

ASIAN DEVELOPMENT BANK
Operations Evaluation Department

PROJECT PERFORMANCE EVALUATION REPORT

IN THE

KYRGYZ REPUBLIC

In this electronic file, the report is followed by Management's response.

Performance Evaluation Report

Project Number: 32415
Loan Number: 1633
March 2007

Kyrgyz Republic: Flood Emergency Rehabilitation Project

Operations Evaluation Department

Asian Development Bank

CURRENCY EQUIVALENTS

Currency Unit – som (Som)

	At Appraisal (July 1998)	At Project Completion (August 2002)	At Operations Evaluation (October 2006)
Som1.00	\$0.0521	\$0.0217	\$0.0202
\$1.00	Som19.19	Som46.08	Som49.50

ABBREVIATIONS

ADB	–	Asian Development Bank
EA	–	executing agency
IA	–	implementing agency
MEES	–	Ministry of Ecology and Emergency Situations
MESCD	–	Ministry of Emergency Situations and Civil Defense
OED	–	Operations Evaluation Department
OEM	–	Operations Evaluation Mission
PCR	–	project completion report
PIU	–	project implementation unit
pm	–	person-month
PMU	–	project management unit
PSC	–	project steering committee
SDR	–	special drawings right

GLOSSARY

akim	A head of a district
oblast	A province in the Kyrgyz Republic
rayon	A rural district

NOTE

In this report, "\$" refers to US dollars.

KEY WORDS

disaster, emergency, flood, Kyrgyz, landslide, lessons learned, performance evaluation, rehabilitation

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The Guidelines formally adopted by the Operations Evaluation Department (OED) on avoiding conflict of interest in its independent evaluations were observed in preparing this report. P. Darjes and F. Jurahanov were engaged to provide consulting services for the report.

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BASIC DATA

Loan 1633-KGZ(SF): Flood Emergency Rehabilitation Project

Project Preparation/Institution Building

Key Project Data (\$ million)	As per ADB Loan Documents	Actual
Total Project Cost	6.34	6.12
Foreign Exchange Cost	4.00	3.88
ADB Loan Amount/Utilization	5.00 (SDR3.77) ^a	4.92
ADB Loan Amount/Cancellation		0.02

Key Dates	Expected	Actual
Fact-Finding		—
Appraisal		8–25 July 1998
Loan Negotiations		25–27 August 1998
Board Approval		24 September 1998
Loan Agreement		10 November 1998
Loan Effectiveness	6 February 1999	26 November 1998
First Disbursement		9 December 1998
Project Completion	31 October 2000	August 2002
Loan Closing	30 April 2001	2 April 2003
Months (effectiveness to completion)	20.8	45.0

Borrower **Kyrgyz Republic**

Executing Agency **Ministry of Ecology and Emergency Situations (formerly Ministry of
Emergency Situations and Defense)**

Mission Data

Type of Mission	No. of Missions	No. of Person-Days
Fact-Finding		—
Appraisal	1	54
Inception	1	37
Project Administration		
Special Loan Administration	1	5
Review	8	202
Project Completion	1	33
Operations Evaluation	1	35

— = not available, ADB = Asian Development Bank, SDR = special drawing rights.

^a The SDR depreciated against the US dollar during project implementation, reducing the available loan amount from \$5.00 million to \$4.94 million.

EXECUTIVE SUMMARY

This report presents the findings of an evaluation of the 1998 Flood Emergency Rehabilitation Project (the Project) in the Kyrgyz Republic. The Project was the first disaster or emergency assistance from the Asian Development Bank (ADB) to the Kyrgyz Republic. The Operations Evaluation Mission (OEM) visited the Kyrgyz Republic from September to October 2006.

The Kyrgyz Republic is prone to natural disasters, which can take the form of earthquakes, landslides, and floods. Over the past 15 years, an average of about 170 disasters has occurred per year. Annual disaster damage is in the range of \$30 million–\$35 million. From May to June 1998, continuous heavy rains caused severe flooding and landslides over wide areas of the Kyrgyz Republic. The Government asked ADB for assistance to rehabilitate infrastructure and restore normal life and activities. The Project was designed and approved as emergency assistance to the Government of the Kyrgyz Republic.

The Project was to assist the Kyrgyz Republic in rehabilitating public infrastructure and in coping with the consequences of the disaster as it was experiencing severe budget constraints. The Project's rationale was to enable quick economic and social recovery by restoring infrastructure to pre-disaster levels. The Project was in line with ADB's policy on *Rehabilitation Assistance After Disasters* (1989).

The Project's physical outputs included subprojects to restore or construct (i) district roads and bridges, (ii) riverbank protection infrastructure, (iii) water supply and irrigation facilities, (iv) telephone and power transmission lines, (v) schools, and (vi) health posts in resettlement areas. The project outputs at completion varied from the project design at appraisal. Compared with 37 subprojects envisaged at appraisal, the completed Project included 39 subprojects. Sixteen subprojects were dropped from the original project scope during project implementation, and 18 were added. Of the 16 new subprojects, only 3 were included in the original long list of eligible 84 subprojects. Some of the subprojects added in the course of implementation had no traceable link to the disaster. The poor state of repair of the subprojects prior to the disaster made it difficult to determine what was actually deferred maintenance rather than disaster-related damage.

The organization of project underwent significant changes during implementation. A project management unit was formed at the headquarters of the Executing Agency and supported by one international consultant and national consultants. In contrast, project implementation units in the field were understaffed considering their supervision of many subprojects.

Rather than consolidate the subprojects in batches, each subproject was tendered separately because of the distances between them and the limited capacity of local contractors. The bidding process for half of the subprojects was seriously flawed, in compliance with neither ADB's *Procurement Guidelines* (2006, as amended from time to time), nor the Government's bidding procedures. Rather serious irregularities marked the first 19 subprojects, including (i) deviation from standard tender documents, (ii) ambiguous instructions about the inclusion of taxes in the bids, (iii) contracts being awarded prior to obtaining ADB approval, and (iv) civil works commencing prior to tendering. ADB was too lenient with regard to the violations of its *Procurement Guidelines*, and it is unclear how ADB's intervention at a late stage in the process could have rectified the observed deficiencies.

The actual project cost of \$6.12 million was close to the appraisal estimate of \$6.34 million. This applies also to the actual foreign exchange cost of \$3.88 million, compared with the appraisal estimate of \$4.00 million. Among the various cost items, expenses on consultant services were almost twice as high as envisaged at appraisal, due mainly to converting the status of the international consultant from short-term to long-term supervisor. The share of consultant services in total cost increased from 5.8% at appraisal to almost 11.8% at completion. The cost estimates were treated as a budget to which subproject standards and quality had to be adapted. This meant that the rehabilitation called for in the Project could not be accommodated by available funds.

The Project consisted of 39 subprojects for roads and bridges, schools, telephone and power transmission lines, water supply facilities, and health posts in resettlement centers. Private contractors selected by local competitive bidding procedures carried out the civil works. The Project was completed after 4 years, 2 years later than expected at appraisal. There was limited scope to reduce the implementation time considering the executing agency's unfamiliarity with ADB procedures and the volume of construction work involved in the Project.

Judging by the current condition of the subprojects, the quality of construction was fair. Out of 34 inspected subprojects, 76% were rated good to fair, and 24% poor or destroyed. Prior to the disaster, many facilities were already in a poor state of repair and so required comprehensive reconstruction, not merely restoration to pre-disaster conditions. The perceived need to maximize the coverage of available funds meant that resources might have been spread too thinly over too many subprojects. Having fewer subprojects would have made project implementation more manageable and enhanced overall performance. Relatively simple construction work, including restoring telephone and power transmission lines, was completed at good quality, and their present state of repair was found satisfactory.

The project objectives of restoring key infrastructure to pre-disaster levels and normal livelihood conditions were largely met. The overall assessment of the Project was successful. Specifically, the Project was rated relevant, effective, and efficient, and its sustainability less likely. This result has to be appreciated in the light of the formidable challenges under which the relief measures had to be implemented, notably (i) the wide geographical scatter of subprojects, (ii) the geological instability of the area in which facilities had to be reconstructed, and (iii) the capacity and capability constraints of the institutions that carried out the relief measures. Subprojects in power and telecommunications performed best, while the worst performers were school and road subprojects.

The socioeconomic impact survey confirmed that subprojects have improved the quality of life in the affected communities. The rehabilitation works allowed normal activities to resume by providing access to places of employment, markets, hospitals, and schools. In general, affected people expressed satisfaction with the relief measures. Most of them did not regard the relocation areas as permanent and have returned to their original homes. Interviewed residents indicated that they were allowed to express preferences with respect to the relocation area. Problems associated with the relocation centers varied and included longer distances to schools and health centers and inadequate access to irrigation and drinking water.

ADB's processing of the loan was expeditious. Subproject formulation and approval arrangements were generally satisfactory. However, greater attention should have been paid to the (i) recurrent nature of flood disasters in the Kyrgyz Republic, (ii) dimension of the damage inflicted on infrastructure, and (iii) modest construction standards that would ensue from the short implementation period and available financing.

Sustainability of the project outcomes has emerged as the key concern, whose different aspects include (i) ADB's previous emergency assistance policy and the funds available under the project loan that could not provide more than quick fixes, rather than sustainable development results; (ii) the recurrent nature of disasters in the Kyrgyz Republic; and (iii) the generally weak maintenance regime that had led to a backlog of deferred maintenance and may have contributed to the dimension of the disaster. Of the 34 subprojects visited by the OEM, the sustainability of 16 (40%) was rated either less likely or unlikely.

The key lesson identified is related to ADB's role in post-disaster operations. If urgency is the key and funding limited, the subprojects selected should all have achievable outcomes, with a focus on facilities that cost relatively little and are a priority in the context of emergency disaster relief for the affected population. This would apply to resettlement centers and meant leaving infrastructure rehabilitation to a separate project with realistic timeframe and adequate funding to achieve sustainable results. ADB's *Disaster and Emergency Assistance Policy* (2004) addresses this issue. The recurrent nature of natural disasters in the Kyrgyz Republic poses risks of a strategic nature that should be addressed at the country level with regular project loans. As an alternative, a fund dedicated to disaster mitigation could be established.

The mix of (i) a variable project scope, (ii) inadequate construction supervision on the ground, and (iii) non-adherence to procurement standards has created an aura rife for corruption and fund abuse. Even under emergency conditions, ADB's *Procurement Guidelines* should not be compromised, the agreed project scope should be adhered to, and more emphasis should be placed on local consultants. Other lessons provided by the OEM suggest that

- (i) implementation periods should be assessed based on realistic project preparation and construction periods;
- (ii) disaster relief assistance cannot remedy deferred maintenance;
- (iii) emergency interventions should focus on transitional emergency assistance and address people's immediate needs, leaving infrastructure rehabilitation for dedicated project loans; and
- (iv) public education and awareness are the keys to disaster protection.

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KYRGYZ REPUBLIC FLOOD EMERGENCY REHABILITATION PROJECT (as implemented)

KAZAKHSTAN



I. INTRODUCTION

A. Evaluation Purpose and Process

1. In May and June 1998, heavy rains caused severe flooding and landslides over wide areas of the Kyrgyz Republic. The disaster inflicted heavy damage on private property and public physical infrastructure. The Asian Development Bank (ADB) Flood Emergency Rehabilitation Project¹ (the Project) was to provide assistance to the Government of the Kyrgyz Republic (the Government) in restoring public physical infrastructure damaged by the disaster. The Project was approved on 24 September 1998 and completed in August 2002. Four years after completion, ADB's Operations Evaluation Department (OED) evaluated the Project with regard to its relevance, effectiveness, efficiency, and sustainability. The Operations Evaluation Mission (OEM) prepared this report in accordance with ADB guidelines for project performance evaluation.² The OEM visited the Kyrgyz Republic from 25 September to 6 October 2006 and inspected 34 of the total of 39 subprojects. By that time, over 4 years had passed since the last of 39 subprojects had been completed. The subprojects inspected by the OEM were located in the administrative regions of Batken (3), Jalal Abad (18), and Osh (13). A list of subprojects inspected by the OEM is in Appendix 1.

2. The evaluation draws upon a review of project documents and other relevant studies and upon discussions with ADB staff members and officials of government agencies concerned with the Project. It incorporates the results of the OEM's field inspections, comprising technical inspections of a sample of project infrastructure and beneficiary consultation at selected project locations. A copy of the draft evaluation report was shared with ADB's departments and offices concerned and those of the Borrower and the executing agency (EA), and their views have been incorporated as appropriate.

3. In December 2003, the project completion report (PCR) rated the Project relevant, efficacious, and less efficient, and its sustainability less likely. Nonetheless, the overall performance of the Project was rated successful. The Project was rated relevant with respect to the country's priorities and ADB's policy³ on *Rehabilitation Assistance After Disasters* (1989). This assessment applied also to the changes in the list of subprojects during implementation. It considered the Project efficacious because it had achieved its basic objective of helping restore public infrastructure damaged by the disaster. Although no formal economic analysis was undertaken at appraisal, the PCR concluded that the Project was less efficient in achieving its outputs. The PCR expressed concern about the sustainability of subprojects. Sustainability was considered at risk because of inadequate maintenance management and financing and the vulnerability of subprojects to recurrent disasters. The overall rating of successful resulted from the predominantly positive assessment of effectiveness and those subprojects that had shown satisfactory performance.

¹ ADB. 1998. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Kyrgyz Republic for the Flood Emergency Rehabilitation Project*. Manila (Loan 1633-KGZ[SF]), for \$5.0 million, approved on 10 November).

² ADB. 2006. *Guidelines for Preparing Performance Evaluation Reports for Public Sector Operations*. Manila.

³ ADB's response to emergencies in its developing member countries (DMCs) was governed by ADB; ADB. 1987. *Policy on Rehabilitation Assistance to Small DMCs Affected by Natural Disasters*. Manila; and ADB. 1989. *Rehabilitation Assistance After Disasters*. Manila.

B. Expected Results

4. The Project's expected outcome was to help restore economic activity by rehabilitating infrastructure. In the long run, the impact of the Project was expected to be demonstrated by poverty alleviation and assistance for the Government's efforts to bring social and economic life back to normal, together with sustaining general economic activities in the affected regions. The Project was intended to enable the Government to continue its normal expenditure program. Consistent with the nature of the Project, a rudimentary design and monitoring framework was prepared at appraisal. The updated framework in Appendix 2 shows the impact and outcome indicators, as well as the intended beneficiaries and outputs of the Project.

II. DESIGN AND IMPLEMENTATION

A. Formulation

5. Regional and district government committees in charge of emergencies identified subprojects eligible for restoration and ADB financing. Damage statements listed the affected sites and the scope of damage and provided cost estimates and financing needs. The statements were screened and prioritized by the central Government. Following the Government's request for emergency assistance, a loan appraisal mission visited the Kyrgyz Republic in July 1998. The mission carried out a thorough damage-and-needs assessment in close consultation with national and local government authorities and the people affected by the disaster. An agreement was reached with the World Bank on a suitable division of work by sector. The outcome of the needs assessment was a long list of 84 subprojects that were eligible for financing under ADB's policy on *Rehabilitation Assistance After Disasters*. This list was reduced to a short list of 37 high-priority subprojects, on the basis of which ADB's Board of Directors approved the Project on 24 September 1998.

6. The criteria used in designing the Project followed from ADB's policy on *Rehabilitation Assistance After Disasters* approved in 1989, which required that subprojects be implemented expeditiously and restored to pre-disaster levels, not wholly reconstructed. Implementation arrangements were designed to ensure quick and simple access to funds, adequate beneficiary participation, and a relatively high level of consultant support and ADB supervision. Environmental and social aspects were also to be considered in the design of subprojects, though their emergency nature precluded a thorough consideration of these concerns.

B. Rationale

7. Because of its seismic and geographic conditions, the Kyrgyz Republic is prone to natural disasters, including earthquakes, landslides, and floods. Between 1992 and 1999, over 1,210 natural disasters were recorded in the Kyrgyz Republic. Direct economic damage caused by natural disasters in the country exceeds on average \$20 million per year.⁴ This figure does not include indirect damage or such secondary effects as ecological harm, epidemics, deteriorated living conditions, or lost soil fertility. In May–June 1998, continuous heavy rains caused severe flooding and landslides in the Jalal Abad, Osh, and Batken oblasts (administrative regions) of the Kyrgyz Republic. The floods and landslides inflicted heavy

⁴ United Nations Development Programme. 2005. Central Asia Human Development Report. *Bringing Down Barriers: Regional Cooperation for Human Development and Human Security*. Bratislava.

damage on private property and public infrastructure, particularly roads, water supply infrastructure, drainage systems, power and telephone lines, healthcare facilities, and school buildings. The disaster worsened the misery of poor people living in the worst affected areas, especially in the Budalyk Valley of Osh Oblast, where houses, farmland, and livestock were lost. Damage to public infrastructure limited access to markets, health services, drinking water, electricity, irrigation, and education.

8. The Project was proposed under ADB's 1989 policy on *Rehabilitation Assistance After Disasters*. The Project was to assist in (i) rehabilitating public infrastructure damaged by floods and landslides and (ii) mitigating the risk that these expenditures would disrupt the Government's macroeconomic stabilization programs. The need to help the Government cope with the disaster was urgent, as it was experiencing severe budget constraints. The assumption was that without ADB assistance a portion of the Government budget would necessarily have been reallocated to disaster rehabilitation, aggravating existing fiscal constraints that already hindered the Government's social and macroeconomic stabilization efforts.

C. Cost, Financing, and Executing Arrangements

9. The actual project cost of \$6.12 million was close to the appraisal estimate of \$6.34 million. This applies also to the actual foreign exchange cost of \$3.88 million, which approached the appraisal estimate of \$4.00 million. Among the various cost items, expenses on consultant services were almost twice as high as envisaged at appraisal. Their share in the total cost doubled from 5.8% at appraisal to almost 11.8% at completion. Most of the increase arose from extending the services of the international consultant, as the extension of national consultants could be financed from the existing budget (see para. 13). Changes in the costs of subprojects were insignificant, which is less than surprising, as the original cost estimates were treated as budgets to which subproject standards and quality had to be adapted. The cost estimates at appraisal did not allow for preparing designs, work drawings, specifications, or bid documents. It was assumed that these activities would be carried out by the EA using its own human and financial resources. A summary of the estimated and actual project costs is in Table 1.

10. Financing arrangements remained largely unchanged, with ADB financing accounting for 80.4% of the total cost, including the whole foreign exchange cost and a portion of the local cost. ADB's financing share at appraisal had been estimated at 78.9%.

Table 1: Project Cost
(\$ million)

Item	Appraisal Estimate			Actual		
	Foreign	Local	Total	Foreign	Local	Total
A. Physical Infrastructure and						
1. Civil Works	3.28	1.89	5.17	3.15	2.04	5.19
2. Equipment	0.12	0.00	0.12	0.21	0.00	0.21
Subtotal (A)	3.40	1.90	5.28	3.36	2.04	5.40
B. Project Implementation Assistance						
1. Consulting Services	0.17	0.20	0.37	0.52	0.20	0.73
Subtotal (B)	0.17	0.20	0.37	0.52	0.20	0.73
C. Contingencies						
1. Physical	0.27	0.15	0.42	0.00	0.00	0.00
2. Price	0.17	0.09	0.26	0.00	0.00	0.00
Subtotal (C)	0.44	0.25	0.69	0.00	0.00	0.00
Total	4.01	2.33	6.34	3.88	2.24	6.12

Source: ADB. 2003. *Project Completion Report on the Flood Emergency Rehabilitation Project in the Kyrgyz Republic*. Manila.

11. The cost and financing estimates indicate what level and, perhaps, quality of construction was envisaged at appraisal. Given the type of outputs proposed for the various infrastructure concerned and their state of disrepair prior to the disaster, the cost and financing estimates would not have allowed more than quick fixes, not sustainable rehabilitation. While expeditious restoration to pre-disaster conditions was in line with ADB's policy on *Rehabilitation Assistance After Disasters* in force at the time of appraisal, the policy may have conflicted with the overall objective of achieving development results.⁵

12. Project management underwent substantial organizational changes during implementation. An organization chart showing the original and actual management structure is in Appendixes 3 and 4. At appraisal, the following implementation arrangement was envisaged:

- (i) An interministerial committee consisting of all line ministries concerned with reconstruction activities would act as the project steering committee (PSC) and be in charge of fund allocation to sectors and the coordination and overall supervision of project implementation. The PSC was to convene quarterly.
- (ii) As the ministry in charge of disaster prevention and emergency relief operations, the Ministry of Ecology and Emergency Situations (MEES)⁶ was to act as EA for the Project. MEES was assumed to be capable of carrying out this function because of its substantial experience with rehabilitation works in response to natural disasters.
- (iii) Two project implementation units (PIUs), one in each of the two oblasts then recognized as affected, would be in charge of preconstruction activities, construction supervision, quality control, and the maintenance of project accounts.

⁵ The policy at the time of appraisal was revised in 2004.

⁶ The EA's original name was the Ministry for Emergency Situations and Civil Defense (MESCD). In January 2001, MESCD was merged with the Ministry of Ecology, and the new ministry was named Ministry of Ecology and Emergency Situations (MEES). In 2005, the ecology portfolio was separated from MEES, and MEES was renamed the Ministry of Emergency Situations.

- (iv) The deputy governors of the two affected oblasts were to act as part-time project directors and to supervise the two PIUs. The project director was to be assisted by a full-time project manager in each PIU, who would be recruited from the oblast administration. In addition, the oblasts were expected to second adequate technical and administrative staff to the PIUs.
- (v) One international project adviser was to be engaged for 6 person-months, and three national consultants (a road engineer, municipal engineer, and accountant) for a total of 72 person-months (24 person-months each, covering the original implementation period of the Project) to assist the PIUs with project implementation.

13. Soon after the start of the Project, the Government and ADB realized that the envisaged implementation arrangements did not work well, and the following changes were made:

- (i) To streamline the chain of command and decision-making process, MEES took over from the Ministry of Finance the chairing of the PSC.
- (ii) Within MEES, a project management unit (PMU) was established to assume all procurement responsibilities and supervise the activities of the PIUs. The PMU was established in May 1999.
- (iii) Three consultants were attached to the PMU, including the international advisor and two local engineers.
- (iv) The PIUs, which originally were to be composed of oblast staff, would be strengthened by local consultants, who would also manage the PIUs. As a result, local consultancy increased from 72 person-months to 110. The increase was accommodated within existing budgets.
- (v) Topographic and geophysical surveys and the preparation of designs were contracted out to local consultants and design institutes. (The assumption that MEES or the oblast administrations would have adequate capability and resources to carry out these tasks had turned out to be unrealistic.)
- (vi) One year after inception, in response to noted irregularities in adherence to procurement guidelines, the function of the international consultant was converted from part-time advisor to permanent supervisor. To accommodate the multiple extensions of the loan closing date, the contract of the international consultant was extended from the original 6.0 person-months to a total of 23.5 person-months.

14. In view of the emergency situation, the choice of MEES as EA had merits. However, several ADB missions, including the PCR Mission, noted that the capacity of MEES to implement the Project was weak and that, although implementation arrangements were amended in the course of implementation, the Project continued to experience considerable difficulties and delays. If these observations were valid, the subsequent decision to concentrate more authority on MEES would appear to have been a move in the wrong direction. While MEES had limited implementation experience with sizeable infrastructure projects, such experience existed in the line ministries concerned with particular sectors, notably education, transport, and water management. Given the relatively large number of subprojects in those sectors, it should have been worth considering to establish PIUs in the line ministries under the coordination of MEES. By the Federation Internationale des Ingenieurs Conseils terms of contracts, the line ministries could have appointed experienced engineers to act as their representatives for periodic supervision and final acceptance of the completed subprojects. The OEM is of the view that this arrangement would have (i) expedited project

implementation, (ii) strengthened accountability and sense of ownership, and (iii) contributed to improving the quality of subprojects.

D. Procurement, Construction, and Scheduling

15. **Procurement.** The Project originally consisted of 37 subprojects that were to be tendered in 10 packages. However, in the course of implementation, ADB and the Government agreed to tender each subproject separately because (i) the individual subprojects were quite distant from one another, and (ii) most of the local contractors had limited capacity to work on more than one subproject at a time.

16. Serious irregularities were experienced in the bidding of civil works for the first 19 subprojects, as the tendering procedures did not comply with ADB's *Procurement Guidelines* (2006, as amended from time to time) or the Government's bidding procedures. The irregularities were detected during review missions and in connection with withdrawal applications and included

- (i) deviation from the standard tender document prepared by the project adviser and cleared by ADB,
- (ii) ambiguous instructions about the inclusion of taxes in the bids,
- (iii) contracts being awarded prior to obtaining ADB approval,
- (iv) advance payments to contractors in excess of the amounts stipulated in the tender documents,
- (v) the lack of guarantees for advance payments, and
- (vi) civil works commencing prior to tendering.

17. ADB instructed the EA to amend these 19 contracts in line with the Government's procedures and ADB's *Procurement Guidelines* and then submit them to ADB for approval after the fact. ADB approved the amended civil works contracts in April 2000. Appropriate tendering procedures were adopted for the remaining contracts. It is, however, unclear how ADB's intervention at a late stage in the process could have rectified the observed deficiencies, when contracts had already been awarded and work started.

18. **Construction.** Judging by the current condition of the subprojects, the quality of construction was fair. Of 34 subprojects inspected, 76% were rated good to fair, and 24% poor or destroyed. A variety of reasons contributed to these results. Prior to the disaster, many facilities were already in a poor state of repair and required comprehensive reconstruction, not just restoration to pre-disaster conditions. This applies in particular to the roads, bridges, and riverbank protection works in the Budalyk Valley in Osh Oblast. Budgets were stretched to maximize outputs. In some cases, facilities not affected by the disaster were included. The strategy of expanding the number of subprojects lowered the quality of construction. School buildings were completed consistent with the modest standards prevalent in Central Asia, which the Project did not improve. Some buildings were completed at a quality unacceptable by any standard. Relatively simple construction work, including the restoration of telephone and power lines, was completed at good quality, and their state of repair at the time of the OEM was satisfactory. The detailed results of a survey of physical conditions carried out by the OEM are in Appendix 5. A summary is in Table 2.

Table 2: Summary of Condition Survey

Subproject Category	Condition								Total in Category	
	Good		Fair		Poor		Destroyed			
	Number	%	Number	%	Number	%	Number	%		%
A. Roads and Bridges	3	30.0	3	30.0	2	20.0	2	20.0	10	100.0
B. Schools	3	27.3	6	54.5	2	18.2	0	0.0	11	100.0
C. Telephone and Power Lines	4	100.0	0	0.0	0	0.0	0	0.0	4	100.0
D. Health Posts	2	100.0	0	0.0	0	0.0	0	0.0	2	100.0
E. Water Supply	4	57.1	1	14.3	2	28.6	0	0.0	7	100.0
Total in Condition Group	16	47.1	10	29.4	6	17.6	2	5.9	34	100.0

Source: Operations Evaluation Mission.

19. **Scheduling.** Despite the organizational changes made at an early stage, project implementation continued to experience problems, slowing progress and causing a 16-month delay in completing the Project. The original loan closing was April 2001. By that time, the Project was only 41% complete. After three extensions, the loan account was closed on 23 October 2002.⁷ Delays occurred for various reasons, including

- (i) the EA's lack of experience in implementing internationally funded projects,
- (ii) repeated changes in the scope of the Project,
- (iii) changes in project management staff following the reorganization of the Ministry of Emergency Situations and Civil Defense in January 2001,
- (iv) disrupted international travel following the 11 September 2001 events, delaying the resumption of work by the international consultant by 3 months,⁸ and
- (v) severe weather during the winter months of 2001/2002 causing a delay of 4.5 months.⁹

20. Although the OEM is of the view that justification for some of the delays was weak, the targeted 2-year implementation period was too short in the first place to effectively complete the volume of civil works on bridges, roads, and riverbank infrastructure. While expeditious implementation is a key principle underlying ADB's policy on *Rehabilitation Assistance After Disasters*, the expectation to complete the Project within 2 years was unrealistic and even counterproductive, given the scope and nature of the civil works involved and the lead time required to prepare the subprojects. There is a trade-off between the implementation time of emergency assistance loans and the quality of outputs. For infrastructure-restoration projects, this trade-off can mean a choice between quick fixes and achieving development results. In setting objectives and determining an implementation period of 2 years, the appraisal mission should have adapted the scope of the Project and the type of subprojects included to the given

⁷ The loan account was kept open until 2 April 2003 to allow for liquidation of the imprest account advances.

⁸ According to the PCR, disruptions in international travel emanated from the heightened security in the region and caused a delay of 3 months. According to the findings of the OEM, international flights to and from the region had to be rerouted to avoid the airspace over Afghanistan. This did not, however, affect flight schedules enough to delay the international consultant's resumption of duty by 3 months.

⁹ The OEM sees only limited validity in this reason. Winters in the Kyrgyz Republic are harsh in general and usually do not allow construction activities. That construction would not be possible during the winter months had been taken into account by the original implementation schedule.

objectives and implementation period. This would have excluded restoring roads, bridges, and riverbank infrastructure.

E. Design Changes

21. In the course of implementation, the scope of the Project underwent significant changes. Instead of the 37 subprojects envisaged at appraisal, the completed Project included 39 subprojects, but the changes were greater than this suggests. The first change involved 14 road projects that were dropped from the scope of the Project and moved to the regional Greater Silk Road Project. New subprojects were included as substitutes for the roads. The second major change involved the inclusion of nine new schools in the project scope. So, 16 subprojects were dropped from the original project scope and 18 were added during implementation. Of the 18 new subprojects, only 3 were included in the long list of 84 subprojects that had resulted from the original damage-and-needs assessment. A table highlighting details of the variations in project scope is in Appendix 6. A summary of the changes is shown in Table 3.

Table 3: Physical Components Included at Appraisal and as Completed
(Number of Subprojects)

Sector	At Appraisal		As Completed	
	Jalal Abad Oblast	Osh Oblast	Jalal Abad Oblast	Osh and Batken Oblasts
Roads and Bridges	2	17	3	7
Power	5	0	3	0
Health Posts	1	1	1	1
Water Supply and Drainage	3	1	4	2
Schools	2	1	9	6
Telecommunications	1	0	1	0
Relocation Centers	3	0	2	0
Subtotal	17	20	23	16
Total	37			39

Source: ADB 2003. *Project Completion Report on the Flood Emergency Rehabilitation Project in the Kyrgyz Republic*. Manila.

F. Outputs

22. The Project's physical outputs included subprojects to restore or construct district roads and bridges, schools, water supply and irrigation infrastructure, telephone and power transmission lines, and health posts in resettlement areas. Civil works, equipment, and consulting services originally estimated at 78 person-months (6 person-months of international consultancy and 72 person-months of national consultancy) were to be employed to achieve these outcomes. At project completion, the following facilities were constructed or rehabilitated: (i) 10 roads and bridges, (ii) 3 power subprojects, (iii) 2 healthcare facilities, (iv) 6 water supply and drainage systems, (v) 15 old and new schools, (vi) 1 telecommunication facility, and (vii) 2 relocation centers for affected families. The changes in project scope during implementation are outlined in para. 20 and Table 3.

G. Consultants

23. A total of 110 person-months of national consultancy were used for project management and supervision. The consultants, most of them former MEES staff, included one municipal

engineer, one road engineer, two project managers, and a project accountant. The PCR rated the performance of the national consultants as partly satisfactory and satisfactory and has attributed possible shortcomings to their lack of experience in contract management and inadequate preparation for the job. Given the wide geographical dispersal of project sites and the small number of consultants, even better-trained consultants might not have been equal to the task. While the PIUs were strengthened in the course of implementation, increasing their number from 72 person-months to 110 person-months, the increase was still inadequate. Supervisory capacity within MEES should have been better assessed at appraisal. As an alternative to the organizational setup used under the Project, in which the PIUs cut across all sectors, the PIUs could have been formed by the line ministries concerned, e.g., transport, education, and water supply. This would have made more effective use of the knowledge available in the line ministries and enhanced the sense of ownership and accountability.

24. One international consultant financed by the loan was engaged as a part-time advisor to the EA and PIUs for an initial period of 6 months on an intermittent basis. His contract was extended to match the full length of the implementation period, and his position was converted to permanent supervisor in the PMU at the headquarters of MEES. To accommodate the various extensions of the loan closing date, the contract of the international consultant was extended from the original 6.0 person-months to a total of 23.5 person-months. The international consultant carried out field inspections with the national consultants and reported to MEES on his observations of project progress and matters that required attention. He worked closely with the project accountant and checked certificates approved by the consultants for payment. The consultant also assisted MEES in preparing withdrawal applications for the replenishment of funds in the imprest account and the required reports to ADB. The consultant carried out limited training of MEES and PIU staff focused on contract management and ADB guidelines on procurement. Most training occurred on the job. Twelve staffers from the PMU and the PIUs were trained. The impact of training on the capacity of MEES to implement international projects is considered marginal, since very few of the counterpart staff continue to work in MEES. The PCR rated the performance of the international consultant highly satisfactory. The OEM has received additional positive feedback on the consultant's performance and would therefore endorse this assessment.

H. Loan Covenants

25. Project performance would have been more satisfactory if loan covenants related to implementation had been more strictly complied with. Areas where compliance was lax included (i) procurement, (ii) project administration, (iii) counterpart funding, and (iv) maintenance of project facilities. The most serious deviation from the loan covenants was that MEES did not abide by ADB's *Procurement Guidelines* in more than half of the contracts. While ADB's *Disaster and Emergency Assistance Policy* (2004) calls for a liberal interpretation of the guidelines, the procurement practices adopted by the PIU seemed to have been almost in defiance of ADB's standards. ADB tried to mitigate the risk of abuse by fielding several missions to provide training in project administration and management and also posted a senior international civil engineer to provide guidance to the MEES and PIUs. Under these circumstances, it is difficult to accept the explanation by the PCR that the observed aberrations were caused by the EA's lack of familiarity in implementing externally funded projects.

I. Policy Framework

26. Because of its geophysical conditions, the Kyrgyz Republic is prone to such natural disasters as earthquakes, landslides, and floods. The country's land area is 198,800 square

kilometers (km), of which 95% is mountainous. The terrain ranges in altitude between sea level and 7,038 meters. Over the past 15 years, an average of about 170 disasters have occurred per year. Most deaths are caused by landslides, avalanches, earthquakes, and mudflows. On average, the monetary value of annual disaster damage is in the range of \$30 million to \$35 million.¹⁰ MEES has been set up to formulate and implement policies to prevent such emergencies. It manages financial, material, and technical resources for disaster relief operations and is responsible for coordinating the operations of the various central and local government departments. MEES develops emergency plans and carries out training for the local population and government officials. The current Government policy is based on a comprehensive response that integrates (i) disaster prevention; (ii) developing early-warning and monitoring systems; (iii) awareness building, education, and training of experts and citizens; and (iv) relief and reconstruction.

27. A key feature of ADB's policy in force at appraisal was to restore infrastructure to pre-disaster conditions. The policy envisaged quick recovery, the restoration of normal services, and, accordingly, a short implementation period. Other elements of the policy included (i) community participation, (ii) coordination with development partners involved in relief operations, and (iii) a sectoral approach to project design. This meant that the ADB project would have to be a slice of a larger Government program and that a batch of subprojects would have to be ready for immediate implementation, while preparation for the subsequent batch could be carried out during implementation. The Project was generally in line with the approach envisaged by this policy. While the affected population was consulted about options for relocation centers, other subprojects such as roads, riverbank infrastructure, and power transmission lines provided only limited scope for community participation.

28. ADB's *Operations Manual*¹¹ was revised in 2004, a year after project completion. The updated policy incorporated the lessons from previous emergency assistance projects and envisaged (i) a sharper focus on fewer sectors; (ii) faster project preparation; (iii) design criteria that ensure sustainability; (iv) technical assistance for preventive measures; and (v) independent project monitoring for strengthened governance. The policy regards disaster relief as a continuum involving short-term transitional emergency assistance combined with medium- to long-term rehabilitation and reconstruction. The comprehensive approach addressing both short-term emergency assistance needs and long-term rehabilitation requirements is fully supported by the insights gained from the OEM's assessment of the Project.

29. Funding for maintenance is a systemic issue in the Kyrgyz Republic. The budgets of both the central and local governments are inadequate to finance proper maintenance of the roads, bridges, schools, and other facilities rehabilitated under the Project. For road and riverbank maintenance, the situation is particularly serious, and the outlook to sustain project facilities is less than encouraging. As many of the roads run alongside riverbeds, the maintenance situation for roads depends, to a large extent, on that of riverbanks. Maintenance of riverbanks and roads came to a halt immediately after the collapse of the former Soviet Union. As the country is prone to natural disasters that regularly disrupt economic activities, the allocation of funds is often limited to emergency maintenance needs. As a result, infrastructure has gradually deteriorated and is in a very poor state of repair.

30. Maintenance of infrastructure facilities, particularly roads and riverbanks, has long been neglected, maintenance budgets are inadequate, and the cost-recovery mechanism is

¹⁰ MEES. 2006. Data obtained from a PowerPoint presentation.

¹¹ ADB. 2004. *Operations Manual*. Section D7/BP: Bank Policies, Disaster, and Emergency Assistance. Manila.

deficient.¹² In some cases, the poor state of repair of the facilities aggravated the impact of the disaster. Emergency assistance loans under ADB's *Disaster and Emergency Assistance Policy* aim to mitigate immediate losses of priority assets rather than provide comprehensive reconstruction or remove the backlog of deferred maintenance. Given this objective, the emergency assistance can restore facilities only to the inadequate pre-disaster conditions that, to some extent, contributed to the dimension of the disaster. While ADB's policy is consistent with the objective of restoring economic, social, and governance activities after disasters, it prolongs the circular problem of inadequate maintenance.

III. PERFORMANCE ASSESSMENT

A. Overall Assessment

31. The overall assessment of the Project was successful. This result has to be appreciated in the light of the formidable challenges under which the relief measures had to be implemented, including the

- (i) geographical dimension of the disaster and wide dispersal of subprojects,
- (ii) need to distribute disaster relief resources fairly and in accordance with the emergency needs of the oblasts,
- (iii) geological instability of the area in which facilities had to be reconstructed,
- (iv) need for expeditious emergency operations,
- (v) principle of economy and efficiency that had to be complied with, and
- (vi) capacity and capability constraints of the institutions that had to carry out the relief measures.

Given these constraints, the performance of the Project was satisfactory.

32. The subprojects brought significant economic benefits by responding to emergency needs of the people in the affected areas. The socioeconomic impact survey carried out by the OEM confirmed that the rehabilitation works allowed normal activities to resume with access to schools, hospitals, and employment places. People saved their time and money when traveling to social centers and work places. The relief measures were satisfactory (see also para. 41). However, the quality of some of the subprojects was less satisfactory. The desire to maximize the coverage of available funds meant that resources were spread too thinly over too many subprojects. A smaller number of subprojects would have made project implementation more manageable and enhanced overall performance. To these ends, the eligibility of subprojects for inclusion in the ADB loan should have been limited to correcting direct disaster damage. This would have increased the relevance of the Project, and subprojects could have been completed at better quality, improving both their efficiency and sustainability.

33. To arrive at the overall assessment, the individual component ratings were aggregated using equal weightings for the 34 subprojects. The rating was based on four criteria: relevance (20%), effectiveness (30%), efficiency (30%), and sustainability (20%). Individual criterion ratings were in whole numbers from 0 to 3, with a higher rating indicating better performance. The overall assessment is summarized in Table 4. Further details are in Appendix 7.

¹² ADB. 2005. *Institutional Support in the Transport Sector*. Final Report (TA 3757-KGZ). Manila.

Table 4: Overall Performance Assessment

Criterion	Average Score per Subproject	Weight	Overall
1. Relevance	2.32	0.2	0.46
2. Effectiveness	2.50	0.3	0.75
3. Efficiency	1.97	0.3	0.59
4. Sustainability	1.62	0.2	0.32
Total Rating^a			2.10

^a Highly successful > 2.7, successful 2.7–1.6, partly successful <1.6–0.8, unsuccessful < 0.8.

Source: ADB. 2006. *Guidelines for Preparing Performance Evaluation Reports for Public Sector Operations*. Manila.

34. In terms of sectors, subprojects in power and telecommunications performed best. The worst performers were schools and roads. Tables 5 and 6 provide summaries of the ratings. A detailed assessment is in Appendix 7.

B. Relevance

35. The Project was rated relevant.¹³ The rating applies to the Kyrgyz Republic's objectives to mitigate the effects of natural disasters and ADB's *Disaster and Emergency Assistance Policy*, both in terms of the policy valid at the time of appraisal and the policy as revised in 2004. Fifteen subprojects not included in the original long list of subprojects were added to the scope of the Project during implementation (para. 21). This made assessing their relevance difficult. As most of the subprojects had been in a poor state of repair prior to the disaster, a clear demarcation of disaster-inflicted damage from the effect of deferred maintenance was not possible. The Project demonstrated a strong coordination with other funding agencies such as the World Bank, United Nations Development Programme, and other international aid agencies. ADB responded quickly in assisting the Government to reconstruct or rehabilitate damaged infrastructure in affected oblasts. The OEM rated 70.6% of the subprojects highly relevant, 5.9% relevant, and 8.8% partly relevant.

Table 5: Summary of Ratings by Sector and Region

Sector	Rating
Roads and Bridges	1.99
Water Management	2.28
Power and Telecommunications	2.50
Schools	1.94
Health Posts	2.25
Region	
Jalal Abad	2.24
Osh	1.58
Batken	1.87

Source: Operations Evaluation Mission.

¹³ The rating of 2.7 was at the margin between highly relevant and relevant.

Table 6: Summary of Ratings by Criteria
(Number of Subprojects)

	Number	%
Relevance		
Highly Relevant	24	70.6
Relevant	2	5.9
Partly Relevant	3	8.8
Not Relevant	5	14.7
Effectiveness		
Highly Effective	22	64.7
Effective	8	23.5
Less Effective	3	8.8
Ineffective	1	2.9
Efficiency		
Highly Efficient	10	29.4
Efficient	14	41.2
Less Efficient	9	26.5
Inefficient	1	2.9
Sustainability		
Most Likely	7	20.6
Likely	13	38.2
Less Likely	8	23.5
Unlikely	6	17.6

Source: Operations Evaluation Mission.

C. Effectiveness

36. The Project is rated effective. Effectiveness describes the extent to which the outcome, as specified in the design and monitoring framework, has been achieved. The expected outcome of the Project was to restore economic activity in the affected regions by rehabilitating roads and bridges, power and energy, water supply, schools, telecommunications, and new public facilities in relocation centers. The Project has largely achieved the expected outcome. While some of the disaster-affected areas have since suffered from recurring disasters, the outcome of the Project was to restore daily life to normal. In all, 64.7% of all subprojects were rated highly effective, 23.5% effective, and 8.8% less effective.

D. Efficiency

37. The Project was rated efficient. Efficiency describes how economically resources have been converted to results. In view of the emergency situation prevailing in the aftermath of the disaster, no rigorous economic analysis was carried out at appraisal. As baseline data were not available and no least-cost analysis had been prepared at appraisal, the OEM did not calculate an economic internal rate of return or related investment indicators. As indicators for efficiency, the OEM has used a combination of the following criteria: (i) duration of construction, (ii) unit cost of construction, (iii) quality of construction, and (iv) number of beneficiaries. In some instances, unit cost of construction, such as investment cost per kilometer of construction, was inordinately high. In other cases, workmanship was poor, requiring premature repair work and expenditures. Some subprojects displayed a combination of high cost and poor workmanship. In all, 29.4% of the subprojects were rated highly efficient, 41.2% efficient, and 29.4% less efficient or below.

E. Sustainability

38. The OEM rated the Project's sustainability less likely. This assessment has taken into account the performance of subprojects located in geologically unstable areas and the physical conditions of the subprojects vis-à-vis the generally weak maintenance regime. Funding for maintenance is a systemic issue in the Kyrgyz Republic. Local governments in particular are short of adequate recurrent budgets for maintaining the roads, bridges, schools, and other facilities rehabilitated under the Project. A recent Government decree abolishing parents' participation in the financing of school costs has aggravated the situation in the education sector. In the face of such budget constraints, the low quality of work observed in some school buildings adversely affects not only the efficiency rating of the Project but also its sustainability. Of the 34 subprojects, the sustainability of 14 was rated less likely or unlikely. Four subprojects were rated unsustainable because of their location in geologically unstable areas and 10 because of their poor physical condition coupled with a low likelihood of receiving proper maintenance.

39. Project activities included restoring damaged facilities and reconstructing in locations better protected from floods and landslides. The rehabilitated facilities were designed to minimize damage from future floods and landslides, and in some cases facilities were relocated to safer ground. Although the 2003 floods exceeded the magnitude of the 1998 floods, they damaged only three out of 39 subprojects. These three subprojects are all in the Budalyk area and include the access road to Budalyk, a water pipeline, and two culverts close to Kara-Suu village in Budalyk. Landslides in two places completely destroyed sections of the rehabilitated road. The road is aligned in a valley along a river, and the area is exposed to landslide risk. The cost of maintaining the project road is ever increasing because of landslides in 2003–2005 and their likelihood in the future. While a new road at a safer alignment higher up the valley is currently under construction, the Osh Oblast administration is considering relocating residents of the Budalyk Valley to a less vulnerable area. No agreement has been reached with residents on the amount of compensation required.

IV. OTHER ASSESSMENTS

A. Impact

1. Assessment of Impact

a. Impact on Institutions

40. The international consultant carried out training of MEES and PIU staff in project management and administration. The training focused on contract management and ADB guidelines on procurement. Special ADB missions provided similar training. A total of 12 staff from the PMU and the PIUs were trained. Considering that this was the first experience of MEES with an internationally financed project, the training was valuable with regard to both project implementation and the future activities of MEES. However, the contribution to capacity building was limited, considering that most of the trained staff were contractual and left MEES after the Project was completed. Others left the Government or joined other ministries of it after MEES was restructured.

b. Socioeconomic Impact

41. Interviews and focus group discussions with local government authorities and residents revealed that there was no socioeconomic impact assessment conducted by the local government or nongovernment organizations to determine the impact of rehabilitation subprojects. The OEM carried out a socioeconomic survey of selected subprojects. During the field visits, the OEM interviewed about 540 people. A combination of rapid assessments, interviews, and focus group discussions were employed during the survey. The rapid assessments were undertaken mostly for roads, bridges, and riverbank-strengthening subprojects, while the surveys were held in resettlement centers and rehabilitated schools. The surveys generally confirmed that the subprojects brought significant economic and social benefits. In most cases, they were highly relevant in responding to the emergency needs of people living in affected areas. Most respondents stated that the subprojects helped them significantly to save time and money when traveling to social centers and workplaces. However, subsequent landslides eliminated a portion of the benefits. People living in the Budalyk Valley of Osh Oblast are particularly vulnerable to natural disasters. The subprojects have improved the quality of life in the affected communities. The rehabilitation works allowed normal activities to resume with access to places of employment, markets, hospitals, and schools. In general, affected people expressed satisfaction with the relief measures. A detailed report on the socioeconomic conditions in the relocation centers is in Appendix 8.

c. Environmental Impact

42. The Project had no significant adverse environmental impact. Since the Project's objective was to restore the infrastructure to pre-disaster conditions, the subprojects were not expected to create any specific environmental impact. During site visits, the OEM did not observe any adverse impact on the environment.

B. ADB Performance

43. ADB's performance is rated satisfactory. Its processing of the loan was expeditious. Subproject formulation and approval arrangements were generally satisfactory. ADB was perhaps too lenient with regard to the violations of its *Procurement Guidelines* and the frequent deviations from the original project scope. Greater attention should have been paid to the (i) recurrent nature of disasters, (ii) dimension of the damage inflicted on infrastructure, and (iii) low construction standards that would result from the short implementation period and available financing. Another indicator of ADB's performance is the time that elapsed between the appraisal mission and the date of loan effectiveness, which was about 4 months. One option for ADB to reduce the processing time of future emergency assistance loans would be to prepare a medium-term and strategy work plan for responding to disasters. Since natural disasters in the Kyrgyz Republic occur regularly and at predictable locations, it would be prudent to determine specific sectors where ADB could get involved and develop a work plan based on a quick response mechanism even at the level of preparing the country programming strategy.

44. MEES staff indicated that they were generally satisfied with ADB's performance. ADB carried out eight loan review missions and one loan disbursement mission. The missions were mostly adequately staffed. However, in view of the increased number of school projects and the observed low quality of construction, the inclusion of an education specialist could have improved project supervision and quality control. In some cases, communication with ADB was perceived as cumbersome and time consuming. ADB's decision to extend the contract of the

international consultant detracted from the efficiency of the Project. Given the wide geographical dispersal of the project sites, strengthening supervision capacity on the ground would have been more effective.

C. Borrower Performance

45. The Borrower's performance is rated less satisfactory. Project performance by the EA would have been better if loan covenants related to implementation had been more strictly complied with. Areas where compliance was lax included (i) procurement, (ii) project administration, (iii) counterpart funding, and (iv) maintenance of project facilities. Project implementation was coordinated centrally through the PSC, but frequent changes in the Cabinet meant that meetings of the PSC did not take place regularly. Delayed release of counterpart funds during the latter part of project implementation hampered the progress of civil works. Procurement practices were murky and could have given rise to fund abuse.

V. ISSUES, LESSONS, AND FOLLOW-UP ACTIONS

A. Issues

46. The issues that have emerged from the evaluation revolve around ADB's *Disaster and Emergency Assistance Policy*, the construction standards applied to infrastructure subprojects, and their efficiency and sustainability. While the issues were relevant to the ADB policy in force at appraisal, they have been rendered mute to some extent by the 2004 revisions to the policy (footnote 11). Clearly, the issues would have been better addressed if the project design had been based on ADB's current policy. The OEM's conclusions reinforce the directions adopted by the new policy. The issues are discussed below.

47. Prior to the disaster, (i) maintenance of infrastructure, particularly roads and riverbanks, had long been neglected; (ii) maintenance budgets were inadequate; and (iii) the cost-recovery mechanism was deficient. There was a substantial backlog of deferred maintenance, and the poor state of repair of infrastructure aggravated the impact of the disaster. Emergency assistance loans under the relevant ADB policy aimed to mitigate immediate losses to priority assets rather than provide comprehensive reconstruction or remove the backlog of deferred maintenance. Given this objective, emergency assistance could restore facilities only to their inadequate pre-disaster condition. While ADB's policy was consistent with the objective of restoring economic, social, and governance activities after disasters, it has prolonged the circular problem of inadequate maintenance and increasing vulnerability to disasters. There should be an arrangement or agreement between the Government and ADB that repair and maintenance expenditures be funded or internalized in the Government's recurrent budget.

48. Given the country's topography and geophysical condition, natural disasters are likely to recur, and preventive action should be taken to protect residents of the most vulnerable areas. The Budalyk Valley in Osh Oblast is a case in point. Subsequent to the 1998 floods and landslides, the valley has been hit by several disasters, and the cost incurred by the Government from repeated reconstruction has been a multiple of the cost of the ADB subprojects affected. Apart from the sustainability issue, this is an inefficient use of scarce Government resources. The OEM is aware of credible Government efforts to relocate part of the population to safer ground. These efforts have been hampered by people's unwillingness to relocate, and the cause of this is seen to be inadequate compensation offered by the Government. The Government and ADB may usefully consider following up disaster relief operations with relocation projects. The economic returns on such projects would be high,

considering the cost savings that would be realized if it ended the past pattern of repeated costly and unsuccessful emergency interventions. A medium-term strategy and program could be considered in the country programming strategy,

49. ADB needs to better define its role in post-disaster operations. The issues that should be addressed in this context relate to the selection of subprojects that can or cannot be completed satisfactorily within the given constraints of time and financing. Reconstruction of infrastructure usually takes a long time and requires substantial funding. The patch-and-mend approach that was applied to road and riverbank subprojects, while expeditious and in keeping with available budgets, is not in line with ADB's overall policy to achieve development results. This assessment resonates with that of Loan 1666-BAN: Flood Damage Rehabilitation Project, in which this approach was viewed as short term and unsustainable. The focus then should be on facilities that cost relatively less to repair and are a priority in emergency disaster relief for affected people. This would apply to resettlement centers.

50. The issue of proper funding is of a strategic nature and must be addressed countrywide and in country strategy programs. In the Kyrgyz Republic, natural disasters are recurrent and foreseeable. The risks involved should therefore be considered in country programs and regular project loans. As an alternative, a fund dedicated to disaster mitigation could be established.

51. The efficiency of the Project would have benefited from including fewer subprojects. Reducing the scope of the Project became an option for the Government, when an alternative source of financing became available and most of the larger road subprojects were withdrawn from the Project. Rather than using loan funds to leverage the budget of the Government, the freed-up funds could have been concentrated on the remaining subprojects. This would have resulted in better project quality arising from (i) a more manageable supervision task, (ii) a higher standard of the completed Project, and (iii) less susceptibility to repairs and thus lower recurrent cost for repairs and maintenance.

52. The Ministry of Education confirmed that it uses standard designs for constructing school buildings. There are also standard formulas for allocating maintenance funds to schools. The OEM had raised this issue because it had found that the observed quality deficiencies were concentrated on school buildings. While the ministry was represented on the PSC, it is unclear to what extent the PSC dealt with matters of project design and implementation. Be that as it may, the schools rehabilitated under the Project did not reflect uniform design standards or any supervisory involvement of the ministry. The broader issue in this context is to what extent the line ministries concerned should be involved in project implementation. As an alternative to the organizational setup used under the Project, in which the PIUs cut across all sectors, the OEM proposes to examine the merits of PIUs that would be formed according to the major sectors affected by the disaster, e.g., transport, education, and water supply. This arrangement would appear advantageous in large projects with a lot of subprojects in each sector. It would make more effective use of the knowledge available in the line ministries and enhance the sense of ownership and accountability.

53. Recent experience from disaster-prone countries in different parts of Central, South, and Southeast Asia reveals how involving schoolchildren can add value to information dissemination. Disaster preparation could be mainstreamed as part of the national school curriculum to raise basic awareness of measures that can reduce risks from natural disasters.

B. Lessons

54. The performance of the Project has provided lessons for the implementation of future disaster-relief operations. The lessons include (i) ways to shorten disaster response times, (ii) the need to be more narrowly focused on priority emergency interventions, and (iii) the desirability of combining disaster relief operations with post-emergency reconstruction activities:

- (i) Preparing a long list of eligible subprojects provided the required flexibility in the scope of the Project and should have been adhered to when the need for changes arose. The practice adopted during implementation was less than transparent and raised concerns that ADB's loan funds were used to leverage the Government's maintenance budgets rather than provide disaster relief.
- (ii) Supervisory capacity on the ground was inadequate. Rather than concentrating resources on the PMU at MEES headquarters and relying on one international consultant, the PIUs in the field should have been strengthened.
- (iii) In disaster relief operations, urgency can be counterproductive with regard to the sustainability of the facilities to be restored. In assessing the length of implementation periods, it is useful to identify potentials for reducing response times, rather than benchmarking the implementation period on the completion target that was determined at appraisal.
- (iv) Completing the Project's infrastructure subprojects would have taken longer than the actual implementation time if design procedures and construction standards had been governed by sustainability considerations. Adequate arrangements should have been made for preparing construction designs.
- (v) There was scope for shortening the implementation time. In view of the recurrent nature of disasters in Kyrgyz Republic, a proactive approach can be adopted by training selected EA staff in areas that have caused delays, including procurement, financing, and accounting procedures. The issue has largely been addressed by setting up a resident mission with delegated authority.
- (vi) Levels of past maintenance, the state of repair of facilities, and vulnerability to disasters are linked. Disaster relief assistance cannot remedy deferred maintenance. Attempts by the EA to do exactly that and even spread the emergency assistance funds to infrastructure not affected by the disaster should be mitigated by clearer eligibility criteria for subprojects.
- (vii) The immediate emergency intervention should focus on transitional emergency assistance addressing people's immediate needs, while accompanying project preparatory technical assistance should identify infrastructure eligible for comprehensive reconstruction and prepare a loan project for implementation after the emergency has passed. Capacity building for maintenance management and financing should be pursued along with the proposed loan project.
- (viii) Education is the key to disaster protection. Countless lives have been saved by the simple power of knowledge. National school curricula could be revisited to incorporate modules on disaster preparation. Disaster training sessions covering basic preparation, early warning signals, and emergency procedures should be offered to schools and communities. The Government must be prepared to provide additional resources to train teachers and prepare training manuals and textbooks for disaster-prone areas, if not for the entire population.
- (ix) The Government should internalize necessary repair and maintenance expenditures in its recurrent budget and, where appropriate, mobilize local communities to look after the upkeep of the rehabilitated infrastructure.

- (x) There is a need to consider, at the country strategy and program level, a special strategy and program to address preparations for, and the management of, recurrent natural disasters delegated to resident mission to implement as necessary.

C. Follow-Up Actions

55. The OEM has proposed that the Government follow up on the following subprojects:
- (i) **Murdash school, located in Alay Rayon, Osh Oblast.** The tiles used for the floor of the main school corridor are wall tiles intended for kitchens or bathrooms. They are weak and slippery and pose a serious accident hazard for teachers and students, requiring urgent replacement.
 - (ii) **Kojoke school, located in Nookat Rayon, Osh Oblast.** The linoleum flooring is torn and needs to be replaced with a material that provides insulation from the cold concrete floor.
 - (iii) **Jalal Abad–Kazarman Road, Suzak Rayon.** The culvert subproject on the road does not appear to receive maintenance. It was half clogged by debris and siltation when the OEM inspected it. As such, it will not effectively protect the road from future floods.
 - (iv) **Gumkana village school.** The school has no heating, and the electrical wiring in the attic is covered with rice straw, presenting a serious fire hazard.

LIST OF SUBPROJECTS EVALUATED BY THE OPERATIONS EVALUATION MISSION

Subproject Code

Jalal Abad Oblast

R-1	Rehabilitation of bridge on Jalal Abad–Kazarman road, Suzak Rayon
R-2	Rehabilitation of Jalal Abad–Kazarman road, Suzak Rayon
R-11	Rehabilitation of inner roads in Suzak town
W-5	Rehabilitation of water supply to Shekaftar settlement, Chatkal Rayon
H-1	Health post in Kyzyljar settlement, Suzak Rayon
W-1	Rehabilitation of water supply system in Suzak town
W-2	Rehabilitation of drainage system in Suzak town
S-1	Jomok kindergarten in Suzak town
	Construction of new school in Sari Tala village, Ala Buka Rayon
	Construction of new school in Kurama village, Nookan Rayon
S-7	Construction of school in Syny village, Aksi Rayon
S-5	Construction of school in Tegene village, Aksi Rayon
W-4	Mailu-Suu water supply
E-1	Electric supply to Suzak town
E-2	Electric power line in Mailu-Suu town
E-12	Heating system in Mailu-Suu town
S-8	Construction of school in Gumkana village, Bazar Korgon Rayon
	Construction of new school in Oogan Tala village, Bazar Korgon Rayon
T-1	Telephone lines in Suzak town
HS-1R	Roads in Kyzyljar settlement, Suzak Rayon
HS-1E	Rehabilitation of electric power lines in Kyzyljar settlement, Suzak Rayon

Osh Oblast

R-2	Rehabilitation of three bridges on road, Budalyk village
R-2A	Rehabilitation of road, Budalyk village
R-2B	Construction of culvert on road, Budalyk village
W-1	Rehabilitation of water supply, Budalyk village
H-1	Construction of new health post in Budalyk village
R-3	Rehabilitation of Sopus Korgon–Terek road, Alay Rayon
	Construction of school in Aravan village, Aravan Rayon
S-4	Construction of school in Kojoke village, Nookat Rayon
	Construction of school in Baiysh village, Nookat Rayon
	Construction of school in Murdash village, Alay Rayon

Batken Oblast

W-3	Construction of water supply to Maksat settlement, Leylac Rayon, Batken Oblast
R-19	Rehabilitation of road to Maksat settlement, Leylac Rayon, Batken Oblast
R-13	Rehabilitation of retaining walls in Osh–Isfana road, Leylac Rayon, Batken Oblast

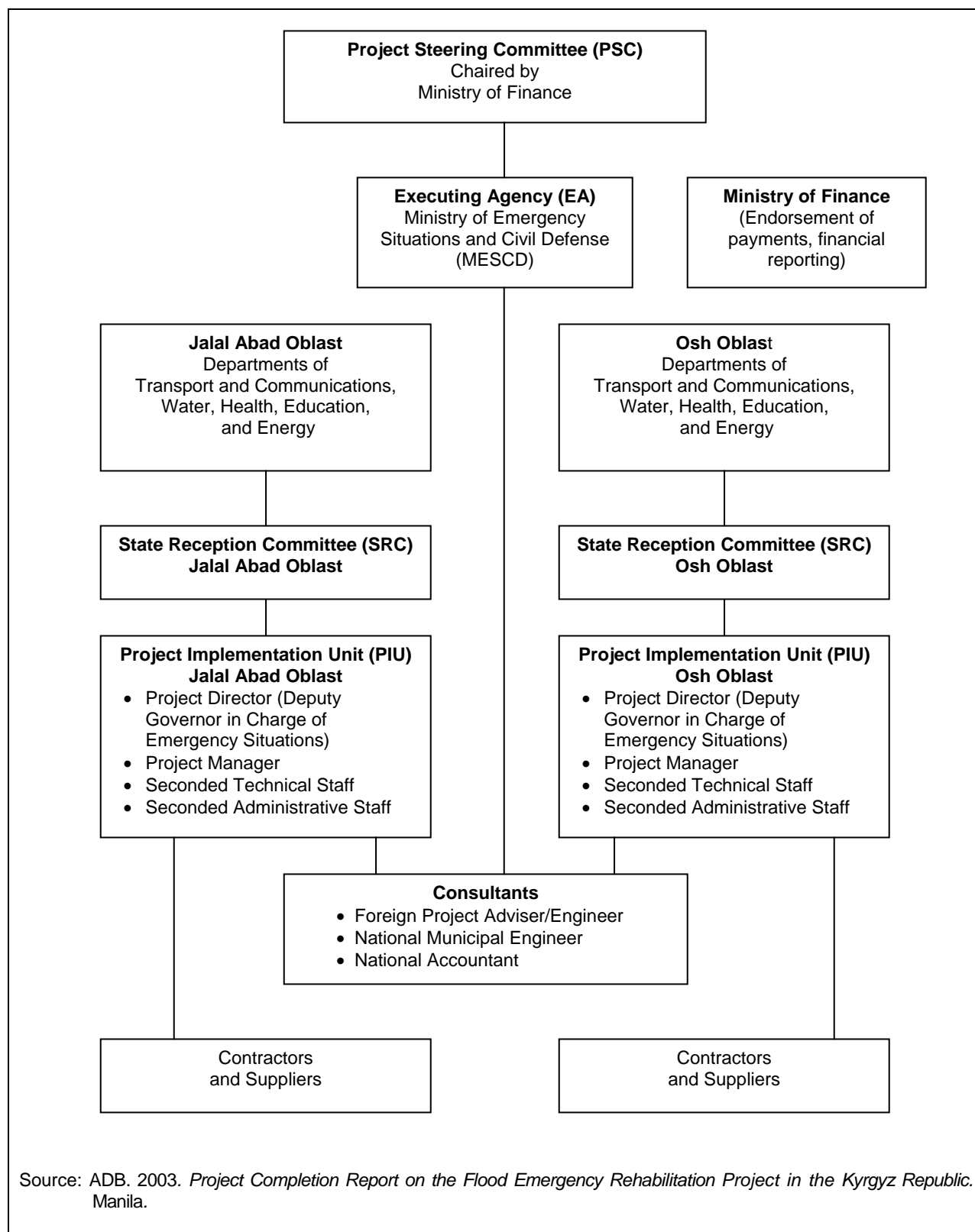
UPDATED DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators		Data Sources/Reporting Mechanisms	Assumptions/Risks
	Appraisal	Actual		
Impact Bring social and economic life of affected areas back to normal and avoid severe disruption to the economic development of Jalal Abad, Osh, and Batken oblasts	Economic activities reestablished and economic growth maintained.	Economic activities were reestablished where subsequent disasters have not damaged project output.	National and oblast statistics	General economic and social conditions in the oblasts and in the country do not decline. Further disasters do not occur.
Outcome Restored economic activity through rehabilitated roads and bridges, power and energy, water supply and sewerage, schools, and telecommunications, and new roads and power and water supply facilities in relocation centers.	Reestablished transport access; restored power and water supply and sanitation services; restored access to medical and educational facilities. Improved living environment in relocation centers.	Transport, power, water supply, health services, and access to education were restored. Outcome was nullified where subsequent disasters occurred and where maintenance is inadequate. Inferior design and substandard construction also limited project outcomes. Improved living conditions in relocation centers.	Items procured and operational Project completion report Operations evaluation surveys and focus group discussions	Further disasters do not occur. The Government is committed to rehabilitating the damaged infrastructure and maintaining it thereafter.
Outputs 1. Rehabilitated roads and bridges 2. Rehabilitated power transmission 3. Rehabilitated healthcare facilities 4. Rehabilitated water supply and sanitation systems	1. Construction from January 1999 to September 2000 of 19 subprojects 2. Construction from February 1999 to September 2000 of five subprojects 3. Construction from January 1999 to September 2000 of two subprojects 4. Construction from January to December 2000 of four subprojects	1. Construction from April 1999 to August 2002 of nine road and bridge subprojects 2. Construction from August 1999 to January 2002 of three power subprojects 3. Construction from July 1999 to July 2001 of two health subprojects 4. Construction from June 1999 to July 2002 of five water and sanitation subprojects	EA and IA reports Project completion report	Adequate EA capacity for effective project management Adequate capacity of local construction industry Adequate supervision of construction works Counterpart funding availability

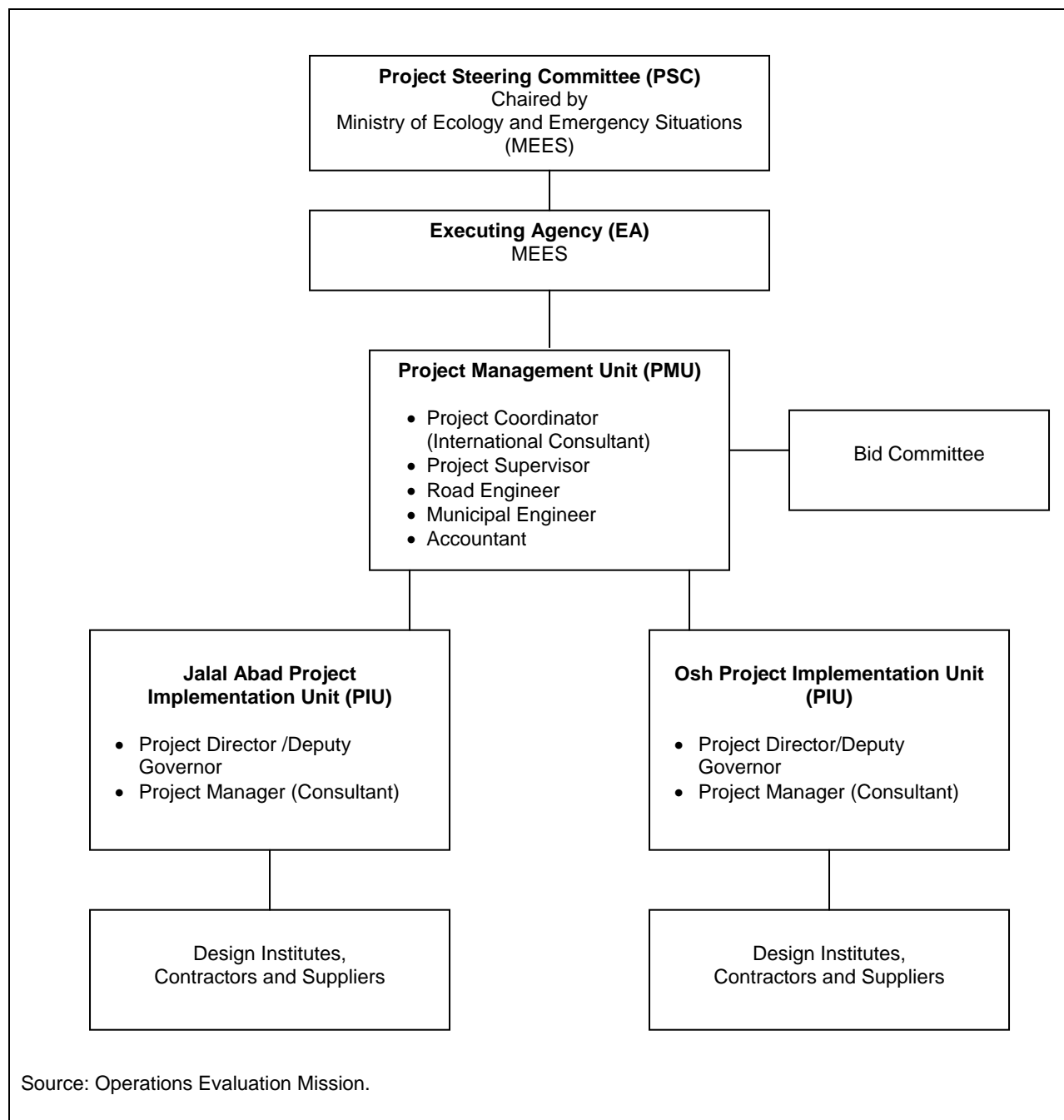
Design Summary	Performance Targets/Indicators		Data Sources/Reporting Mechanisms	Assumptions/Risks
	Appraisal	Actual		
5. Rehabilitated old schools and newly constructed ones	5. Construction from January to September 2000 of three subprojects	5. Construction from June 1999 to July 2002 of 15 school subprojects	Operations evaluation survey and focus group discussion	
6. Rehabilitated telecommunications facilities	6. Construction from December 1998 to September 2000 of one subproject	6. Construction from September 1999 to May 2002 of one telecommunications subproject		
7. Relocation centers for affected families	7. Construction from January 1999 to September 2000 of three subprojects	7. Construction from August 1999 to February 2002 of four relocation subprojects		
Activities with Milestones			Inputs	
1.0 Preconstruction activities from February 1999			Arrangement of counterpart funds Disbursement of retroactive financing PIU established in Jalal Abad and Osh PMU established in MEES (MESCD) Establishment of imprest account and initial deposit of \$0.5 million into it ADB appraisal	
2.0 Civil works construction and equipment procurement 2.1 Procurement of civil works by PMU based on local competitive bidding			Hiring of international consultant Preparation of designs and specifications Invitation to bid Evaluation of bids Awarding of contracts	
2.2 Construction of civil works by local contractors			Implementation according to contract schedule	
2.3 Procurement of equipment			ADB approval of bidding documents Bid invitation Evaluation of bids Contract awarding	

ADB = Asian Development Bank, EA = executing agency, IA = implementing agency, MESCD = Ministry of Emergency Situations and Civil Defense, MEES = Ministry of Ecology and Emergency Situations, MESCD = Ministry of Emergency Situations and Civil Defense, PIU = project implementation unit, PMU project management unit.

EXPECTED PROJECT MANAGEMENT ORGANIZATION



ACTUAL IMPLEMENTATION ARRANGEMENTS



RESULTS OF CONDITIONS SURVEY

Subproject Code	Subproject	Observations
	Jalal Abad Oblast	
R-11	Inner Suzak roads Overall good condition	<ul style="list-style-type: none"> Asphalt-sealed road in good condition As the main thoroughfare, the road is intensively used by residents of Suzak and surrounding counties as well. According to locals, the old road did not have sidewalks for pedestrians, unlike the subproject road, which is very important for the safety of families that live along the road and of the schoolchildren who use the road every day. Koogart riverbank is now well secured through a World Bank project and is being scoured and connected to another river for drainage through the same project.
R-1	Bridge on Jalal Abad–Kazarman road Overall good condition	<ul style="list-style-type: none"> Bridge in good condition
R-2	Jalal Abad–Kazarman road Poor condition	<ul style="list-style-type: none"> Culverts are not well maintained, some half filled with mud and debris. Villager say the culverts initially helped improve drainage, but lately the roads have begun to flood again in heavy rain.
E-1	Suzak Ail power lines Overall good condition	<ul style="list-style-type: none"> Power lines in good working condition
E-2	Mailu-Suu power line Overall good condition	<ul style="list-style-type: none"> Power lines were constructed but had to be relocated twice due to landslides in 1999 and 2002. Some equipment was stolen during reconstruction. Likely to be damaged by future landslides
E-12	Heating network repair, Mailu-Suu Poor condition	<ul style="list-style-type: none"> Subproject was not completed as designed.
H-1	Kyzyljar relocation center health post, Suzak Overall good condition	<ul style="list-style-type: none"> The health post has become a center of service for Suzak and the 200 families of Kyzyljar. The health post is in good, functioning condition and meets the needs of local families for primary and dental healthcare. Staff of 40 to attend to an average of 50 patients per day Water is available only 2 hours a day, as is the case for the whole relocation center. The main problem of the health post and Kyzyljar families is the lack of water supply in the settlement. Residents collect water in the 2 hours that it is made available from the Suzak system.
W-1	Rehabilitation of water supply system, Suzak Overall good condition	<ul style="list-style-type: none"> The system is in good condition; water is supplied in communal stations but not piped into houses. Random interviews with persons living in Suzak and Kyzyljar settlement reveal little discontent with the service; residents claim that the system has helped improved their lives.
W-2	Rehabilitation of drainage system in Suzak Overall good condition	<ul style="list-style-type: none"> The system is in good condition. About 30,000 residents live in Suzak, and they benefit from the system. A reed thicket grows at the opening of drainage canal; along the canal are some siltation and plant growth. According to local authorities, the canal is cleaned every spring before expected heavy rains. At present, the drainage is being maintained by the Suzak village administration.
W-4	Repair of water mains, Mailu-Suu	<ul style="list-style-type: none"> Water pipes subsequently had to be relocated twice due to

Subproject Code	Subproject	Observations
	Overall good condition	landslides.
W-5	Shekafter village water pipes, Chatkal Rayon Overall poor condition	<ul style="list-style-type: none"> • Upon completion, the subproject provided water for only 6 months and only to residents close to the system. • The system included two reservoirs that leaked water and flooded nearby homes. Because of this, the reservoirs were emptied and dismantled. • Evidence of bad design
S-1	Jomog kindergarten, Suzak Overall good condition	<ul style="list-style-type: none"> • School in good condition • 160 preschoolers and babies divided into six groups or classes; six teachers and six nurses • The school provides care for children of working mothers.
S-5	Tegene village school, Aksi Rayon Overall fair condition	<ul style="list-style-type: none"> • The school was not directly damaged by floods, but its foundations had been weakened by an earthquake in 1992. • There are 319 students in 15 classes. • The school is remote and evidently little maintained. • Construction and design standards are low (e.g., no cafeteria, gymnasium, or drinking water facilities), residents are pleased that they have a school. • The school is also used for community functions.
S-7	Syny village school, Aksi Rayon Overall fair condition	<ul style="list-style-type: none"> • 399 students attend the school. • The school roof was poorly constructed; rainwater damage on the walls is evident and has resulted in the toilet walls collapsing. • Maintenance is low.
S-8	Gumkana village school, Bazar Korgon Overall poor condition	<ul style="list-style-type: none"> • 520 students attend the school. • The school was poorly constructed. • It was finished in 1999 but could be used only in 2001 as there was no school equipment. • Rotting floor boards were changed twice. • Electrical wiring in the attic can be damaged by rats and burn the straw insulation on which it is laid. Two other schools in the area burned down this way in the past.
	New school in Sari-Tala village, Ala Buka Overall good condition	<ul style="list-style-type: none"> • 882 students attend the school. • The school is in good condition, though there is little maintenance; the principal's only complaint is that it has no cafeteria.
	New school in Kurama village, Nookan Overall good condition	<ul style="list-style-type: none"> • 126 students attend the school. • It is reputedly the best school in Nookan, but the heating system sometimes fails due to a design flaw. • The old school was in bad condition but was not directly damaged by floods.
	New school in Oogan Tala village, Bazar Korgon Overall fair condition	<ul style="list-style-type: none"> • 662 students attend the school. • It is unclear whether the school was damaged by floods, though the old building was in bad condition from age. • The heating system was poorly designed and constructed. The boiler tanks were originally located on the rooftop. When the pump failed, students had to manually fill the tanks by clambering up the roof. In winter, this became quite dangerous. The school has since relocated the tanks, but students still need to manually fill them using buckets. • The school roof is regularly damaged by strong winds, as the roofing material used cannot withstand climatic conditions there.
T-1	Reinstallation of telephone lines, Suzak Overall good condition	<ul style="list-style-type: none"> • The system is in good condition. • Conversation with a random sample of people living in Suzak village and Kyzyljar settlement revealed no discontent with the service. • People seem to be happy with results of the subprojects,

Subproject Code	Subproject	Observations
		which helped them to improve their lives.
HS-1R	Roads in Kyzyljar relocation center, Suzak Overall good condition	<ul style="list-style-type: none"> • Road is in acceptable condition but very dusty and in parts without gravel. • During conversation, the locals expressed the need for upgrading the road to asphalt. • The main reason an asphalt road is needed is to allow public transportation for getting to the health post located in Kyzyljar settlement. • Cost seems to be on the high side at about \$22,000/km
HS-1E	Power lines in the Kyzyljar, Suzak Overall good condition	<ul style="list-style-type: none"> • Good condition • Conversation with a random sample of people living in Suzak village and Kyzyljar settlement revealed no discontent with the service. • People seem to be happy with results of the subprojects, which helped them to improve their lives.
	Osh Oblast	
R-2	Three bridges on roads to Budalyk Overall fair condition	<ul style="list-style-type: none"> • Two bridges were restored as planned and are still in use. • The bridge linking Kara-Suu village to the main road was washed away by landslides in May 2004; the culvert was recovered to reconstruct a two-culvert bridge 40 meters from its former location; this bridge looks vulnerable as the ground surrounding it shows deep fissures indicating imminent erosion and/or slide to the river. • In 2004, there was a landslide on the hill near one of the existing bridges, at Oktyabr) that hit 11 homes and killed 33 people.
R-2A	Side road repair, Budalyk Partly destroyed	<ul style="list-style-type: none"> • Up to 1.5 km was destroyed and buried by landslides from 2003 to 2006. • Vulnerability of the village is evident; most residents are reluctant to relocate, while some would relocate with fair compensation. In 1998, residents already were relocated from landslide-prone areas, but they came back a few years later. • Where roads are not destroyed, they are well graveled • New works are ongoing at a higher elevation from the project road with Chinese contractors; chief specialist of MEES in Alay says the contractors are relatively expensive and works are not of good quality (Som9 million for 4 km) • A one-way journey from the village to the nearest center at Gulcha takes 3 hours on horseback or 1 day on foot.
R-2B	Culvert repair on the side road, Budalyk Destroyed	<ul style="list-style-type: none"> • The culvert was washed 200 m away from its original location and lies at the bottom of the river. • The culvert had been washed away once before, but the villagers recovered it and restored it on their own. • The cost of this repair seems to be two times higher than culvert subprojects in Budalyk above (average cost of which is Som0.5 million).
R-3	Sopu Korgon–Tereg road, Alay Overall poor condition	<ul style="list-style-type: none"> • The road is in bad condition; many parts have not been regaveled, and tall grass grows on parts as evidence of low traffic. • It lies on a riverbank reinforced under the project with boulders; funds went mostly to this reinforcement. • However, the road was damaged by a landslide and not by a flood. • The reinforced riverbank protects a community of about 15 houses and a new mosque from the rising river, but they are well elevated; the houses should have been relocated instead because they are at the foot of a steep hill and rock

Subproject Code	Subproject	Observations
		<p>face that looks unstable and caused the original damage (as reflected in the appraisal long list).</p> <ul style="list-style-type: none"> • The road leads to nowhere in particular and ends suddenly instead of linking to a bridge, just 50 m beyond the end of the road, that is used by a village of 1,500 across the river. • Per unit construction cost of more than \$40,000/km is on the high side.
H-1	<p>Health post rehabilitation, Budalyk</p> <p>Overall good condition</p>	<ul style="list-style-type: none"> • In the 5 months to September 2006, the post provided primary healthcare services to 600 patients. • There is no drugstore, but the clinic has first aid medicine and equipment; medical supplies come from Gulcha. • There had been a funding agency project to set up a pharmacy, but since the village had no registered pharmacist, it did not succeed. • The most prevalent disease is hypertension. • In cases of emergency, the maternity room is able to provide necessary care to women giving birth. • The structure is simple but clean and well maintained; the construction cost of Som2.4 million seems to be high for the quality of work.
W-1	<p>Water pipe reinstallation, Budalyk</p> <p>Overall poor condition</p>	<ul style="list-style-type: none"> • Only the Oktyabr water supply pipe is functioning. • One km of the Kara-Suu portion was washed away in 2003; it remains unrestored, and the village is waterless
S-4	<p>School in Kojoke village, Nookat</p> <p>Overall fair condition</p>	<ul style="list-style-type: none"> • The new school is well elevated compared with the abandoned old school; the principal says they have long dreamed of the new, improved school. • The new school accommodates 603 students in 17 classrooms (422 in 13 in project completion report). • The absence of gutters or drainage means rainwater drips directly onto the ground around the building; bitumen protects the base of the building from the splash. • The ceilings and floors are bare concrete; it gets very cold in winter, so much so that students fall ill with colds and rheumatism; to rectify the situation, Community Development and Investment Agency (ARIS), an NGO, donated floorboards for eight rooms; with the school's own funds, floors in two rooms were covered with linoleum (which helped little and can be dangerous when students trip on torn parts). • The principal says rooms are 1/3 too big; he was not consulted during the design stage; in the future, funds permitting, he plans to divide them to create teachers' rooms or other classrooms. • He also thought some of the windows are not located well to provide ventilation and natural illumination. • The light bulbs are too dim or for home use only. • Asked why he did not complain about poor design and construction quality, the principal says that the village was grateful enough that the school was built and that to complain would have been in bad taste.
	<p>School in Aravan village, Aravan</p> <p>Overall poor condition</p>	<ul style="list-style-type: none"> • From outside, the school looks good and well maintained. The subproject helped to complete a partly built, then abandoned, school building, thus allowing 457 students (310 at the time of completion) to study in 17 classes in 2 shifts. • The subproject was added to the loan because the population in the village was increasing and the families had been complaining that they had no school. • The school is in not located in a flood-prone area.

Subproject Code	Subproject	Observations
		<ul style="list-style-type: none"> • The floorboards in the classrooms are moldy, and some are rotting and unstable. • The floorboards are rotting because there is no concrete base nor ventilation underneath the floors and the floorboards used were untreated. • Poor floor construction caused mold infestation of the floorboards, which can cause serious illness in children. • In two of the 10 rooms, floors were repaired using funds raised from students (Som100 were collected from each student); holes were drilled at each corner of the rooms' floors for ventilation. • The floors are creaking and unstable because the 1 m distance between supporting beams is farther than standard of 0.5 m. • The boiler tank capacity of 500 liters is inadequate to heat the whole school; some rooms are too hot while some are cold in winter; ceilings can get moldy in winter due to excessive heat in rooms near the boiler room. • Cotton and sunflower are planted in the schoolyard to generate income for maintenance and new construction (e.g., sport hall).
	School in Murdash village, Alay Overall fair condition	<ul style="list-style-type: none"> • From the outside, the school looks good; 480 students from grade 1 to 11 attend classes in two shifts. • The principal claims construction quality is very poor. • Four years after completion, wooden floor boards are being torn up and replaced in one classroom; other classroom floors are also in bad condition. • Wooden floorboards in all 22 classrooms are rotting because there is no concrete base or ventilation underneath the floors and the floorboards used were untreated. • Poor floor construction caused mold infestation of the floorboards, which can cause serious illness in children. • Corridor floors are covered with bathroom wall tiles, some of which are cracked, creating a serious safety risk. • Some rooms are big and only 2/3 was occupied (average class size is 27). • Some rooms are dark and damp; one teacher said that in the winter in can get really cold.
	School in Baiysh village, Nookat Overall fair condition	<ul style="list-style-type: none"> • From outside, the school looks good and well maintained; desks and chairs are also well maintained. • The new school is in a significantly better location than the old abandoned school, which was not elevated and quite close to the river. • However, the schoolyard still gets flooded with about a 30 centimeters of water some four times a year as there is no ring drainage around the building and the building is still located lower than the road; at these times it is hard for students to reach the school building. • No evidence of floorboard rot as the floors are ventilated, but gaps are showing between some of the planks • Floodwater may enter the building through the vents. • Construction delays to starting 2nd floor construction resulted in water damage on the 1st floor ceiling. • The heating system circulation capacity was too small to provide proper heating to the building; it was later replaced by the school at its own expense. • Heating system pipes are not insulated with glass wool,

Subproject Code	Subproject	Observations
		and this results in energy loss.
	Batken Oblast	
R-13	Road and retaining walls repair of Leylac road Overall fair condition	<ul style="list-style-type: none"> • The design of the project was already approved back in 1993 but was only partly built for lack of funds. • The retaining wall under this subproject is built upon the old unfinished construction. • The wall and seven cross-walls are in a good condition and effectively protect the only road that connects Leylac Rayon with the regional center. • The road is vital for connecting two villages that are located along the road with Leylac village and the regional center. • However, subsequent flooding demolished about 3 meters of the wall located in the upper part along the river.
R-19	Road in Maksat settlement, Leylac Overall fair condition	<ul style="list-style-type: none"> • The road is a 22.8 km gravel road from Bulakbashi to Maksat. • According to the mayor of Leylac, about 26,000 people from three villages in the area benefit from the road. • The road made it possible to bypass Tajikistan and reduce by about 20 km the travel distance from Bulakbashi to Maksat. • The per unit cost of production is high.
W-3	Water supply in Maksat Settlement, Leylac Overall fair condition	<ul style="list-style-type: none"> • The water supply system provides water from Leylac River to about half of the Maksat settlement. • According to the contractor, they built 2,620 m of dukes and 709 m of water tunnels under the Project. • The families located in the lower half of the Maksat settlement use the water for consumption and irrigation. • The other half of the settlement needs to fetch water either from the lower half or from Tajikistan, located about 150 m down the settlement. • The drinking water system was built by MEES and tested successfully but was never launched.

km = kilometer, m = meter, MEES = Ministry of Ecology and Emergency Situations, NGO = nongovernment organization.

Source: Operations Evaluation Mission.

VARIATIONS IN PROJECT SCOPE

(Exchange Rate \$/som: \$0.05 at Appraisal and \$0.02 at Project Completion)

As Completed				
No.	Subproject	Rayon	Sector	Cost ^b
A. Osh Oblast:				
1.	Three Bridges on Road	Budalik	Roads and Bridges	32,550
2.	Side Road Repair	Budalik	Roads and Bridges	133,735
3.	Culvert Repair on the Side Road	Budalik	Roads and Bridges	18,879
4.	Sopu Korgon-Tereg Road	Alay	Roads and Bridges	90,803
5.	Bridge in Nichke Village, Uzgen ^a	Uzgen	Roads and Bridges	46,757
6.	Health Post Rehabilitation	Budalik	Health	52,357
7.	Water Pipe Reinstallation	Budalik	Water	113,369
8.	School in Kojoke Village ^a	Nookat	Education	146,804
9.	School in Aravan Village ^a	Aravan	Education	84,785
10.	School in Yangi-Turmush Village ^a	Kara Suu	Education	138,042
11.	School in First of May Village ^a	Kara Kulda	Education	170,699
12.	School in Murdash Village ^a	Alay	Education	117,787
13.	School in Baiysh Village ^a	Nookat	Education	149,796
Subtotal (A)				1,296,364
B. Batken Oblast:				
1.	Repair road and retaining walls of Leylac Road	Leylac	Road and Bridges	87,384
2.	Road in Maksat Settlement, Leylac ^a	Leylac	Relocation	364,024
3.	Water Supply in Maksat Settlement, Leylac ^a	Leylac	Relocation	321,968
Subtotal (B)				773,375
C. Jalal Abad Oblast:				
1.	Inner Suzak Ail Roads	Suzak	Road and Bridges	112,355
2.	Bridge on Jalal-Abad-Kazarman Road	Suzak	Road and Bridges	112,103
3.	Jalal-Abad-Kazarman Road ^c	Suzak	Road and Bridges	95,750
4.	Suzak Ail Power Lines (RF)	Suzak	Power	22,883
5.	Mailu-Suu Power Line	Mailu Suu	Power	48,304
6.	Heating Network Repair	Mailu Suu	Power	225,474
7.	Kyzyljar Relocation Center Health Post	Suzak	Health	45,664
8.	Rehabilitation of Water Supply System	Suzak	Water	45,664
9.	Rehabilitation of Drainage System	Suzak	Water	81,583
10.	Repair of Water Mains (RF)	Mailu Suu	Water	9,060
11.	Shekafter Village Water Pipes ^c	Chatkal	Water	90,881
12.	Akmechet School (RF)	Suzak	Education	74,865
13.	Jomog Kindergarten (RF)	Suzak	Education	23,738
14.	Teyene Village School ^c	Aksi	Education	52,897
15.	Syny Village School ^a	Aksi	Education	74,679
16.	Gumkana Village School ^a	Bazar Korgon	Education	197,566
17.	School in Kazarman Settlement ^a	Toguz Toro	Education	164,558
18.	New School in Sari-Tala Village ^a	Ala Buka	Education	182,599
19.	New School in Kurama Village ^a	Nookan	Education	135,994
20.	New School in Oogan Tala Village ^a	Bazar Korgon	Education	165,526
21.	Reinstallation of Telephone Lines	Suzak	Telecommunication	4,292
22.	Roads in Kyzyljar Relocation Center	Suzak	Relocation	143,520
23.	Power Lines in the Kyzyljar Relocation Center	Suzak	Relocation	15,775
Subtotal (C)				2,125,730
Total				4,195,469

^a New subprojects. 18

^b Cost at completion. MEES.

^c New subprojects from appraisal longlist. 3

Added from list of ALL flood damage projects:

- Shekafter Water Pipes = \$205,000 (appraisal estimate),

- Teyene Village School = \$164,102 (appraisal estimate), and

- Jalal Abad-Kazarman Road = \$70,3358.97 (appraisal estimate).

Source: Operations Evaluation Mission.

Appraisal				
No.	Subproject	Rayon	Sector	Cost ^a
A. Osh Oblast:				
1.	Osh-Khorog road ^b	Nariman	Roads and Bridges	12,000
2.	Three bridges on roads	Budalik	Roads and Bridges	151,000
3.	Side road repair	Budalik	Roads and Bridges	179,000
4.	Culvert repair on the side road	Budalik	Roads and Bridges	18,000
5.	Sopu Korgon - Tereg road	Alay	Roads and Bridges	29,000
6.	Gravel road repair to Osh-Khorog road ^b	Santas	Roads and Bridges	33,000
7.	Repair of road to west Tajikistan ^b	Jalkindi	Roads and Bridges	11,000
8.	Repair of 128 m Osh-Khorog road ^b	Gulchar	Roads and Bridges	5,000
9.	Bridge on Osh-Marizaki road ^b	Kurshad	Roads and Bridges	4,000
10.	Repair of portion of Osh-Khorog road ^b	Bulalu	Roads and Bridges	10,000
11.	Ilai-Tushunook road ^b	Kakuljar	Roads and Bridges	8,000
12.	Road from Chapaev to International Village ^b	Nookat	Roads and Bridges	12,000
13.	A bridge on Abshir river ^b	Nookat	Roads and Bridges	20,000
14.	A bridge on Mirzaky-Alay Ku road ^b	Cahmar	Roads and Bridges	8,000
15.	Health Post Rehabilitation	Budalik	Health	84,000
16.	Water pipe installation	Budalik	Water	75,000
17.	Toktogul Secondary School ^b	Isfana	Education	304,000
Subtotal (A)				963,000
B. Batken Oblast:				
1.	Leylac road culvert ^b	Leylac	Roads and Bridges	18,000
2.	Repair of Leylac road	Leylac	Roads and Bridges	7,000
3.	Gravel road from Sok to Sai ^b	Batken	Roads and Bridges	16,000
Subtotal (B)				41,000
C. Jalal Abad:				
1.	Inner Suzak Ail Roads	Suzak	Roads and Bridges	1,297,000
2.	Bridge on Jalal-Abad - Kazarman	Suzak	Roads and Bridges	501,000
3.	Suzak Ail Transmission Lines ^a	Suzak	Power	259,000
4.	Suzak Ail Power Lines (RF)	Suzak	Power	95,000
5.	Mailu Su Power Lines	Mailu Suu	Power	68,000
6.	Heating Network Repair	Mailu Suu	Power	203,000
7.	Substation Replacement ^a	Suzak	Power	204,000
8.	Kyzyljar Relocation Center Health Center	Suzak	Health	96,000
9.	Rehabilitation of Water Supply System	Suzak	Water	212,000
10.	Rehabilitation of Sewage Collector	Suzak	Water	124,000
11.	Relocation of Water Mains (RF)	Mailu Suu	Water	130,000
12.	Akmechet School (RF)	Suzak	Education	199,000
13.	Jomog Kindergarden (RF)	Suzak	Education	97,000
14.	Reinstallation of Telephone Lines	Suzak	Telecommunication	34,000
15.	Roads in the Kyzyljar	Suzak	Relocation	267,000
16.	Water Supply in the Kyzyljar ^b	Suzak	Relocation	341,000
17.	Power Lines in the Kyzyljar	Suzak	Relocation	151,000
Subtotal (C)				4,278,000
Total				5,282,000

^a Appraisal estimate.

^b Appraisal subprojects dropped.

Source: Operations Evaluation Mission.

PERFORMANCE ASSESSMENT

Subproject	Relevance			Effectiveness			Efficiency			Sustainability			Total
	Score	Weight	Rating	Score	Weight	Rating	Score	Weight	Rating	Score	Weight	Rating	Rating
A. Jalal Abad Oblast													
1. Inner Suzak roads	3	0.2	0.6	3	0.3	0.9	3	0.3	0.9	3	0.2	0.6	3.0
2. Bridge on Kazarman road	3	0.2	0.6	3	0.3	0.9	2	0.3	0.6	2	0.2	0.4	2.5
3. Jalal Abad–Kazarman road	3	0.2	0.6	3	0.3	0.9	1	0.3	0.3	0	0.2	0	1.8
4. Suzak Ail power	3	0.2	0.6	3	0.3	0.9	3	0.3	0.9	3	0.2	0.6	3.0
5. Mailu-Suu power	3	0.2	0.6	3	0.3	0.9	3	0.3	0.9	2	0.2	0.4	2.8
6. Heating network Mailu-Suu	3	0.2	0.6	1	0.3	0.3	1	0.3	0.3	0	0.2	0	1.2
7. Kyzyljar relocation health post	2	0.2	0.4	2	0.3	0.6	1	0.3	0.3	1	0.2	0.2	1.5
8. Suzak water supply	3	0.2	0.6	3	0.3	0.9	3	0.3	0.9	3	0.2	0.6	3.0
9. Suzak drainage system	3	0.2	0.6	3	0.3	0.9	2	0.3	0.6	1	0.2	0.2	2.3
10. Water mains Mailu-Suu	3	0.2	0.6	3	0.3	0.9	2	0.3	0.6	2	0.2	0.4	2.5
11. Shekafter village water pipes	3	0.2	0.6	3	0.3	0.9	2	0.3	0.6	2	0.2	0.4	2.5
12. Jomog kindergarten	3	0.2	0.6	3	0.3	0.9	3	0.3	0.9	3	0.2	0.6	3.0
13. Tegene Akis school	0	0.2	0.2	3	0.3	0.9	3	0.3	0.9	2	0.2	0.4	2.4
14. Syni Village school	3	0.2	0.6	2	0.3	0.6	2	0.3	0.6	1	0.2	0.2	2.0
15. Gumkana village school	3	0.2	0.6	1	0.3	0.3	1	0.3	0.3	1	0.2	0.2	1.4
16. Sari-Tala village school	1	0.2	0.2	3	0.3	0.9	2	0.3	0.6	2	0.2	0.4	2.1
17. Kurama village school, Nooken	0	0.2	0	3	0.3	0.9	1	0.3	0.3	1	0.2	0.2	1.4
18. Oogan village school	0	0.2	0	3	0.3	0.9	1	0.3	0.3	1	0.2	0.2	1.4
19. Suzak telephone lines	3	0.2	0.6	3	0.3	0.9	3	0.3	0.9	3	0.2	0.6	3.0
20. Roads Kyzyljar center	3	0.2	0.6	3	0.3	0.9	1	0.3	0.3	2	0.2	0.4	2.2
21. Powerline in Kyzyljar relocation	3	0.2	0.6	3	0.3	0.9	3	0.3	0.9	3	0.2	0.6	3.0
B. Osh Oblast													
1. Three bridges on Budalyk road	3	0.2	0.6	3	0.3	0.9	3	0.3	0.9	0	0.2	0	2.4
2. Budalyk side road repair	3	0.2	0.6	2	0.3	0.6	2	0.3	0.6	0	0.2	0	1.8
3. Culvert on Budalyk side road	3	0.2	0.6	2	0.3	0.6	2	0.3	0.6	0	0.2	0	1.8
4. Sopol Korgon village road	0	0.2	0	0	0.3	0	0	0.3	0	0	0.2	0	0.0

Subproject	Relevance			Effectiveness			Efficiency			Sustainability			Total
	Score	Weight	Rating	Score	Weight	Rating	Score	Weight	Rating	Score	Weight	Rating	Rating
5. Budalyk health post	3	0.2	0.6	3	0.3	0.9	3	0.3	0.9	3	0.2	0.6	3.0
6. Water pipe Budalyk	3	0.2	0.6	2	0.3	0.6	2	0.3	0.6	2	0.2	0.4	2.2
7. School Kojoke village, Nookat	3	0.2	0.6	2	0.3	0.6	2	0.3	0.6	2	0.2	0.4	2.2
8. School Aravan village	1	0.2	0.2	2	0.3	0.6	2	0.3	0.6	2	0.2	0.4	1.8
9. School Murdash village	0	0.2	0	2	0.3	0.6	1	0.3	0.3	2	0.2	0.4	1.3
10. School Baiysh village	3	0.2	0.6	3	0.3	0.9	2	0.3	0.6	2	0.2	0.4	2.5
C. Batken Oblast													
1 Retaining walls Leylac River	3	0.2	0.6	3	0.3	0.9	2	0.3	0.6	2	0.2	0.4	2.5
2 Road in Maksat village	1	0.2	0.2	3	0.3	0.9	2	0.3	0.6	1	0.2	0.2	1.9
3 Maksat village water supply	2	0.2	0.4	1	0.3	0.3	1	0.3	0.3	1	0.2	0.2	1.2
34													72.6
Overall Rating													2.1

Source: Operations Evaluation Mission.

SOCIOECONOMIC SURVEY

A. Introduction

1. To determine the socioeconomic impacts of the Flood Emergency Rehabilitation Project (the Project), the Operations Evaluation Mission (OEM) undertook a socioeconomic survey covering 34 of the 39 subproject communities from 27 September to 18 October 2006. This report summarizes the findings and lessons gleaned from the survey, which employed the following research tools:

- (i) **Rapid assessments.** These were based on visual observation of the physical condition of subprojects. They also included observation and assessment of the extent of use by the direct beneficiaries of the subproject. Rapid assessments also collected data on general socioeconomic conditions of the local populations and direct beneficiaries. The number of beneficiaries from the sample of 34 subprojects chosen by the OEM totaled 313,386 people (Table A8.5).
- (ii) **Interviews.** These were of three types: (a) interviews of specialists and local authorities, (b) rapid surveys and interviews of direct beneficiaries, and (c) interviews of indirect beneficiaries (for example, in the case of resettlements, indirect beneficiaries would include existing businesses located near the resettlement area).
- (iii) **Focus group discussions.** These were conducted with groups of local authorities, specialists, and representatives of direct beneficiaries, all of whom were involved in the day-to-day use and maintenance of the subprojects. A total of 543 people participated in interviews and group discussions conducted during the OEM (Table A8.6).

2. The results of the Project are provided in the form of an overall assessment of the socioeconomic impact of the subprojects, based on the following key factors: (i) social impact of a subproject, (ii) economic impact of a subproject, (iii) satisfaction of direct beneficiaries, (iv) satisfaction of local authorities, (v) social problems that resulted or may result from a subproject, and (vi) economic problems that resulted or may result from a subproject. The recommendations are intended to resolve the observed problems and to avoid the future recurrence of such shortcomings. All recommendations are based on findings of the research conducted and the recommendations of local authorities, specialists, and direct and indirect beneficiaries.

B. Survey Results

1. Roads and Bridges Evaluation Report

3. **Background.** Three of the nine road and bridge subprojects are located in Jalal Abad Oblast, four in Osh Oblast, and two in Batken Oblast. Roads and bridges in Batken and Jalal Abad oblasts were mainly damaged by floods, while roads and bridges in Osh Oblast were mainly damaged by landslides. This could be explained by the existence of mountains in Osh Oblast. Floods resulting from heavy rains and snow also caused landslides in Osh Oblast. Overall, the number of beneficiaries after completion of the nine subprojects in this section amounted to about 200,600 people (Table A8.1).

4. A total of 106 people were interviewed in the course of analyzing the socioeconomic impact of roads and bridges built under the Project. Nine were regional and local authorities, including the head of the Ministry of Ecology and Emergency Situations (MEES) regional department and local departments, *akims* (mayors) and deputy *akims* of oblasts and rayons, and heads of village and settlement councils. Five represented contractors and specialists in the field and the rest included 92 direct beneficiaries.

5. The surveys revealed that the subprojects brought significant economic and social benefits that justify the efforts made in implementing them. In some cases, such as subprojects in Budalyk, Suzak, and Leylac rayons, the subprojects were highly relevant and responded to living and emergency needs of people. On the other hand, the Sopu Korgon–Terek road subproject in Osh Oblast was much less relevant and efficient from a social and economic standpoint. Although the subproject strengthened a riverbed and improved the road condition along the river, the road is hardly used by local residents. In addition, floods would hardly damage houses as the nearest ones are located safely on high ground.

6. **Socioeconomic Impact.** The social impact of the subprojects was substantial in all cases, except for the Sopu Korgon–Terek road subproject. In all 10 other subprojects, rehabilitation works had a great impact on the social well-being of people living in project sites. The following summary reflects the major issues encountered by the OEM:

- (i) In Budalyk village, recurrent landslides from 2004 to 2006 had destroyed about 2 kilometers (km) of the road in three sections. The Government is in the process of building a new section of the road, which runs on higher ground and connects with the subproject road at both ends.
- (ii) About 95% of respondents stated that the subprojects helped them save significant time and energy reaching local, district, and regional centers for better medical treatment and education, as well as when traveling to their farms, businesses, schools, and local health posts. Respondents in Budalyk village¹ pointed out that before the restoration they could reach the nearest market and department store only on horseback, the ride taking about 8–10 hours. With the road restored, travel time is only 2–3 hours.
- (iii) In about 45% of cases (subprojects in Budalyk village and partly in Maksat settlement) women indicated that damage caused by natural disasters made travel impossible for them.
- (iv) A landslide that happened on 26 April 2004 destroyed 11 houses along the road that was built under the subproject in Kaynama settlement of Budalyk village and killed 33 people. About 200 meters of the road restored with the Asian Development Bank (ADB) assistance was destroyed. The road was subsequently repaired by MEES and is in a fair condition.
- (v) About 97% of respondents in Suzak village, Jalal Abad Oblast, indicated that subprojects helped them resume and/or improve their normal lives. According to the interviewees, before the rehabilitation of inner roads in Suzak village, the old road did not have sidewalks for pedestrians. ADB's road has sidewalks, which is very important for the safety of families that live along the road and especially for the schoolchildren who use the road every day.
- (vi) Interviews and focus group discussions with local government authorities, as well as with field specialists, revealed that there was no socioeconomic impact

¹ Related subprojects are (i) rehabilitation of three bridges on the road in Budalyk village, (ii) rehabilitation of a road in Budalyk village, and (iii) construction of a culvert on a road in Budalyk village.

assessment conducted by the local government or nongovernment organizations to determine the impact of rehabilitation subprojects on local incomes, employment, or other socioeconomic indicators.

- (vii) Regarding the road subproject in the Maksat resettlement area in Leylac Rayon of Batken Oblast, local government authorities indicated that the subproject had made a valuable contribution to the implementation of the Government's policy for the development of border communities to avoid possible territorial disputes with neighboring countries. The linkage to the disaster could not be established. During the interview, the *akim* of Leylac Rayon pointed out that gradual migration of Tajik citizens into a territory next to Maksat settlement had become a concern to the administration.
- (viii) According to the *akim* of Leylac Rayon, a new road to the Maksat settlement road made it possible to bypass Tajik territory,² thus enabling smooth travel through Batken Oblast. The new road to Maksat has shortened the traveling distance by about 20 km. Assuming that traveling 20 km on a gravel road in mountainous area takes about 30 minutes, the subproject brought a significant economic impact in terms of saving time, energy, and money.

C. Power Evaluation Report

7. **Background.** According to the background information in the project completion report (PCR), three power subprojects in Jalal Abad Oblast were completed under the Project. All three were included in the OEM sample. All three had been rated highly relevant, as one (electric supply to Suzak village) responded to emergency needs caused by flooding damage, and the other two (electric power line and heating system in Mailu-Suu town) restored power supply after damage caused by landslides.

8. With regard to the subprojects in Mailu-Suu, the OEM failed to verify their existence. Neither local authorities nor residents were aware of a heating system in Mailu-Suu town. The PCR provides some explanation, stating that, although the subproject was included in the original project scope, a major portion of the work had been carried out under a different administration and not under the supervision of the project consultants. The PCR also notes that the subproject was not completed under Project. Nonetheless, one would have expected that at least the head of the MEES office in Mailu-Suu would have known something about this subproject.

9. **Beneficiaries.** According to the PCR, immediately after the completion of three subprojects in this section, the number of beneficiaries totaled about 33,000 people. However, the OEM found out that, in the case of the electric power line in Mailu-Suu city, the power was supplied for only a few months. The subsequent landslides in the spring of 2002 destroyed some sections of the power lines. Cables in other parts were either taken by contractors for the new lines or stolen by inhabitants living in surrounding areas. Most of the posts were also removed. Thus, in 2006, the number of beneficiaries from the three subprojects was reduced by 8,000 people at minimum, leaving the number of beneficiaries at 25 000 (Table A8.2).

10. **Rapid Assessments, Interviews, and Focus Group Discussions.** A total of 37 people were interviewed, three of whom belonged to regional and local authorities, including the heads of the MEES regional department and Mailu-Suu department and mayor of Mailu-Suu town. Another three represented contractors and specialists in the field. The remaining 31 were

² A Tajik enclave in Kyrgyz territory had made direct access to Maksat cumbersome.

direct beneficiaries, including local residents, businesses, and farmers. The survey revealed that the subprojects brought significant economic and social benefits that would justify the efforts made in their implementation. However, a landslide on the outskirts of Mailu-Suu city destroyed facilities constructed by one of subprojects shortly after they were completed.

11. **Socioeconomic Impact.** The social impact of the subprojects was ranked high in Suzak village and moderate to low in Mailu-Suu city. The OEM noted the following issues:

- (i) All respondents in Suzak village stated that the subproject made a significant contribution to returning their lives to normal. It was also mentioned that the populations of surrounding counties such as Stadion, At Chapar, and Lavdan-Kara were also cut off from power supply, which was restored by the subproject.
- (ii) About 60% of respondents mentioned that the subproject restored not only lights in their houses but also heat, as use electric power to heat their houses. Thus, the subproject helped the population of Suzak and surrounding three villages to stay in good health.
- (iii) Respondents in Jomok kindergarten, which is another subproject site, mentioned that restoring power supply was very important not only for houses, but also for such public institutions as schools and hospitals.
- (iv) The economic impact on Suzak and the surrounding three villages was significant, as businesses and government offices were able to return to normal work.
- (v) Small businesses such as bakeries and butcher shops were able to resume their operations.
- (vi) The resumption of power supply helped continuing construction works to repair damage from the flood.

D. Health Evaluation Report

12. **Background.** According to the background information in the PCR, two health subprojects were implemented, one in Jalal Abad Oblast (the health post in Kyzyljar relocation center) and one in Osh Oblast (the construction of a new health post in Budalyk village). Both were chosen for OEM's sample. The health post in Kyzyljar had been rated relevant, as, although there is a central hospital about 3 km away, the health post is very important in responding to needs of people living in the new settlement. As for the health post in Budalyk village, it had been rated highly relevant because a landslide had destroyed the old health post, the only one serving five villages. Constructing a new one was a matter of urgency.

13. **Beneficiaries.** More than 7,500 people in five villages in Budalyk benefit from the health post. As for the health post in Kyzyljar relocation center, about 1,000 people living in the settlement and another 3,000 from surrounding settlements benefit from it. The approximate number of total beneficiaries from both subprojects is close to 12,000.

14. **Rapid Assessments, Interviews, and Focus Group Discussions.** A total of 32 people were interviewed. Some minor issues emerged during the interviews.

15. **Socioeconomic Impact.** The OEM made the following observations:

- (i) All respondents in both sites said that the social impact of the subprojects was very significant.
- (ii) Focus group discussion with local authorities, health post heads, and doctors revealed that, on average, 4–7 patients visit the health post in Budalyk every day. From 2 May to 25 September 2006, a total of 606 patients visited the health post.
- (iii) The health post in Budalyk is located relatively close to the village school with

- about 400 students in neighboring Karasu settlement, allowing the provision of emergency healthcare for the schoolchildren.
- (iv) The health post in Budalyk village provides free preliminary medical care. It also has a maternity unit, which is used in emergencies and was highly rated by all female respondents. Usually, qualified care is provided in Gulcha city.
 - (v) Most patients see a doctor at the health post in Budalyk for high blood pressure, which, according to the doctor, is caused by the high altitude where the villagers live.
 - (vi) The health post in Kyzyljar settlement provides family healthcare services for 200 families in Kyzyljar and from surrounding settlements of Suzak village.
 - (vii) The health post in Kyzyljar also operates a dental clinic, the only one in Suzak village.
 - (viii) About 95% of respondents in Budalyk village stated that the subproject saved them time, energy, and money since, after the old health post was destroyed by a landslide, people of five villages in the area had to travel to Gulcha for healthcare.
 - (ix) At present, the health post in Kyzyljar settlement employs 40 people, including qualified doctors and nurses, which is also significant in solving unemployment in Suzak village.

E. Water Supply and Drainage Report

16. **Background.** According to the PCR, six water supply and drainage subprojects were implemented under the Project, four in Jalal Abad Oblast, one in Osh Oblast, and one in Batken Oblast. All six subprojects were chosen for the OEM's sample. Ratings on relevance of the six subprojects vary from not relevant to highly relevant.

17. **Beneficiaries.** The number of beneficiaries differed at the time the subprojects were completed and that of the OEM in 2006 (Table A8.3). The main reason for the change is the poor quality of completed construction work conducted in Shekaftar village, coupled with recurrent landslides in Mailu-Suu city. The present number of beneficiaries from the facilities built during the subprojects' implementation is 47,100.

18. **Rapid Assessments, Interviews, and Focus Group Discussions.** A total of 56 people were interviewed during the analysis of socioeconomic impact of subprojects on this section. In general, respondents in Suzak village were highly satisfied, while most respondents in Shekaftar settlement were dissatisfied. As for respondents in Mailu-Suu, they could not recall much since, after completion of the subproject in 1998, the subsequent 1999 landslides had destroyed the water supply pipes.

19. **Socioeconomic Impact.** The survey findings are summarized below:

- (i) All respondents in Suzak village indicated that the subprojects were very valuable to their community and three neighboring communities.
- (ii) All respondents agreed that results of the subprojects in their village helped them to improve their lives.
- (iii) In Budalyk village, the number of beneficiaries decreased by about 500 people after a landslide in 2003 destroyed about 1 km of a water supply pipe in Karasu settlement. Karasu residents who live close to Budalyk now get their water from there.
- (iv) In Maksat settlement, the water supply system provides water from the Leylac River to about half of the settlement. According to the contractor, 2,620 meters of underground aquaducts and 709 meters of water tunnels were built during the

- Project.
- (v) Families that are located in the lower half of the Maksat settlement use the water for consumption and irrigation. People in the other half of the settlement bring water either from the lower half or from Tajikistan territory, located about 150 meters away from the settlement.
 - (vi) One can easily observe that houses in the lower half of the settlement, which has water supply, have green yards with some fruit trees. Some families have poultry and cattle. In contrast, the other part of the settlement presents a totally different picture, with houses on barren land covered by sand and stones.
 - (vii) The drinking water system was built by MEES and tested successfully but has not yet been launched.
 - (viii) About 95% of respondents in Maksat settlement mentioned water supply as one of the main reasons that they choose to stay in the settlement.
 - (ix) Seventy percent of female respondents in the unserved part of Maksat settlement mentioned that bringing water to their houses is an everyday problem, as it is considered women's work. This is especially tough for mothers who have little babies at home.
 - (x) Water supply remains an issue in Shekaftar settlement. Eighty percent of the respondents mentioned that water provision never covered the whole settlement. Ninety percent of them blame contractors and local authorities for negligence and corruption.
 - (xi) After the installation of water supply facilities in Shekaftar settlement, water ran for only several months and reached about two-thirds of the settlement. Because of shortcomings in construction and the insolvency of the local water-supply unit, Vodokanal, the provision of water was stopped. It was resumed after moving two reservoirs to a new location and solving the issue of debts with the rayon electric supply unit. New construction was financed mainly by the Community Development and Investment Agency (ARIS) foundation.
 - (xii) The general attitude of Mailu-Suu respondents can be described as indifference. The main reason is the frequent recurrence of natural disasters that take place in their region. According to the head of MEES department in Mailu-Suu town, landslides happened almost every year between 1992 and 2004.

F. Education Report

20. **Background.** According to the PCR, 15 education subprojects were implemented by the Project, nine in Jalal Abad Oblast and six in Osh and Batken oblasts. Of that number 11 subprojects were chosen for the OEM's sample. Ratings on relevance of the 11 subprojects vary from not relevant to highly relevant.

21. **Beneficiaries.** The number of direct beneficiaries—counting students that attend a school and faculty members—is 5,188 (Table A8.4). However, the most recent completion of a school subproject was 4 years ago in 2002. Assuming that, on average, 40 students finish each of the 11 schools each year, we can conclude that in 4 years' time some 1,760 students finished, and their places were filled by new enrollees. That brings the total number of direct beneficiaries to about 6, 950. This number still does not include students' parents. A more realistic number of direct beneficiaries would be no fewer than 10,000.

22. **Rapid Assessments, Interviews, and Focus Group Discussions.** A total of 255 people were interviewed in the course of analyzing the socioeconomic impact of subprojects on this section. Of them, 12 were regional and local authorities, including *akims* and deputy *akims* of

rayons, heads of village and settlement councils, heads of MEES regional department and local departments, and heads and specialists of rayon public education departments. Two people represented contractors and specialists in the field. A total of 241 direct beneficiaries were interviewed, including students, directors, deputy directors, principals, teachers, economists (supply managers), local residents, and businesses.

23. **Socioeconomic Impacts.** The OEM made the following observations:

- (i) In general, all respondents pointed out that the socioeconomic impact of schools was very significant to the community.
- (ii) At the same time, levels of satisfaction varied. Fifteen percent of respondents were very satisfied with the subprojects. About 65% stated that they were satisfied in general and mentioned only few minor problems. About 20% of respondents were less satisfied and mentioned shortcomings that may pose a risk to the health of children and school personnel.
- (iii) Jomok kindergarten in Suzak village won first place in a contest among all kindergartens in the whole of Jalal Abad Oblast. Personnel of the kindergarten say that it would not have been possible without renovations made by the subproject back in 1998.
- (iv) Two schools in Aksi Rayon, in Tegene and Syny, are located in remote, mountainous areas about 85 and 70 km away from the administrative center of Aksi. The old buildings of both schools were built back in the 1950s and were damaged by heavy rains and snows. The construction of new school buildings was among the most significant events in the recent history of both settlements.
- (v) The school in Kurama settlement of Nookan Rayon (Jalal Abad Oblast) was voted as one of the best schools in Nookan Rayon for its modern facilities.
- (vi) The subprojects in Tegene and Syny were also highly praised by Aksi Rayon government. The *akim* of Aksi Rayon gave a letter to the OEM in which he praised the subprojects and thanked ADB on behalf of students, their parents, teachers, and other people who live in both settlements, as well as of the local and rayon governments.
- (vii) The head of Akjol village council and the head of Tegene settlement council stated that the new school in Tegene plays a significant role in the socioeconomic development of the settlement. The Tegene settlement is located relatively close to Tashkumir city. According to local authorities, Tashkumir has been facing demographic problems caused by increased unemployment resulting from the bankruptcy of industrial enterprises and relatively expensive housing. Because of those problems, some people started moving from Tashkumir city into Tegene settlement. Village and settlement heads said that the existence of a new school building significantly affects the decisions of families that choose to move into Tegene settlement.
- (viii) In about 65% of cases, new school buildings are used for various public events in the settlements, including village and/or settlement council meetings, concerts, dances, and parties.
- (ix) In some cases, old school buildings or some portions of them were kept in relatively good shape and have been used for educational and/or recreational purposes. For example, the hall of the old school building of Murdash School is used for meetings, various celebratory parties, and dances.
- (x) The school in Kojoke uses a portion of old building for a grocery and butcher's shop, both of which belong to the school and allow it to earn some income for annual maintenance and repair works.
- (xi) According to the school management, there is a plan to renovate the old building

- of the school in Bayish for use as a new kindergarten, and this would be conducted by the local administration.
- (xii) The school in Oogan-Tala (Jalal Abad Oblast) managed to conduct some minor renovation works in the old building, which now is used to teach students in grades 1–4. This allowed the school to move from two shifts per day to one.
- (xiii) The new school in Aravan was able to rent 1 hectare of land next to the school to grow cotton and sunflower. During the Mission, the OEM team saw some of the school staff, along with 8th and 9th grade students, picking cotton. According to the director, the school earned enough money from the crops to build a gymnasium.

G. Telecommunications Report

24. **Background.** According to the PCR, only one subproject was implemented in the telecommunications sector. The subproject was included in the sample of the OEM. The subproject was implemented in Suzak village in response to the natural disaster. Thus the subproject was found to be highly relevant.

25. **Beneficiaries.** The total number of beneficiaries is more than 8,000 people.

26. **Rapid Assessments, Interviews, and Focus Group Discussions.** A total of 39 people were interviewed, and all of them were highly satisfied with the subproject.

27. **Socioeconomic Impact.** The OEM noted the following:

- (i) Some respondents of Uzbek nationality said that having a telephone connection at home helped them to keep in touch with their relatives in Uzbekistan. The respondents pointed out that the subproject helped them to save time and money previously spent visiting the local post office to make telephone calls.
- (ii) Some respondents mentioned that having telephones at home helps them to keep their families in good health since, in case of emergency, they can call an ambulance. One of them said that he had a sick family member who fell critically ill recently. Without a working phone at home, he would not have been able to call a doctor, and maybe would not have saved the life of his family member.
- (iii) According to government officials, in a country like the Kyrgyz Republic, where population centers are widely scattered and vulnerable to natural disasters, telephone connections are vital.
- (iv) One of respondents stated that he was about to open an Internet café in Suzak village center, which would be impossible without telephone lines fixed under the subproject.

H. Resettlement Centers Report

28. **Background.** According to the PCR, two resettlement subprojects were completed, both in Kyzyljar relocation center in Suzak village of Jalal Abad Oblast. The OEM visited both subprojects: (i) roads in Kyzyljar settlement and (ii) rehabilitation of electric power lines in Kyzyljar settlement.

29. **Beneficiaries.** The total number of beneficiaries is more than 8,000 people.

30. **Rapid Assessments, Interviews, and Focus Group Discussions.** All respondents in Suzak village were highly satisfied with the subproject.

31. **Socioeconomic Impact.** The survey revealed the following issues:

- (i) Some patients of the health post in Kyzyljar said that, before the construction of the roads, it was highly inconvenient to come to the health post, especially for patients whose pain could be further exacerbated by the awful condition of the road. The health post subproject was completed in 2001, and the roads in 2002.
- (ii) According to interviewees, more than 70% of the economically active population of Kyzyljar work in Suzak village and beyond, which requires them to use the road at least twice a day. The improved condition of the road saves time and energy.
- (iii) According to male respondents, although the road requires further improvement, it has already helped reduce vehicle operating costs.
- (iv) About 80% of respondents mentioned that rehabilitating electric power lines helped keep them and their children in good health, since most people in Kyzyljar settlement use electric heaters in their houses.
- (v) Most respondents pointed out that rehabilitating electric power lines played a significant role in the provision of drinking water to their settlement by powering a water pump.
- (vi) Female respondents mentioned that rehabilitating power lines helped to make their community a safer place, since the main street in the settlement is now lit at night.

I. Conclusions

32. The problems that were found by the OEM can be divided into three groups related to (i) shortcomings in the design or planning of subprojects; (ii) shortcomings in implementation, such as the use of poor quality construction materials or failing to follow standard measures and techniques; and (iii) failure to consider safety standards.

1. Roads and Bridges

33. **Roads in Budalyk.** Subsequent landslides destroyed several sections of the road over a length of about 2 km over the last 3 years. To fix the damage, the Government announced a tender, which was won by a Chinese contractor who is reconstructing the sections on higher ground. According to local residents and local authorities, the construction by the Chinese company is taking too long.

Box A8: Case of Kamchiev Mamat

Kamchiev Mamat is a local 75 year-old farmer and herdsman. His house used to be along the old road constructed under the subproject. However, after recurrent floods and the total destruction of sections of the road, the Government is constructing a new road along an alignment passing through his land. For the last 4 years, the Government has been trying to convince him to move to another village, but he has refused. However, after the new construction started, he decided to move to a safer location.

Regulations require the Government to compensate him. However, according to the contract with the local government, compensation is to be paid only when the owner of a house starts demolishing it. Kamchiev Mamat explains that no one would start demolishing a house before getting paid by the Government and fixing a new place for his family to live. Thus the problems remain unsolved.

Source: Operations Evaluation Mission.

2. Power, Water Supply, and Drainage

34. **Water and Power Supply in Mailu-Suu.** The pipelines used to be on the right bank of the Mailu-Su River. After a landslide destroyed them, they were reconstructed on the other side of the river. In 2000, landslides destroyed the pipelines again. In the fall of the same year, the pipelines were moved back to the right bank of the river. According to the head of MEES department in Mailu-Suu city, in 2001, ADB discussed a possible project for constructing a road and pipelines along the road. However, the project was not started. The project was ready, the tender announced, a company in Aksi won the tender, but the project did not go ahead. At present, the World Bank is discussing a project to build a road on the right bank of the river. However, the road will be a service road for implementing a major project to move buried uranium waste to another place.

35. **Powerlines in Mailu-Suu.** Something similar happened regarding power supply lines in Mailu-Suu city. According to the head of MEES department in Mailu-Suu city, after the completion of the subproject, the very next landslide destroyed about half of the power supply posts by cutting the cables. The Government managed to install the power supply posts along a new, safer route. About half of the remaining posts were used in a restoration project conducted by the Government. Some of the other posts are left on the old location, and locals stole some of them.

3. Education

36. Most of the problems unearthed during the OEM relate to schools. About 30% of the schools had problems with rotten floors resulting from the failure to install ventilation pipes in buildings.

37. **School in Aravan** (Osh Oblast). No ventilation holes were fixed during construction. Poor quality wood was used for the floor. As a result, floors in four classrooms and the director's room rotted. In addition, the water tank installed for the heating system was too small, only 500 liters. For lack of other funding options, the school collected money from students. So far the two classrooms and damage in the director's room have been fixed, leaving two more classrooms to be repaired. The school does not have enough funds. The director says that they plan to use part of the income from the sale of cotton harvested by the school.

38. **School in Oogan-Tala.** (Jalal Abad). The water supply and heating system was highly deficient. During acceptance testing, the system partly worked. Later, during actual use, the system did not work. There were several problems, including bad, rusting radiators, about 15 of which started leaking. Also, the water pump that was supposed to take water into the tank located on the roof did not work. Now, students use ladders to climb up to the roof with containers to fill the tank, which is dangerous, especially in winter. The schoolteachers are also concerned about the heating system and the roof, so any funds they find are used to address those problems. Since 2002 the school contacted MEES more than 30 times asking it to fix the heating system. The school eventually used regular maintenance funds from the Government to repair the heating system. However, the available funds did not allow the school to fix the system properly.

39. The heating system was a dual-power one with a charcoal oven and electric power. Because of malfunctions, the charcoal-based system was cut off. The electric power unit was moved into the school building, and heating ovens, provided by the ADB project, were installed in a small separate building located about 50 meters away. The roof was covered with corrugated

asbestos board, which proved to be a bad choice for that special case, as the school is located in an area with a lot of snow and strong winds. In winter, the weight of the snow breaks the tiles, and the ceiling starts leaking. The school repaints classroom walls but does not have enough funds to replace the board with metal panels. Thus, the problem is not solved yet.

40. **School in Gumkana** (Jalal Abad). Although built in 1999, the school started operating only in 2001 because of the late supply of school furniture. In 2001, it was discovered that half of the floors had rotted. When the school construction was completed, there was no heating system. The Project provided poor quality, Chinese-made electric heaters that served only 1 winter. Even in that one winter, the electric system was not able to supply all the heaters, and some portions of poor-quality cables burned off.

41. Other problems are related to the roof. Originally, according to school personnel, the roof was designed to be metal. However, the contractor later used slates for the roof. Teachers said that, in that area, it is impossible to have a slate roof because of very strong winds and heavy snows. All houses around the school had metal roofs. As a result, the slates keep being ripped off by strong winds and cracked under heavy snows, which results in leaking ceilings, leaving water stains in a few classrooms.

42. The biggest problem is related to electric cables that are laid on the attic floor, which is covered by rice straw and shavings. Some portions of the cable go through metal conduits that insulate them from easily inflammable shavings and rice straws. However, in most places, the cables are either not insulated at all or go through plastic conduits. The school area is surrounded by walnut groves that, according to teachers, harbor lots of rats and mice. As winter approaches, the rodents get to the attic of the school building. This makes the cables even more dangerous, as rats can eat the insulation of electric cables, which can cause a fire. This has already happened in two schools in that area, numbers 19 and 11, both of which burned down because of the same shortcoming in their construction.

43. In 2002, the school complained to the contractor, Bozorkorgon Ayil Kurilish, which then repaired or replaced all of the floors. Later, floors in three classrooms went bad again, one of the key reasons being the lack of ventilation holes. As in other, similar cases, the designer of the school project was Dolbor Design Institute. After numerous complaints, the school managed in 2005 to install a new heating system with the assistance of Mercy Corps. The school does some maintenance repairs every fall, preparing for winds and snow, but this is not enough to solve the problem. At this moment the school has no funds to fix the problem. The teachers said that they try to stay vigilant, keeping in mind that fire may break out in the attic at any time.

44. **School in Kurama.** At the end of the corridors in two classrooms, small heating pipes were not installed properly. After being used for about an hour, the pipes start detaching from the wall and tilt toward the center of the classroom, scaring students. Since this is quite dangerous, the school does not use heating for more than an hour at a time.

45. **School in Sari Tala** (Jalal Abad). The heating system did not function properly as it used charcoal, which is difficult to get in Alabuka. The heating system was changed to electric.

46. **School in Murdash** (Osh). According to school personnel and specialists working in changing floors in two of 22 classrooms, bad quality wood was used for floors. Besides that, contractors failed to install ventilation holes. All hallways of the single-story school building are covered with white tiles measuring 25 square centimeters, which are designed for use on bathroom or kitchen walls. They are very slippery and dangerous, especially in autumn and

winter. In addition, because of improper installation, the tiles are already starting to crack. The school is changing the floors in classrooms, where the situation came close to being critically dangerous to students. The floors in two classrooms were already replaced, and work on two others was in progress. The school also bored ventilation holes in the proper locations.

47. **School in Bayish.** The school is lower than the surface of the road, which worsens the situation during floods. There is no drainage around the foundation of the building. As a result, the foundation becomes water logged and students are forced to use an improvised entry during the floods, which occur three or four times a year.

48. **School in Kojoke.** Floors in all 17 classrooms and three administration rooms are made of concrete covered with linoleum, which harms the health of children. The linoleum used for flooring is of a poor quality and has ripped in many places, posing the threat of injury to students. According to management, the concrete floors make heating classrooms difficult.

Table A8.1: Number of Beneficiaries in Section I Subprojects

No.	Name of Subproject	Oblast	Number of Beneficiaries
1.	Rehabilitation of bridge on Jalal Abad–Kazarman Road	Jalal Abad	35,000
2.	Rehabilitation of Jalal Abad–Kazarman Road	Jalal Abad	25,000
3.	Rehabilitation of inner roads in Suzak village	Jalal Abad	65,000
4.	Rehabilitation of 3 bridges on road to Budalyk village	Osh	4,500
5.	Rehabilitation of road in Budalyk village	Osh	5,000
6.	Construction of culvert on road in Budalyk village	Osh	4,500
7.	Rehabilitation of Soppu Korgon–Terek road	Osh	600
8.	Rehabilitation of retaining walls on Osh–Isfana road	Batken	35,000
9.	Rehabilitation of road to Maksat settlement	Batken	26,000
Total			200,600

Source: Operations Evaluation Mission.

Table A8.2: Number of Beneficiaries in Section II Subprojects

No.	Name of Subproject	Number of Beneficiaries in 2002	Number of Beneficiaries in 2006
1.	Electric supply to Suzak village	5,000	5,000
2.	Electric power line in Mailu-Suu city	8,000	0
3.	Heating system in Mailu-Suu town	20,000	20,000
Total		33,000	25,000

Source: Operations Evaluation Mission.

Table A8.3: Number of Beneficiaries in Section IV Subprojects

No.	Name of Subproject	Number of Beneficiaries at Completion	Number of Beneficiaries in 2006
1.	Rehabilitation of water supply system in Suzak village	20,000	23,000
2.	Rehabilitation of drainage system in Suzak village	20,000	23,000
3.	Mailu-Suu water supply	20,000	0
4.	Rehabilitation of water supply to Shekaftar settlement	2,500	0
5.	Rehabilitation of water supply in Budalyk village	1,600	1,100
6.	Construction of waster supply to Maksat settlement		0
Total		64,100	47,100

Source: Operations Evaluation Mission.

Table A8.4: Number of Beneficiaries in Section V Subprojects

No.	Name of Subproject	Oblast	Number of Students	Number of Staff	Total
1.	Jomok kindergarten in Suzak village	Jalal Abad	180	19	199
2.	Construction of school in Oogan-Tala	Jalal Abad	662	41	703
3.	Construction of school in Gumkana	Jalal Abad	520	36	556
4.	Construction of school in Kurama	Jalal Abad	126	22	148
5.	Construction of school in Sari Tala	Jalal Abad	390	30	420
6.	Construction of school in Tegene	Jalal Abad	317	28	345
7.	Construction of school in Syny	Jalal Abad	699	45	744
8.	Construction of school in Murdash	Osh	488	35	523
9.	Construction of school in Aravan	Osh	457	30	487
10.	Construction of school in Bayish	Osh	390	32	422
11.	Construction of school in Kojoke	Osh	603	38	641
Total			4,832	356	5,188

Source: Operations Evaluation Mission.

Table A8.5: Number of Beneficiaries by Subproject

No.	Name of Subproject	Oblast	Number of Beneficiaries
1.	Rehabilitation of bridge on Jalal Abad–Kazarman Road	Jalal Abad	35,000
2.	Rehabilitation of Jalal Abad–Kazarman Road	Jalal Abad	25,000
3.	Rehabilitation of inner roads in Suzak village	Jalal Abad	65,000
4.	Rehabilitation of 3 bridges on road to Budalyk village	Osh	4,500
5.	Rehabilitation of road in Budalyk village	Osh	5,000
6.	Construction of culvert on road in Budalyk village	Osh	4,500
7.	Rehabilitation of Sopus Korgon–Terek road	Osh	600
8.	Rehabilitation of retaining walls on Osh–Isfana road	Batken	35,000
9.	Rehabilitation of road to Maksat settlement	Batken	26,000
10.	Electric supply to Suzak village	Jalal Abad	5,000
11.	Electric power line in Mailu-Suu city	Jalal Abad	8,000
12.	Heating system in Mailu-Suu town	Jalal Abad	20,000
13.	Rehabilitation of water supply system in Suzak village	Jalal Abad	23,000
14.	Rehabilitation of drainage system in Suzak village	Jalal Abad	23,000
15.	Mailu-Suu water supply	Jalal Abad	-
16.	Rehabilitation of water supply to Shekaftar settlement	Jalal Abad	-
17.	Rehabilitation of water supply in Budalyk village	Osh	1,100
18.	Construction of water supply to Maksat settlement	Batken	-
19.	Jomok kindergarten in Suzak Rayon	Jalal Abad	199
20.	Construction of school in Sari Tala	Jalal Abad	422
21.	Construction of school in Kurama	Jalal Abad	148
22.	Construction of school in Syny	Jalal Abad	741
23.	Construction of school in Tegene	Jalal Abad	347
24.	Construction of school in Gumakana village	Jalal Abad	557
25.	Construction of school in Oogan Tala village	Jalal Abad	695
26.	Construction of school in Aravan	Osh	492
27.	Construction of school in Kojoke	Osh	642
28.	Construction of school in Murdash	Osh	518
29.	Construction of school in Bayish	Osh	425
30.	Health post in Budalyk village	Osh	7,500
31.	Health post in Kyzyljar relocation center	Jalal Abad	4,000
32.	Rehabilitation of telecommunications in Suzak village	Jalal Abad	8,000
33.	Roads in Kyzyljar relocation center	Jalal Abad	4,000
34.	Rehabilitation of electric power lines in Kyzyljar relocation center	Jalal Abad	4,000
Total			313,386

Source: Operations Evaluation Mission.

Table A8.6: Number of People Interviewed by Sector

No.	Sector	Number of Interviewed
1.	Roads and Bridges	106
2.	Power	37
3.	Health	32
4.	Water Supply and Drainage	56
5.	Education	255
6.	Telecommunications	39
7.	Resettlement Centers	18
Total		543

Source: Operations Evaluation Mission.

**MANAGEMENT RESPONSE TO THE PROJECT PERFORMANCE EVALUATION
REPORT FOR THE FLOOD EMERGENCY REHABILITATION PROJECT
IN THE KYRGYZ REPUBLIC (Loan 1633-KGZ)**

On 3 May 2007, the Director General, Operations Evaluation Department, received the following response from the Managing Director General on behalf of Management:

We agree with the overall findings and assessment of the above Project Performance Evaluation Report. We have no specific comments on this report and we feel that a Management response is not necessary.

**MANAGEMENT RESPONSE TO THE PROJECT PERFORMANCE EVALUATION
REPORT FOR THE FLOOD EMERGENCY REHABILITATION PROJECT
IN THE KYRGYZ REPUBLIC (Loan 1633-KGZ)**

On 31 May 2007, the Director General, Operations Evaluation Department, received the following response from the Managing Director General on behalf of Management:

Further to the memo dated 2 May 2007 on the above subject, we would like to advise you for more clarity that we agree with the overall findings and assessment of the above Project Performance Evaluation Report and have no specific comments on this report.