown in the table. Serious difficulty surrounds the collection of tariffs from customers. According to the DfID study, payment is received for some 46.5% of the generated energy (remainder comprises 24.2% in transmission loss, 19.6% in distribution loss, 9.7% in unpaid bills). The World Bank, DfID and other international organizations are assisting in improving the tariff and collection systems.

Table 13.7 Current Tariff Structure

Households		
	Consumption KWh/month	Tiyin /kwh
Single Phase	0-149	43
	150	80
Industrial and Agricultural Consumer		
Power Rating	Som per kw	Tiyin per kWh
<150kW	0	80
>150kW	45	70
Other types of Consumer		
Category	Som per kw	Tiyin per kWh
Pumping Station		60
State and local		80
Restaurant and café		
<6kW	0	80
>=6 kW	45	80
Sauna etc	60	80

Source DFID Project Homepage and interview

For heating in the Issyk-Kul zone, more than 100 systems operate. The largest centralized system is a coal-fired 60 MW steam plant constructed in 1956, serving 51 residential buildings and 10 public organizations with a reduced supply capacity. The heating systems, however, are inefficient due to poor maintenance and there is a decreasing number of customers. Heating using electric power is increasing for both residential and office buildings. In the longer term, co-generation using fuel cells could be disseminated at a lower price.



Photo 13.4 Heating Plant in Karakol

The reduced quality of supply and elevated tariffs has resulted in financial difficulties for Vostokelectro, which is in charge of electricity supply in the Issyk-Kul zone. The operating structure has to be improved by rectifying the tariff collection systems with metering and renovation of the obsolete sub-station and distribution systems.

(2) Development Plan for Power Supply System

Demand for electric power supply, currently reaching 240 MW in winter and 50 MW in summer at Balykchy substation, will increase with the increasing demand for heating, tourism and other industrial use, as well as for

Table 13.8 Estimated Peak Power Demand
(Unit: MW)

	2003	2010	2025
Karakol	38.2	59.9	71.9
Balykchy	23.6	36.7	47.9
Cholpon-Ata	5.0	8.0	17.6
Others	173.2	264.4	282.8
Total	240.0	369.1	420.2

Source: JICA Study Team

residential use under the improved economic conditions. The peak power demand is estimated to reach 370 MW in 2010, rising to 420 MW in 2025 as shown in Table 13.8.

To cope with the increased power demand, further development is required for the electric power supply and heating systems. Development efforts should first be directed towards improvement of the financial position of Vostokelectro. This could be achieved through enhancement of the tariff collection systems and reduction of distribution losses. In addition, some development projects are required both for medium-term improvement and long-term development, including the following:

- (i) Rehabilitation of power distribution network under Vostokelectro, through rehabilitation of distribution lines and upgrading of sub-station facilities, as well as installation of electric meters
- (ii) Improvement of regional heating systems through rehabilitation of coal-fired thermal plant and small-scale boilers, as well as improvement in fee collection systems
- (iii) Accelerated development of alternative energy sources, including renewable energy (solar, wind and bio-gas) in the off-grid areas, as well as development of fuel cells in the longer term

Lessons will be learned from the experience of community-based bio-gas energy development in the rural villages under a UNDP-sponsored project.

13.4 Telecommunications System

Telecommunications services are a basic infrastructure for tourism and other industrial development as well as for improved livelihoods of people in the Issyk-Kul zone. The current situation and future development in the telecommunications sector are reviewed and discussed.

(1) Current Situation and Issues to be Addressed in Telecommunications

The privatized joint stock company, Kyrgyz Telecom, is in charge of telecommunications services for fixed telephones, telegraph, radio and TV broadcasting. Mobile phones and the Internet are served by subsidiaries of Kyrgyz Telecom, namely Kotel and Bitel. The service level in the Issyk-Kul Oblast is 17.8 connections per 100 persons in urban areas and 5.4 in rural areas. Cholpon-Ata, as a tourism center, has 39 connections per 100 persons.

Currently, a trunk line for telecommunications runs from Bishkek to Karakol via Cholpon-Ata and Kadji-sai through a microwave digital circuit. For the mobile phone services, 7 transceiver stations have been installed, while the Internet service is

available via telephone dial-up. The Kyrgyz Telecom has a plan to install a fiber optic cable with a capacity of STM-4 (622 Mbps) along the Bishkek-Kemin-Cholpon-Ata-Karakol route, as well as introducing a digital switching station and expanding the network to remote villages.

(2) Development Plan for Telecommunications System

Telecommunication demands in the Issyk-Kul zone are predicted to increase to nearly 140,000 fixed telephone lines in 2010 and 210,000 lines in 2025, as shown in the table. The installation ratio will be around 32 lines per 100 persons in 2010 and 40 lines in 2025.

Table 13.9 Demand for Fixed Telephone

Area	Current Capacity	2003	2010	2025
Karakol	15,620	13,380	22,500	36,000
Balykchy	7,100	8,280	13,800	24,000
Cholpon-Ata	3,432	1,740	3,000	8,800
Others	48,082	60,720	99,300	141,600
Total	74,234	84,120	138,600	210,400

Source: JICA Study Team

In view of the planned increase in tourism and industrial development with the development of two FEZs (inclusive of a plan for an IT park), telecommunications in the Issyk-Kul zone should be further improved. Furthermore, information centres for marketing and other business are to be developed in the region. Communities in rural areas should also be integrated into the IT-based society in the medium to longer terms. Consequently, the following improvements are proposed in the telecommunications sector:

- (i) Improvement of trunk line capacity by installing SDH cables around the Issyk-Kul Lake (600 km in length), forming a telecommunication ring; as well as an increased capacity between Bishkek and Cholpon-Ata.
- (ii) Upgrading of digital telephone exchange facilities at three major centres, Karakol, Cholpon-Ata and Balykchy

The proposed improvements will be implemented through private initiatives or by Kyrgyz Telecom. In the event that FEZs are developed in Balykchy and Tamchy, and if an IT park is planned in FEZs or any other location, the installation of optical fiber cable should be promoted earlier to ensure services for potential investors in IT software.

In connection with the improvement of telecommunications in Issyk-Kul, it is desirable that human resource development in ICT be promoted in an accelerated manner through the higher education system and vocational training. The ICT improvement would also contribute to integration of the rural area into the Issyk-Kul community, creating a harmonized region in Issyk-Kul.

13.5 Transportation Systems

There have been some imposing ideas about transport development in the Issyk-Kul zone; for example upgrading Cholpon-Ata – Almaty road crossing the Kungoy Ala-Too range, construction of Bedel Pass international motor road, construction of Sary Jaz international motor road, construction of a by-pass road (Issyk-Kul ring road) and extension of the railway from Balykchy up to Cholpon-Ata. These ideas appear to reflect an eagerness to improve international accessibility to this region.

However, most of these projects are not envisaged under the proposed transport development plan. Following discussions at the Working Group and Workshops with stakeholders, it has been concluded that the Issyk-Kul zone should be developed in a way that expansion of tourism and other industries does not result in a heavy burden on the ecosystem of Issyk-Kul Lake. The Issyk-Kul zone will be set aside for international arteries as discussed in Section 5.3.

(1) Current Situation of Transport Network

The road network of the Kyrgyz Republic extends for more than 34,000 km, of which 19,000 km are public roads. The basic road network includes several international roads as illustrated in the following figure.

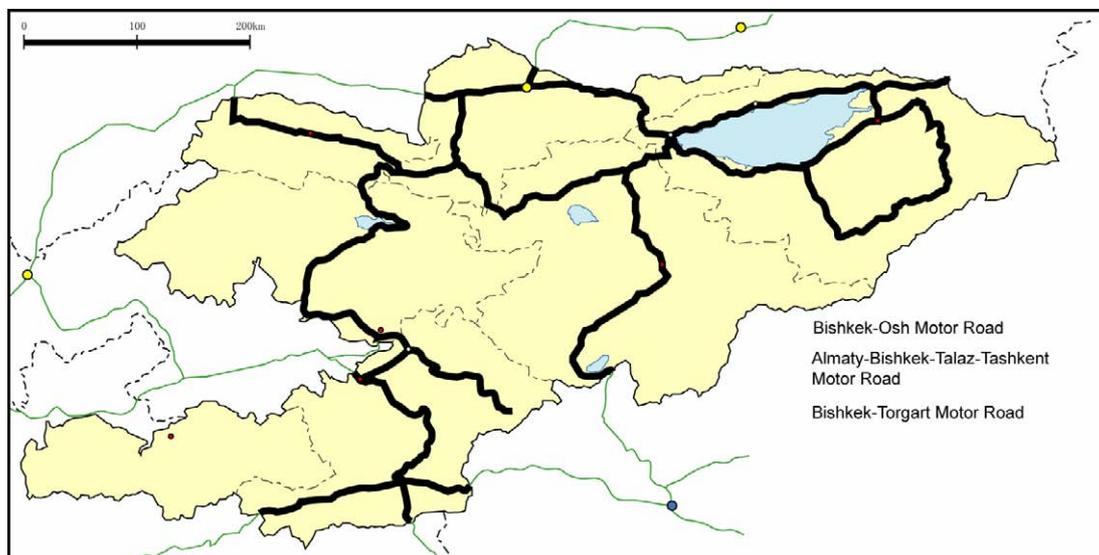


Figure 13.4 International Motor Road Network in the Republic

In the Issyk-Kul zone, three international motor roads form the basic structure for the transport network including:

- (i) Bishkek-Balykchy-Torugart motor road (539 km)
- (ii) Issyk-Kul ring road (438 km)

(iii) Tup-Kegen motor road (76 km)

The total length of motor roads in the Issyk-Kul Oblast is 3,022 km, comprising 1,037 km of international motor roads, 770 km of national motor roads, and 1,220 km of regional motor roads. Traffic volume in the Issyk-Kul zone is still relatively small, although accurate data are limited. The average annual daily traffic (AADT) of Issyk-Kul ring road is around 500-900 along the north shore and 400 along the south shore. AADT of the road along Boom Valley is about 2,800. There is a strong peak in the summer season. The JICA Study Team conducted a 16-hour traffic volume survey at several points in the Issyk-Kul zone as summarized in the following table.

Table 13.10 Results of Traffic Volume Survey

	Car	Minibus	Bus	Truck	Total
May 27, 2004 (Wednesday)					
Boom Valley	1,536	41	33	246	1,856
July 16, 2004 (Friday)					
Boom Valley	3,467	538	130	296	4,476
Balykchy – Cholpon-Ata	2,810	520	136	223	3,689
Kajy-Say – Tamga	214	57	19	50	340

Source: JICA Study Team

s discussed in Section 8.1, automobile emissions (e.g. carbon monoxide and hydrocarbons) to be generated by the increased traffic volume estimated under the “moderate growth case” will not cause damage to the ecosystem in the Issyk-Kul zone. It should, however, be noted that the estimate is based on an assumption that vehicles are regularly inspected, as there is no current legal or institutional framework to regulate vehicle emissions.

There are 63 public transport routes within the Issyk-Kul Oblast. From Karakol to Bishkek, it takes approximately 6 hours by minibus (about 300 soms) and 8 hours by bus (about 160 soms). Public transport regularly operates on schedule, and the frequency is relatively high given the low population density.

Rail Transport

Rail transport in the Kyrgyz Republic accounts for only 3% of all freight and 0.1% of passenger movement; however, it plays an important role in international transportation as part of the railway network in the CIS countries. Between Bishkek and Balykchy, trains with diesel traction operate on a single track (1,520 mm broad gauge). The railway is well maintained to meet the current transport demand although the system is relatively old. Oil products represent the main freight component from Bishkek, while coal and sand are the major freight items from Rybachie (Balykchy). A passenger train of 4 cars operates daily in the summer season. It takes 4 hours and 40 minutes between

Bishkek and Rybachie. The number of passengers along this route is around 2,000 per summer season.

Air Transport

Manas International Airport is located 30 km northwest of Bishkek. It has a 4,600 m long runway. The first phase of a modernization project was completed in 2000 with the assistance of a JBIC loan. Since then the number of passengers and freight has increased, reaching 380,500 (arrivals and departures) in 2003. Domestic passengers account for 30.1% of total passengers. International passengers from/to Russia account for 26.1%, followed by passengers from/to Turkey (11.8%) and Germany (6.7%). The annual volume of passengers between Bishkek and Tashkent is less than that between Bishkek and Urmuchi.

There are two airports in the Issyk-Kul zone, namely the Issyk-Kul International Airport (former Tamchy airport) and Karakol Airport. The Issyk-Kul airport, with a 2000 m x 45 m runway, is located 35 km to the west of Cholpon-Ata. The airport was reconstructed and commenced operations in August 2003. Manas International Airport bears the maintenance costs of Issyk-Kul and Karakol airports.

There are some concerns about the airspace surrounding both Issyk-Kul and Karakol airports and exceptional permission was required to allow their construction. The northern side of the horizontal surface of Issyk-Kul airport cuts into the adjacent mountain range.

Water Transport

A stock company, called Issyk-Kul Liner, provides freight transport services with two tug boats and seven barges having jurisdiction over Balykchy port, Karakol port and Kyrmenti wharf (closed during the winter season). Its facilities are now obsolete and all freight ships are past their serviceable life. At one time water transport on the Issyk-Kul Lake played a significant role in freight transport, however, demand has dropped rapidly in recent years. Coal is the major freight cargo from Balykchy to Karakol and Kyrmenti, while sand is transported on the return journey. No passenger liner operates on the Lake, although there are 15 passenger ships available for excursions.

(2) Transport Demand Analysis

With limited traffic data, traffic demand was estimated based on various assumptions related to development target, available traffic data, related reports, international experience, and observations of the Study Team. Flow diagram of the demand analysis is illustrated in the following figure.

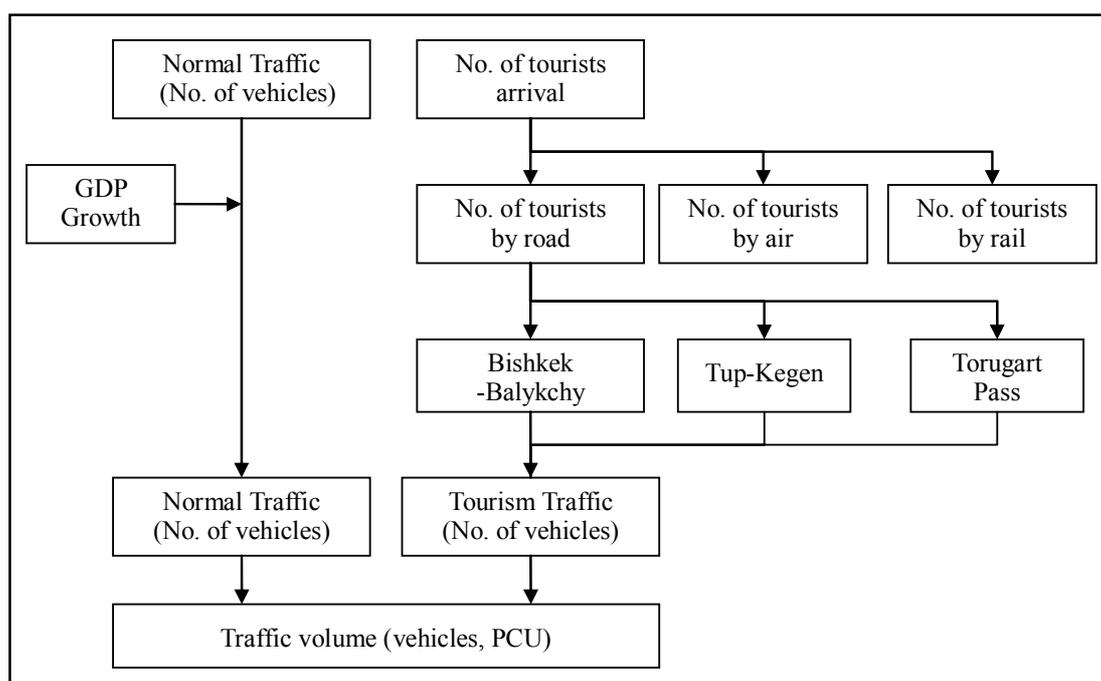


Figure 13.5 Flow of Transport Demand Analysis

Transport Demand “Without Project” Case

The annual average daily traffic along Boom Valley (Bishkek-Balykchy) will reach 4,500 and 9,700 PCU in 2010 and 2025, respectively. This means there is no need to upgrade the existing roads in view of SNiP requirements. However, hourly traffic volume in the peak month along Boom Valley and within Cholpon-Ata city will slightly exceed the road capacity by 2025.

Table 13.11 Average Daily Traffic in PCU “Without Project” Case

	Capacity PCU per hour	2010		2025	
		Annual PCU/day	Peak month PCU/day	Annual PCU/day	Peak month PCU/day
Bishkek – Balykchy	1600	4,500	7,700 (0.6) ^{*1}	9,700	15,000 (1.1)
Balykchy – Cholpon-Ata	2200	2,800	5,100 (0.3)	6,000	9,400 (0.5)
Cholpon-Ata – Karakol	2200	1,400	2,100 (0.1)	3,100	4,600 (0.3)
Within Cholpon-Ata ^{*2}	1500	4,800	8,400 (0.7)	10,300	16,000 (1.3)
Karakol – Balykchy (south)	1800	700	1,300 (0.1)	1,500	2,400 (0.2)

*1: Volume to Capacity Ratio of the peak hour of the peak month. Traffic volume in the peak hour is assumed to be 12% of the daily traffic volume.

*2: Inner transport is assumed to be 25% of passing traffic.

Source: JICA Study Team Estimation

Transport Demand “With Project” Case

With the increased volume of traffic, congestion along the Boom Valley on the Bishkek – Balykchy road would become critical. Traffic demand along this section is estimated assuming the following projects are implemented:

- Expansion of Issyk-Kul International Airport to accept long-distance flights

- Rehabilitation of Tup-Kegen Road as a diversion route from Almaty to Cholpon-Ata
- Rehabilitation of Bishkek – Balykchy railway to the extent that it would compete with motor roads
- Construction of a freight terminal at Balykchy to transfer containers from truck to rail

The four projects will reduce traffic volume along Boom Valley (Kemin - Balykchy) to such an extent that continuous traffic congestion will not be observed, although travel speed will be restrained during peak hours in the peak month in 2025.

Table 13.12 Average Daily Traffic in PCU “With Project” Case (1)

	2010		2025		
	Annual	Peak Month	Annual	Peak Month	VCR
Bishkek – Balykchy	4,300	7,100	9,300	13,200	1.0
Tup – Kegen	100	200	200	700	-

*JICA Study Team

Congestion in Cholpon-Ata

This case takes into account the following projects as alternatives:

- Route diversion of trucks from the northern part of Issyk-Kul ring road to the south
- Revival of water transport for freight transportation
- Construction of a bypass road
- Widening of road width (2-lane road to 4-lane road)

Table 13.13 Average Daily Traffic in PCU “With Project” Case (2)

	Capacity PCU per hour	2010		2025	
		Annual	Peak Month	Annual	Peak Month
Route diversion* ¹	1,500	4,600	8,000	9,800	15,300
Water transport* ²	1,500	4,600	8,000	9,800	15,300
Bypass road	1,500	3,200	6,000	6,600	10,600
4-lane road	4,100	4,800	8,400	10,300	16,000

*1: Transport between Balykchy-Karakol is assumed to be 75% of Cholpon-Ata - Karakol.

*2: Water transport carries 3,000 tons per direction. 1 truck carries 15 tons.

(3) Transport Network Concept and Strategy

Based on the current situation of the transportation systems and the transport demand analysis, a transport network concept for the target year 2025 has been formulated, as illustrated the following figure.

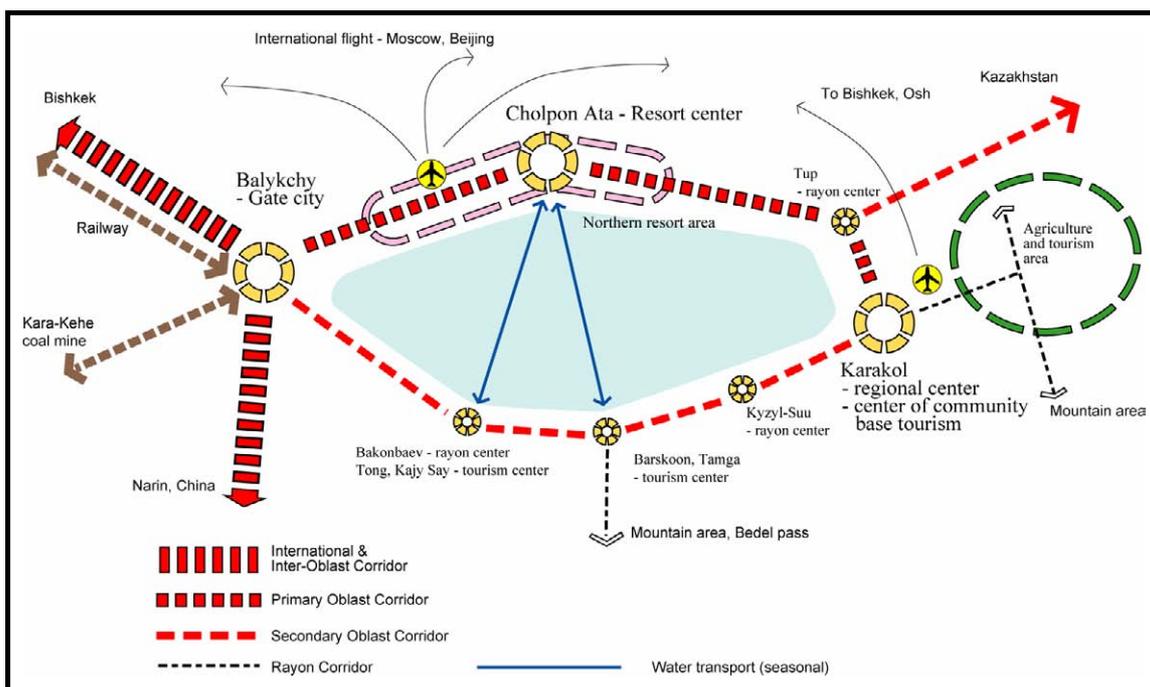


Figure 13.6 Transport Network Concept in Issyk-Kul Zone

Road Network

- (i) Bishkek – Balykchy – Torugart International motor road is the major access route connecting Issyk-Kul Zone to Bishkek, other Oblasts, and the outside world.
- (ii) Issyk-Kul ring road forms a basic network connecting important regional centres such as Karakol, Cholpon-Ata, Balykchy, Tup, Bakonbaeva and other resort areas. The ring road is not only an arterial road to support industry and people’s lives, but is also a connection road for various tourism zones in Issyk-Kul zone. The northern part of the ring road carries a higher traffic volume than the southern part.
- (iii) Tup - Kegen international motor road connects Issyk-Kul zone and Kazakhstan, and provides an important alternative route from Almaty for tourists and is an important route for the export of agricultural products.
- (iv) Local and rural roads connect local communities, integrate scattered points of tourism, and provide access routes for agricultural factories. Settlements in Aku-Su Rayon are linearly connected to Karakol by a section of the Karakol – Bakonbaeva – Englichek international motor road, and other national roads.

Airport

Manas International Airport will be an important hub airport accepting many international flights, which contributes to good accessibility to Issyk-Kul zone for tourists from outside the country. Issyk-Kul International Airport will directly accept international flights not only from Almaty and other cities in neighbouring countries, but also Moscow and other large important cities during the summer tourist period.

Railway

A railway connects Bishkek and Issyk-Kul Zone for tourists in the summer season, although the major role of the railway is freight transportation. The modal share of the rail is smaller than for road transportation, but it will play an important role in reducing future traffic volume along Boom Valley.

Water transport

Water transport will deal with passenger transport as a tourism attraction, although freight transport will also be revived in the future.

Based on the network concept, a development strategy in the transportation sector has been proposed as summarized in the following table. Basically, the existing transport system will be improved and maintained without expanding the new transport network.

Table 13.14 Development Strategy in the Transportation Sector

Period	Issue of Transport Sector	Remark
<u>Short-term</u> Initial preparation	To recover minimum service level	Due to the extremely poor condition of hotels and other accommodation, transport development itself can not contribute to increased tourist arrivals; instead, the road network should be improved to meet the minimum requirement of service levels when implementing the Master Plan.
<u>Mid-term</u> Launching and boost	To trigger tourism development To support industrial development To support community development	If the priority projects in the Master Plan successfully lead the initial tourism development and attract tourists as expected, the transport sector should be developed in a manner to induce further investment and tourism arrivals, enhancing further development. Efforts should be given to strengthen basic networks in local areas to support agricultural and community development.
<u>Long-term</u> Sustainable growth	To support various tourist activity	After the Master Plan brings about steady increases in tourist arrivals, the transport sector should contribute to sustainable growth by providing an attractive transport system. Transport capacity should be expanded by the stage tourist arrivals reach the maximum target.
<u>2025-</u> Control and management	To provide control over transport demand	Transport sector should turn its policy from development to one of control and management of transport demand, to maintain the ecosystem after the number of tourist arrivals reaches allowable capacity.

(4) Transport Projects

The following projects are proposed for development of the transportation sector in the Issyk-Kul zone. It is noted that routine and periodic maintenance works are important activities in the transport sector but are excluded from the project list.

Table 13.15 Proposed Projects in the Transportation Sector

Objective	Period	Projects
To provide various and good accessibility for international tourists to Issyk-Kul Zone	<i>Short-term:</i>	- Road Safety along Boom Valley - Rehabilitation of Tup – Kegen Road
	<i>Mid-term:</i>	- Runway Expansion of Issyk-Kul International Airport
To ensure high mobility	<i>Short-term:</i>	- Rehabilitation of Issyk-Kul Ring Road
	<i>Mid-term:</i>	
	<i>Long-term:</i>	- Construction of a bypass road
To reduce travel cost for economic activity of local communities	<i>Mid-term:</i>	- Rehabilitation of Tup – Kegen Road - Improvement of local roads
To offer attractive and pleasant transport system for tourists	<i>Mid-term:</i>	- Construction of “roadside stations” - Improvement of local roads (for tourism resources)
	<i>Long-term:</i>	- Redevelopment of Balykchy Port Area
To provide efficient transport system	<i>Long-term:</i>	- Bishkek – Balykchy railway rehabilitation - Construction of a freight terminal

The proposed projects are illustrated in the location map in the following figure.

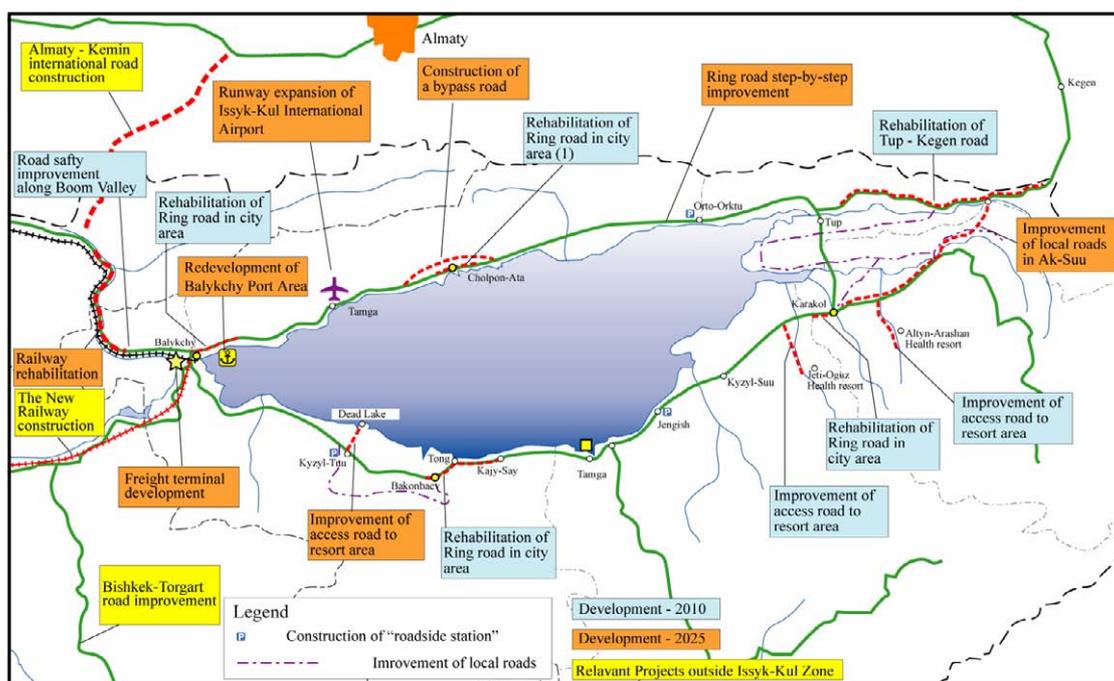


Figure 13.7 Project Location Map in Issyk-Kul Zone

13.6 Proposed Projects/Programs for Infrastructure Development

For the integrated development of the Issyk-Kul zone and in line with the social and economic development plans as previously discussed, it is proposed that the following short-, medium- and long-term infrastructure improvements be implemented in the areas of water supply and sewerage, solid waste management, power supply and heating, telecommunications and transport sectors.

Infrastructure Development				
1. Water Supply/Sewerage Treatment	1) Surface water resource development for water supply system	██████	▣	
	2) Rehabilitation of Cholpon Ata sewage treatment plant	██████		
	3) Renovation of Voda Canal management	██████		
	4) sanitation Improvement in Rural Area and Accommodation Facilities			
2. Solid waste	1) Clean campaign of garbage in tourism spot	██████	▣	
	2) Improvement of disposal management		▣	
3. Energy	1) Rehabilitation of power distribution network (Vostokelectro empowerment)		▣	
	2) Improvement of regional heating system		▣	
	3) Acceleration of energy substitution (incl. Hydro fuel cell)		▣	
4. Telecommunication	1) Improvement of capacity of trunk line (to Bishkek and the circuit of lakeshore)		▣	
	2) Upgrading of telephone exchange in three cities		▣	
5. Transportation	1. Development of Internal road	1) Improvement of ring road (incl. bridges)	██████	▣
		2) Development of local road		▣
		3) Construction of a freight terminal in Balykchy (FEZ)		▣
	2. Rehabilitation of regional transportation network	4) Development of road safety facility in Boom Valley		▣
		5) Rehabilitation of Tup-Kegen road		▣
		6) Rehabilitation of Almaty- Kemin- Balykchy- Naryn road		▣
		7) Rehabilitation of Bishkek-Balykchy railway		▣
	3. Airport	8) Expansion of Issyk-Kul international Airport (Tamchy)		▣
		9) Rehabilitation of Karakol airport		▣
	4. Port	10) Renewal of Balykchy port		▣
		11) Improvement of coal transportation system		▣

CHAPTER 14

INVESTMENT AND FINANCE

14.1 Public and Private Investment

The government of the Kyrgyz Republic prepared the Comprehensive Development Framework (CDF) towards 2010 in close collaboration with international donors. Under this framework, the National Poverty Reduction Strategy (NPRS) is aimed at 2003-05, as discussed in Section 2.3. The medium-term budget framework for gross investments is guided by the NPRS as tabulated below.

Table 14.1 Gross Investments under NPRS

	2003	2004	2005	2006	2007
	Actual	Expected	Forecasted		
Nominal GDP, bln. Soms	83.4	91.8	100.5	110.5	121.5
Real GDP growth rate, %	6.7	4.0	4.5	5.3	5.2
Gross investments (% of GDP)	18.0	18.1	19.8	20.3	20.6
Public investment	5.3	3.9	3.5	3.1	3.2
PIP (external funding)	4.4	3.5	3.2	2.9	2.8
Private investment	12.7	14.2	16.3	17.2	17.4
Consolidated state budget deficit, % of GDP	5.0	4.4	4.0	3.2	2.9

As seen in the above table, the government is to gradually decrease public investment from 5.3% of GDP in 2003 to 3.2% in 2007 in order to maintain a sound macroeconomic and financial position of the Republic. The external funding for public investment is to be limited to around 3% of GDP, or approximately US\$70 to 80 million per annum. With limited public investment, it is expected that private funding will fill the gap.

Such a macroeconomic framework is a limitation, particularly for improvement in public services and infrastructure. Although economic infrastructure in the Issyk-Kul zone is to be significantly improved, as discussed in the foregoing Chapter 13, it is fortunate that a minimum level of infrastructure was developed prior to independence during the Soviet administration. Nonetheless, the existing infrastructure has not been well maintained and requires substantial investment in rehabilitation and maintenance.

Given the low saving rate as a result of high unemployment and low purchasing power, as well as the limited capacity of domestic financial institutions, domestic investment

remains stagnant. Government spending has declined slightly and cannot increase without a higher tax collection. Consequently, in order to improve the income of the population, an increase in foreign direct investment (FDI) is essential for development of the Kyrgyz Republic, as well as for development of the Issyk-Kul zone.

14.2 FDI Inflow to the Republic

The total FDIs during 1995-2002 amounted to about US\$880 million, equivalent to a relatively steady inflow of approximately US\$100 million annually, as shown in table and figure.

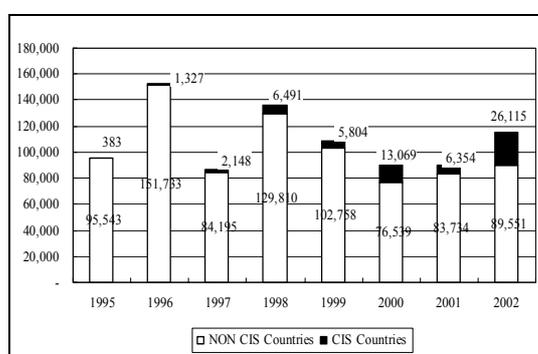


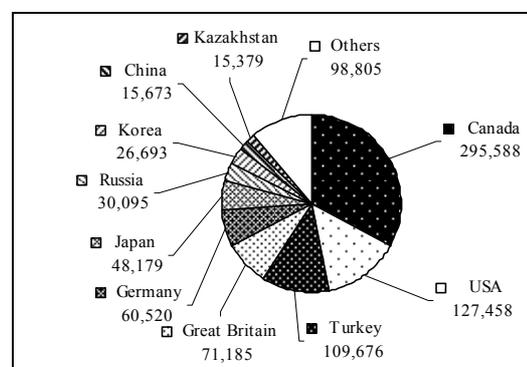
Figure 14.1 FDI in the Kyrgyz Republic

Of US\$520 million invested in the industrial sector, that related to Kumutor gold mine from Canada accounts for approximately 60%. Thus, Canada features significantly in the FDI statistics. The gradual economic recovery of Russia has also contributed to the recent increase in FDIs from CIS countries.

Table 14.2 Flow of FDIs by Sector (1995-2002)

(in thousand USD)

Sector	FDI	Share
Industry	518,168	59.2%
Commerce and public catering	115,244	13.2%
Procurement organizations	60,994	7.0%
Construction	46,186	5.3%
Geology, geodesy & hydrometeorology	32,050	3.7%
Public utilities	21,452	2.5%
Finance, credits, insurance & pension services	21,128	2.4%
IT services	13,735	1.6%
Communication	11,415	1.3%
Healthcare, physical training & social protection	10,145	1.2%
Others	25,039	2.9%
Total	875,555	100.0%



(Amount in 1,000 US\$)

Figure 14.2 Cumulative FDIs by Country

The Law on Foreign Investment, adopted in 1998 in accordance with the requirements of WTO, ensures national treatment of foreign investors and provides guarantees on the meeting of international standards, such as for the protection from expropriation and free use of investment incomes.

The increase in FDIs, however, has been less significant in recent years. In addition, 75% of foreign investors who responded to the recent UNIDO survey indicated that they have been experiencing performance levels below or well below their expectations. It also revealed that 90% of respondents considered that the regulatory factors were impeding investment performance, pointing out that there are too many regulations for

business, many of which do not provide sufficient clarity and consistency. The regulatory barriers, or inadequacy in the regulatory system, are issues faced not only by foreign investors but also by domestic investors.

Legal and regulatory constraints encountered by investors are numerous. Some important aspects include:

- (i) Registration: Enterprises are required to register with the Ministry of Justice, National Statistics Committee, State Tax Inspectorate, and Social Fund. For small businesses and individual entrepreneurs without connections or influence in these bodies, coupled with the limited number of officials in the rayon office and their unfriendly and unresponsive attitudes, often create difficulties.
- (ii) Permits and Licences: Different licences and permits are required. A new version of the Law on Licensing is currently under preparation.
- (iii) State Inspections: Enterprises are often subject to visits and inspections by various state bodies. While some are authorized, others are not. For instance, the World Bank-funded study revealed that the dairy processing industries are subject to six to seven inspections by different authorities, and they could reduce costs by 33% if the unjustified inspections and requirements were removed.
- (vi) Tax System: Under the current tax system, there are too many taxes and fee items resulting in a significant overall burden on business. These taxes and fees are collected monthly or quarterly and on different dates. A full schedule of taxes and fees is not readily available.

To overcome such difficulties, various measures have been and are being taken by the government. They include:

- (i) Rationalization of the tax system: Under the guidance of IMF- and USAID-supported fiscal reform projects, the government is currently in the process of reforming the tax system, which necessitates corresponding structural changes in government bodies.
- (ii) Investment Round Table (IRT): IRT, formerly called the FDI Secretariat, is staffed with international and national experts headed by the Vice-Prime Minister. It provides a unique mechanism of reviewing and developing policies for investment, including legal and regulatory measures.
- (iii) Investment Promotion Centre (IPC): IPC provides foreign investors with a package of basic information and legislative requirements by collating excerpts of relevant laws.

- (iv) Investment Promotion Agency (IPA): In order to improve the quality of services offered to investors, the government is currently studying the creation of an IPA.
- (v) Free Economic Zone (FEZ): FEZ is considered an important legal arrangement to attract foreign capital, technology and management in return for tax incentives. Karakol FEZ was the initial one created but was closed in 2004 and shifted to Balykchy and Tamchy under a law enacted by Parliament. Bishkek FEZ now operational.

These legal and institutional frameworks for FDI promotion are generally applicable to integrated development of the Issyk-Kul zone.

14.3 FDIs to Issyk-Kul Zone

The FDI inflow into the Issyk-Kul Oblast was US\$66.8 million (4.1% of total FDIs to the Republic) in 1999, US\$47.2 million (6.7%) in 2000 and US\$76.8 million (7.0%) in 2002. Of the total FDIs in the oblast in 2003 (US\$28.7 million), around 92% was for the Kumutor gold mine investment. Investment in other businesses is relatively small, despite the availability of tourism and other resources in the region.

For promotion of FDIs in Issyk-Kul, the Oblast Administration created the Center of Tourism, Investment and External Relations under the Decree of the Governor in April 2003. The Center collects information on FDIs and collates investment proposals for dissemination to potential investors. The Center wishes to engage actively in FDI promotion but has not been able to undertake major activities due to capacity and budget limitations. The Centre is essentially operated independently from the IPC and other central government organs. With the integration of IPC in MEDIT and with the possible establishment of IPA, it is

Table 14.3 FDIs in Issyk-Kul Oblast in 2003

(in thousand USD)

FDI by industry	
Total Direct Investments	28,667.57
Mining	3,294.94
Canada	3,294.94
Processing Industry	23,253.73
Kazakhstan	2.50
Great Britain	0.12
Canada	23,088.48
China	99.01
South Korea	50.00
Turkey	10.30
Switzerland	3.32
Food Products, including Drinks & Tabaco	
South Korea	50.00
Textiles	
Great Britain	0.12
Turkey	10.30
Textiles & Leather Based Products	
China	99.01
Paper & Publishing	
Switzerland	3.32
Rubber & Plastic Production	
Kazakhstan	2.50
Production & Distribution of Gas, Hot Water & Electricity	
Russian Federation	2.57
Hotels & Restaraunts	
Kazakhstan	0.93
Transportation & Communicati	288.04
Russian Federation	201.39
Great Britain	86.65
Real Estate Operations & Services	
Russian Federation	1,827.37

Source: Original sources is from NSC and compiled by JST

important to clarify roles and responsibilities of each level of government for FDI promotion.

As discussed in Chapter 11, the planned development of tourism in the Issyk-Kul zone should result in huge increases in tourist arrivals in Issyk-Kul (1.1 million tourist arrivals in 2010, increasing to 1.8 million in 2025). Investment initiatives should be taken by the private sector. Both domestic and foreign investments should be encouraged, particularly in this sector. Investments in industrial development in Balykchy and Tamchy FEZs should also be vigorously promoted. The agricultural development sector similarly offers opportunities for investment, particularly in processing of such local products as fruit, herbs, potatoes and other vegetables, etc.

In August 2004, a new law on “Sustainable Development of Ecological and Economic System Issyk-Kul” was adopted by Parliament. While most of the provisions are abstract and are based on general concepts of preserving the environmental and cultural heritage, there are new requirements that are contradictory to existing laws and the development strategies of both Issyk-Kul and the state. Provisions related to private investment and problems they may be created include:

- (i) Some 90% of employees must be Kyrgyz citizens if resort and recreation facilities are rented to foreign individuals (Article 17)
- (ii) Foreign persons are prohibited from owning recreational and tourism facilities but can rent for up to 49 years with the consent of Parliament (Article 20)
- (iii) Tourism infrastructure facilities are owned by the State and local self-governments and cannot be sold to private individuals, only rented for up to 50 years (Article 26)

While the intent of the law is understandable, Article 20 is not in line with the national principle embraced in the Law of Foreign Investment and will create a major deterrent to FDIs in tourism. Article 26 will also hinder private development and management of those facilities, as discussed in Chapter 11. It is expected that these and other issues regarding this law will be dealt with through the IRT mechanism and solved in the near future.

For the promotion of private investment in the Issyk-Kul zone, some measures are recommended. They include:

- (i) Rationalization of the government structures on FDI data and promotion:
The official FDI data are currently based on the survey conducted by NSC, which does not have a regular mechanism to share detailed information with other relevant government bodies. The MEDIT regional office in Issyk-Kul is

supposed to be a focal point for potential investors but has difficulty in accessing potential investors in the region. Likewise, FDI promotion and advisory activities are carried out by different government bodies and are not well coordinated. It is recommended that the existing structures and methods be reviewed and reformed by the authorities concerned.

(ii) Proper operation of FEZs:

Lessons from the failed Karakol FEZ, detailed operational modalities and procedures based on the Law on FEZ (including the latest amendments in 2003), need to be evaluated and implemented in order to ensure new FEZs at Balykchy and Tamchy will attract FDIs.

(iii) Barrier Free Zone:

A system of tax exemption is available for trade-oriented enterprises located in FEZs. The introduction of a similar system to encourage other types of investment, particularly tourism-related, is often discussed in policy circles. Such an arrangement may not be important in view of the demand forecast in the tourism sector. It is recommended that the Oblast administration mobilizes efforts to streamline regulatory mechanisms to the extent possible and ensures a regulatory environment that would promote investment.

(iv) Defining the roles of the government:

Looking at various plans prepared by the central and local governments, the role of the public and private sectors is often unclear. The roles of the government with regard to recreational facilities are to plan and guide appropriate land use, to induce private investment by providing an appropriate regulatory environment, and to ensure environmental protection.

14.4 Financial System

The financial system of the Kyrgyz Republic has been slowly but steadily developing since the introduction of laws in 1992 related to the National Bank of Kyrgyz Republic (NBKR) and commercial banks. However, the financial system only partially fulfils its functions, and the top priority is to augment the efficiency of financial intermediation through ongoing and continuous institutional, legal and regulatory reform, which will ultimately lead to improvements in savings mobilization and resource allocation based on quality competition. The financial system can be best described as an emerging bank-centred system. Other institutions include non-bank financial intermediaries that are mostly donor-funded to support micro and small enterprises, the Kyrgyz Stock Exchange, investment funds, leasing companies, and insurance and pension sectors that are not systemically significant.

Regarding the functioning of the capital market, the first securities exchange was opened in 1995 and the securities exchange commission was established in 1997. The number of listed companies is 18 and their total capitalization is 1.2 million soms, as at the end of 2003. Considering that matured capital markets exist only in a small number of countries in the world, it may be too early to expect the country to make major progress in this area. Rather, the focus should be on development of a sound and efficient banking system and sustainable microfinance operations.

The current situations of the banking system indicate options are narrow for both lenders and borrowers, the cost of intermediation is too high, and safe borrowers may be deterred because of high interest rates. The system is based on short-term structures and inefficient allocation of financial resources. In order to achieve efficient allocation of financial resources, the price structure should be reasonable, which in turn requires symmetric information in the market through proper disclosure and competition. The agenda for further development of the financial system, which has been defined by a number of development institutions and international donors, could be best summarized as follows:

- (i) Consolidation and rationalization of the banking sector with involvement of foreign banks.
- (ii) Compliance with capital requirements in the banking sector
- (iii) Improvement of risk management practices and introduction of Basel (risk-weighted capital) requirements.
- (iv) Strengthening of banking and securities regulations.
- (v) Introduction of International Accounting Standards in financial reporting.
- (vi) Legal framework for the relief of financially distressed companies (bankruptcy law, etc.).
- (vii) Choosing the most efficient form of financial intermediaries for foreign lending assistance.

The banking system in the Republic is composed of three groups, differing from each other in their legal form, ownership structure, and goals, but competing with each other in all sections of the financial market. The three groups are: i) commercial banks and branches of foreign banks, ii) state-owned banks, and iii) non-bank finance institutions and credit cooperatives.

The first group of commercial banks embraces the following types of financial institutions: 11 commercial banks with local shareholder background, six commercial banks with international shareholder background, and one branch of a foreign bank. It is important to note that two out of the six banks with international shareholder background have the participation of international financial and developmental institutions. Kyrgyz Investment and Credit Bank (KICB) were established jointly by

IFC, EBRD, Aga Khan Fund for Economic Development, the German Bank for Reconstruction (DEG), and the Kyrgyz government. Demir Kyrgyz International Bank (DKIB) is 70% owned by Turkish companies and 15% by IFC and EBRD, respectively.

The banks in the second group are Kairat Bank and Settlement & Savings Company (SSC), which together represent about 12% of total assets in the banking sector. They have limited banking licences with activities restricted to inter-bank lending, government securities transactions, deposit-taking, and payment services. Both banks are under public ownership and basically pursue public welfare goals. Current efforts include privatization of these banks.

On the funding side, the total capital of the two banking groups as of June 2004 is 2.0 billion soms, and many banks are undercapitalized. The largest banks in terms of capital are Kyrgyz Investment Credit Bank (KICB), Asia Universal Bank, JSCB “Kyrgyzstan”, JSC “Kyrgyzpromstroibank”, and SSC. The total deposits as of June 2004 are 8.6 billion soms. At about 10% of GDP, this level of deposits is still low compared with the level of broad money, which was 17% of GDP at the end of 2003. In addition, nearly 90% of deposits is in current accounts. This short-term structure on the funding side constrains capabilities on the lending side.

On the lending side, the total loan portfolio at the end of 2003 was 3.0 billion soms, or 3.6% of GDP, while the total assets reached 11.3 billion soms, or 13.5% of GDP. The loans at the end of June 2004 increased to 4.2 billion soms, but most loans remain short-term (from 6 to 12 months). In addition, the relatively weak corporate sector and a high proportion of foreign currency lending impose risks on the banks. Mobilization of local currency deposits is necessary to increase local currency lending, which in turn requires more trust in the local currency.

The cost of intermediation is high, as represented in big spreads between the interest on deposits and loans. Thus lending rates are high (around 18-20% for US dollar loans and 24-28% for domestic currency loans), which, given the inflation rates of 2-5%, clearly exceed the possible returns on real investments. This may cause undue distress on the part of borrowers. It is widely known that bank managers often require kick-backs on loans, making effective interest rates even higher than the officially reported figures. The high cost of intermediation also contributes to the low levels of savings and real investment in the economy.

The third group consists of non-banking financial institutions, which compete with banks on the lending side. To improve access to finance by small entrepreneurs, the non-banking sector has further developed since the late 1990s. The main players are Kyrgyz Agriculture Finance Corporation (KAFC) and Financial Company for Support and Development of Credit Unions (FCCU). There are 303 credit unions, which are

organized under the umbrella of FCCU and are allowed to accept deposits if certain conditions are met. These non-banking institutions are supervised by the Division of Supervision of Non-Banking Institutions of NBKR.

Reform of the banking sector must include improvement of the regulatory environment to achieve a safe, sound banking system with a level playing field. This task is challenging since the only constant will be change. The process of revising banking laws and regulations is on-going. NBKR supervision capacity shall be strengthened given that the scope of regulation is growing. As part of the agenda for the banking sector reform, NBKR has made financial statements based on International Accounting Standards compulsory for banks since 2003. However, it must be noted that none of the local banks have yet been audited based on international accounting standards or rated by rating agencies. Another important development is the consideration of a deposit insurance scheme. Although the authorities are keen for its introduction, IMF experts argue that the timing is premature and that preconditions include strong bank supervision, a healthy banking system, improved data reporting and adequate funding of such a scheme.

14.5 Micro and SME Financing

Growth of micro, small and medium enterprises is a key to poverty reduction and community development, as well as for agricultural development. At present four types of Micro and/or SME (Small Medium Enterprise) financing are identified in the Kyrgyz Republic: i) by KAFC; ii) through Savings and Credit Unions (SCUs) under the umbrella of FCCU; iii) by microfinance organizations (MFOs); and iv) by commercial banks supported by the EBRD-IFC Micro and Small Enterprise Finance Facility (MSFF).

KAFC and FCCU were established by special regulations of the government, are owned by the government and have received concessionary donor loans. KAFC is by far the largest operation in the country, having a 63% share of the Micro & SME financing market and 25% of the entire financial sector of the country in terms of outstanding loan portfolios. KAFC plans to obtain a banking licence in the near future so as to engage in deposit-taking and other financial services. KAFC is now finalizing a privatization plan. FCCU, on the other hand, has modest operations with a 13% share in the Micro & SME financing market. There are at the moment a total of 303 SCUs throughout the country operating under the FCCU umbrella, of which about one-third show strong performances.

MFOs are established and supervised in accordance with the Law on Microfinance Organization adopted in 2002. There are three categories of MFOs:

- Microfinance Company, which can engage in deposit taking and settlement;
- Microcredit Company, which can engage only in lending; and
- Microcredit Agency, which is a not-for-profit organization and can engage only in lending.

Currently there are 16 Microcredit Companies and 56 Microcredit Agencies. There is no Microfinance Company established at present. It may be pointed out that this category of MFOs overlaps with banks and when an organization is ready to become a Microfinance Company it should obtain a banking licence for the provision of a wider ranges of services and, more importantly, better supervision by NBKR. The largest MFOs are Foundation for International Communities Assistance (FINCA), supported by IFC, Mercy Corps International (MCI), a U.S. non-profit agency, and Bai Tushum Financial Foundation (BTEF), a non-profit agency established by Swiss CARITAS. These MFOs charge annualized interest rates ranging from 28% to 54%, with loan terms from 3 to 24 months depending on the loan size and use.

MSFF began operations in 2002 and offers an innovative approach to Micro & SME financing by working with commercial banks. The technical assistance recruits and trains loan officers, who will be taken over by participating banks during the initial period of 6 to 12 months. While interest rates range from 24% to 35%, higher speed in appraising, processing loans and meeting urgent needs of customers has lead to a rapid increase in disbursements, with the latest share in the Micro & SME financing market being 12%.

A comparison of these different types of organizations, in terms of the total loan outstanding and number of organizations (and branches) for both the entire nation and the Issyk-Kul region, is given in the following table.

Table 14.4 Overview of Micro & SME Financing

(as of January-February 2004)

(unit of the outstanding loans : 1,000 soms)

Institution	Nation-wide		Issyk-Kul	
	Total loan outstanding	No. of institutions	Total loan outstanding	No. of institutions
Savings and Credit Unions	288,840	303	55,101	47
KAFC	1,279,296	1 (42 offices)	218,192	1 branch in Karakol and 1 office in each rayon
Pawn shops	8,029	108	n.a.	n.a.
Microfinance organizations	434,124	72	49,376	15
Total non-banking sector	2,010,289		322,669 (excl. pawn shops)	
EBRD MSF (via commercial banks)	260,202	4 banks	4,422	2 bank branches in Karakol
Total Micro & SME financing	2,270,491		327,091 (excl. pawn shops)	
Total (Banks & Non-banks)	5,057,000			

Source: National Bank of Kyrgyz Republic, FCCU, KAFC and the MSFF project

Note: The total loans outstanding for SCUs and KAFC in Issyk-Kul are at April 2004 and June 2004, respectively.
The total loan outstanding for MFSS for the entire nation and Issyk-Kul is at June 2004.

14.6 Proposed Projects/Programs for Investment and Finance

Various donors have been and are extending technical assistance (TA) and loans in the financial sector. The donor-supported projects are:

<Strengthening of NBKR>

- ADB TA for NBKR in promoting financial sector reform (to be completed in October 2004)
- USAID support to NBKR's banking division on regulation of commercial banks

<Strengthening of Commercial Banks>

- ADB financial intermediation and resource mobilization (completed)
- ADB TA-loan for commercial bank audits (completed)
- Investment in KICB by IFC, EBRD, Aga Khan, etc.

<Agricultural Finance>

- World Bank's rural finance II
- IFAD's farm development fund (equity finance to KAFC)
- ADB loan to KAFC
- TACIS TA to KAFC

<Savings and Credit Unions>

- ADB's establishing and financing FCCU
- GTZ TA for FCCU on risk-rating system and capacity building

<Microfinance>

- USAID TA to write the microfinance law
- USAID/IFC support to FINCA Kyrgyzstan and Mercy Corps
- MSFF support by EBRD, IFC, Swiss, USAID and TACIS

<Leasing>

- IFC TA for development of a leasing law and related regulations
- IFC's Central Asian Leasing Facility

<Mortgage Finance>

- IFC TA for development of legal framework for mortgage finance

For integrated development of the Issyk-Kul zone and in view of the on-going and planned assistance by the donor community, it is proposed that the following programs be additionally executed.

Table 14.5 Proposed Projects for Investment and Finance

Sector/Subjects	Program/Project	2005	-2010	-2025
1. Acceleration of finance credit opportunity for the local	1) Support for Micro & SME Financing		XXXXXX	
	2) Strengthening Commercial Banking Sector		XXXXXX	
	3) Institutional Strengthening of the Savings and Credit Union System		XXXXXX	
2. FDI Promotion	4) Consolidation of Regional Institutions for FDI promotion	■■■■■		
	5) Regularly Reforms for Private Investment and Business Promotion in Issyk-Kul	■■■■■		

CHAPTER 15

INSTITUTIONAL ARRANGEMENT

15.1 Decentralization Pilot Scheme in Issyk-Kul Oblast

The institutional framework for state governance has been discussed in Section 2.4 as an issue to be addressed for the national development frameworks. Some additional issues are outlined in this Chapter on the promotion of local governance and the institutional arrangement for implementation of the integrated development plan in the Issyk-Kul zone.

In February 2004, a Presidential Decree was issued to undertake a pilot project in the Issyk-Kul Oblast to explore the decentralization of functions from the central government to the Oblast and from Oblast to the Rayons and local self-governments (LSGs). As a result of this Decree, the Governor is now authorized to appoint the heads of most state administration bodies in the Oblast with the consent of the respective ministries, committees, agencies and commissions, and to approve the structure and staffing of these bodies in consultation with the respective organs in Bishkek. The double accountability structure of the local state administration bodies (i.e. they are accountable to both their respective headquarter bodies in Bishkek and the Governor) still continues but the weight of accountability has now shifted more to the Governor. The Decree also provides that the functions in certain areas will be delegated to the Oblast and requests the Oblast administration to draft legal amendments based on their experience. As of September 2004, the major decisions and actions taken under this pilot scheme include:

- (i) Transferring the authorities for state registration of legal entities, including entities with foreign investment, to the Oblast administration (Decree of the Ministry of Justice, March and May, 2004)
- (ii) Transferring the authorities for issuing licences and permits for hunting and fowling, for setting limits of felling, and setting standards for fisheries to the Oblast administration (Decree of the State Forestry Service, May, 2004)
- (iii) Transferring the authorities for controlling the use of funds for environmental protection in Issyk-kul to the Oblast administration (Decree of the Ministry of Ecology and Emergency Situations, July, 2004)

- (iv) Transferring the authorities of control over allocating land parcels for ownership and use to the Oblast administration (Decree of the Ministry of Economic Development, Industry and Trade, April, 2004)
- (v) A proposal to reduce the number of state bodies in the Oblast from 76 to 60 and to decrease personnel by 15-20% has been prepared (the proposal will be finalized based on the results of the on-going Functional Review)

A more comprehensive report on the decisions taken and activities pursued under this pilot project is expected to be presented towards the end of 2004. The focus of the decentralization so far has been on: i) decentralizing authorities and functions from the central government to the Oblast and ii) restructuring Oblast and Rayon state administration structures. Decentralization of fiscal authorities is yet to take place, as it would require initially restructuring the revenue and expenditure systems in the central government. In the near future, the Oblast and Rayons are expected to delegate certain authorities and functions to LSGs, corresponding to the progress of their capacity development.

Under such circumstances, the implementation of the projects and programs proposed through this study should envisage more initiatives of the Issyk-Kul Oblast administration. For efficient execution of the proposed projects, however, the central government and agencies concerned should be involved in supporting the Oblast administration as it is yet unequipped with adequate human resources.

15.2 Strengthening of Local Self-Governance

The national strategy for development of LSG has been defined under the laws on “Local Self-Government and Local State Administration” (January 2002), “Communal Property Ownership” (March 2002), and “Economic and Financial Bases of Local Self-Government” (September 2003), providing the foundations for administrative and economic autonomy of LSGs, as introduced in Section 2.4.

The areas of LSG responsibility are described as “main affairs of local significance” in Article 15 of the Law on Local Self-Government and Local State Administration. These includes:

- (i) Organization of operation and development of the life support system and provision of social and cultural services
- (ii) Comprehensive social and economic development of local community territories
- (iii) Rational land use by local communities

- (iv) Housing and utilities, territory improvements
- (v) Communal transport and roads
- (vi) Creation of adequate conditions for the development of pre-schools, secondary schools and vocational education
- (vii) Creation of adequate conditions for the development of health care
- (viii) Maintenance and development of historical and cultural traditions of the local community

In addition, Article 16 of the same law lists state powers that can be delegated once the necessary procedures of the state support system are established in the spheres of social policies, agriculture and livestock, environmental protection, tax and duty collection, law and order, and consumer and retail services. In order to fulfil the functions in these areas, demarcation of responsibilities between LSG and the local state administration has to be clearly defined and LSG needs to ensure adequate financial resources, locally generated and transferred from the state. Also, institutional and managerial capacity of LSG has to be enhanced. Several donors, including UNDP and USAID, are providing support towards this end. Also, the World Bank will soon start providing support to conduct a detailed survey of the functions, both legally mandated and actually practised, of state administrations at Oblast and Rayon and those of LSG.

In light of the developments described above and discussions currently taking place within the policy circle, a local government structure that will emerge in the future may appear like the following:

Table 15.1 Possible Future Structure of Local Government

Level	Executive	Legislative	Head
New Local State Administration	State Administration (with more decentralized powers)	Council of LSG representatives in place of Kenesh?	Appointed by President/Cabinet or Elected
LSG			
City - Republican significance - (New structure)significance	City Administration	City Kenesh	Mayor (elected)
Aiyl	Aiyl Okmotu	Aiyl Kenesh	Head (elected)
Town	Town Administration	Town Kenesh	Head (elected)

In relation to local governance, communities in the Kyrgyz Republic have been playing increasingly important roles. Although communities are not part of the formal government structure, the 2002 law on “Local Self-Government and Local State Administration” recognizes its vital role by stating that “the system of local self-government includes local keneshes, their executive bodies, territorial civil self-government bodies and other bodies formed by the population, as well as meetings and gathering of residents” (Article 5, underlined by JICA Study Team). In addition, a

new law “on Community Based Organizations,” adopted in 2004, guarantees legal status of a Community Based Organization (CBO) once it is registered with LSG and provides basic goals and organizational structure of CBOs. The formulation of these legal frameworks and support measures for communities has been assisted by various donors, including UNDP and USAID.

Despite the increasing power and responsibility to be shifted to LSGs and the important roles that CBOs are to assume in social and economic development, the communities in the Issyk-Kul zone are not yet well organized at the village level, as discussed in Chapter 9. Therefore, it is strongly recommended that the programs proposed for community empowerment be implemented without delay and that the social capital be consolidated to attain a healthy and harmonized region of Issyk-Kul.

15.3 Issyk-Kul Development Forum

The policy measures and projects proposed in this study require involvement of different state bodies at the republican, Oblast and LSG levels. Institutional arrangement for implementation of the proposed projects has been discussed during the course of the study, mainly on three alternatives illustrated in the following..

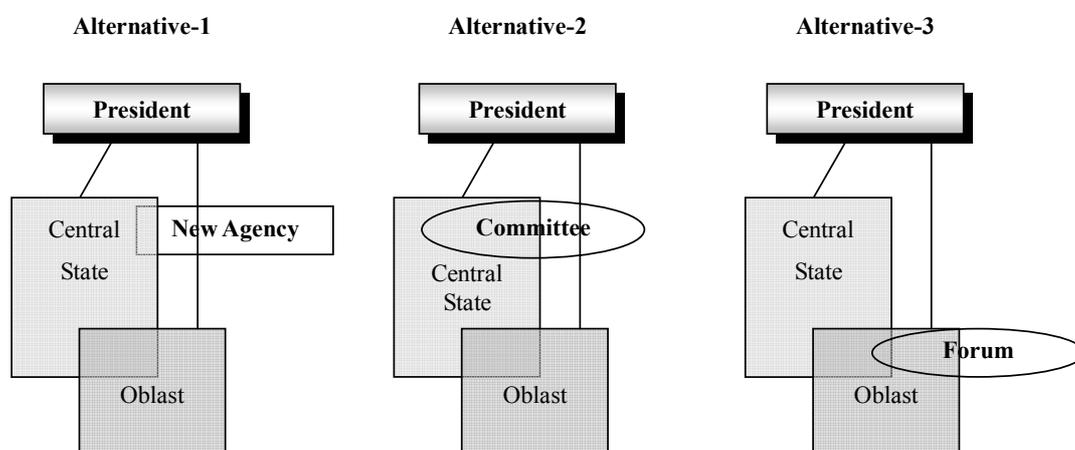


Figure 15.1 Alternative Institutional Arrangements for Implementation

The possibility of creating a new stage agency to follow through the implementation of the proposed projects was discussed with government officials. It was agreed that this would not be a viable option in light of the on-going efforts to streamline and rationalize government structures. It appears, at the initial stage of the study, that the Ministry of Regional Development and Local Self-Government is to be responsible for integrated regional development. It was later informed that the Ministry will be renamed as the Ministry of Local Self-Government and the mandate for regional development will be shifted to the Ministry of Economic Development, Industry and Trade (MEDIT).

Building on the momentum of decentralization, establishment of a “Forum” comprising various stakeholders in the Issyk-Kul Oblast has been proposed by the JICA Study Team and agreed by the Steering Committee and Oblast. The forum, which will be called “Issyk-Kul Development Forum”, will not be an implementing agency or a political decision-making body. Rather, it will be a body for consultation and coordination of key development directions of the Oblast, including those recommended in the integrated development plan of the Issyk-Kul zone.

A detailed set-up of the Issyk-Kul Development Forum (IDF) is under discussion. The key aspects of the set-up and requirements of IDF will be drafted in the form of a Regulation, which will be issued by the Oblast or the government. The basic setup of the arrangement is outlined in the following.

Table 15.2 Basic Set-up of the Issyk-Kul Development Forum

	Nature	Role	Objective	Ultimate Goal
1.	Consultative body to the Oblast government	To review and advise on important and relevant policies and activities of the Oblast	For reflecting local views and needs in key policy directions of the Oblast	Sustainable development of Issyk-kul, promoting private investment and business while taking into account the needs of communities and environmental protection
2.	Platform of public-private partnership	To provide a mechanism of consultation and cooperation between various public and private participants in the Oblast	For more effective and efficient use of resources (financial, human, etc.) available in the Oblast	

Members:

These will comprise approximately 20 members representing LSGs, Rayons, academia, communities (CBOs), NGOs, private enterprises, financial institutions, women’s associations and other relevant groups of stakeholders.

Secretariat

The IDF will be supported by a secretariat located in the Issyk-Kul Oblast administration.

Initial Areas of Focus

- (i) Local governance and community development
- (ii) Private investment and business promotion
- (iii) Environmental protection

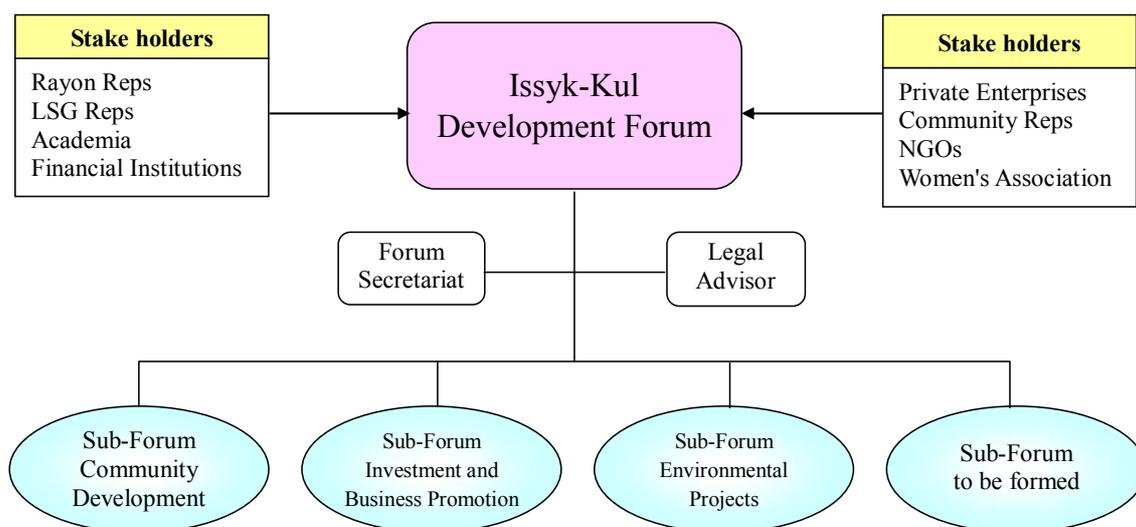


Figure 15.2 Proposed Structure of Issyk-Kul Development Forum

While preparing for the establishment of the Issyk-Kul Development Forum, the Issyk-Kul Oblast and JICA Study Team has discussed the EU-TACIS supported project on strengthening implementation of the CDF, which provides support to the Resource Center in the Issyk-Kul Oblast. The Resource Center, located in the Oblast administration building, will provide a range of information and data including various donor-supported projects, their best practices, marketing information for enterprises, information for visitors/tourists, government structures, laws and regulations. An appropriate partnership structure among the Oblast, Recourse Center and Issyk-Kul Development Forum will be agreed in due course.

15.4 Proposed Projects/Programs for Institutional Arrangement

To strengthen the local governance in the implementation of the integrated development plan of the Issyk-Kul zone, as well as to support decentralization in the Oblast, it is proposed that the program outlined in the table below be executed.

Table 15.3 Proposed Program for Institutional Arrangement

Sector/Subjects	Program/Project	Schedule		
		2005	-2010	-2025
1. Organizational Arrangement for regional development	1) Issyk-kul Good Governance and Regional Development Forum			

CHAPTER 16

PRIORITY PROJECTS/PROGRAMS FOR IMMEDIATE IMPLEMENTATION

16.1 Selection of Priority Projects/Programs

The sector-wise studies, as presented in Chapters 7 to 15, have formulated a total of 78 projects and programs for integrated development of the Issyk-Kul zone. These projects will support the formation of a regional cluster to attain the principal objective of creating a “healthy and harmonized region of Issyk-Kul” in the short, medium and longer terms.

The total costs to be incurred for the implementation of all proposed projects and programs will require a substantial amount of investment. The estimated total costs for the 78 projects will amount to around US\$380 million, with US\$330 million earmarked for infrastructure development, US\$30 million for industrial development (agriculture, tourism and manufacturing industries), and US\$20 million for social and community development. Implementation of these projects at one time is not viable under the national and regional frameworks.

Consequently, priority projects/programs have been selected for immediate implementation, irrespective of whether they are to be completed or at least initiated in the short term. The selection of the priority projects/programs has been made in the following manner:

- (i) Priority projects/programs have been selected from the list of projects formulated and proposed in each development sector. Projects/programs on the extended list have been discussed with stakeholders at the Workshops.
- (ii) Based on the possibility and ease of implementation, priority projects and programs have been selected.
- (iii) Final evaluation for selection of the priority projects/programs has been determined based on an evaluation of five factors, namely:
 - Sustainability
 - Efficiency
 - Impact on the social environment (with SEA in view)

- Effect on poverty reduction
- Relevancy

The evaluation for the 78 projects is summarized in the Annexed Table 16.1. As a result, a total of 49 projects/programs have been selected as priority projects, including 36 projects with a high possibility of implementation and 13 with high evaluation scores. They are summarized in the following table.

Table 16.1 Summarized Results for Selection of Priority Projects

Sector	Number of PPs		Number of Priority PPs				
	No.	(%)	High Possibility of Implementation	High Score of 5 Eval. Items	Total No.	(%)	Total No./ No. of PPs
Institution/organization	1	1%	1	0	1	2%	100%
Land use/Environmental preservation	9	12%	9	0	9	18%	100%
Social/Community Development	7	9%	5	0	5	10%	71%
Financial/Investment	5	6%	2	1	3	6%	60%
Industrial Development							
Agriculture	7	9%	4	0	4	8%	57%
Tourism	15	19%	7	2	9	18%	60%
Manufacturing	7	9%	2	3	5	10%	71%
Infrastructure Development	27	35%	6	7	13	27%	48%
Total	78	100%	36	13	49	100%	63%

The predicted disbursement of the estimated costs is summarized in the following table.

Table 16.2 Estimated Project Costs

Sector/Subjects	Projects/programs				Priority Projects/programs				Remarks
	Estimated cost (million US\$)				Estimated cost (million US\$)				
	2005	-2010	-2025	total	2005	-2010	-2025	total	
Institution/Organization	0	0	0	0	0	0	0	0	
A. Institutional Development	0	0	0	0	0	0	0	0	cost is included in E
Land Use Plan/Environment Control	0.50	0	0	0.50	0.50	0	0	0.50	
B. Land Use	0.00	0	0	0	0	0	0	0.00	cost is included in E
C. Environmental Preservation	0.50	0	0	0.50	0.50	0	0	0.50	cost is partially included in E
Social/Community Development	1.50	5.50	10.00	17.00	1.50	3.50	0	5.00	
D. Social Development	0	2.50	10.00	12.50	0	0.50	0	0.50	
E. Community Development	1.50	3.00	0	4.50	1.50	3.00	0	4.50	
Financial Development	0	0.52	0	0.52	0	0.20	0	0.20	
F. Finance	0	0.52	0	0.52	0	0.20	0	0.20	
Industrial Development	5.30	11.95	10.00	27.25	5.30	7.67	0	12.97	
G. Agriculture	4	3.02	0	6.81	4	0.00	0	3.79	
H. Tourism	1.51	4.13	0	5.64	1.51	2.87	0	4.38	
I. Manufacturing Industry	0	4.80	10.00	14.80	0	4.80	0	4.80	
Infrastructure Development	12.63	104.26	214.90	331.79	12.63	39.76	30.20	82.59	
J. Water Supply/Sewerage	11.00	3.00	0	14.00	11.00	2.00	0	13.00	
K. Solid waste	0.03	1.56	0	1.59	0.03	0.06	0	0.09	
L. Energy	0	11.00	1.00	12.00	0	10.00	0	10.00	
M. Telecommunication	0	8.70	0	8.70	0	8.70	0	8.70	
N. Transport	1.60	80.00	213.90	295.50	1.60	19.00	30.20	50.80	
Total	19.93	122.23	234.90	377.06	19.93	51.13	30.20	101.26	
projected annual expenditure(million \$/yr)		24.45	15.66	14.50		10.23	2.01	3.89	

Note:

GDP in 2000 (CDF)	\$1,220,000,000
State budget for Infrastructure dev.(3%of GDP)	\$36,600,000
GDP in 2010 (CDF)	\$1,807,000,000
State budget for Infrastructure dev.(3%of GDP)	\$54,200,000

The priority projects/programs based on development phase are categorized into:

- (i) Urgent projects for which actions are required around 2005
- (ii) Short-term projects for which actions are required within 5 years up to around 2010
- (iii) Medium and long-term projects for which some actions are to be taken at the earliest time.

The estimated costs of priority projects will amount to approximately US\$20 million by 2005, of which US\$10 million is earmarked for urgent rehabilitation of the sewerage treatment plant in Cholpon-Ata. The medium-term projects (2006-2010) will cost US\$51 million in five years, or an average of US\$10.2 million per annum.

As discussed in Chapter 14, CDF-NPRS has set a target for public investment of within 3% of GDP in or around 2010, equivalent to around US\$70-80 million. This will lead to an average annual disbursement for the priority projects (US\$10.2 million) being equivalent to about 13~15% of PIP for 2010, with the selected priority projects being within a reasonable investment range in the Issyk-Kul zone.

The estimated cost of the priority projects/programs would be allocated to the responsible executing agencies for implementation. Based on institutional responsibility, the project costs and their disbursement will be distributed as summarized in the following table.

Table 16.3 Priority Projects by Responsible Organization

Main Responsible Organization	Estimated cost (US\$ million)			
	2005	-2010	-2025	Total
Issyk-Kul Oblast Administration	5.32	4.56		9.88
SCAC+(Voda Canal)	11.00	2.00		13.00
State Commission of Tourism	0.50	1.80		2.30
Min. of Environment	0.50			0.50
Min. of Education		0.50		0.50
Min. of Transport	1.60	12.00	8.00	21.60
SSGC	0.01			0.01
Academia	1.00	1.00		2.00
Vostokelectryo		10.00		10.00
Kyrgyz Telecom	0.00	8.70		8.70
Financing Organization		0.20		0.20
Private		10.37	22.20	32.57
Total	19.93	51.13	30.20	101.26

Source: JICA Study Team

16.2 Outline of Priority Projects/Programs

The outline of the selected priority projects/programs is tabulated in Annexed Table 1.3. A project sheet of 49 priority projects, showing the outline of each project, is attached to this Report as **Appendix I**.

Table 16.4 Outline of Priority Projects/Programs

Projects/Programs	Outline	Implementing Schedule		
		2005	2010	2025
A. State Governance and Institutions				
1) Support to the Issyk-Kul Development Forum	Organize the regional forum as the implementing body of Issyk-Kul regional development with the participation of public and private donors and NGOs.	■		
B. Environmental Management				
1) Formulation and implementation of environmental management plan for sustainable conservation of ecosystem of Lake Issyk-Kul	The environmental management plan is to be formulated based on establishment of the “Law on Clean Lake Issyk-Kul”.	■		
2) Reinforcement of laws and institutional systems on the environment of Lake Issyk-Kul	Strict application of effluent quality standard to sanatoriums, hotels, factories, etc. located in Issyk-Kul Lake watershed.	■	▨	
3) Environment education/awareness building (water quality monitoring by secondary school students)	In order to give environmental education to the residents, on-site water quality checking by local people using simplified method is meaningful.	■		
4) Establishment of data management system for sustainability of water environment using GIS	Development of GIS data of lake water information such as water quality, water levels, etc. (improvement of monitoring system is inclusive).	■		
5) Restoration of water purification function in lake transition zone	Restoration of wet lane and meadows in the coastal area of Issyk-Kul Lake, which is sensitive to water quality contamination due to closed water body	■	▨	
6) Project for the management of water level change	Detailed study on countermeasures to change of water level of Issyk-Kul Lake. The enhancement of meteorological observatory network should be inclusive.	■	▨	
C. Land Use				
1) Introduction of incentives measures in land use management	The incentive measure for land use control should be introduced through the taxation system on farmland and lease pricing on pasture land.	■		
2) Restructuring of spatial planning system	A quick method of planning should be pursued by reducing the number and depth of pre-planning surveys to fit the current private land ownership system.	■		
3) Streamlining of permission procedure	A quick and effective permission procedure should be established by expanding the authority and enhancing the capacity of Oblast level administration.	■		
D. Social and Community Development				
1) Strengthening of vocational training	Capacity empowerment for vocational education is urgently needed. Empowerment in tourism faculty of existing universities and establishment of specialized vocational training schools.		▨	
4) Establishment of network for community empowerment	Network setup concerning community empowerment/development by donors and NGOs to avoid duplication and cooperation.	■	▨	

Projects/Programs	Outline	Implementing Schedule		
		2005	2010	2025
5) Development and marketing of community products/goods (Michi no Eki)	Income generation for community by the specialized local products and sale to tourists at the Michi no Eki	■	▨	
6) Community development fund	Development fund for community business, repair of common facility by the joint contribution with community member, Aiyl Okmuto, donors, etc.		▨	
7) Deregulation concerning CBO business/community development	Simplification of building permission, restaurant business permission for the easy startup of non-profitable business by CBO		▨	
E. Investment Promotion and Financial Sector				
2) Strengthening commercial banking sector	Commercial bank should be strengthened to promote finance for micro and small enterprises. Risk management, internal control and audit, loan appraisal, trade finance, etc. are necessary.		▨	
4) Consolidation of regional institutions for FDI promotion	Capacity building is necessary for institutions responsible for FDI promotion.	■		
5) Regulatory reforms for private investment and business promotion in Issyk-Kul	A mechanism to receive complaints and concrete cases concerning business barriers related to public interference from private enterprises will be established at the proposed Issyk-kul Development Forum.	■		
F. Agriculture				
1) Strengthening of the Farmers Association Program	Present farmers association should be converted to the entrepreneur association for farmers to yield profits for the community and members through agricultural business.	■	▨	
3) Village reforestation program	Regional and village reforestation should be promoted through village nursery projects.	■	▨	
4) Fruit and herb development program (incl. tourism farm)	Cultivation of fruits and herbs should be nourished in Issyk-Kul Zone to encourage processing industry, tourism-related sales, etc.	■	▨	
5) Beekeeping and natural medicines development program	Promotion of the production of honey and natural medicines made from the sub-products of beekeeping or herbs.	■	▨	
G. Tourism				
3) Production of tourist maps by GIS map	To produce trekking maps, etc. in the eastern mountainous area of Issyk-Kul using 1:100,000 digital maps, which have been produced by the JICA Study Team.	■		
4) Improvement of the tourist statistics technology	Preparation of WTO standard tourism statistics through joint work of 5 Central Asian countries	■	▨	
5) Tourism human resource development package	Capacity building of tourism human resources is urgent. Enhancement of tourism faculty of universities and OJT (on-the-job training) is necessary.	■	▨	
6) Cooperation of regional tourism promotion in Central Asia	Joint activity for tourism promotion by 5 Central Asian countries.	■	▨	
7) Promotion of ecological tourism in biosphere territory	Eco-tourism in Issyk-Kul biosphere territory will be promoted. Ecological centre in Cholpon Ata will be fully utilized for purpose.	■	▨	
8) Historical and archaeological museum	Development of archaeological and historical museum for exhibition of the silk road in Issyk-Kul zone.		▨	
12) Improvement of reservation system using IT system	Digitalization of hotel/sanatorium reservations by IT technology. Technical assistance for consensus-making among tourism agencies and accommodation		▨	

Projects/Programs	Outline	Implementing Schedule		
		2005	2010	2025
13) Supporting measures for development of FEZ and development promotion area	Support for the tourism resort development in Tamchy FEZ, the external infrastructure development, agreement of tourism free zone concept		▣	
14) Invitation of sports training camp (expansion of tourism season)	Intensive promotion of off-peak tourism such as sports training camp		▣	
15) Invitation of convention tourism to Issyk-Kul Zone	Intensive promotion of international conference on basis of accumulated international sanatorium/hotel		▣	
H. Industrial Development				
1) Promotion of Juice, jam, cider, honey liquor, medical materials, vegetable processing	Technical assistance, nourishment of processing, manufacturer of fruit, beekeeping, herb production, vegetables, etc.		▣	
3) Networking of manufacturers	Information exchange, linkage between industries and/or enterprises should be established. Network for machinery and materials procurement and products sale will be developed in the distribution centre, for instance.		▣	
4) Establishment of package material bank	Small lot trade of package materials is necessary for micro and small enterprises and community business. Balykchy is suitable to develop trading centre.		▣	
5) Cargo terminal/trading centre in Balykchy	Cargo distribution centre is conceivable at Balykchy, the transportation node connecting Naryn/Kashgar to Bishkek. Advantageous tax incentives for established enterprises should be discussed.		▣	
6) IT park in Tamchy FEZ	Air-based industry such as IT software industry, high value added manufacturer are conceivable adjacent to Tamchy Airport. Airport IT park, for instance, will be the infrastructure to invite those industries.		▣	
I. Infrastructure				
1) Surface water resource development for water supply system	In line with the development of surface water resources for the water supply in Issyk-Kul zone, purification facility should be installed. Technical and financial assistance are necessary.	■	▣	
2) Rehabilitation of Cholpon-Ata sewage treatment plant	Outdated sewage treatment plant in Cholpon-Ata is so dangerous as to give an adverse impact to the Issyk-Kul Lake water. Total improvement of facilities of the plant and empowerment of management/operation corporation, Voda Canal. are necessary.	■		
3) Renovation of Voda Canal management		■		
4) Clean campaign of garbage in tourism spot	Clean campaign for rubbish treatment is recommended to keep the reputation of beautiful Issyk-Kul by cleaning up of scattered rubbish.	■	▣	
5) Rehabilitation of power distribution network (Vostokelectryo empowerment)	Even in the urban area of Issyk-Kul zone, frequent black outs are seen to be due to the old-age distribution network. Modernization of distribution network as well as empowerment and sound management of Vostokelectryo are necessary.		▣	

Projects/Programs	Outline	Implementing Schedule		
		2005	2010	2025
6) Improvement of capacity of trunk line (to Bishkek and the circuit of lakeshore)	By high speed telecommunication OFC between Bishkek and Cholpon-Ata, digitalization of tourism industry and introduction of IT industry will be accelerated. Installation of OFC in Karakol and the southern coastal area will be required to enhance the infrastructure foundation to attract industry.		▣	
7) Digitization of telephone switchboards, increasing the telephone capacity	Digitization of telephone exchanges in Karakol, Balykchy, Cholpon-Ata will be necessary for the upgrade of telecommunication capacity.		▣	
8)-1 Improvement plan of ring road	Introduction of database system and inspection system of roads.		▣	
8)-2 Improvement of ring road in city area	Pavement improvement of road section in city areas.		▣	
8)-3 Emergency maintenance of ring road	Regular emergency maintenance work should be carried out in city roads in Issyk-Kul zone.			
8)-4 Reconstruction of bridge on ring road	There are some bridges to be repaired in the near future.		▣	
9) Development of a freight terminal in Balykchy (FEZ)	Development of cargo distribution centre is recommended in Balykchy, the transportation node on the route of Bishkek to Naryn, as explained in I 5.		▣	
10) Expansion of Issyk-Kul international Airport (Tamchy)	Improvement of Tamchy Airport will contribute to new tourism demand from remote areas.		▣	

16.3 Pre-feasibility Level Study on Selected Priority Projects

As defined in the Terms of Reference for this study, a pre-feasibility level study has been conducted for several selected priority projects, inclusive of the initial environmental examination (IEE) required for the Strategic Environmental Assessment (SEA). These projects are:

- (i) Community Empowerment Program
Includes establishment of a network for community empowerment, development and marketing of community products, community development funds, and deregulation for CBO community business incubation
- (ii) Agricultural Development Program
Includes strengthening of farmers' association, fruit and herb cultivation/processing and bee-culture and natural medicine development program
- (iii) Rehabilitation of Cholpon-Ata Sewage Treatment System
- (iv) Rehabilitation of Power Distribution Network
- (v) Balykchy Free Economic Zone

At the Steering Committee meeting, it was requested that the additional reviews of the following project at a pre-feasibility level study be conducted:

- (vi) Expansion of the Issyk-Kul International Airport at Tamchy

The results of studies are presented in **Appendix II** to this Report.

CHAPTER 17

CONCLUSIONS AND RECOMMENDATIONS

17.1 Conclusions

The following conclusions are derived from the study on integrated development of the Issyk-Kul zone:

- (1) In the event that the proposed projects and programs are implemented as scheduled, the targets of the integrated development plan of the Issyk-Kul zone set out in Section 5.2 will be attained. The gross outputs in agriculture, tourism and industry sectors would grow as targeted under the moderate growth scenario. However, challenges are required in all sectors through the combined efforts of the public, private and academic circles, as well as through collaborative efforts of the people and communities in the region.
- (2) Although tourism development is a driving force for integrated development of the Issyk-Kul zone, agricultural development combined with community empowerment should be accelerated in the region. As individual farmers and villagers have limited powers for accelerated development, they should be properly organized to collaborate and present challenges to attain their targets. As verified through the pilot operations of community development and village nurseries, community empowerment is the most important task in the short- and medium-terms. The community is the basis of integrated regional development.
- (3) Tourism development in Issyk-Kul has high potential and tourist arrivals are expected to quadruple by the year 2010. The increased number of tourists will have impacts on the natural environment, but the negative impacts can be mitigated and maintained within an acceptable range provided land use and the environment are properly managed, as programmed in this study.
- (4) Tourism should not be developed independently, but should be promoted in combination with community development as well as agricultural and other industrial developments. This will ensure an industrial cluster can be developed in the Issyk-Kul zone. Community products, including agricultural products, will expand markets. This will result in an increased number of tourist arrivals even

though tourists would find hospitality in communities as well as the natural landscape. Linkages between tourism development and community development will greatly contribute to the creation of a healthy and harmonized region of Issyk-Kul.

- (5) Industries in the Issyk-Kul zone would be better oriented to produce niche products for niche markets, making utmost use of local resources available in the region. There still remain many unexplored resources in the region. For instance, herb cultivation and processing appear to be promising agro-based industries, and they would contribute to enhancing the image of a healthy region of Issyk-Kul.
- (6) Economic infrastructures, e.g. water supply and sewerage, solid waste disposal, electric power, telecommunications and transportation, still require substantial improvement. However, in view of the macroeconomic and financial frameworks, public investment in infrastructure improvements will have to be limited to an affordable level. Urgent rehabilitation, like the sewerage treatment plant in Cholpon-Ata, should be implemented without delay. However, urgent improvements must be programmed in accordance with financial viability and a well-balanced budget allocation.
- (7) The environment and ecological systems of the Issyk-Kul zone, particularly water quality of the Issyk-Kul Lake, will be sustainable against the total pollutants to be generated by the proposed projects/programs, but only if environmental management is properly executed, as programmed in this study. Special attention should be paid to management and control of land use around the lake shore. Environmental monitoring should be maintained, with improved monitoring systems.
- (8) Livelihoods of the people, particularly in rural areas, will be substantially improved through community empowerment programs and agricultural development projects. For instance, members associated with herb cultivation would prolong their period of employment and duplicate their incomes in three to four years. On average, per capita GDP in the Issyk-Kul zone would be increased from current levels of around 15,600 soms to some 21,000 soms in 2010 and 42,500 soms in 2025. The proposed development plan will greatly contribute to poverty reduction in the Issyk-Kul zone.
- (9) Individual challenges should be integrated into the “Regional Power” plan with a common target of attaining well-balanced and harmonized regional development in Issyk-Kul. All stakeholders should challenge individual and collective participation in integrated regional development. The participatory approach has proved to be effective and it should be applied to enhance regional power.

- (10) Conclusively, the objective of integrated regional development, namely the “Creation of a Healthy and Harmonized Region of Issyk-Kul”, can be attained through implementation of the projects/programs proposed in this Study.

17.2 Recommendations

Based on the conclusions summarized above, as well as the results of studies carried out for the integrated development of the Issyk-Kul zone, the JICA Study Team recommends the following:

- (1) Since the proposed projects/programs are evaluated as being effective and sustainable, they should be implemented by the respective stakeholder groups. Collective efforts by the public, academic and private circles are required, and it is recommended that the “Public-Academic-Private Partnership” for the implementation of the proposed projects be strengthened.
- (2) Under the financial constraints of the central government, it is recommended that some priority projects/programs be implemented with the financial support of international donors. In this context, it appears appropriate that the requests of the Kyrgyz government have been forwarded to the Government of Japan for continued technical assistance in community empowerment in the Issyk-Kul zone and for grant aid and technical assistance in the urgent rehabilitation of the Cholpon Ata sewage treatment plant.
- (3) Enhancement of local governance appears to be of utmost importance for social and economic development in the region, particularly poverty reduction. In this context, it is recommended that community-based development and community empowerment be promoted in an accelerated manner. The social capital can only be consolidated through empowerment of communities and local self-government.
- (4) For decentralization and streamlining of public administration, as well as for development planning in every social and economic sector, better compilation and open access to statistics is indispensable. It is therefore recommended that the statistic survey system be improved and the statistic data be distributed and open to access by any public and private institution.
- (5) The participatory approach applied in formulating the integrated regional plan, as well as in executing pilot project operations, has proved to be effective through this Study. It is therefore recommended that the participatory approach also be applied in the implementation of the proposed projects/programs. It is further

recommended that the participatory approach be adopted for development projects in other regions.

- (6) Promotion of regional cooperation in Central Asia and Eurasia is indispensable, as discussed at the workshop of the JICA Study Team held in Cholpon-Ata for “Regional Cooperation in Tourism Promotion in Central Asia”. The Issyk-Kul zone offers an ideal site for convention tourism. It is recommended that the workshop for joint tourism promotion in Central Asia be continued in the future and that chances for international conventions in Issyk-Kul be expanded for promotion of amicable, convivial and healthy international relations in Central Asia and the World.
- (7) The proposed development plan for the Issyk-Kul zone will serve as a master plan for integrated regional development in Issyk-Kul, as well as a guideline for similar development in other regions of the Kyrgyz Republic. It is therefore recommended that the proposed plan be recognized by the central and Oblast governments as an officially authorized plan together with a declaration that the plan will be followed as a guiding document for integrated development of the Issyk-Kul zone.
- (8) The plan formulated in this study reflects current conditions and prospects in the foreseeable future. It should be monitored in the course of implementation since there may be changes in political, economic and social circumstances in the future. If these occur, it is recommended that the proposed regional development plan be reviewed and updated sometime before 2010, the target year proposed by CDF.

ANNEXED

TABLES

Table 1.1 Member of Steering Committee

Tanaev N. Timofeevich	Prime Minister of the Kyrgyz Republic
Tursunov A. Tursunbaevich	Chairman of the State Commission on Architecture and Construction, Deputy Chairman of the Steering Committee
Shalieva T. Asanovna	Head of State Administration, Governor of the Issyk-kul Oblast
Almakuchukov O.Mukashevich	Chairman of State Committee for Tourism, Sport and Youth Policy
Toromyrzaev E. Toromyrzaevich	First Deputy Minister of Finance
Ajikeev A. Toktorbekovich	Deputy Minister of Transport and Communications
Baitemirov B.Janyshevich	Deputy Minister of Agriculture, Water Economy and Processing Industry
Jeenbaev J. Jeenbaevich	President of National Academy of Science
Joldoshev N. Bekultanovich	Head of Department of Industrial-Constructional Complex and Municipal Economy, Prime Minister Office
Shaimbetov D. Akmatovich	Head of Construction Complex Sector and Communications of Trade Department, Industry and Construction Complex and Communications
Mukanbetov S.Turdukojoevich	Director of Investment Policy Department under the Ministry of Finance
Tsurkov V. Egorovich	Director of State Service on Geodesy and Cartography
Junusov U. Kachkynovich	Head of Tourism Infrastructure Development Department, Training of personnel for State Committee of the Kyrgyz Republic on Tourism, Sports and Youth Policy
Alykulov K.Mamytovich	Director of Kyrgyz Research Institute on Architecture and Town Building
Rustembekov O.Farbagyshevich	Director of Ecology and Nature Management Department of the Ministry of Ecology and Emergency Situations
Kanimetov K. Abdyl daevich	Head of the Main Department of Economic Analysis and Development of the Ministry of Foreign Trade and Industry
Jamboev J. Kadykeevich	Adviser of the Minister of Decentralization and Regional Development
Usekeev K. Joldoshibekovich	Director of Economic Development Center under the State Administration of Issyk-Kul Oblast

Table 1.2 Member of Working Groups and JICA Study Team

(Working Group)

Macro Economics Finance

Sanjar T. Mukanbetov	Ministry of Finance
Ulan N. Isabekov	Ministry of Finance
Sultanbekov D. Aalyevich	Country Development Framework Secretariat
Mirlan Kemeldinov	Research Institute of Architecture and Town Building
Rudenko T. Nikolaevna	Research Institute of Architecture and Town Building

Social Development Policy/ Planning

Kemeldinov Mirlan	Research Institute of Architecture and Town Building
Orolbekov Azamat	Research Institute of Architecture and Town Building
Kurenkeev Marat	Research Institute of Architecture and Town Building
Muhamadiev N. Alekseevna	Research Institute of Architecture and Town Building
Kanatbek Usekeev	Center of Tourism Development of Issyk-kul Oblast
Afanasenko V. Livovna	Head of Ecology and Monitoring Dep. of the Ministry of Ecology and Emergency Situations
Shabunin G. Dmitrievich	Hydrometeorology of the Ministry of Ecology and Emergency Situations
Romanovsky V. Vladimirovich	Institute of Water Problem and Hydro energy of Science Academy
Arynov A. Japarovich	Issyk-Kul Biosphere Territory
Salmakeev D. Sydykovich	Issyk-Kul Regional Dep. on Environmental Protection
Shukurov E. Djaparovich	Aleine NGO

Spatial Development Planning/ Infrastructure Maintenance

Toibaev Nurlan	Urban Construction Dep. of SCAC
Mokeev Kuvan	Head of Registration Department of Jeti-Oguz rayon
Abdiev Almaz	State Agency on Registration Rights
Baitemirov B. Janyshevich	Deputy Minister of Agriculture, Water Resources and Processing Industry
Imanaliev A.M.	Deputy Director State Agency on Real Estate Rights
Strijachenko Tatyana	Research Institute of Architecture and Town Building
Januzak Gulbatyrov	Research Institute of Architecture and Town Building
Kurenkeev Marat	Research Institute of Architecture and Town Building
Orolbekov Azamat	Research Institute of Architecture and Town Building
Tolubaev Kalis	Research Institute of Architecture and Town Building
Abdikadyrov Oros	Research Institute of Architecture and Town Building

Tourism Promotion Policy / Planning

Kanybek T. Masalbekov	State Committee of Tourism, Sport and Youth Policy
Kenjebaeva N. Myrzabekovna	State Committee of Tourism, Sport and Youth Policy

Sultanbekov D. Aalyevich	Country Development Framework Secretariat
Emil S. Umetaliev	Chairman of Congress of Business Association
Cherenkov Evgeny	Tien Shan Travel
Alina T. Strijachenko	Research Institute of Architecture and Town Building
(JICA Advisory Committee)	
Shuji Koiso	Leader of JICA Advisory Committee
Masaru Takimoto	JICA Institute for International Cooperation
Kenichi Tanaka	JICA Institute for International Cooperation
Kenji Chujo	Senior Counselor, 5 th Research Department, Infrastructure Development Institute
Masakatsu Abe	Senior Counsellor, 5 th Research Department, Infrastructure Development Institute
(JICA Study Team)	
Hajime Koizumi	Project Team Leader/Regional Development Policy
Yoseki Nagase	National Development Planning/Macro Economic Policy/Regional Development Policy
Isamu Asakura	Regional Development Planning, Deputy Team Leader
Nobuko Shimomura	Social Economy/Economic Financial Analysis/Investment Promotion
Takashi Koyama	Land Use Planning
Yoichi Nishimura	Agriculture Development
Masanori Tanifuji	Industrial Development
Toshiyuki Saito	Entrepreneurial Business Promotion
Kanji Hoshino	Tourism Development/Tourism Facility
Shogo Uchida	Transport Planning
Jun Kuwabara	Infrastructure Planning
Shinsuke Satoh	Natural Environment/Water Resources/Environment Management Plan
Masahiro Ibayashi	Social Environment/Participatory Development/Gender/Poverty Alleviation
Naoko Anzai	Public Administration/Institutional Building/Legal System
Sachiyo Takata	Information Disclosure and Management
Yoshihiro Fukushima	Water Resource/Water Level Analysis
Aoi Iwana	Coordinator

Table 1.3 Scoring Evaluation of Priority Projects/Programs (1/2)

Sector/Subjects	Program/Project	Schedule			Expectable assistance	Implementing possibility	Scoring Evaluation						Evaluation	Final Selection for Priority PP
		2005	-2010	-2025			Sustainability	Efficiency	Social Env. Impact	Poverty Reduction Effects	Relevancy	Total Score		
A. State Governance and Institutions														
1. Organizational Arrangement for regional development	1) Issyk-kul Good Governance and Regional Development Forum	■			Technology assistance based project	O	1	2	2	2	1	8	+	O
B. Environmental Preservation														
1. Application of Strict environmental control	1) Formulation and Implementation of Environmental Management Plan	■	■		Technology assistance based project	O	2	2	2	0	2	8	+	O
	2) Reinforcement of laws and institutional systems on the	■	■	■		O	2	2	2	0	2	8	+	O
	3) Environment education/awareness building	■				O	2	1	2	0	2	7		O
	4) Establishment of Data Management System for	■				O	1	2	2	0	2	7		O
	5) Restoration of water purification function in lake transition zone	■	■	■		O	2	2	2	0	2	8	+	O
	6) Project for the management of water level change	■	■	■		O	2	2	2	0	2	8	+	O
C. Land Use														
Effective and efficient land use control	1) Introduction of incentives for land use control	■			Technology assistance based project	O	2	2	2	0	2	8	+	O
	2) restructuring of spatial planning system	■	■	■		O	2	2	2	0	2	8	+	O
	3) Streamlining of procedures for land use permission	■				O	2	2	2	0	2	8	+	O
D. Social and Community Development														
1. Education	1) Strengthening of Vocational		■	■	Technology assistance based project	O	1	1	2	2	2	8	+	O
2. Community empowerment	4) Establishment of network for the community empowerment	■	■	■		O	2	2	1	2	2	9	+	O
	5) Development and marketing of community products/goods (Michino Eki)	■	■	■		O	2	2	1	2	2	9	+	O
	6) Community development fund	■	■	■		O	2	2	1	2	2	9	+	O
	7) Deregulation concerning the CBO business/community development	■	■	■		O	2	2	1	2	2	9	+	O
E. Investment Promotion and Financial Sector														
	2) Strengthening Commercial Banking Sector		■	■	Technology assistance based project		1	2	2	2	2	9	+	O
	4)Consolidation of Regional Institutions for FDI promotion	■				O	1	2	2	2	1	8	+	O
	5)Regularly Reforms for Private Investment and Business Promotion in Issyk-Kul	■				O	1	2	2	1	1	7		O
F. Agriculture														
1. Institutional strengthening	1) Strengthening of the farmers association program	■	■	■	Technology assistance based project	O	2	1	1	2	2	8	+	O
3. Reforestation	3) Village reforestation program	■	■	■	Technology assistance based project	O	1	1	2	0	2	6		O
4. Development of local products/goods	4) Fruit and herb development program (incl. tourism farm)	■	■	■		O	1	2	2	2	2	9	+	O
	5) Beekeeping and natural medicines development program	■	■	■		O	1	2	2	2	2	9	+	O
G. Tourism														
	3) Production of Tourist Maps for general purpose of the Issyk-Kul	■			Follow-work	O	2	2	2	1	2	9	+	O
	4) Improvement of the Tourists Statistics Technology	■	■	■	SV	O	2	2	2	0	2	8	+	O
	5) Tourism human resources development package	■	■	■		O	2	2	0	1	2	7		O
	6) Cooperation of regional Tourism promotion in the central Asia	■	■	■	O	2	1	0	1	2	6		O	

Table 1.3 Scoring Evaluation of Priority Projects/Programs (2/2)

Sector/Subjects	Program/Project	Schedule			Expectable assistance	Implementing possibility	Scoring Evaluation					Evaluation	Final Selection for Priority PP	
		2005	-2010	-2025			Sustainability	Efficiency	Social Env. Impact	Poverty Reduction Effects	Relevancy			Total Score
2. Development of tourism facility (public sector)	8) Historical and Archaeological Museum		XXXX		(grass route) Culture grant	O	2	2	0	0	2	6		O
3. Support to private sector	12) Improvement of the Reservation System Using IT System		XXXX				2	1	2	1	2	8	+	O
	13) Supporting Measures for Development of FEZ and		XXXX		Oblast decided dev. FEZ	O	1	1	2	1	2	7		O
	14) Invitation of Sports Training Camp (expansion of tourism season)		XXXX			O	2	1	2	0	1	6		O
	15) Invitation of Convention Tourism to Issyk-kul Zone		XXXX				1	2	2	1	2	8	+	O
H. Industrial Development														
1. Promotion of agricultural products processing	1) Juice, jam, cider, honey liquor, medical materials, vegetable processing		XXXX				1	2	1	2	2	8	+	O
3. Upgrading of trade/transportation operation	3) Networking of micro		XXXX				1	2	2	1	2	8	+	O
	4) Establishment of package material bank		XXXX				1	2	2	1	2	8	+	O
	5) Cargo terminal/trading center in Balykchy		XXXX		included in I-4	O	1	1	2	1	2	7		O
4. Development of knowledge industry	6) IT park in Tamchy FEZ		XXXX		Oblast decided dev.	O	0	1	2	1	2	6		O
I. Infrastructure Development														
1. Renovation of service	1) Surface water resource development for water supply system		XXXX		(Swiss, WB) Grant	O	1	2	0	1	1	5		O
	2) Rehabilitation of Cholpon Ata sewage treatment plant		XXXX			O	2	2	2	2	2	10	+	O
	3) Renovation of Voda Canal management (Barykchy, Karakol)		XXXX		Grant Soft component	O	2	2	2	1	2	9	+	O
2. Improvement of disposal standard	4) Clean campaign of garbage in tourism spot		XXXX		Technology assistance based project	O	2	2	2	0	1	7		O
3. Improvement of power/telecommunication system	5) Rehabilitation of Power distribution network (Vostokelectro)		XXXX				2	2	1	1	2	8	+	O
	6) Improvement of Capacity of Trunk Line (to Bishkek and Circuit of lakeshore)		XXXX				2	1	2	1	2	8	+	O
	7) Upgrading of telephone exchange in three cities		XXXX				2	1	2	1	2	8	+	O
Transport														
1. Development of Internal road network	8-1 Improvement of ring road		XXXX				1	2	1	2	2	8	+	O
	8-2 Improvement of ring road in city		XXXX				1	2	1	2	2	8	+	O
	8-3 Emergency maintenance of ring road		XXXX				2	2	1	2	2	9	+	O
	8-4 Reconstruction of bridge on ring road (some bridge should be studied urgently)		XXXX				1	2	1	2	2	8	+	O
	9) Construction of a freight terminal in Balykchy (FEZ)		XXXX		Oblast decided dev.	O	1	1	2	0	0	4		O
3. Airport	10) Expansion of Issyk-Kul international Airport (Tamchy)		XXXX		Russian assistance	O	1	2	0	1	1	5		O

APPENDIX-I

OUTLINE OF

PRIORITY PROJECTS/PROGRAMS

Outline of Priority Projects/Programs

List of Project Sheets

A. Institutional Development

- 1) Support to the Issyk-kul Development Forum I - 1

B. Environmental Preservation

- 1) Formulation and Implementation of Environmental Management Plan for Sustainable Conservation of Ecosystem of Lake Issyk-Kul I - 2
- 2) Reinforcement of Laws and Institutional Systems on the Environment of Lake Issyk-Kul I - 3
- 3) Environment Education/Awareness Building (water quality monitoring by secondary school students) I - 4
- 4) Establishment of Data Management System for Sustainability of Water Environment Using GIS I - 5
- 5) Restoration of Water Purification Function in Lake Transition Zone I - 6
- 6) Project for the Management of Water Level Change I - 7

C. Land Use

- 1) Program for Introduction of Incentive Measures in Land Use Management System..... I - 8
- 2) Program for Restructuring of Spatial Planning System..... I - 9
- 3) Program for Streamlining of Permission Procedure..... I - 10

D. Social/Community Development

- 1) Strengthening of Vocational Training I - 11
- 4) Establishment of Network for Community Empowerment..... I - 12
- 5) Development and Marketing of Community Products/Goods I - 13
- 6) Community Development Fund I - 14
- 7) Deregulation Concerning the CBO Business/Community Development..... I - 15

E. Investment Promotion and Financial Sector Issues

- 2) Strengthening Commercial Banking Sector I - 16
- 4) Consolidation of Regional Institutions for FDI Promotion I - 17
- 5) Regulatory Reforms for Private Investment and Business
Promotion in Issyk-kul I - 18

F. Agriculture

- 1) Strengthening of the Farmers Association Program I - 19
- 3) Village Reforestation Program I - 20
- 4) Fruits and Herbs Development Program I - 21
- 5) Beekeeping and Natural Medicines Development Program..... I - 22

G. Tourism

- 3) Production of Tourist Maps by GIS Map I - 23
- 4) Improvement of Tourist Statistics Technology I - 24
- 5) Tourism Human Resource Development Package I - 25
- 6) Cooperation of Regional Tourism Promotion in Central Asia..... I - 26
- 8) Historical and Archaeological Museum in Cholpon-Ata I - 27
- 12) Improvement of the Reservation System Using IT System..... I - 28
- 13) Supporting Measures for Development of FEZ and Development
Promotion Area..... I - 29
- 14) Invitation of Sports Training Camp I - 30
- 15) Invitation of Convention Tourism to Issyk-kul Zone I - 31

H. Manufacturing Industry

- 1) Promotion of Juice, Jam, Cider, Honey Liquor, Medical Materials,
Vegetable Processing I - 32
- 3) Networking of Micro/Small Manufacturer I - 33
- 4) Establishment of Package Material Bank I - 34
- 5) Cargo Terminal/ Trading Center in Balykchi I - 35
- 6) IT Park in Tamchy FEZ I - 36

I. Infrastructure Development

Water Supply/Sewerage

- 1) Surface Water Resource Development in City I - 37
- 2) Rehabilitation of Cholpon – Ata Sewage Treatment Plant I - 38

3) Renovation of Voda Canal Management	I - 39
Solid Waste	
4) Cleanup Campaign of Garbage in Tourism Spot.....	I - 40
Power/Telecommunication	
5) Rehabilitation of Power Distribution Network (Vostokelectro empowerment).....	I - 41
6) Improvement of Capacity of Trunk Line (to Bishkek and circuit of lakeshore).....	I - 42
7) Digitization of Telephone Switchboards, Increasing the Telephone Capacity	I - 43
Transport	
8-1) Improvement Plan of Issyk-Kul Ring Road	I - 44
8-2) Improvement of Ring Road in City Areas	I - 45
8-3) Emergency Maintenance of Ring Road	I - 46
8-4) Reconstruction of Bridges on Ring Road	I - 47
9) Construction of a Freight Terminal in Balykchy (FEZ)	I - 48
10) Expansion of Issyk-Kul International Airport (Tamchy).....	I - 49

Program/Project Sheet for the Development of Issyk-Kul Zone

A-1)	Support to the Issyk-kul Development Forum	Sector	Institution reform & building
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
<u>Background</u>	As part of the efforts to implement the Master Plan for the long-term development of Issyk-kul, establishment of an “Issyk-kul Development Forum” at the level of Oblast has been proposed. While different government bodies at the Republican, Oblast, Rayon and local self-government levels are responsible for implementing respective components of the Master Plan, the Forum has an important role to play by providing: (i) a mechanism of reflecting views of local communities and stakeholders in key policy decisions and directions of the Oblast and (ii) space of interaction and coordination among different public and private actors with a view towards ensuring sustainable development of Issyk-kul. The Forum will be composed of approximately 20 members, representing local self-governments, Rayon offices, communities, NGOs, private enterprises, financial institutions, academia, women’s associations and other relevant groups. The Forum will initially focus on issues in the areas of community development, private investment and business promotion, and environmental protection, which can be later expanded or adjusted depending on the experience of the initial period. The details of the set-up of the Forum including the membership and procedures will be stipulated in a Regulation.		
<u>Project Purposes</u>	To provide expert advice and support to the Secretariat of the Forum as well as to deliberations of the Forum to facilitate its establishment and functioning to achieve its objectives.		
<u>Inputs/Activities</u>	<u>Inputs:</u> - Office set-up - Three national experts (one full-time manager and two lawyers with business background) - One international expert for supervision - Budgetary support <u>Activities include:</u> - Preparation of work plans, meeting agenda and any other necessary documents that support the activities of the Forum - Analytical work and presentation with respect to regulatory review, investment proposals, etc. - Preparation of records of the meetings and activities. - Dissemination of information and knowledge and other public relations activities.		
Cost		Target Area	The entire area of Issyk-kul Oblast
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Issyk-kul Oblast Administration (in cooperation with Minister of Regional Development and local self-government and other concerned state administrations in the Republican Government and Rayons in Issyk-kul)		
Finance Source	External assistance		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high		
Relevancy	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project List for the Development of Issyk-Kul Zone

B-1)	Formulation and Implementation of Environmental Management Plan for Sustainable Conservation of Ecosystem of Lake Issyk-Kul	Sector	Land Use/Environment
		■Software	■Hardware
Outline	<ul style="list-style-type: none"> • Due to its characteristics of an enclosed area, the lake is especially susceptible to accumulation of pollutants when compared to rivers and seas. Therefore, lakes have difficulty recovering their water quality after pollution. The disturbance of the lake ecosystem soon appears as a change in lake water quality. Proper water quality management of lake water leads to the overall conservation of the lake ecosystem. • Preservation of water quality of Issyk-Kul Lake is realized through the implementation of the environmental management plan. The environmental management plan requires formulation based on establishment of the “Law on Clean Lake Issyk-Kul”. The environmental management plan includes the following contents: <ul style="list-style-type: none"> – Institutional and regulatory reforms: <ul style="list-style-type: none"> • Introduction of area-wide total pollutant load control system, • Setting up of target values of water quality: <p style="margin-left: 20px;">Targeted water quality of Issyk-Kul Lake is set as less than 1.0ppm BOD (currently 0.61ppm), less than 0.2ppm of T-N (currently less than 0.15ppm), and less than 0.005ppm of T-P (currently less than 0.001ppm).</p> • First Management Plan will target five years from 2005 -2010 and will be reviewed every 5 years. • Review and modification of existing regulations and standards. – Promotion of measures for water quality control including: <ul style="list-style-type: none"> • Renovation of the existing sewerage treatment facilities in Cholpon-Ata. • Effective practice concerning wastewater treatment control of sanatoriums/hotels and factories. • Integrated septic treatment system in rural communities. • Management of inflow river water quality and quantity. • Promotion of meadow restoration project in order to revive the natural purification mechanism. – Formulation of monitoring program for lake water and inflow river waters 		
Cost		Target Area	Issyk-Kul area
Target Year	■2005 □2010 □2025		
Responsible Organization	Ministry of Ecology and Emergency Situations		
Finance Source			
Evaluation			
Sustainability	□low □medium ■high (note:)		
Efficiency	□low □medium ■high (note:)		
Impact on Social Environmental	□no impact ■good impact □adverse impact (note:)		
Effect on Poverty Reduction	■low □medium □high (note:)		
Relevance	□low □medium ■high (note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevance: Understanding of stakeholders

Program/Project List for the Development of Issyk-Kul Zone

B-2)	Reinforcement of Laws and Institutional Systems for the Environment of Lake Issyk-Kul	Sector	
		<input checked="" type="checkbox"/> Software	<input type="checkbox"/> Hardware
Outline	<p>At present, Kyrgyzstan has water environment-related laws and systems for the management of water resources and the environment. However, most laws and systems applied now are followed or modified based on those established during the Soviet era. As a result, there are stringent laws/regulations, no regulations against the objects to be regulated, or only arbitrary regulations.</p> <p>In the Issyk-Kul area, laws and institutional systems to be applied for the conservation of the environment, which take into account the specialty of the area, have not yet been established. For example, regulation against oil spillage from ships or oil leakage from jet-skies used for leisure in the lake, or areawide target values of water quality to be maintained, have not been provided.</p> <p>This project aims to reinforce environment-related laws and institutional systems for the conservation of the environment of the Issyk-Kul area.</p>		
Cost		Target	Watershed of Lake Issyk-Kul and
Target Year	<input type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025	Area	related area
Responsible Organization	Ministry of Ecology and Emergency Situations, Academy of Science		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (note:)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Relevance	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		

Note: 1) Sustainability: Availability of necessary man power, organization, resources
2) Efficiency: B/C
3) Relevance: Understanding of stakeholders

Program/Project List for the Development of Issyk-Kul Zone

B-3)	Environment Education/ Awareness Building (water quality monitoring by secondary school students)	Sector	Land Use/Environment
		■Software	■Hardware
Outline	<p>Environmental monitoring by central or local authorities plays an important role for proper environmental management. For this purpose, concerned organizations such as the Gidromet and MoEE have been conducting environmental monitoring. In addition to the monitoring conducted by the authorities, environmental awareness of local people is indispensable for sustainable preservation of the local environment. In order to provide environmental education to residents or to improve their environmental awareness, on-site water quality checking by local people using simplified methods is meaningful.</p> <p>This program proposes the conducting of on-site water quality checking and evaluating using a simplified water test kit and simplified water quality evaluation methods by local people. This can be effective in the first step of water quality monitoring, leading to improved environmental awareness of residents and children. The outline of the program is as follows:</p> <ul style="list-style-type: none"> ◆ Methodology of checking or evaluation of water quality: Tool: Portable water quality analyzer, simplified water test kit (Pack Test[®]) (The tools are to be in the custody of the Forum.) In addition to the above monitoring, observation of biological indexes such as waterweed and benthos will be conducted concurrently. ◆ Monitoring place: Aiyl-Okmotu level (monitoring instructors travel around Aiyl-Okmotu). ◆ Results of checking are to be open to the public at the Regional Development Forum. 		
Cost		Target Area	Issyk-Kul area (Cholpon-Ata, Balykchy, Karakol)
Target Year	■2005 □2010 □2025		
Responsible Organization	Forum, Secondary school, Local Self-government, Ministry of Education		
Finance Source			
Evaluation			
Sustainability	□low □medium ■high (note:)		
Efficiency	□low ■medium □high (note:)		
Impact on Social Environmental	□no impact ■good impact □adverse impact (note:)		
Effect on Poverty Reduction	■low □medium □high (note:)		
Relevance	□low □medium ■high (note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevance: Understanding of stakeholders

Program/Project List for the Development of Issyk-Kul Zone

B-4)	Establishment of Data Management System for Sustainability of Water Environment Using GIS	Sector	
		<input checked="" type="checkbox"/> Software <input checked="" type="checkbox"/> Hardware	
Outline	<p>Water quality monitoring in the watershed of Issyk-Kul Lake has been conducted by the Ministry of Ecology and Emergency Situations. However, after the collapse of the Soviet Union, monitoring is not necessarily sufficient at present due to lack of equipment and outflow of human resources. The data collected previously are also not well utilized.</p> <p>In order to improve the present environmental conditions of Issyk-Kul area, maintenance of the water environment and prevention of its deterioration in and around Lake Issyk-Kul is very important. For this purpose, monitoring of water quality in this area is essential. Application of GIS for establishment of the environmental management data system of lakes, especially for the large lakes such as Lake Issyk-Kul, which is about 180km in the east-west direction and about 60km north-south, is very useful.</p> <p>Under the above, this project aims to establish a data system for environmental water management.</p> <p>Major items included in the program are as follows:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Preparation of computer hardware and software required for the establishment of a GIS database <input type="checkbox"/> Preparation of analytical equipment required for the execution of water quality monitoring <input type="checkbox"/> Review of the framework of monitoring and related laws and regulations <input type="checkbox"/> Establishment and utilization of environmental water management system using GIS. 		
Cost		Target Area	Issyk-Kul area
Target Year	<input type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Ministry of Ecology and Emergency Situations		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (note:)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Relevance	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevance: Understanding of stakeholders

Program/Project List for the Development of Issyk-Kul Zone

B-5)	Restoration of Water Purification Function in Lake Transition Zone	Sector	
		<input checked="" type="checkbox"/> Software	<input checked="" type="checkbox"/> Hardware
Outline	<p>Comparing other water bodies such as rivers and seas, lakes are characterized by their enclosed areas. Lakes are especially susceptible to the accumulation of pollutants when compared to rivers and seas. This means that lakes are apt to receive pollutants generated by human activities.</p> <p>On the other hand, a lake comprises a complicated and autonomous ecosystem with rivers, atmosphere, vegetation and so on that connect with the lake.</p> <p>Through this consistent ecosystem, the lake maintains its environmental sustainability. Regarding lake water quality, the self-cleaning function in the transition zone of a lake plays an important role. The transition zone includes wetlands, bush, water-weed, etc. in and around the lake shoreline. Each sub-zone purifies waters entering or leaving the lake.</p> <p>Based on the above, this project aims to evaluate and recover the functions of the transition zone that are partially lost through a variety of development activities.</p>		
Cost		Target Area	Watershed of Lake Issyk-Kul
Target Year	<input type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Ministry of Ecology and Emergency Situations		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (note:)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Relevance	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevance: Understanding of stakeholders

Program/Project List for the Development of Issyk-Kul Zone

B-6)	Project for the management of water level change	Sector	
		<input type="checkbox"/> Software	<input checked="" type="checkbox"/> Hardware
Outline	<p>According to data collected by the Gidromet, the water level of Lake Issyk-Kul is trending downward in the longer term, except for seasonal and short range changes. The data of the Gidromet shows the level of fall in water is around 3 meters in the last 75 years (1927 to 2002), equating to a decline of 4cm/year. Excessive water level change causes not only changes in the natural environment around the lake but also changes in cultural and economical values of the lake. It is said that climate change operates significantly upon the water level change of Lake Issyk-Kul. However, systematic investigation has not yet been conducted and there are no established theories on the cause of water level change in Lake Issyk-Kul. Therefore, there are no studies on the possibilities of water level control, and no current measurements for water level control. This project aims to investigate the cause of water level change in Lake Issyk-Kul, and also aims to study the feasibility of diverting water and/or constructing a drainage channel for this purpose.</p>		
Cost		Target Area	Watershed of Lake Issyk-Kul and related area
Target Year	<input type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Ministry of Ecology and Emergency Situations, Academy of Science		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (note:)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Relevance	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevance: Understanding of stakeholders

Program/Project List for the Development of Issyk-Kul Zone

C-1)	Program for Introduction of Incentive Measures in Land Use Management System	Sector	Land Use Management
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>The incentive measures for land use control should be introduced through the taxation system on farmland and lease pricing on pasture land. The rates of land tax are set by the Ministry of Finance based on a certain range in differences to be entrusted to the decisions of Ayil Okmotu administration. The condition and productivity of each farming land plot must be assessed by updating the existing information. There is a certain accumulation of know-how to undertake this task in the Kyrgyz State Project Institute for Land Development, better known as Giprozem, under the GosRegistre. As preparation of an electronic map system for taxation purposes is to start in Gosregistre, the assessment result can be effectively integrated. The responsibility of carrying out the works should be assigned to the Oblast administration for a period, since the Issyk-Kul zone has only officially adjusted to national level policies. The fund for the assessment work shall be fully provided by the Oblast administration.</p>		
Cost		Target Area	Entire Zone
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Issyk-Kul Oblast, Local GosRegistre, Local SCAC, Aiyl Okmotu		
Finance Source	Central/ Local State Government		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note: will be embedded to administrative routine.)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note: stakeholders well recognize it's importance.)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (note: it will foster the ownership of the region among residents.)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (note: not directly connected to poverty related measures.)		
Relevance	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note: implementation of land use planning is one of the mission of the M/P.)		

- Note
- 1) Sustainability: Availability of necessary man power, organization, resources
 - 2) Efficiency: B/C
 - 3) Relevance: Understanding of stakeholders

Program/Project List for the Development of Issyk-Kul Zone

C-2)	Program for Restructuring of Spatial Planning System	Sector	Land Use Management
		■ Program □ Project □ Others	
Outline	The role and the character of the hierarchical physical plan system should be changed. A quick manner of planning should be pursued by reducing the number and depths of the pre-planning surveys to fit the current private land ownership system. The character of the drawing will be shifted from a design to a vision in each level of the plan more or less. The spatial structure of the target area of the plan should be set agreed among upper level administrations as well as inhabitants and other stakeholders, and be authorized. Those detailed plans on district level can be planned later on by full consultation with the neighbourhoods or even by the initiative of the neighbourhoods. Hiring of planning consultants and/or architects may become necessary. In order to reduce the high cost for procurement of these experts, the current license policy should be amended to enable local experts to participate in bidding. In the discussion among stakeholders, the importance of restructuring the Spatial Planning System was well understood.		
Cost		Target Area	Aiyl Okmotus in entire zone.
Target Year	■ 2005 □ 2010 □ 2025		Two pilot Aiyl Okmotu admins.
Responsible Organization	Issyk-Kul Oblast, Local GosRegistre, Local SCAC, Aiyl Okmotu		
Finance Source	Central/ Local State Government		
Evaluation			
Sustainability	□ low □ medium ■ high (Note: will be embedded to administrative routine)		
Efficiency	□ low □ medium ■ high (Note: stakeholders well recognize importance)		
Impact on Social Environmental	□ no impact ■ good impact □ adverse impact (Note: it will foster the ownership of the region among residents.)		
Effect on Poverty Reduction	■ low □ medium □ high (Note: not directly connected to poverty-related measures.)		
Relevance	□ low □ medium ■ high (Note: promotion of FDI is one of the major missions of the M/P.)		

- Note
- 1) Sustainability: Availability of necessary manpower, organization, resources
 - 2) Efficiency: B/C
 - 3) Relevance: Understanding of stakeholders

Program/Project List for Development of Issyk-Kul Zone

C-3)	Program for Streamlining of Permission Procedure	Sector	Land Use Management
		■ Program □ Project □ Others	
Outline	A quick and effective permission procedure should be established by expanding the authority and enhancing the capacity of the Oblast level administration and strengthening the monitoring function of the Biosphere Territory through the central government. Concerning the Issyk-Kul zone, the interest of the nation is associated with the JICA Masterplan, thus further assessment by national agencies on the construction/land development application will not be necessary. The central government should concentrate on international factors of the Issyk-Kul zone, such as the Ramsar treaty, Biosphere Territory Reserve, and possibly the Historical Heritages Conservation. To meet this, strengthening the capacity for assessment works is needed as the assessment works should be carried out by qualified experts situated in the local area. Central government organizations responsible for monitoring these international issues shall be clearly identified.		
Cost		Target Area	Aiyl Okmotus in entire zone..
Target Year	■ 2005 □ 2010 □ 2025		
Responsible Organization	Issyk-Kul Oblast, Local GosRegistre, Local SCAC, Aiyl Okmotu		
Finance Source	Central/ Local State Government		
Evaluation			
Sustainability	□ low □ medium ■ high (Note: Will be embedded to administrative routine)		
Efficiency	□ low □ medium ■ high (Note: Stakeholders recognize importance)		
Impact on Social Environmental	□ no impact ■ good impact □ adverse impact (Note: It will foster ownership of the region among residents.)		
Effect on Poverty Reduction	■ low □ medium □ high (Note: Not directly connected to poverty related measures.)		
Relevance	□ low □ medium ■ high (Note: Promotion of FDI is one of the major missions of the M/P.)		

- Note
- 1) Sustainability: Availability of necessary manpower, organization, resources
 - 2) Efficiency: B/C
 - 3) Relevance: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

D-1)	Strengthening of Vocational Training	Sector	Human Resource Development
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Vocational training in existing schools/universities shall be improved and enhanced at both secondary and higher levels. Educational programs are aimed at enhancing human resources to start or enhance businesses in the transitional economy.</p> <p>In the secondary education, basic business techniques, such as accounting, taxation system and basic business law, will be transferred to individuals, farmers and small groups to start business. As for the tourism industry, programs on service skills and hospitality at hotels and restaurants/cafés will be basic lessons.</p> <p>In higher education, business knowledge such as management skills, trade, market research, etc., will be included in programs to improve and enhance present business skills. Tourism business programs will include tour planning for travel agency, hotel management, promotion, etc., as described in G-5.</p> <p>The program shall be applied to unemployed people, who graduated from higher education. The practical program encourages them to start new businesses based on market needs.</p>		
Cost		Target Area	
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Ministry of Education/Private		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

D-1)	Strengthening of Vocational Training	Sector	Human Resource Development
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Vocational training in existing schools/universities shall be improved and enhanced at both secondary and higher levels. Educational programs are aimed at enhancing human resources to start or enhance businesses in the transitional economy.</p> <p>In the secondary education, basic business techniques, such as accounting, taxation system and basic business law, will be transferred to individuals, farmers and small groups to start business. As for the tourism industry, programs on service skills and hospitality at hotels and restaurants/cafés will be basic lessons.</p> <p>In higher education, business knowledge such as management skills, trade, market research, etc., will be included in programs to improve and enhance present business skills. Tourism business programs will include tour planning for travel agency, hotel management, promotion, etc., as described in G-5.</p> <p>The program shall be applied to unemployed people, who graduated from higher education. The practical program encourages them to start new businesses based on market needs.</p>		
Cost		Target Area	
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Ministry of Education/Private		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources

2) Efficiency: B/C

3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

D-6)	Community Development Fund	Sector	Social, Community
	<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others		
Outline	<ul style="list-style-type: none"> - Community Development Fund A Community Development Fund shall be established to enable self-reliance and sustainable community development. The resource of CDF will be funded from community savings. The CDF will be used for micro-credit of community business groups. CDF will be a source for improvement of community infrastructure. - Community Action Plan A Community Action Plan (CAP) shall be made by the community. CAP includes community activity/event plans and improvement plans of common facilities in the community. - Implementation of CAP Based on the CAP, the community will implement the plan by utilizing CDF with the support of Aiyl Okmuto and other relevant agencies. 		
Cost		Target Area	Whole Issyk-Kul Zone
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Issyk-Kul Oblast/Community		
Finance Source	Community saving		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

D-7)	Deregulation Concerning CBO Business/community Development	Sector	Social, Community
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>When the community starts various types of activities or small businesses, it encounters many constraints and obstacles, caused by complicated regulations, long procedures and processes. Therefore, deregulation is required to create a preferable legal environment to encourage the community to start their activities and small business. It is considered that some strict regulations are unnecessary for community activities or small businesses. Simplification of the application and permission procedures is most important.</p>		
Cost		Target Area	Whole Issyk-Kul Zone
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Issyk-Kul Oblast/Relevant Ministries		
Finance Source	Donor Assistance		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note: _____)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

E-2)	Strengthening Commercial Banking Sector	Sector	Finance
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
<u>Background</u>	The banking sector in the Kyrgyz Republic requires ongoing institutional, legal, and regulatory reform in order to be able to fulfill its functions of savings mobilization and efficient financial resource allocation. The current banking system is characterized as lacking confidence, being under-lent, and most likely being under-capitalized. Consolidation among 20 existing banks with foreign participation will be an inevitable development. At the same time, banks need to improve their capital requirements, risk management practices, installation of the Basel requirements, internal control, and internal audit, among others. ADB has been providing technical assistance to strengthen the supervision capacity of the National Bank of the Kyrgyz Republic (NBKR, the central bank) and the management of commercial banks and plans to launch a second TA project in 2005. As the needs for institutional improvement of commercial banks are enormous and urgent, additional technical assistance is required in close cooperation with the NBKR and the new ADB-supported project.		
<u>Project Purposes</u>	To strengthen institutional capacities of commercial banks, to build confidence in the banking system and to encourage healthy development of the financial system and the economy.		
<u>Activities</u>	To provide expert advice and work closely with counterparts on all relevant areas of management of commercial banks, including risk management, internal control and audit, loan appraisal, EDP systems, trade finance, among others. In doing so, the level playing field of commercial banks needs to be ensured so as to not discriminate in favour of or against any particular banks. (Details of the project will be worked out once the present ADB TA (to prepare the new project) is complete and in consultation with the NBKR and ADB.)		
Cost	US\$200,000	Target Area	Entire country
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	National Bank of Kyrgyz Republic and commercial banks		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

E-2)	Strengthening Commercial Banking Sector	Sector	Finance
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
<u>Background</u>	The banking sector in the Kyrgyz Republic requires ongoing institutional, legal, and regulatory reform in order to be able to fulfill its functions of savings mobilization and efficient financial resource allocation. The current banking system is characterized as lacking confidence, being under-lent, and most likely being under-capitalized. Consolidation among 20 existing banks with foreign participation will be an inevitable development. At the same time, banks need to improve their capital requirements, risk management practices, installation of the Basel requirements, internal control, and internal audit, among others. ADB has been providing technical assistance to strengthen the supervision capacity of the National Bank of the Kyrgyz Republic (NBKR, the central bank) and the management of commercial banks and plans to launch a second TA project in 2005. As the needs for institutional improvement of commercial banks are enormous and urgent, additional technical assistance is required in close cooperation with the NBKR and the new ADB-supported project.		
<u>Project Purposes</u>	To strengthen institutional capacities of commercial banks, to build confidence in the banking system and to encourage healthy development of the financial system and the economy.		
<u>Activities</u>	To provide expert advice and work closely with counterparts on all relevant areas of management of commercial banks, including risk management, internal control and audit, loan appraisal, EDP systems, trade finance, among others. In doing so, the level playing field of commercial banks needs to be ensured so as to not discriminate in favour of or against any particular banks. (Details of the project will be worked out once the present ADB TA (to prepare the new project) is complete and in consultation with the NBKR and ADB.)		
Cost	US\$200,000	Target Area	Entire country
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	National Bank of Kyrgyz Republic and commercial banks		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project List for the Development of Issyk-Kul Zone

E-4)	Consolidation of Regional Institutions for FDI promotion	Sector	FDI Promotion
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline Background	Issyk-kul Oblast, despite the great potential of the tourism industry, has not succeeded in increasing investment volume except for the massive investment of Kumtor gold mining industry since late 1990s. The centre of economic and tourism development under the Issyk-kul Oblast government has been working as a focal point of investment promotion in the region, compiling the information required for investors and investment project profiles. However, it is not a simple task to attract new investments through self-promotion activities due to problems such as poor infrastructure and government administration. Serious problems also lie in the credibility of data in the business environment and past investments. The statistics of the FDI are currently compiled by the NSC through questionnaires. The data compiled are aligned with the IMF manual, but many have pointed out the inaccuracies due to the procedure. In addition, the data are not fully disclosed to the stakeholders.		
Project purpose	The program aimed for local government officials to have a capacity for investment-promoting activities through improvement of analytical skills, relevant data and policy planning. Improvement of the quality on FDI statistics will be targeted through streamlining the role of local and central government stakeholders. One of the highlighted subjects will support development procedures, operation and management of the enacted and revised FEZ law in Karakol. The program based on the revised law should be consolidated by early 2005 and put into practice in 2005.		
Activities	The training program will be designed primarily to streamline FDI-related data at a national level and on how to utilize data on promotional activities both in the region and centre. Advisory services will be provided periodically for monitoring execution of the policies and data collection and analysis. The activities will be aligned by the pilot project on decentralization of the state administration and development of local self-government and support the oblast government capacity. The conforming data will be materialized by streamlining plural "One stop shop" entities into a single agency, as recommended in the past Investment Summits. Dispatched experts will support the effort of the relevant stakeholders by providing information on capacity building activities.		
Cost		Target Area	
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization		Issyk-kul Oblast government, MEDIT, Investment Round Table Secretariat	
Finance Source		Oblast government budget and technical assistance from the donors	
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high		
Relevancy	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

F-1)	Strengthening of the Farmer's Association Program	Sector	Agriculture
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>The strengthening of the farmer's association is the most important and urgent subject because major subjects such as technical improvement, micro-finance, processing, marketing and extension to change the crops can be realized by the farmer's association. The farmers will belong to the Enterprising Association of Farmers (EAF) (ex. Potatoes EAF, Fruits EAF, Beekeeping EAF). The EAF has headquarters to operate the EAF. The EAFs will be federated at the oblast level and their headquarters will establish the forum to operate the federation.</p> <p>The objective of the federation is the enterprising of agro-business by/for/of farmers. Functions are micro-finance, extension/technical improvement, marketing and processing. The facilities include the micro-finance centre, training centre, marketing & information centre, etc.</p> <p>The components are as follows:</p> <ol style="list-style-type: none"> 1) Establishment of EAFs and headquarters; 2) Establishment of Federation of EAFs and Forum of Headquarters; 3) Establishment of Information & Marketing Centre, Training Centre, Micro-finance Centre. 		
Cost	US\$1,050,000	Target Area	Issyk-Kul Oblast
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization		Issyk-Kul Oblast Administration	
Finance Source		JICA (Technical Cooperation Project)	
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Impact on Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

F-3)	Village Reforestation Program	Sector	Agriculture
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>In the pilot project for village nurseries, the seedlings for firewood/reforestation were/will be planted by the farmers in the nurseries, villages, shores of the lake as shown below (at July 2004).</p> <p>1) Nurseries: Popular 3500, Wild Apricot 1000 2) Villages: Popular 200, Willow 100 3) Shores: Wild Apricot (to be planted in Oct. 2004)</p> <p>The effectiveness are:</p> <p>1) Reforestation of the damaged forests at the shores; 2) Improvement of the environment in the villages (micro-climate, wind-protection, landscape etc.); and 3) Supply of the firewood for poor people.</p> <p>Based on the result of the pilot project, it should be expanded to the entire Oblast. The components are as follows:</p> <p>1) Expansion of the nurseries (Wild Apricot 10000, Popular 10000 newly) 2) Expansion of the villages which will be planted (16 villages) 3) Expansion of the shoes which will be planted (16 ha)</p>		
Cost	Sum(US\$460,000)	Target Area	Issyk-Kul Oblast
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Issyk-Kul Oblast Administration		
Finance Source	JICA (Technical Cooperation Project)		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Impact on Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (note:)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (note:)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note:)		

Note: 1) Sustainability: Availability of necessary man power, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

F-5)	Beekeeping and Natural Medicines Development Program	Sector	Agriculture
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Honey is one of the resources for special agro-products in the oblast as well as fruits and herbs. It is estimated that the demand of honey will increase as souvenir or consumption in the hotels according to the improvement of tourism/increase of tourists. Also, sub-products of beekeeping such as propolis, pollen can be the materials of medicines as well as herbs. Therefore, it is necessary to develop the production of honey and the natural medicine made from the sub-products of beekeeping or herbs.</p> <p>The components are as follows :</p> <ol style="list-style-type: none"> 1) Expansion and technical improvement of the beekeeping ; 2) Improvement of the processing and packaging ; 3) Research and Development of the natural medicines made from herbs or sub-products of beekeeping ; 4) Establishment of the <i>Institute/Laboratory of Agro-Products</i> to research and develop the special ago-products such as natural medicine, honey of high quality or herb tea, processed fruits ; and 5) Expansion of the market of honey or the developed special agro-products. 		
Cost	Sum(US\$1,050,000)	Target Area	Issyk-Kul Oblast
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization		Issyk-Kul Oblast Administration	
Finance Source		JICA (Technical Cooperation Project), Partially	
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (note: _____)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note: _____)		
Impact on Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (note _____)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high		

Note: 1) Sustainability: Availability of necessary man power, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-3)	Production of Tourist Maps by GIS	Sector	Tourism
	Map	<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p><u>Background:</u> As the Issyk-kul region has been designated as a secret zone by USSR, any topographical maps have not been officially published for trekkers and mountain climbers. At present the maps are available from the State Council of National Cartography, but there is no information for tourists. In order to promote trekking and mountaineering tourism, it is absolutely necessary to produce tourist maps and provide for the tourists.</p> <p><u>Projects:</u> To produce tourist maps using GIS maps, which have been produced by this project. The maps requested for production for tourists are:</p> <ol style="list-style-type: none"> 1. Geographical maps around Issyk-kul lake, in which towns and major villages are indicated. 2. A tourist map in which tourists spots, roads and access ways are indicated (1:100,000). 3. A tourist map for trekkers in which major attractive trails are indicated (1:50,000) 5. A map for mountain climbers in which sufficient information for mountaineering is indicated. (1 : 100,000, 1 : 50,000) <p>Those maps are sold in tourist information offices and information centers, established through the support of JICA, TACIS and GTZ.</p>		
Cost	US\$ 10,000	Target Area	The Study Area of Issyk-kul zone
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	The State Council of Cartography in cooperation with The State Committee of Tourism, Sports and Youth Policies		
Finance Source	The State Council of Cartography in cooperation with The State Committee of Tourism, Sports and Youth Policies		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: The Kyrgyz government has a development policy to promote nature oriented tourism. It will generate incomes to publisher)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Production of GIS base maps is part of the Study.)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note : It will contribute to promotion of tourism and arrival of tourists; other cultures will also have major impacts.)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: Expansion of tourism will generate a wide range of job opportunities for the local communities)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Promotion of nature tourism fits the national tourism development policy and expectation of local communities.)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources

2) Efficiency: B/C

3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-4)	Improvement of Tourist Statistics Technology	Sector	Tourism
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p><u>Background:</u> Absence of a reliable statistics system is the most critical problem in planning for tourism development. Incoherent understanding and disunity of concepts for compilation by different authorities generate tremendous discrepancies among each statistics table of tourism. Those discrepancies come about due to the following 2 reasons: 1. Insufficient knowledge of tourism statistics, and 2. Lack of statistical technology in the related Committees and Oblast administration. It makes formulation of appropriate development plans and strategies extremely difficult. Technology of appropriate statistics is strongly required.</p> <p><u>Project:</u> The project aims at allocating an experienced statistics expert in the State Committee of Tourism, Sports and Youth Policies and National Statistics Committee. His duty should be: 1. To build up the most reasonable process and measures for collection of tourism-related statistical data 2. To establish data collection measures among the related authorities and companies 3. To organize the system to verify collected data 4. To establish the analysis and compilation of tourism statistical data in compliance with WTO (World Tourism Organization) methods. 5. To transfer statistical technology to Kyrgyz personnel 6. The assignment shall be contracted as below. 7. An expert of the state committee of Tourism, Sports and Youth Policies in Bishkek will be assigned and the assignment shall be a minimum of 2 years.</p>		
Cost	US\$ 1,000,000 1 expert for 2 years	Target Area	Kyrgyzstan and Issyk-kul Zone
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	National Statistical Committee or State Committee for Tourism, Sports and Youth Policies		
Finance Source	Extend Technical Assistance		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Establishment of the reliable statistics is desired)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Dispatch of experts with necessary equipment)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note: Contribute to establishment of social and economic information)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note: No direct effects)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Necessity for the establishment of reliable statistics is widely understood by all stakeholders)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-5)	Tourism Human Resource Development Package	Sector	Tourism
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p><u>Background :</u> Lack of trained manpower is the most serious problem facing Kyrgyz Tourism. Insufficient knowledge of tourism services is critical. It comes from the absence of capable teachers and trainers in the universities and academies who really understand international tourism services. The most important task of human resource development for the tourism sector in Kyrgyzstan is “training of teaching staff and trainers of tourists services in the hotels”.</p> <p><u>Projects: for the students</u> The development package for human resource development is composed of the following elements:</p> <ol style="list-style-type: none"> 1. Dispatching JICA Senior Volunteers (SV) to the tourism faculty of universities to provide training in hotel services. They will train professors, teaching staff, and trainers in the universities and vocational schools. They will be assigned as below: Two SVs to: 1) Manas Kyrgyz-Turkish University, 2) Kyrgyz National university of Economy and Commerce, 3) Tourism Academy, 4) University of Tourism, Management and Business, 5) Bishkek Academy of economy and Finance, and 6) university of European Civilization. This is a total of 12 SVs. 2. The SVs will be requested to re-train trainers in the tourism industries in order to refresh and augment knowledge of the latest techniques in tourism services. 3. The SVs will prepare service manuals with reference to the Kyrgyz culture in order to sustain the results of technical cooperation. Manuals should be developed and published for all people working in tourism and concerned with the industry in Kyrgyzstan. 		
Cost		Target	Bishkek
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025	Area	
Responsible Organization	Committee of Tourism, Sports and Youth Policies		
Finance Source	Extend Technical Assistance		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Tourism generates a large share of GDP)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: It is the important issue on Kyrgyz side)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input type="checkbox"/> good impact <input checked="" type="checkbox"/> adverse impact (Note : It will be a big impact for Kyrgyz vocational training and professional education)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: There may be not direct effect, but promotion of tourism will generate job opportunities.)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: This is the most requested by all stakeholders.)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-6)	Cooperation of Regional Tourism Promotion in Central Asia	Sector	Tourism
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p><u>Background :</u> Most tour packages for Central Asia are multi-destination packages composed of two to three countries. Therefore, increased tourists in each country are dependant on increased tourists in the region, which are directly related. Regional cooperation of tourism promotion is essential for prosperity of tourism in each country. The Study Team verified that support for regional joint promotion was extremely effective for reinforcement of tourism both regionally and in each country. This was through a workshop for the Regional Joint Tourism Promotion with participating representatives from the five regional member countries, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. This was organized by the Study Team in Cholpon-Ata in July 2004. It was also agreed that the joint workshop should be held annually with the chair rotating to each member country.</p> <p><u>Program :</u> It is aimed at establishing a regional tourism promotion system by organizing an “Association of Regional Tourism Development” between the 5 Central Asian countries as above. Joint promotion will be held annually with chair rotation to each member country. In order to ensure sustainability of the association, it will be most effective that the second meeting be held as soon as possible as an extension of this Study. The Study Team will act as the secretariat of the meeting in the early stage but will hand over to the member countries step by step. According to lessons from previous experience, it is necessary to consider financial support for members to attend the meeting, including airfares to the meeting site, local transport and accommodation.</p>		
Cost	US\$ 500,000	Target Area	Capital cities of Member Countries
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2015 <input type="checkbox"/> 2025		
Responsible Organization	All tourism related authorities of member countries.		
Finance Source	Contribution of member countries & Donor		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: It was agreed to hold annually in the member countries)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: Financial support for attendants shall be considered)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input type="checkbox"/> good impact <input checked="" type="checkbox"/> adverse impact (Note: Increase of tourists may generate social impacts on local society in the member countries)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: No quick effects, but extension of tourism will contribute to poverty eradication through job opportunities and tourism incomes)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note : It was recognized by all participants as being extremely important)		

- Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-6)	Cooperation of Regional Tourism Promotion in Central Asia	Sector	Tourism
		■ Program □ Project □ Others	
Outline	<p><u>Background :</u> Most tour packages for Central Asia are multi-destination packages composed of two to three countries. Therefore, increased tourists in each country are dependant on increased tourists in the region, which are directly related. Regional cooperation of tourism promotion is essential for prosperity of tourism in each country. The Study Team verified that support for regional joint promotion was extremely effective for reinforcement of tourism both regionally and in each country. This was through a workshop for the Regional Joint Tourism Promotion with participating representatives from the five regional member countries, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. This was organized by the Study Team in Cholpon-Ata in July 2004. It was also agreed that the joint workshop should be held annually with the chair rotating to each member country.</p> <p><u>Program :</u> It is aimed at establishing a regional tourism promotion system by organizing an “Association of Regional Tourism Development” between the 5 Central Asian countries as above. Joint promotion will be held annually with chair rotation to each member country. In order to ensure sustainability of the association, it will be most effective that the second meeting be held as soon as possible as an extension of this Study. The Study Team will act as the secretariat of the meeting in the early stage but will hand over to the member countries step by step. According to lessons from previous experience, it is necessary to consider financial support for members to attend the meeting, including airfares to the meeting site, local transport and accommodation.</p>		
Cost	US\$ 500,000	Target Area	Capital cities of Member Countries
Target Year	■ 2005 □ 2015 □ 2025		
Responsible Organization	All tourism related authorities of member countries.		
Finance Source	Contribution of member countries & Donor		
Evaluation			
Sustainability	□ low □ medium ■ high (Note: It was agreed to hold annually in the member countries)		
Efficiency	□ low ■ medium □ high (Note: Financial support for attendants shall be considered)		
Impact on Social Environmental	□ no impact □ good impact ■ adverse impact (Note: Increase of tourists may generate social impacts on local society in the member countries)		
Effect on Poverty Reduction	□ low ■ medium □ high (Note: No quick effects, but extension of tourism will contribute to poverty eradication through job opportunities and tourism incomes)		
Relevancy	□ low □ medium ■ high (Note : It was recognized by all participants as being extremely important)		

- Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-8)	Historical and Archaeological Museum in Cholpon-Ata	Sector		Tourism
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others		
Outline	<p><u>Background:</u> There is at present a Cholpon-Ata museum in the center of Cholpon-Ata town. The museum exhibits pre-historic objects and Kyrgyz ethnic features but is limited in terms of the history of the Kyrgyz ethnic group. However, the museum is required to present exhibitions of inter-ethnic historical and cultural features, because Issyk-kul Resort Area is an international town and many CIS and Kyrgyz domestic tourists have a great chance of contacting each other on the ancient Silk Road. Therefore the exhibition of the museum should present a history of exchange in human activities and culture throughout the Central Asia Region.</p> <p><u>Project:</u> It is to establish a new museum in which archaeology, history, human science and natural science of the area around the Silk Road (centering on the Issyk-kul region) are exhibited. It will also promote friendship and interrelations, particularly among CIS countries and others, such as Europe, China and Japan. It is proposed to establish the museum through the contribution of attractively constructed suitable buildings and renovations with the financial support of JICA, using funds from Grass Route Grant aid and Cultural Grant aid.</p>			
Cost	US\$ 500,000	Target Area	Cholpon-Ata	
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025			
Responsible Organization	Issyk-kul Oblast, Cholpon-Ata town and Science Academy			
Finance Source	Extend Assistance			
Evaluation				
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: It is an income generating facility)			
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: It is undertaken by the Japanese side)			
Impact on Social Environmental	<input type="checkbox"/> no impact <input type="checkbox"/> good impact <input checked="" type="checkbox"/> adverse impact (Note : It will contribute to reinforce the friendship and unity of the minds of the CIS tourists)			
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note : Increased tourists will indirectly contribute to poverty reduction)			
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Importance and effects of exhibition are well understood by tourists and organizer)			

Note: 1) Sustainability: Availability of necessary manpower, organization, resources

2) Efficiency: B/C

3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-12)	Improvement of the Reservation System Using IT System	Sector	Tourism
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p><u>Background :</u> The present reservation system for major tourist accommodation facilities such as resort hotels and sanatoriums are by telephone and tele-fax. The primitive telephone line network results in frequent problems, such as disappearance of reservations, and generates bad reputations by tourists (especially from other CIS countries). Announcements of rooms for rent in private houses are being undertaken by placing small bills on walls, fences and doors by owners, inviting only fortunate tourists who have seen the bill. In order to establish more efficient means of reservation, it is recommended that an IT network system be established, including information of room reservations.</p> <p><u>Project :</u> Computers will be provided to Balykchy, Cholon-Ata and Karakol towns and 17 major villages to build up the reservation system in the IT network system around Issyk-kul lake. The information is composed of two main groups, one being the group of resort hotels, sanatoriums, small hotels and lodges, and the other being the group of B&B guest houses and private rental rooms.</p> <ol style="list-style-type: none"> 1) The resort hotels, sanatoriums and small hotels and lodges will be connected online with established reservation centers in Balykchy, Cholpon-Ata and Karakol. These must be accessible by tourism agencies and individuals throughout the world. 2) The information on B&B guest houses and private rental rooms are registered to the village sites by owners and are connected into the regional IT network. 3) Both sites should be accessible through public internet networks. 		
Cost	US\$ 70,000	Target Area	Balykchy, Cholpon-Ata, Karakol and other 17 villages
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Provider of the network (Private Sector)		
Finance Source	Each hotel, sanatorium, lodge, guest house, individual rental room owner		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: It will increase revenue for each group)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note : Initial costs are relatively high for villages)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note : It will contribute to popularizing computers in villages)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note : Increased revenue in the village contributes to reduction of poverty)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note : It will be appreciated by both villagers and tourists)		

Note: 1) Sustainability: Availability of necessary man power, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-13)	Supporting Measures for Development of FEZ Tourism Development Area	Sector	
		■ Program	□ Project □Others
Outline	<p>Background : Considerable legal, economic and social barriers in Kyrgyzstan stagnate foreign and domestic investments in Issyk-kul tourism. It is necessary to remove those barriers, which is expected by potential investors. In order to develop tourism FEZ (Free Economic Zone) to promote investments for Issyk-kul tourism zone, the public sector shall support the private sector to solve the following barriers:</p> <p>Program: The public sector shall support investment by the private sector in order to promote tourism development, and the following incentives and public investment shall be implemented to invite private investors.</p> <ol style="list-style-type: none"> 1. Unification of gap between official and actual requirements and application procedure for private investments. 2. Tax exemption to the investors for infrastructure and facilities in FEZ, exemption of income tax, import duty, tax for money transfer and credit, refund of VAT at the border posts. 3. Preference of bank loan for investors in FEZ. Present high interest (25%) and short terms of loan (max. 12 years) should be amended for promotion of investments for tourism sector. 4. Preference of property rights in FEZ. To support land acquisition and extend period of property rights of land and buildings to maximum 95 years in the FEZ zone. 5. Public investment for infrastructure in FEZ. Upgrade of economic and social infrastructure, transport and telecommunication. 6. Support for international marketing for FEZ investors. The State and Oblast should grant financial and administrative support for marketing of tourism in the international markets. 7. Legal security for investors in FEZ. To secure legal protection for invested property, business conditions and activities. 8. Social Security of the business environment in FEZ. To eradicate general crime, robbery and extortion by policemen and bribing by officials. 		
Cost		Target Area	Tamchy Village, Issyk-kul Oblast
Target Year	□ 2005 ■ 2010 □ 2025		
Responsible Organization	Ministry of Economy, Trade and Industry, Ministry of Transport and Communication		
Finance Source	State Budget		
Evaluation			
Sustainability	□ low ■ medium □ high (Note: Absence of manpower with experience of FEZ)		
Efficiency	□ low ■ medium □ high (Note: Absence of know-how of development of FEZ)		
Impact on Social Environmental	□ no impact ■ good impact □adverse impact (Note : Arrival of more tourists with different culture and living philosophy will be a big impact on local society)		
Effect on Poverty Reduction	□ low ■ medium □ high (Note: Increases employment in the local community)		
Relevancy	□ low □ medium ■ high (Note: Development of tourism is expected by economic sector)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources

2) Efficiency: B/C

3) Relevance: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-14)	Invitation of Sports Training Camp	Sector	Tourism
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Background: Accumulation of sufficient accommodation, treatment facilities and sunny weather make Issyk-Kul Lake zone an attractive destination for many sports lovers and professional athletes. The big price discount for accommodation during the shoulder and low seasons are attractive to organizers of training camps. The Issyk-Kul zone is considered to be one of the most suitable locations for sports training camps since the Soviet period.</p> <p>In order to compensate for the fall in occupancy of accommodation during low and shoulder seasons, sports training camps are considered to be one of the most attractive and appropriate tourism products. The high altitude of the Issyk-Kul region is also considered to be favorable in strengthening and increased durability of athletes' bodies.</p> <p>Program: Sports training camp should be attractive tourism products for both hotels and athletes. Promotion of those sports training camps between October and May should provide good compensation for the low season and marketing will be targeted not only in Kyrgyzstan but all the CIS and other neighboring countries. The untouched clean natural environment should be an important condition for the sports training camps.</p> <p>Support of invitations for sports training camps in the Issyk-Kul zone should be undertaken through the cooperation of public and private sectors. In order to develop a sports training tourism product in Issyk-Kul zone, accumulation of the following functions are required:</p> <ol style="list-style-type: none"> 1. Development of sports facilities are the responsibility of Oblast administration 2. Medical treatment and recuperation programs are the responsibility of the public sector 3. Necessary infrastructures, such as electricity, water, sports field and hospital 4. Accommodation, healthy food and amenity facilities are the responsibility of the private sector 5. Accommodation at moderate prices and service quality are the responsibility of the private sector 		
Cost		Target Area	Cholpon-Ata
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Issyk-kul oblast administration, Issyk-kul Hotel Association		
Finance Source	General Budget of Oblast, Cholpon-Ata town, hotels in issyk-kul		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Frequent marketing to sports association is required)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: Initial investment for equipment is required)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note : It will contribute to the promotion of sports in the local community)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Development of new tourism products for the low season is a common task for hotels and sanatoriums in Issyk-kul zone)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevance: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

G-15)	Invitation of Convention Tourism to Issyk-kul Zone	Sector	Tourism
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Background: Convention tourism is already one of the most important tourism products in Issyk-kul zone. The beautiful landscape and natural settings are ideal after-convention tourism resources. This has resulted in invitations for many conventions, seminars, workshops and conferences, which are held by public and private sectors, international organizations and donors. They are at present concentrated in May, June, September and October, just before and after the peak season. They are certainly compensating for decreases in tourist numbers and revenues during the low season and are expected to be the main tourism product during low seasons and winter.</p> <p>Program: The considerable support for Invitation of International Convention to Issyk-kul zone will be undertaken in line with the following requirements:</p> <ol style="list-style-type: none"> Promotion of the International Convention to the potential markets, publicity, HP Convention tourism is one of the most expected tourism products. The famous name of Issyk-kul Lake, existing convention rooms in hotels, and accumulation of more than 20,000 beds in accommodation facilities developed within 50 km of the lake are its advantages. Development of publications about detailed information to distribute to organizers. Possible support of the Japanese government is to issue the publication for necessary information, such as “agent information brochure” for convention tourism organizer. In this, detailed information on the convention hall, equipment, prices, accommodation, manpower and after-convention programmes are stated. To produce a service manual for convention tourism, in order to upgrade tourism services for convention tourists. To prepare educational material for upgrading of service techniques in the service sector of hotels and restaurants in Issyk-kul zone. Development of after-convention tourism products for the convention tourists. Recommendation for Improvement of Accessibility, In order to improve accessibility to Issyk-kul zone, improvement and coordination of traffic modes shall be considered. Train, bus, taxi, private cars and airplanes will be the major traffic modes in accordance with urgency and necessity of the participants. 		
Cost		Target Area	Issyk-kul Oblast
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	State Committee for Tourism, Sports and Youth Policy, Issyk-kul Oblast		
Finance Source	State budget and Contribution of hotel Industry		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: Budget depends mainly on contribution of private sector)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: If financial inputs are sufficiently implemented)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note : Development of off season tourism may change employment in the local labor market and the life of residents.)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note : Development of off season tourism will generate various employment levels in the local labor market.)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note :)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevance: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

H-1)	Promotion of juice, jam, cider, honey liquor, medical materials, vegetable processing	Sector	Agriculture, Industry and Commerce
		<input checked="" type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>To promote agro-processing activities in local communities, particularly using local agricultural resources such as orchards, natural herbs, honey and vegetables. This is important to increase local community incomes and to create the high value-added marketing products in local enterprises. Increased competitiveness in selling local products in domestic and overseas markets is another top priority of their activities. In the industrial sector, the following activities should be established to support and promote local agro-processing industries:</p> <ol style="list-style-type: none"> 1. Technology assistance to improve quality/design to support and guide sustainable agro-processing technologies and marketing methods (packaging, bottling, labeling, etc) to local producers, and to induce new and unique local agro-processing products to domestic and overseas markets. 2. Establishment of reliable financial supporting systems such as low rate of loan and export guarantee support, if necessary, for SME. This would accelerate new agro-processing products such as unique Cider & Honey Wines and Medical Herb raw material production. 3. Strengthening of IT network technologies among the SME to expand and strengthen domestic and overseas marketing as well as reliable commercial ordering systems. 		
Cost	Inclusive in E	Target Area	Issyk-Kul Oblast
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Ministry of Agriculture, Water Resources and Processing Industry, Ministry of Economic Development, Trade and Industry		
Finance Source	METI, State Commission for Business Development, UNIDO		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: Lack of industrial designer and system engineer)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: PPP is strongly required for efficiency)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note: There is no direct production activities in this Centre)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Expansion of local products in domestic and overseas markets could reduce un- and under-employment labor in local areas. Thus, passive effect on poverty reduction could occur caused by the revitalization of local economy.)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

H-3)	Networking of Micro/small Manufacturer	Sector	Industrial Development
		■ Program ■ Project □ Others	
Outline	<p>Micro/small manufacturing sector is required to be networked for product development collaboration due to lack of self-development technology, know-how, marketing power and financial support. Micro Manufacturing Network Platform should be established to organize effective production collaboration, marketing and distribution.</p> <p>Other related support facilities, such as trade centres and banking and financial collaboration, are also desirable to integrate the Micro Manufacturing Network Platform for further development in the Micro Manufacturing sector.</p> <p>In addition, Micro Manufacturing Network in association with IT-related knowledge should be encouraged in order to adjust the new market demand in the local area:</p> <ol style="list-style-type: none"> 1. Formulation of horizontal integration among central and local enterprises, for example in developing new marketing field. 2. Technical support from the Micro Manufacturing Network Platform to entrepreneurs in the Micro Manufacturing sector (network collaboration in the field of industrial design improvement, trade technology, product technology development, business support (IT revolution), package material procurement, etc.) 		
Cost	Sum (US\$ 1.0 million)	Target Area	Balykchi -Tamchy –Karakol Corridor
Target Year	□ 2005 ■ 2010 □ 2025		
Responsible Organization	MEDTI, Ministry of Agriculture, Water Resources and Processing Industry		
Finance Source	n.a.		
Evaluation			
Sustainability	□ low ■ medium □ high (Note: It is required to educate the collaboration mind among new comers and to improve accessibility to global market information)		
Efficiency	□ low □ medium ■ high (Note: Re-use idle machines and workshop space in SOE)		
Impact on Social Environmental	□ no impact ■ good impact □ adverse impact (Note: Increase entrepreneurship mind in local area and reduce un- and under employment)		
Effect on Poverty Reduction	□ low ■ medium □ high (Note: Local economic activities could be increased)		
Relevancy	□ low □ medium ■ high (Note: Increase security and reliability in production sector)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

H-4)	Establishment of Package Material Bank	Sector	Industrial Development
		<input checked="" type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Product development in the Micro and SME sectors is required to collaborate their manufacturing activities. This will provide more economical cost operation arising due to lack of self-development technology, know-how, marketing information, financial support and small bargaining power in raw material purchases (required lot is too small for selling-factory base). Establishment of the Package Material Bank in Balykchi could be a symbol of SME product development collaboration in order to increase cost competitiveness and to create high-standard products in domestic and overseas markets.</p> <p>Main roles of Package Material Bank are:</p> <ol style="list-style-type: none"> 1) To purchase packaging-related materials on behalf of Micro- and SME, such as packaging glass bottles, caps or labeling sheets (relatively large amounts) and to distribute them to Micro- and SME in small amounts. 2) To print high-quality labeling in order to request Micro-and SME factories 3) To give guidance off product needs in the domestic and overseas markets, encouraging Micro and SME collaboration activities. 		
<p style="text-align: center;">System of the Package Bank</p>			
Cost	Sum (US\$)	Target Area	Balykchy -Tamchy –Karakol Corridor
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization		MEDTI, Ministry of Agriculture, Water Resources and Processing Industry	
Finance Source		MEDTI, SC for Business Development, International Organization, Private	
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: It is required to educate collaborative minds in new comers and to improve accessibility to global market information)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Re-use idle machines and workshop space in SOE)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note: Increase entrepreneurship mind in local area and reduce un- and under employment)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: Local economic activities could be increased)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: Increased security and reliability in production sector)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

H-5)	Cargo Terminal/ Trading Center in Balykchy	Sector	Commerce & Transportation
		<input checked="" type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Issyk-Kul region, as well as the nation, has inactive retail markets and limited wholesale market power for local industrial products. Thus, it is necessary to establish integrated wholesale and trade market facilities with IT development and to strengthen the reliable regional and national distribution network systems.</p> <p>To improve accessibility in domestic and overseas markets to revitalize local industry, it is required to integrate the scattered wholesale functions in the region into the new Trading Center (wholesale & marketing) and to construct modern Cargo Terminals for their own product distribution to domestic and overseas markets both efficiently and economically.</p> <ol style="list-style-type: none"> 1. Establishment of a New Trading Center in Balykchi FEZ. The strengthening of national distribution network system (for example rehabilitation of railway facility, trunk road improvement, and IT network development) is also necessary to increase the reliability of trade and commerce activities in the region. 2. One-stop-service in the Trading Center should be allocated for new business visitors. 3. Banking and insurance functions with ICT network are required to increase the reliability of local business trade. 4. Packaging and bottling supply service center (mainly packaging and bottle depot for food processing companies) 5. Making Free Trade Agreements with neighboring countries (free border trade, etc.) 		
Cost	Inclusive in N-3)	Target Area	In the Balykchy FTZ
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Ministry of Economic Development, Trade and Industry, Ministry of Transportation and Communication,		
Finance Source	METI, Issyk-Kul Oblast Government, International Donors		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note: International trade experts and SE personnel are required in the management sector)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note: Amount of initial investment is high)		
Impact on Social Environment	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note: Integration of wholesale activities could impact on local community)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: No direct effect on poverty reduction at local area can be considered)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (note: Integration of wholesale marketing activities are desired by many enterprenures)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

H-6)	IT Park in Tamchy FEZ	Sector	Telecommunications Sector
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>There is almost no computerization environment in the Issyk-Kul enterprises and almost no IT specialists and programmers in the region (due to lack of job opportunities). Thus, ICT platform development for information exchange within the domestic as well as world market should be a first priority among all industrial and commercial fields in the Issyk-Kul zone. The development facilities of ICT platform are described as follows:</p> <p>1)ICT in management sector should be organized as a flat NW of business activities such as market information, new products R&D, commodity logistics & operation.</p> <p>2)ICT Technical Maintenance Center for maintaining sustainable services for new demand with new ICT technologies in the industrial and commerce sectors.</p> <p>3)ICT Network among various local business depots- local product centre, micro manufacturing network, cargo terminal/trading centre, and regional business training centre, should be integrated in the ICT Technical Maintenance Centre in Tamchy IT Park. This will promote further economic development.</p> <p>4)E-government administration services should be started.</p> <p>5)Development of various enterprises for creating a regional industrial cluster (common ITC platform among agro-process, Micro-and SM industries, tourism, local university, wholesale marketing (ordering and shipment services))</p> <p>6)To be a well known area world-wide (such as Healthy Issyk-kul Paradise) with a comfortable common ICT management</p> <p>7)Set-up of medical support system in this region to secure health treatment tourist/s visitors coming from other regions</p> <p>8)To be a centre of health and medical ICT specialists (cooperation with National IT Centre (Bishikek))</p>		
Cost	Sum (US\$ 1.0 million for ICT Technical Maintenance Center)	Target Area	New Tamchy IT Industrial Park
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization		Ministry of Transportation and Communication	
Finance Source		International donors	
Evaluation			
Sustainability	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note: No SE and technologies. FTTH network is not started at all.)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: Analogue telecommunication lines are already installed along the lake shore and within the city)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note: Remote businesses (reservations, etc) could be more reliable with other societies using ICT platform. Level of safety in the social environment will increase.		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: Increase of economic activity in reliable society influence poverty reduction.)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: To do the business, to know the importance of ICT)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-1)	Surface Water Resource Development in City	Sector	Utilities (Water Supply and Sewerage)
	<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others		
Outline	<p>In three cities of Issyk-Kul Oblast, the water supply system is mainly served by pumping from deep groundwater (70-100m deep wells) as there are no sources of good water quality and there was free electricity in the Soviet era. However, operational bodies now struggle with expensive electricity payments. Increased operation costs influence water charge rates to customers.</p> <p>Surface water sources not requiring pumping facilities should be used to meet the overall water requirement.</p> <p>Project components are: Construction of water intake from surface water source Construction of conveyance pipeline Construction of purification plant or sedimentation basin</p>		
Photograph	<div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">River for Water Source in Karakol Pumping Station for Groundwater in Balykchy</p>		
Cost	US\$1 million x 3 = US\$3 million	Target Area	Balykchy, Karakol, Cholpon-ata
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	SCAC, VodaCanal		
Finance Source	Karakol – SDC, Balykchy – None, Cholpon-Ata – None		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input type="checkbox"/> good impact <input checked="" type="checkbox"/> adverse impact		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high		
Relevancy	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-2)	Rehabilitation of Cholpon – Ata Sewerage Treatment Plant	Sector	Utilities (Water Supply and Sewerage)
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>The sewerage system of Cholpon-Ata city was designed and constructed in the Soviet period. Because of lack of sufficient finance, the operational body (VodaCanal) cannot maintain it properly. Thus, systems are seriously damaged and face the risk of releasing untreated waste water into Issyk-Kul Lake. Untreated waste water can cause pollution in groundwater used daily as drinking water. To cope with such conditions, the following are proposed:</p> <ul style="list-style-type: none"> • Rehabilitation of treatment facilities (sewerage treatment plant, sewer pipe, pumping station) • Capacity building for VodaCanal 		
Cost	Sum (US\$10 million)	Target Area	Cholpon-ata
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	SCAC, VodaCanal in Cholpon-Ata		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note: _____)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-3)	Renovation of VodaCanal Management	Sector	Utilities (Water Supply and Sewerage)
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Voda Canal in each city (the operation body for both water supply and waste water treatment) is facing financial and technical problems caused by insufficient collection of charges and inappropriate maintenance of sewerage facilities. The capacity building of Voda Canal through training of its staff is necessary to address this problem.</p> <p>Training programs will include the followings:</p> <p style="padding-left: 40px;">Improvement of Collecting System and Customer Department Assistance for Maintenance Skills Awareness Campaign for Customers Office Equipment (Computers) Introduction Machinery (Truck and Hoes etc.) Procurement</p>		
Photograph	 <p style="text-align: right;">Voda Canal in Balykchy</p>		
Cost	Inclusive in I-2)	Target Area	Balykchy and Karakol
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	SCAC, Voda Canal		
Finance Source	Balykchy – None, Karakol – None		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note: _____)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note: _____)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note: Sanitation and hygiene environment can be improved)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I- 4)	Cleanup campaign of Garbage in Tourism Spot	Sector	Solid Waste management
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Tourist feel uncomfortable seeing garbage left at site-seeing areas, such as the shoreline of Issyk-Kul Lake. The situation may worsen due to increased future tourism, which will result in increased waste volumes. To entice tourists to return, it is important to provide a clean image in the Issyk-Kul tourism area.</p> <p>Another problem is the low collection service rate. This is the reason for the low financial viability of garbage disposal companies.</p> <p>Increased numbers of collection contracts for garbage and improvement in public awareness (importance of environment for tourism sector development) are the purpose of the program.</p> <ul style="list-style-type: none"> • Periodic campaigns for cleaning main tourism areas, shore line, trunk road and so on , through local community initiatives. • Campaign or advertisements to promote payment contract 		
Cost	US\$30,000 each	Target Area	Karakol, Cholpon-Ata, Balykchy
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	City Authorities		
Finance Source			
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-5)	Rehabilitation of Power Distribution Network (Vostokelectro empowerment)	Sector	Energy (Electricity)
		<input checked="" type="checkbox"/> Program <input type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>24% of total electricity consumption has not been collected from the customers and 15% of electricity is technically lost at the distribution stage due to low maintenance skills and aged facilities. As a result, no electricity companies are financially viable or provide a stable supply for customers. This program aims to improve financial viability of the companies and stable electricity supply. Program components are as follows:</p> <p>1) Improvement of Distribution Network (Upgrading of distribution line, substation facilities) 2) Capacity Building for Operating Bodies Improvement of Charging Systems (Meter Equipment) Training for Maintenance Skills</p>		
Cost	US\$ 10 million	Target Area	Whole Oblast
Target Year	<input checked="" type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Vostokelectro		
Finance Source	Extend Assistance		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-6)	Improvement of Capacity of Trunk Line (to Bishkek and Circuit of lakeshore)	Sector	Telecommunications
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>The telecommunication network of Issyk-Kul Oblast consists of:</p> <ul style="list-style-type: none"> - Trunk radio-relay network Bishkek-Cholpon Ata-Karakol based on SDN, with a capacity of 155 Mbps, equivalent to 1,920 lines. - Trunk analogue radio-relay network Bishkek-Bokonbaevo-Karakol - Analogue underground cable line Balykchy-Cholpon Ata-Karakol (based on K-60P and MKS 4x4x1.2) <p>In order to create a reliable trunk network with high capacity, construction of a high speed SDH network is necessary. This is to consist of modern digital equipment, and the introduction of a wide range of ISDN services to the telecommunications network.</p> <p>Development work will include: Issyk-Kul round SDH cables, 600km, Cholpon Ata – Kemin SDH cable, 100km and equipment</p>		
Cost	US\$5.7 million	Target Area	Cholpon-Ata – Bishkek Issyk-kul Lake Around Area
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Kyrgyz Telecom		
Finance Source	Kyrgyz Telecom		
Evaluation			
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources

2) Efficiency: B/C

3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-7)	Digitization of Telephone Switchboards, Increasing the Telephone Capacity	Sector	Utilities(Telecommunications)																												
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others																													
Outline	<p>In the existing telephone network with free access, functions include:</p> <ul style="list-style-type: none"> • 10 telephone stations in 4 cities with total projected capacity 27,152 clients. The percentage of digitization is 19.8%. • 71 telephone stations in the villages with total projected capacity 19,930 clients. The percentage of digitization of switching equipment is 14.2%. • The international and intercity communication of the Oblast is made through digital stations AXE-10 of Karakol and Bishkek cities. <p>For creation of a multi-service regional network (Fax, Internet, IP-telephone, intellectual and corporate network, etc.) and provision of a united network and service control, the substitution of existing analog digital switching boards is necessary.</p> <p>Current Conditions of the Digital Switching Facilities In Issyk-Kul Oblast</p> <table border="1"> <thead> <tr> <th colspan="2">City</th> <th>Capacity</th> <th>Digital</th> </tr> </thead> <tbody> <tr> <td colspan="2">Cholpon-Ata</td> <td>3,432</td> <td>3,432</td> </tr> <tr> <td colspan="2">Balykchy</td> <td>7,100</td> <td></td> </tr> <tr> <td colspan="2">Karakol</td> <td>15,620</td> <td>1,948</td> </tr> <tr> <td colspan="2">Kadji-Say</td> <td>1,000</td> <td></td> </tr> <tr> <td rowspan="2">Total</td> <td>City telephone stations</td> <td>27,152</td> <td>5,380 (19.8%)</td> </tr> <tr> <td>Village telephone stations</td> <td>19,930</td> <td>2,832 (14.2%)</td> </tr> </tbody> </table>				City		Capacity	Digital	Cholpon-Ata		3,432	3,432	Balykchy		7,100		Karakol		15,620	1,948	Kadji-Say		1,000		Total	City telephone stations	27,152	5,380 (19.8%)	Village telephone stations	19,930	2,832 (14.2%)
City		Capacity	Digital																												
Cholpon-Ata		3,432	3,432																												
Balykchy		7,100																													
Karakol		15,620	1,948																												
Kadji-Say		1,000																													
Total	City telephone stations	27,152	5,380 (19.8%)																												
	Village telephone stations	19,930	2,832 (14.2%)																												
Photos	 <p>Operator System in Balykchy</p>																														
Cost	US\$3 million	Target Area	Karakol, Cholpon-Ata, Balykchy, Kadji-Say, etc.																												
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025																														
Responsible Organization	Kyrgyz Telecom																														
Finance Source	Kyrgyz Telecom																														
Evaluation																															
Sustainability	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)																														
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)																														
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)																														
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)																														
Relevancy	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high																														

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-8)-1	Improvement Plan of Issyk-Kul Ring Road	Sector	Transport
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>The ring road has not yet deteriorated to the level that overall reconstruction work urgently required. However, the pavement is in such poor condition that substantial routine and periodic maintenance is required to maintain the road in good order. With a limited national budget, roads should be improved using a cost-efficient approach. The purpose of this project is to establish the long-term strategy and action plan of maintenance and rehabilitation works that enables efficient improvement in the most important regional roads. This will minimize life-cycle cost instead of the current patchwork approach.</p> <p>This project consists of the following:</p> <ul style="list-style-type: none"> - Introduction of database system and inspection system of roads - Inspection of conditions of ring road - Establishment of long-term action plan of maintenance and rehabilitation. 		
Cost	US\$1 million	Target Area	Issyk-Kul Ring Road (438km)
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	PLUAD 4		
Finance Source	Public sector		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-8)-2	Improvement of Ring Road in City areas	Sector	Transport
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Although the ring road is classified as an “international motor road”, which belongs to the national administration, cities have responsibility for maintenance of roads within its area. Since the cities lack sufficient budget for road maintenance, pavement conditions within the city areas is generally worse than in other sections. Considering that road conditions in city areas attract tourists’ attention, priority should be given to pavement improvement of roads in city areas.</p> <p>The project sites are: - Cholpon Ata (5km) - Balykchy (5km) - Karakol (4km) - Bakonbaev – Kajy Say (20km)</p>		
Cost	US\$16 million	Target Area	Cholpon Ata, Balykchy, Karakol, Bakonvaev-Kajy Say
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	Cholpon-Ata, Balykchy, Karakol, and PLUAD 4		
Finance Source	Cholpon-Ata, Balykchy, Karakol , and MOTC		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevanc	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
 2) Efficiency: B/C
 3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-8)-3	Emergency Maintenance of Ring Road	Sector	Transport
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>Although the ring road is maintained by the government (PLUAD-4, MOTC), the road condition is becoming worse annually due to the limited amount of maintenance work now undertaken. In addition to ordinary routine and periodic maintenance work, emergency maintenance work should be carried out in order to extend the life of pavements. Approximately 5% of the ring road (20km) will be the target of the additional maintenance work.</p>		
Cost	US\$1.6 million	Target Area	Issyk-Kul Ring Road
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	PLUAD 4		
Finance Source	MOTC		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-8)-4	Reconstruction of Bridges on Ring Road	Sector	Transport
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>There are some bridges required to be repaired in the near future; the following four bridges need reconstruction at an early stage:</p> <ul style="list-style-type: none"> - Kajy-Say - Tamga - Chon-Jarguilchack - Tup <p>Special attention should be paid to the bridge at Kajy-Say. A clear crack has been observed at the edge of a bridge beam, and there is a risk that the bridge will fail in the near future. Urgent replacement is inevitable.</p>		
Cost	US\$3 million	Target Area	Kajy-Say, Tamga, Chon-Jarguilchack. Tup
Target Year	<input checked="" type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization	PLUAD 4		
Finance Source	MOTC		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input checked="" type="checkbox"/> no impact <input type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Note:)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-9)	Construction of a freight terminal in Balykchy (FEZ)	Sector	Transport
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>International freight transport between the Kyrgyz Republic and PRC is increasing and Bishkek – Balykchy – Torgart international motor road will become an important road used by many heavy trucks. It is expected that future demand in freight transportation and tourists in the summer season will become a heavy burden on the narrow section of Boom Valley. Since it is difficult to expand the road capacity along Boom Valley, it is necessary to convert freight transport by road to rail along the valley as much as possible.</p> <p><u>Component of the project</u></p> <p>This project promotes a modal shift from road to rail, and contributes to revival of Balykchy city as an important transportation node or as a gateway city.</p> <ul style="list-style-type: none"> - Procurement of special cars for container handling - Warehouses - Parking space for trucks - Regulation of heavy trucks along Boom Valley <p style="text-align: center;">Balykchy Freight Terminal</p> <p style="text-align: center;">China via Torgart</p>		
Cost	US\$2.8 million	Target Area	Balykchy
Target Year	<input type="checkbox"/> 2005 <input type="checkbox"/> 2010 <input checked="" type="checkbox"/> 2025		
Responsible Organization	MOTC/ The Kyrgyz Railway		
Finance Source	MOTC/ The Kyrgyz Railway		
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input checked="" type="checkbox"/> good impact <input type="checkbox"/> adverse impact (Reduction of motor cars will reduce air pollution.)		
Effect on Poverty Reduction	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input checked="" type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources
2) Efficiency: B/C
3) Relevancy: Understanding of stakeholders

Program/Project Sheet for the Development of Issyk-Kul Zone

I-10)	Expansion of Issyk-Kul International Airport (Tamchy)	Sector	Transport
		<input type="checkbox"/> Program <input checked="" type="checkbox"/> Project <input type="checkbox"/> Others	
Outline	<p>The JICA Study Team (JST) set a target for annual tourist arrivals to Issyk-Kul Region of 1.8 million by 2025. The airport is expected to play an important role in this increase and investment in the tourism sector in Issyk-Kul Region. However, Issyk-Kul International Airport currently has a 2000m runway, which cannot accept long-distance flights from Moscow and other cities of the important tourist market.</p> <p><u>Component of the project</u> A Russian company conducted a feasibility study this year. (1) Airport (\$22.2M): - Runway expansion - Rehabilitation of the existing runway and taxiway - Terminal building - Other necessary equipment and machinery for international flights (2) Air navigation system (\$4.2M)</p>		
Cost	US\$26.4M	Target Area	Issyk-Kul International Airport
Target Year	<input type="checkbox"/> 2005 <input checked="" type="checkbox"/> 2010 <input type="checkbox"/> 2025		
Responsible Organization		MOTC	
Finance Source		Private sector	
Evaluation			
Sustainability	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Efficiency	<input type="checkbox"/> low <input type="checkbox"/> medium <input checked="" type="checkbox"/> high (Note:)		
Impact on Social Environmental	<input type="checkbox"/> no impact <input type="checkbox"/> good impact <input checked="" type="checkbox"/> adverse impact (Increase in airbus will cause noise pollution.)		
Effect on Poverty Reduction	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		
Relevancy	<input type="checkbox"/> low <input checked="" type="checkbox"/> medium <input type="checkbox"/> high (Note:)		

Note: 1) Sustainability: Availability of necessary manpower, organization, resources

2) Efficiency: B/C

3) Relevancy: Understanding of stakeholders

APPENDIX-II

STUDY ON

SELECTED PRIORITY PROJECTS

Study on Selected Priority Projects

List of Projects

1. Community Empowerment Program II-1
2. Agricultural Development Program..... II-8
3. Rehabilitation of Cholpon-Ata Sewage Treatment System II-16
4. Rehabilitation of Power Distribution Network
(Vostokelectro empowerment) II-22
5. Balykchy Free Economic Zone..... II-27
6. Expansion of Issyk-Kul International Airport..... II-34

Selected Priority Project - 1

Community Empowerment Program

The following selected priority projects on the community development sector should be combined into and carried out as a “Community Empowerment Program”, in terms of efficiency and effectiveness:

- 1) Establishment of network for community empowerment
- 2) Development and marketing of community products/goods (Michi no Eki)
- 3) Community development fund (CDF)
- 4) Deregulation concerning CBO business/community development

(1) Contents

It is important for communities to reduce poverty and improve their personal and community living environment. To achieve these, it is necessary to restore the social capital system to an acceptable level.

An objective of the program is to empower income generation of communities through the commencement of individual and/or community business and to improve their living environment through initiatives based on restored social capital.

The program composes the above four (4) components, which are tied organically to each other. These components also have some sub-components/functions as follows:

Component 1: Establishment of network for community empowerment (this sub-component aims at restoring the social capital; it also provides a place and an opportunity to meet community members together, and share and exchange experiences among communities.)	
(a) Community Centre Repair	Non-functioning community centres/clubs will repaired and utilized as multi-purpose community centres with community members providing labour. They can be utilized for meetings, cultural events, traditional festivals, etc. to activate community activities.
(b) Community Networking Centre (CNC)	CNC shall be established to share, accumulate and transmit information, development experiences and technologies of special products, small business entrepreneurs, community organizing/enhancement, etc. CNC also empowers community leaders and local NGOs as a facilitator by providing training. Computer facilities, which can access the Internet, will be installed in the community centre. Using the computer, a community web site will be developed to transmit information related to, for example, tourism, region/community and special products. New ideas, methodologies and approaches developed will feed back to communities by web site or community e-mail magazines. In the future, it is expected to be an e-commerce tool, such as Internet shop and e-reservation system of B&B, etc.

Component 2: Development and marketing of community products/goods (Michi no Eki; this sub-component aims at income generation and poverty alleviation by promoting community business.)	
(c) Community Business Incubation Centre (CBIC)	<p>CBIC encourages community business by developing community products/goods and their marketing channels. CBIC has the following functions:</p> <p><u>Information Bank</u> An Information Bank accumulates the information of special products and their distribution. It also seeks new special products and distribution channels, delivers them and trains communities.</p> <p><u>Package Bank</u> A Package Bank takes on packaging and labeling, including design and printing, support works, and so on. It orders and purchases bottles and plastic bags, then retails them to communities.</p> <p><u>Issyk-Kul Brand</u> Entire special products in Issyk-Kul shall combine so that the Issyk-Kul brand and its web site shall be established. Special products of the Issyk-Kul brand will be introduced by web site to facilitate e-commerce.</p> <p><u>Business Networking</u> Each community business undertakes networking so that networking facilitates a cluster among the products. The community business will be expanded and upgraded through the cluster approach. Business networking will facilitate organization of community business associations to ship jointly and enhance the sales force.</p>
(d) Community Shop (Michi no Eki = Roadside Station)	Community Shop, which utilizes community center or yurta, shall be established in each community, and will be supported by CBIC. Community Shop is utilized as a Roadside Station, which can serve as a rest facility or providing souvenirs, special products, and information to tourists. A part of the benefit from the business is saved in the CDF.
Component 3: Community development fund (CDF); this sub-component aims to ensure fund access and implement for the improvement of the living environment.	
(e) Community Development Fund	Community Development Fund shall be established to enable self-reliant and sustainable community development with realization of community empowerment. The fund resource of CDF is composed of funds from community savings. The CDF are managed and used for micro credit to individuals and private groups in addition to community business groups. The interest and parts of benefits are returned to the CDF, which is then revolved and invested for the improvement of the community.
(f) Community Action Plan	Community Action Plan (CAP) will be made by the community. CAP includes an improvement plan of the common facility in the community.
(g) Implementation of CAP	Based on the CAP, the community will implement their improvement using CDF with the support of Aiyl Okmotu and other relevant agencies.
Component 4: Deregulation concerning CBO business/community development (this sub-component aims to promote community activities, such as community business and improvement of communities, by removing legal constraints).	
(h) Study on Deregulation	<p>When a community starts various activities or small businesses, there are so many constraints and obstacles due to many strict and complicated regulations, difficult procedures and long processes.</p> <p>Therefore, a study of deregulation will create a legal environment encouraging community implementation of activities and small businesses.</p> <p>It is considered that such strict regulations are not necessary for community activities or small businesses where effects or scales are small. Hence, possible items, the standard/level to be applied as a double standard, and simplification of the procedures are examined.</p>
(i) Monitoring and Feedback	The study results will be trialled. These will be monitored and improved and fed back to the legal framework.

The formation and functions of the program are shown in the figure below. A program management office shall be established with centre functions at Oblast level in cooperation with the Forum, Oblast administration and Rayon administration. In each community, community-based activities shall be implemented in cooperation with PMO and local governments. PMO provides necessary support to communities including the dispatch of a local NGO as a facilitator.

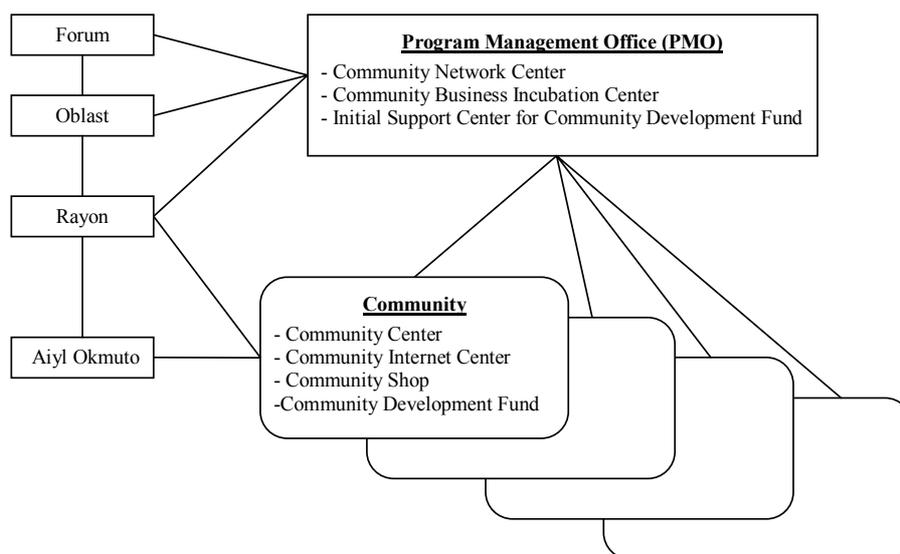


Figure II.1.1 Formation and Function of Program

Activities of the program are outlined below.

Phase I:	Preparation of Program	Selection of communities Training for social mobilization Participatory rural appraisal (baseline survey, needs assessment) Set up groups in the community Set up groups in the community and cooperate with local governments
	Expanding Program to 6 Communities in Total	Community centre repair
	Set up Community Shop	Training in basic business (accounting, law) Making business plan Training in production (handicrafts, packaging, bottling, labeling) Promoting (advertising, affiliation with tourism-related parties)
	Making Community Action Plan	Community activities utilizing community center Defining training programs needed
	Implementing Community Action Plan (improvement of living environment)	Reexamination and revising Community Action Plan in terms of living environment Designing and preparation of implementation Construction and supervision
	Establishment of Community Development Fund	Opening bank account Saving promotion Revolving the fund Training of fund mechanism Saving trial

Phase II:	Expanding Program to 6 Communities in Total	
	Establishment of Community Networking Center	Training of leaders in community and local NGOs Sharing and dissemination of experiences and information on community activities
	Establishment of Community Business Incubation Center	Sharing and dissemination of experiences and information of community shop Training and encouraging new community business Setup information bank, package bank, Issyk-Kul brand Business networking among communities by cluster approach
	Website Development of CNC	Development of common template for website Training for development and updating of community website
Phase III:	Monitoring and evaluation	Monitoring whole activities Evaluation of program Planning next program
	Replication to other Oblasts	

(2) *Evaluation*

Expected major benefits of the program are both tangible and intangible. Tangible benefits are economic benefits of income generation of the communities and physical improvement of the community. Intangible benefits are community empowerment, which contributes to economic benefit, physical improvement of the living environment and all actions (both individuals and groups) in the community.

Expected tangible benefits of the program are as follows:

Benefits	Amount	Remarks
No. of communities	12 communities	
No. of beneficiaries	39,847 people	
No. of expected tourist/day	2.5 – 100	(pilot data) – (with promotion)*
Expected sales amount (US\$/community/year)	1,750 – 70,000	(May-Sep.)
Expected benefits (including salary and profit) (US\$/community/year)	1,650 – 66,000	(May-Sep.)
Expected income of community development fund (US\$/community/year)	460 – 18,400	(May-Sep.)
Expected trainees		
- Plenary training/community /year	1,000	4 times
- Business training (gross)/community /year	360	30 persons*1 time*12 months
- Internet training (gross)/community /year	240	10 persons*2 times*12 months
Expected participants	5,600	

*With promotion: This is estimated in the case of promotion to tourist/bus companies and sanatoriums, etc.

Reference Data from the Pilot Project

Benefits	Amount	Remarks
Economic Benefit		
Sales amount (som/village)	29,355	for 2 months
Material cost (som)	1,555	for 2 months
Benefit (som: including salary and profit)	27,800	for 2 months
Number of tourists/day	2.5	
Number of tourists to buy souvenirs	2.0	
Ratio of no. of participants in project	14%	=66% of household

In the case of “without the program”, there is no place or opportunity to jointly meet community members, or financial resources, technical support, information or ideas to act. Prior to this time, there was no willingness to undertake a program as the community had been ordered during the Soviet period and it also did not know when it should be commenced.

In the case of “with the project”, it could provide the place/forum to meet, and the opportunity to meet, discuss, decide and start to implement ideas. Once a decision is made and actions defined, the program provides necessary resources, such as technical training, information, financial support, materials, facilities/equipment and so on, as required.

Through the overall program, the social capital of the community would be restored and the community reactivated by fostering a relationship of mutual trust and sense of common bonding. It would then be expected that various groups and their activities, such as youth groups, women’s groups, small business, cultural activities and so on, will appear. Synergy effects among these would be further strengthened. In addition, it is expected that youth activities would encourage younger generations and their employment, contributing to the reduction of drug addicts.

(3) Implementation Schedule

The implementation schedule is shown below.

Implementing Schedule of Community Empowerment Program

	2005	2006	2007
Preparation of the program	██████		
Community centre repair (6 communities as a first step)	██████		
Setup Community Shop	██████████		
Making Community Action Plan	██████		
Implementing Community Action Plan (improvement of living environment)	████████		
Preparation of Community Development Fund	██████		
Expanding the program to 16 communities in total		██████████	
Establishment of Community Networking Center		██████████	
Establishment of Community Business Incubation Center		██████████	
Website development of Community Networking Center		██████	
Establishment of Community Development Fund		██████	
Monitoring and evaluation			██████████
Replication to other Oblasts			██████████

(4) IEE

The result of the IEE is presented below.

IEE for Community Empowerment Program

Sector/Subjects		Program/Project	Schedule	
Community Development		Community Empowerment Program	2005-2009	
Item		Evaluation	Remarks	
Social environment	1	Involuntary resettlement	N	
	2	Local economy (employment, livelihood, etc.)	+	People can start their business and generate their income.
	3	Traffic and public facilities	N	
	4	Land use and utilization	N	
	5	Social infrastructure and services	N	
	6	Water usage	N	
	7	Poor indigenous ethnic people	+	Poverty can be reduced by income generation.
	8	Water rights and rights of common people	N	
	9	Community splitting	N	
	10	Equity of benefits and losses, and equity in the development process	--	People without willingness to participate will not benefit.
	11	Gender	+ & --	Women can improve their position but some men may not prefer it.
	12	Children's rights	N	
	13	Cultural heritage/property	N	
	14	Local conflict of interest	N	
	15	Public health conditions	N	
	16	Infectious diseases such as HIV/AIDS etc.	N	

Natural environment	17	Topography and geology	N	
	18	Biota and ecosystem	N	
	19	Soil erosion	N	
	20	Hydrological situation	N	
	21	Greenhouse gases	N	
	22	Meteorology	N	
	23	Landscape	N	
Pollution	24	Air pollution	N	
	25	Water pollution	N	
	26	Soil contamination	N	
	27	Ground subsidence	N	
	28	Waste	N	
	29	Noise and vibration	N	
	30	Offensive odors	N	
Overall Evaluation			C	

Note: --: Negative impacts are expected
 +: Positive impacts are expected
 N: No significant impacts are expected
 ?: Not clear and further study may be required

Overall evaluation:

- A: Likely to have significant adverse impact on the environment and society
- B: Has a lower potentially adverse impact on the environment and society than project A
- C: Likely to have minimal or little adverse impact on the environment and society

Selected Priority Project – 2

Agricultural Development Program

Selected priority projects in the agricultural development sector cited below will be described in detail hereunder.

- (1) Strengthening of the Farmers Association Program
- (2) Fruits and Herbs Development Program
- (3) Beekeeping and Natural Medicines Development Program

(1) Strengthening of the Farmers Association Program

Strengthening of the farmers association is most important and urgently required as important subjects such as technical improvement, micro finance, processing, marketing and extension to change crops can be realized through its implementation.

Farmers will belong to enterprising farmer associations (EAF), such as Potatoes EAF, Fruits EAF, and Beekeeping EAF. The EAFs will be established at the oblast level and their headquarters will be established as forums to operate the federations.

The objective of a federation is to improve the agro-business by, for and of the farmers. Its functions are micro-finance, extension/technical improvement, marketing improvement and processing improvement.

The EAF federations will establish and operate the IMC, whose functions are as follows:

- 1) Provide marketing information of the products to member EAFs;
- 2) Distribution of products to wholesale or export markets;
- 3) Provide favorable prices and better quality of farm inputs to member EAFs;
- 4) Financial intermediation services;
- 5) Provide agricultural extension and technical training services to member EAFs.

The main components of this project are as follows:

- 1) Organization of the EAFs and headquarters;
- 2) Organization of the Federation of EAFs and the Forum of the Headquarters;
- 3) Establishment and Operation of the Information & Marketing Centre.

The scheme of the EAFs and IMC is described in Chapter 9.

(2) Fruits and Herbs Development Program

The resources for special agro-products in Issyk-Kul are fruits (apricots, etc.), herbs, berries and honey, and so on. It is estimated that the demand for fruits/berries (raw/dry fruits and berries, juice, jam, etc.) will increase in line with the improvement in tourism/increased tourists in Issyk-Kul Oblast. Also, various types of herb tea will be the commodities for the tourists.

In the pilot project for village nurseries in 2004, nurseries of fruits and herb farms were established by farmers. Based on the results of the pilot project, fruits and herb cultivation should be expanded to the entire Oblast.

An agro-tourism park will be established to link with tourism development. The tourists can enjoy agricultural activities such as harvesting of fruit, playing with livestock, processing, and shopping/eating agricultural products.

The components are as follows:

- 1) Expansion and technical improvement of fruit and herb cultivation;
- 2) Research and development of new special products such as herb teas, essential oils from herbs, herb soaps, fruits/berry jams, soba-noodle made from buckwheat;
- 3) Dispatch of experts and JOCV (Japan Overseas Cooperation Volunteer) for herbs/fruits for technical assistance;
- 4) Improvement of the processing and packaging of fruit/herb products;
- 5) Expansion of the market;
- 6) Establishment of agro-tourism park.

Photographs of Agro-Tourism Park in Japan



(3) Beekeeping and Natural Medicines Development Program

Honey is one resource for special agro-products in the oblast, in addition to fruits and herbs. It is estimated the demand for honey will increase either as a souvenir or being consumed in hotels due to improved tourism and increased tourist numbers. Also, sub-products of beekeeping, such as propolis pollen, can be used for medicinal materials as well as herbs. Therefore, it is necessary to develop honey production as a natural medicine made from the sub-products of beekeeping or herbs.

The components are as follows:

- 1) Expansion and technical improvement of beekeeping;
- 2) Improvement of processing and packaging;
- 3) Research and development of natural medicines made from herbs or sub-products of beekeeping;
- 4) Establishment of the *Institute of Agro-Products* to research and develop special agro-products such as natural medicines, honey of high quality or herb tea, processed fruits;
- 5) Expansion of the honey market or developed special agro-products;
- 6) Dispatch of experts and JOCV (Japan Overseas Cooperation Volunteer) for beekeeping and special agro-production, such as natural medicine.

(4) Costs

The cost of the agricultural development program is estimated at approximately US\$3.3 million as shown in the table below.

Cost of Agricultural Development Program

	Cost (USD1,000)
Strengthening of the Farmers Association Program	1,050
Fruits and Herbs Development Program	1,230
Beekeeping and Natural Medicines Development Program	1,050
Total	3,330

Source: JST

(5) Economic Evaluation

The agricultural development program was evaluated based on EIRR as shown below. The resultant EIRR exceeds 12%, a level used by ADB as the economic criteria in Kyrgyzstan. For the calculation of the EIRR, initial costs and operation and maintenance costs were considered in the cost stream, while the various items used to define benefits are outlined below.

EIRR of Agricultural Development Program

Program	EIRR (%)
Strengthening of the Farmers Association Program	14
Fruits and Herbs Development Program	39
Beekeeping and Natural Medicines Development Program	16

Program	Cost	Benefit
Strengthening of Farmers Association Program	Initial Costs Operation and Maintenance Cost of Information & Marketing Centre (IMC)	Revenue obtained through export of agricultural products (herbs) through IMC
Fruits and Herbs Development Program	Initial Costs (total \$US1,230,000, refer to the table of costs) O&M cost of Agro-Tourism Park (ATP) The increased O&M cost of fruits and herb cultivation	Increased foreign currency obtained by export of fruit and herbs; Foreign currency obtained from foreign visitors at Agro-Tourism Park
Beekeeping and Natural Medicines Development Program	Initial Costs (total \$US1,050,000, refer to the table of costs) O&M cost of Institute of Agro-Products (IAP)	Revenue to be obtained by beekeeping, natural medicines and other specially developed agro-products.

Source: JST

(6) Action Plan

The activities, responsible agencies and schedule of the agricultural development program are shown in the figure below.

Strengthening of the Farmers Association Program

	Responsible Agency	Schedule					
		2005	2006	2007	2008	2009	2010
1 Organization Stage							
1) Organization of the EAFs	Local Gov, NGO	■	■	■			
2) Organization of the Head Quarter of Each EAF	EAF,NGO	■	■	■			
3) Organization of the Federation of the EAFs	EAF,NGO		■	■	■		
4) Organization of the Forum of the Head Quarters	EAF,NGO			■	■		
2 Establishment of Information & Marketing Center							
1) Business Plan of the Information & Marketing Center	EAF,NGO,Local Gov.			■	■		
2) Generation of Initial Cost	EAF			■	■	■	
3) Construction of the Building / Acquisition of Equipment	EAF, Local Gov.				■	■	
4) Hiring and Training of Staffs	EAF					■	■
5) Start to Operate	EAF						*
6) Monitoring & Evaluation of the Performance	EAF						■

Fruits and Herbs Development Program

	Responsible Agency	Schedule					
		2005	2006	2007	2008	2009	2010
1) Dispatch of experts	JICA	■	■	■			
2) Expansion of the cultivation of fruits/herbs	EAF	■	■	■	■	■	■
3) Research & Development of New Products of fruits/herbs	EAF,NGO		■	■	■	■	■
4) Improvement of Processing and Packaging	EAF,NGO		■	■	■	■	■
5) Expansion of the Market	EAF,NGO		■	■	■	■	■
6) Establishment of the Agro-Tourism Park	EAF,NGO,Local Gov.		■	■	■	■	■

JOCV: Japan Overseas Cooperation Volunteer

Beekeeping and Natural Medicines Development Program

	Responsible Agency	Schedule					
		2005	2006	2007	2008	2009	2010
1) Dispatch of experts	JICA	■	■	■			
2) Technical Improvement of Beekeeping, Processing, Packaging	EAFs, NGO	■	■	■	■	■	■
3) Establishment of the Institute of Agro-Products (IAP)	Local Gov., EAFs		■	■	■	■	■
4) Research & Development of Natural Medicines	IAP, EAFs		■	■	■	■	■
5) Expansion of the Market of Beekeeping Products	IAP, EAFs, NGO		■	■	■	■	■

JOCV: Japan Overseas Cooperation Volunteer

(7) IEE

The IEE was carried out for the implementation of the agricultural development programs. The results are presented in the table below.

IEE Result of Strengthening of the Farmer's Association Program

Sector/Subjects		Program/Project	Schedule	
Agriculture		Strengthening of the Farmers Association Program	2005-2010	
Item		Evaluation	Remarks	
Social environment	1	Involuntary resettlement	N	
	2	Local economy (employment, livelihood, etc.)	+	Agricultural economy will be expanded through establishment of Enterprising Associations of Farmers (EAFs) and Information & Marketing Centre (IMC).
	3	Traffic and public facilities	N	
	4	Land use and utilization	N	
	5	Social infrastructure and services	N	
	6	Water usage	N	
	7	Poor, indigenous ethnic people	N	
	8	Water rights and rights of common people	N	
	9	Split in communities	N	
	10	Equity of benefits and losses, and equity in the development process	+	Members of Enterprising Associations of Farmers can share the benefits and risks.
	11	Gender	N	
	12	Children's rights	N	
	13	Cultural heritage/property	N	
	14	Local conflict of interest	N	
	15	Public health conditions	N	
	16	Infectious diseases such as HIV/AIDS etc.	N	
Natural environment	17	Topography and geology	N	
	18	Biota and ecosystem	N	
	19	Soil erosion	N	
	20	Hydrological situation	N	
	21	Greenhouse gases	N	
	22	Meteorology	N	
	23	Landscape	N	
Pollution	24	Air pollution	N	
	25	Water pollution	N	
	26	Soil contamination	N	
	27	Ground subsidence	N	
	28	Waste	N	
	29	Noise and vibration	N	
	30	Offensive odors	N	
Overall Evaluation		C		

Note:
 --: Negative impacts are expected
 +: Positive impacts are expected
 N: No significant impact is expected
 ?: Not clear and further study may be required

Overall evaluation:
 A: Likely to have significant adverse impact on the environment and society
 B: Have potential adverse impact on the environment and society but less than A
 C: Likely to have minimal or little adverse impact on the environment and society

IEE Result of Fruits and herbs development program

Sector/Subjects		Program/Project		Schedule
Agriculture		Fruits and herbs development program		2005-2010
Item		Evaluation	Remarks	
Social environment	1	Involuntary resettlement	N	
	2	Local economy (employment, livelihood, etc.)	+	The local economy will be expanded by this program.
	3	Traffic and public facilities	+	The Agro-Tourism Park is a kind of public facilities, which combines agriculture and tourism.
	4	Land use and utilization	N	
	5	Social infrastructure and services	N	
	6	Water usage	N	
	7	Poor, indigenous ethnic people	N	
	8	Water rights and rights of common people	N	
	9	Split in communities	N	
	10	Equity of benefit and losses, and equity in the developing process	+	Members of the farmers association can share the benefit and risks.
	11	Gender	N	
	12	Children's right	N	
	13	Cultural heritage/property	N	
	14	Local conflict of interest	N	
	15	Public health conditions	N	
	16	Infectious diseases such as HIV/AIDS etc.	N	
Natural environment	17	Topography and geology	N	
	18	Biota and ecosystem	N	
	19	Soil erosion	N	
	20	Hydrological situation	N	
	21	Greenhouse gases	N	
	22	Meteorology	N	
	23	Landscape	N	
Pollution	24	Air pollution	N	
	25	Water pollution	N	
	26	Soil contamination	N	
	27	Ground subsidence	N	
	28	Waste	N	
	29	Noise and vibration	N	
	30	Offensive odors	N	
Overall Evaluation			C	

Note:

- : Negative impacts are expected
- +: Positive impacts are expected
- N: No significant impact is expected
- ?: Not clear and further study may be required

Overall evaluation:

- A: Likely to have significant adverse impact on the environment and society
- B: Have potential adverse impact on the environment and society less than project A
- C: Likely to have minimal or little adverse impact on the environment and society

IEE Result of Beekeeping and natural medicines development program

Sector/Subjects		Program/Project	Schedule	
Agriculture		Beekeeping and natural medicines development program	2005-2010	
Item		Evaluation	Remarks	
Social environment	1	Involuntary resettlement	N	
	2	Local economy (employment, livelihood, etc.)	+	The local economy will be expanded by this program.
	3	Traffic and public facilities	+	The Institute of Agro-Products is a kind of public facilities, which contributes to improve the local economy.
	4	Land use and utilization	N	
	5	Social infrastructure and services	N	
	6	Water usage	N	
	7	Poor, indigenous ethnic people	N	
	8	Water rights and rights of common people	N	
	9	Split in communities	N	
	10	Equity of benefit and losses, and equity in the developing process	+	Members of the farmers/beekeepers association can share the benefit and risks.
	11	Gender	N	
	12	Children's right	N	
	13	Cultural heritage/property	N	
	14	Local conflict of interest	N	
	15	Public health conditions	N	
	Natural environment	16	Infectious diseases such as HIV/AIDS etc.	N
17		Topography and geology	N	
18		Biota and ecosystem	N	
19		Soil erosion	N	
20		Hydrological situation	N	
21		Greenhouse gases	N	
22		Meteorology	N	
Pollution	23	Landscape	N	
	24	Air pollution	N	
	25	Water pollution	N	
	26	Soil contamination	N	
	27	Ground subsidence	N	
	28	Waste	N	
	29	Noise and vibration	N	
	30	Offensive odors	N	
Overall Evaluation		C		

Note: --: Negative impacts are expected
 +: Positive impacts are expected
 N: No significant impact is expected
 ?: Not clear and further study may be required

Overall evaluation:

- A: Likely to have significant adverse impact on the environment and society
- B: Have potential adverse impact on the environment and society less than project A
- C: Likely to have minimal or little adverse impact on the environment and society

Selected Priority Project – 3

Rehabilitation of Cholpon-Ata Sewage Treatment System

(1) Background

The sewerage system of Cholpon-Ata City was designed and constructed during the Soviet period. The operation body, VodaCanal, can no longer maintain the systems adequately due to a lack of finance, technical skill and human resources. Thus, systems are facing serious risk as non-treated waste water now pours into Issyk-kul lake through the non-functioning pumping stations. In addition, only simply treated water is now causing pollution of ground water used for drinking.

(2) Objective

This project is aiming to:

- 1) Secure a sound and sustainable community with tourism development based on a firm and adequate sewerage system, and
- 2) Preventing and reducing water and sanitation-related diseases.

This will be achieved through the establishment of an adequate operation and maintenance system and the technical and financial empowerment of VodaCanal.

(3) Executing Organization

The role of each organization is summarized below.

SCAC	Overall management within Kyrgyz Government, Capacity Building
VodaCanal	Operation/maintenance body
Cholpon-Ata City Government	Management of VodaCanal and legislation arrangement, coordination with World Bank Project

(4) Components and Activity

Rehabilitation of sewerage treatment facilities

Rehabilitation work will be conducted in the following five stages:

- a) Environmental Impact Assessment: This will be done by the Kyrgyz government according to their regulations.
- b) Basic Design of Facilities: Study on willingness to pay and affordability analysis and tariff setting will be undertaken at this stage.
- c) Detailed Design of Facilities
- d) Preparation of Tender Documents and Tender
- e) Construction and Construction Supervision

Capacity Building for VodaCanal Management

Capacity building of VodaCanal will be conducted based on the following four items:

- a) Problem Analysis and Baseline Survey: This will include improvement, financial, technical, management and customer services components. At the same time it is requested that coordination with other donor activities be implemented.
- b) Training for Normal Operation: The program will be based on previous analysis with arrangements for legislation or institutional issues being made if needed.
- c) Training for New Facilities: This training will be undertaken to ensure staff are accustomed with constructed facilities.
- d) Monitoring: This will be done twice yearly and if points for improvement are noted, additional training might be undertaken.

The sewerage system of Cholpon-Ata city is shown below.

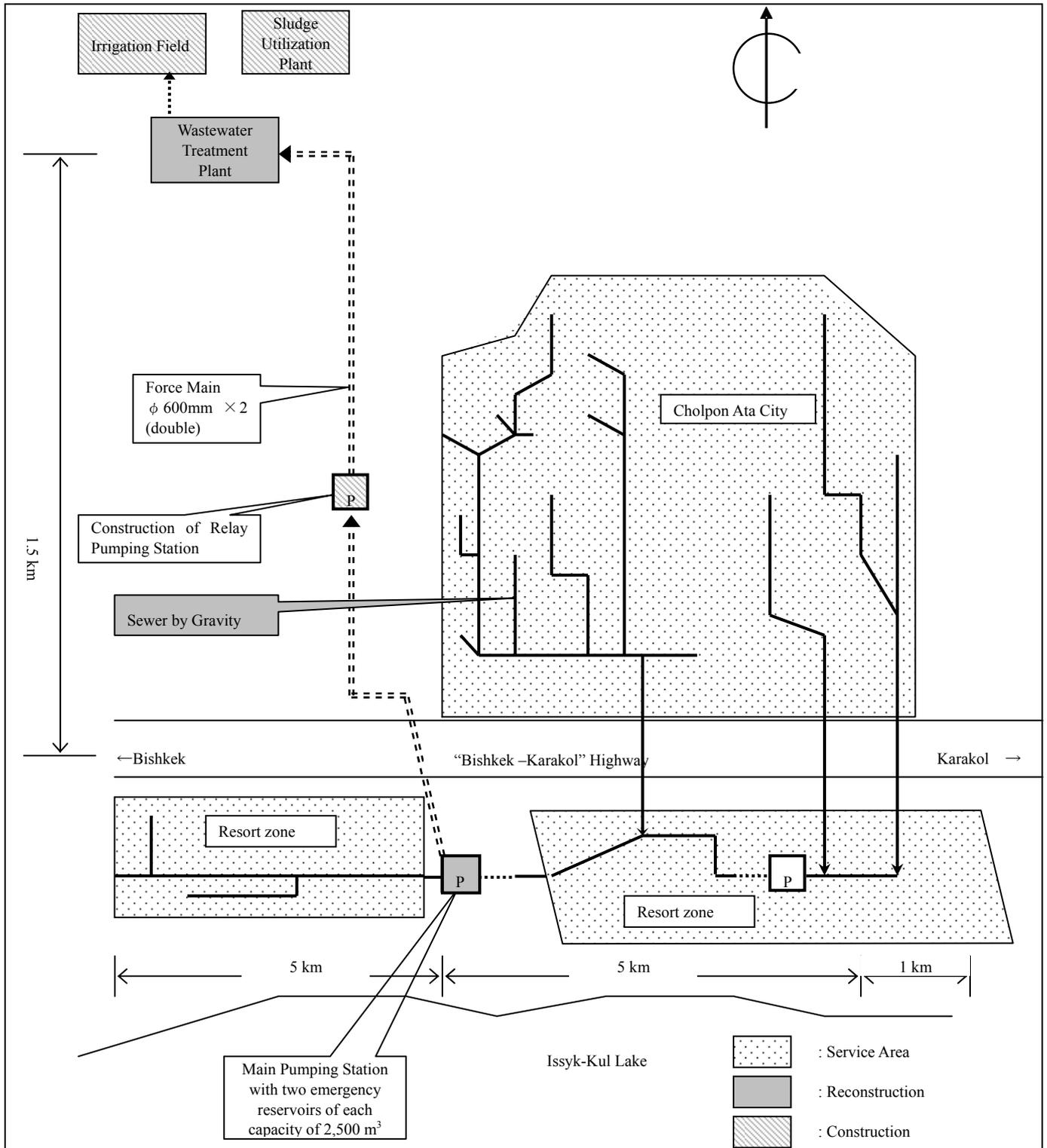


Diagram of Cholpon-Ata City Sewerage System

FIRR of Cholpon-Ata Sewerage Treatment System Operation/Management Work

Unit:USD

Year	Revenue	Initial Cost	OM Cost	Benefit	Total Benefit
2005					
2006	36,000	35,000	40,000	-39,000	-39,000
2007	36,000	35,000	40,000	-39,000	-78,000
2008	36,000	35,000	40,000	-39,000	-117,000
2009	36,000		36,000	0	-117,000
2010	48,000		36,000	12,000	-105,000
2011	48,000		36,000	12,000	-93,000
2012	48,000		36,000	12,000	-81,000
2013	48,000		36,000	12,000	-69,000
2014	48,000		36,000	12,000	-57,000
2015	60,000		36,000	24,000	-33,000
2016	60,000		36,000	24,000	-9,000
2017	60,000		36,000	24,000	15,000
2018	60,000	70,000	36,000	-46,000	-31,000
2019	60,000		36,000	24,000	-7,000
2020	60,000		36,000	24,000	17,000
2021	72,000		40,000	32,000	49,000
2022	72,000		40,000	32,000	81,000
2023	72,000		40,000	32,000	113,000
2024	72,000		40,000	32,000	145,000
2025	72,000		40,000	32,000	177,000

FIRR

8%

Conditions			
Sharing of initial cost			1.5%
Intermediate repair cost			1% of initial cost
Rate of recovery		-2009	30%
		2010-2014	40%
		2015-2020	50%
		2020-2025	60%
O&M cost	2009; Cost reduction after facility rehabilitation 2021; cost increase due to sewage volume increase		

Effectiveness of the project

The effectiveness due to the implementation of the Rehabilitation of Cholpon-Ata sewerage treatment system is anticipated to include:

- a) Enhancement of reliability of the sewerage system;
- b) Possibility of extending the service area leading to improvement of sanitary conditions in the residential zone;
- c) Elimination of the danger of contamination of groundwater and the Issyk-Kul lake water with wastewater;
- d) Empowerment of the staff of Voda Canal;
 - Upgrading the knowledge and skills in construction of sewerage systems according to sanitary regulations;
 - Establishment of a levy collection system and increased revenue;
 - Availability of sustainable O&M for sewerage systems and contribution to upgrading its consciousness.
- e) Providing clean water for irrigation;

f) Utilization of excess sewerage sediment for fertilizer or soil conditioner

(10) Initial Environmental Examination

The result of the IEE is presented below. Based on an overall evaluation, a full scale EIA is not required.

IEE Result of Rehabilitation Project of Cholpon-Ata Sewerage Treatment System

Sector/Subjects		Program/Project	Schedule	
J. Water Supply/Sewerage treatment		Rehabilitation of Cholpon-Ata sewerage treatment plant	2005	
Item		Evaluation	Remarks	
Social environment	1	Involuntary resettlement	N	Target sites exist. No new sites.
	2	Local economy (employment, livelihood, etc.)	N	
	3	Traffic and public facilities	--	During construction work, traffic volume may increase
	4	Land use and utilization	N	
	5	Social infrastructure and services	+	Results of improving efficiency cost may decrease
	6	Water usage	N	
	7	Poor, indigenous ethnic people	N	
	8	Water rights and rights of common people	N	
	9	Split in communities	N	
	10	Equity of benefit and losses, and equity in the developing process	N	
	11	Gender	N	
	12	Children's right	N	
	13	Cultural heritage/property	N	
	14	Local conflict of interest	N	
	15	Public health conditions	+	Sanitation environment will improve
	16	Infectious diseases such as HIV/AIDS etc.	+	Effect on diseases, and incidence of diarrhoea or plague may decrease
Natural environment	17	Topography and geology	N	
	18	Biota and ecosystem	N	
	19	Soil erosion	N	
	20	Hydrological situation	N	
	21	Greenhouse gases	N	
	22	Meteorology	N	
	23	Landscape	N	
Pollution	24	Air pollution	--	During construction works
	25	Water pollution	+	
	26	Soil contamination	N	
	27	Ground subsidence	N	
	28	Waste	--	During construction works
	29	Noise and vibration	--	During construction works
	30	Offensive odors	+	Forecast improved condition
Overall Evaluation		C		

Note: --: Negative impacts are expected
 +: Positive impacts are expected
 N: No significant impact is expected
 ?: Not clear and further study may be required

Overall evaluation:

- A: Likely to have significant adverse impact on the environment and society
- B: Have potential adverse impact on the environment and society less than project A
- C: Likely to have minimal or little adverse impact on the environment and society

Selected Priority Project – 4

Rehabilitation of Power Distribution Network (Vostokelectro empowerment)

(1) Background

Some 24% of total consumption of electricity has not been collected from customers, with 15% technically lost at the distribution stage due to low maintenance skills and aged facilities. It is evident that Cholpon-ata and Karakul City cause many blackouts, although Balykchy substation has no records on power failures. Both future demand increases and also stable operations are needed for industrial development (including tourism development). Stable and affordable price operation contributes to poverty reduction and ecology, the latter being related to substitution of current heating systems that use dirty energy sources like coal and timber from the Issyk-kul area. WB has just commenced a Pilot Project for commercial loss reduction, as part of the Power and District Hearing Rehabilitation projects. The Swiss SECO and KfW also plan to conduct technical loss reduction projects at Naryn Oblast and Bishkek area. The current project can therefore be a model of improvement for commercial loss and technical loss in the oblast.

(2) Objective

This project is aimed at:

- a) Decreasing technical loss and commercial loss
- b) Reliable and stable supply for customers through both technical facility improvement and capacity building (commercial loss reduction).

(3) Executing organizations

The role of concerned organizations is summarized below.

Vostokelectro	Implementation body of the project as distribution company in Issyk-Kul. It will undertake the technical loss reduction project at Naryn Oblast. It is expected that this body will smoothly conduct the project after the Naryn project.
State Commission on Energy	Commission would be requested to conduct institutional arrangement and legislation.

(4) Components and Activities

Capacity Building (Commercial Loss Reduction)

- Introduction of computerized billing system
- Improvement of fee collection system

- Capacity building for financial system, technical skill (inventory and planning), customer services and management
- Setting up metering for clients and distribution facilities

Technical Loss Reduction

- Environmental Impact Assessment
- Reconstruction or rehabilitation of distribution network (additional substation and 110kV network, 35kV network and so on)
- Innovation of distributing operation through communication improvement
- Capacity building of technical skill for maintenance of newly equipped facilities

(5) *Period and Action Plan*

A commercial loss reduction component will start in 2006 and technical loss reduction components, which are expensive, will follow. Monitoring is planned twice annually after commercial loss reduction has terminated.

Implementation Schedule of Rehabilitation of Power Distribution Network

Activity	Implementation	2005	2006	2007	2008	2009	2010
Commercial Loss Reduction Program							
Computerized Billing System	Donars, Volkelectro		■				
Improvement of Fee Collection System	Volkelectro		■				
Capacity Building for Financial System, Management, Customer Service, Technical	Donars, Volkelectro		■	■			
Setting Meter for Customers	Volkelectro		■				
Monitoring	Donars		■	■	■	■	■
Technical Loss Reduction Program							
EIA	State Agency of Energy			■			
Rehabilitation Works	Donars, Volkelectro				■		
Innovation of Distribution operation by improving communications	Donars, Volkelectro				■		
Capacity Building for New Equipment	Donars, Volkelectro					■	

Source: JICA Study Team

(6) *Cost Estimation*

The cost for rehabilitation of the power distribution network is estimated at US\$13.1 million as shown below.

Cost of Rehabilitation of Power Distribution Network

Unit mil USD

Activity	Implementation	Unit	Price	No	Total	Remarks
Commercial Loss Reduction Program						
Computerized Billing System	Donars, Volkelectro	set	0.5	1	0.5	Expansion
Improvement of Fee Collection System	Volkelectro	set	0.5	1	0.5	Expansion
Capacity Building for Financial System, Management, Customer Service, Technical Skill	Donars, Volkelectro	Set	1.0	1	1.0	Computer Billing System, Car for operation etc.
Setting Meter for Customers and Transformers	Volkelectro	Set	1.5	1	1.5	25,000Set
Monitoring	Donars	MM	0.01	36	0.36	4MM / one monitoring (Local)
Sub Total					3.86	
Technical Loss Reduction Program						
EIA	State Agency of Energy	Set	0.2	1	0.2	
Rehabilitation Works	Volkelectro	Set	8.0	1	8.0	Further study Needed
Innovation of Distribution operation by improving communications	Volkelectro	Set	1.0	1	1.0	Further study Needed
Capacity Building for New Equipment	Donars, Volkelectro		0.01	5	0.05	10MM
Sub Total					9.3	
Total					13.1	

* Further study for rehabilitation works and innovation of distribution operation based on improved communications is required. These costs are estimated by using similar type projects.

Source: JICA Study Team

(9) Evaluation

Financial Evaluation

The following table outlined the FIRR calculation of the project. Although further study is required, the technical loss reduction project is estimated to have an FIRR of 3%. Commercial loss reduction components have more viability when compared with technical loss reduction components.

FIRR of Rehabilitation Program of Power Distribution Network

Unit:USD

Year	Revenue	Initial Cost	Cost	Benefit	Total Benefit
2005	81,000		185,000		
2006	81,000	450,000	185,000	-554,000	-554,000
2007	153,000	200,000	185,000	-232,000	-786,000
2008	153,000	0	185,000	-32,000	-818,000
2009	235,000	0	185,000	50,000	-768,000
2010	235,000	0	185,000	50,000	-718,000
2011	235,000		185,000	50,000	-668,000
2012	246,750		194,250	52,500	-615,500
2013	259,088		203,963	55,125	-560,375
2014	272,042		214,161	57,881	-502,494
2015	285,644		224,869	60,775	-441,718
2016	299,926		236,112	63,814	-377,904
2017	314,922		247,918	67,005	-310,900
2018	330,669		260,314	70,355	-240,545
2019	347,202		273,329	73,873	-166,672
2020	364,562		286,996	77,566	-89,105
2021	382,790		301,346	81,445	-7,661
2022	401,930		316,413	85,517	77,856
2023	422,026		332,233	89,793	167,649
2024	443,128		348,845	94,282	261,932
2025	465,284		366,287	98,997	360,928

FIRR 3%

Conditions

Year / Unit	Tariff (USD/kWh)	Electricity Consumption Increase Through Technical Loss Reduction (%)	Commercial Loss (%)
2005-2006	0.014	0	35%
2007-2008	0.02	20%	20%
2009-	0.023	20%	10%
Cost Sharing	30% of meter installation cost and Environmental Impact Assessment Study		
Consumption and Cost Increase	5% per year from 2011		

Source: JICA Study Team

Effectiveness of the Project

The following effectiveness will be attained by implementing the rehabilitation of the power distribution network:

- Charging system will be improved and fee collection rate will increase to 90%.
- Technical loss will decrease to 5% at distribution level.
- Number of power failures will decrease.

(10) Initial Environmental Examination

The results of environmental examinations are shown in the following table. The overall evaluation is rated as C, and a full scale EIA appears to be unnecessary.

IEE Result of Rehabilitation Program of Power Distribution Network

Sector/Subjects		Program/Project		Schedule
Energy (Electricity)		Rehabilitation of power distribution network (Vostokelectro empowerment)		2005
Item		Evaluation	Remarks	
Social environment	1	Involuntary resettlement	N	
	2	Local economy (employment, livelihood, etc.)	+	
	3	Traffic and public facilities	N	
	4	Land use and utilization	N	
	5	Social infrastructure and services	+	
	6	Water usage	N	
	7	Poor, indigenous ethnic people	+	
	8	Water rights and rights of common people	N	
	9	Split in communities	N	
	10	Equity of benefits and losses, and equity in the developing process	N	
	11	Gender	N	
	12	Children's right	N	
	13	Cultural heritage/property	N	
	14	Local conflict of interest	N	
	15	Public health conditions	+	Improvement of heating facilities can be foreseen.
	16	Infectious diseases such as HIV/AIDS etc.	N	
Natural environment	17	Topography and geology	N	
	18	Biota and ecosystem	N	
	19	Soil erosion	N	
	20	Hydrological situation	--	In case that hydro power station is introduced.
	21	Greenhouse gases	+	By substitution of coal-fired boiler for heating
	22	Meteorology	N	
Pollution	23	Landscape	N	
	24	Air pollution	+	
	25	Water pollution	N	
	26	Soil contamination	N	
	27	Ground subsidence	N	
	28	Waste	N	
	29	Noise and vibration	--	During construction works
	30	Offensive odors	N	
Overall Evaluation		C		

Note: --: Negative impacts are expected
 +: Positive impacts are expected
 N: No significant impact is expected
 ?: Not clear and further study may be required

Overall evaluation:

- A: Likely to have significant adverse impact on the environment and society
- B: Have potential adverse impact on the environment and society less than project A
- C: Likely to have minimal or little adverse impact on the environment and society