# ASIAN DEVELOPMENT BANK

**TAR: TAJ 36396**

**TECHNICAL ASSISTANCE**
(Financed by the Japan Special Fund)

**TO THE**

**REPUBLIC OF TAJIKISTAN**

**FOR PREPARING THE**

**DUSHANBE-KYRGYZ BORDER ROAD REHABILITATION PROJECT (PHASE II)**

**August 2004**

## CURRENCY EQUIVALENTS
(as of 13 August 2004)

| | | |
|---|---|---|
| Currency Unit | – | somoni (TJS) |
| TJS1.00 | = | $0.3325 |
| $1.00 | = | TJS3.007 |

## ABBREVIATIONS

| | | |
|---|---|---|
| ADB | – | Asian Development Bank |
| EIA | – | environmental impact assessment |
| FMA | – | financial management assessment |
| IEE | – | initial environmental examination |
| MOT | – | Ministry of Transportation |
| RRP | – | report and recommendation of the President |
| TA | – | technical assistance |

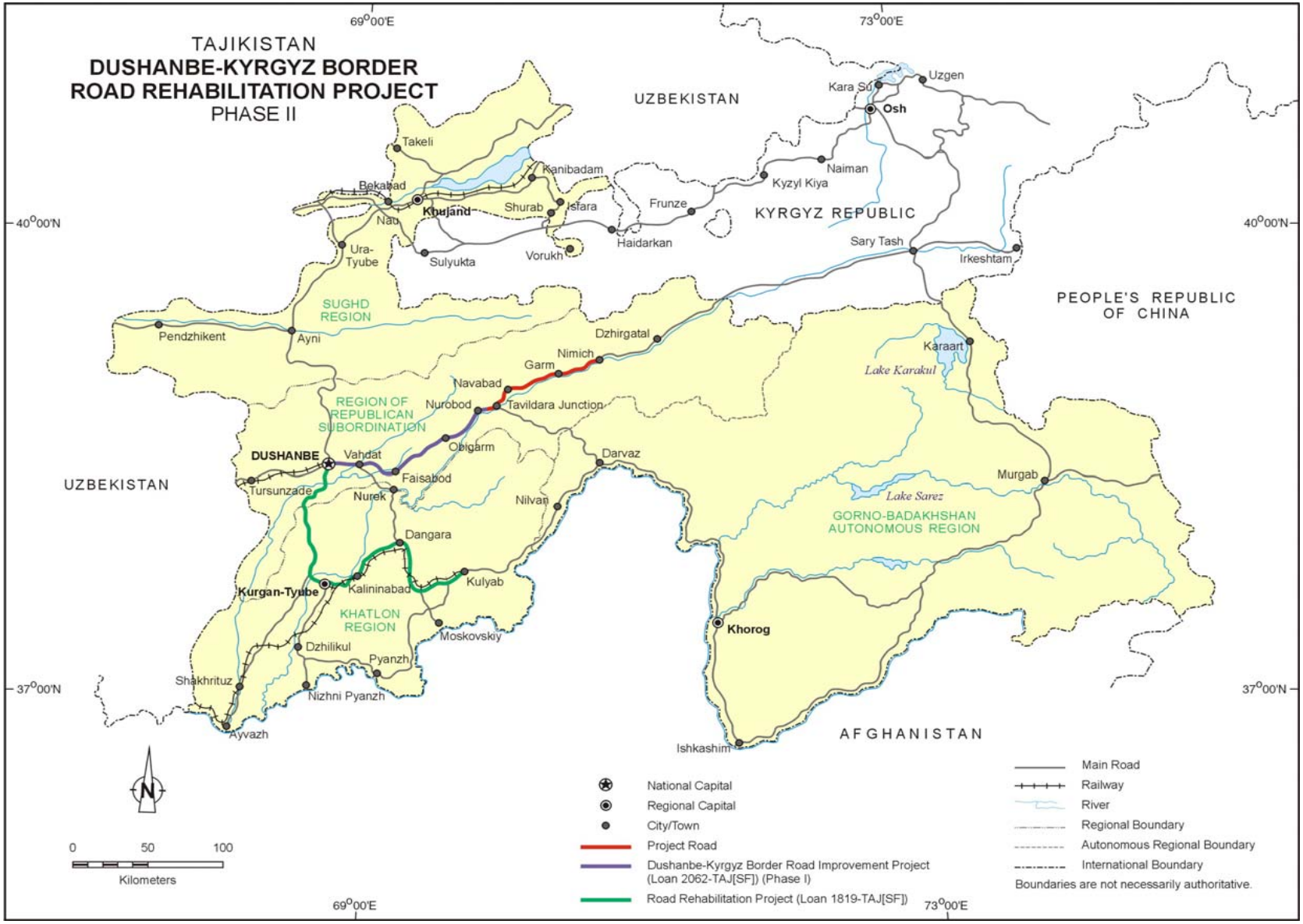
## TA CLASSIFICATION

| | | |
|---|---|---|
| **Poverty Classification** | – | Poverty intervention |
| **Sector** | – | Transport |
| **Subsector** | – | Roads |
| **Theme** | – | Sustainable economic growth |
| **Subtheme** | – | Fostering physical infrastructure development |

## NOTES

(i) The fiscal year of the Government ends on 31 December.
(ii) In this report, "$" refers to US dollars.

This report was prepared by the project team comprising J. Miller, team leader; S. Ferguson; T. Fujino; and N. Toba.


TAJIKISTAN
DUSHANBE-KYRGYZ BORDER
ROAD REHABILITATION PROJECT
PHASE II
69°00'E
73°00'E
40°00'N
37°00'N
UZBEKISTAN
KYRGYZ REPUBLIC
PEOPLE'S REPUBLIC OF CHINA
AFGHANISTAN
Uzgen
Kara Su
Osh
Naiman
Kyzyl Kiya
Frunze
Sary Tash
Irkeshtam
Takeli
Kanibadam
Bekabad
Khujand
Nau
Shurab
Isfara
Haidarkan
Vorukh
Sulyukta
Ura-Tyube
SUGHD REGION
Pendzhikent
Ayni
Dzhirgatal
Nimich
Garm
Navabad
Nurobod
Tavildara Junction
REGION OF REPUBLICAN SUBORDINATION
Obigarm
DUSHANBE
Vahdat
Faisabod
Tursunzade
Nurek
Darvaz
Nilvan
Karaart
Lake Karakul
Murgab
Lake Sarez
GORNO-BADAKHSHAN AUTONOMOUS REGION
Dangara
Kulyab
Kurgan-Tyube
Kalininabad
KHATLON REGION
Moskovskiy
Khorog
Dzhilikul
Pyanzh
Shakhrituz
Nizhni Pyanzh
Ayvazh
Ishkashim
N
0 50 100
Kilometers
National Capital
Regional Capital
City/Town
Project Road
Dushanbe-Kyrgyz Border Road Improvement Project (Loan 2062-TAJ[SF]) (Phase I)
Road Rehabilitation Project (Loan 1819-TAJ[SF])
Main Road
Railway
River
Regional Boundary
Autonomous Regional Boundary
International Boundary
Boundaries are not necessarily authoritative.

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## I. INTRODUCTION

1. During the 2003 Country Programming Mission to Tajikistan, the Government confirmed its request for technical assistance (TA) to help prepare a project for the second phase of improvement of the road from Dushanbe to the Kyrgyz border and associated rural roads (the Project). The Asian Development Bank (ADB) Fact-Finding Mission visited Tajikistan in March 2004, visited the project area, carried out an initial poverty and social assessment and rapid environmental assessment, and discussed project-related issues with Government officials. An understanding was reached with the Government on the objectives, scope, costs, terms of reference, and implementation arrangements for the TA.[1] This paper is based on the understanding reached with the Government and the Mission's observations in the field. The TA framework, outlining the goal, purpose, outputs, and inputs, is in Appendix 1.

## II. ISSUES

2. Tajikistan is the poorest of the Central Asian republics, with a per capita gross domestic product of about $184 in 2002 and a poverty incidence of 83% (1999). Average wages are less than $1 per day.[2] Economic growth resumed in 1997, following a prolonged decline due to the breakup of the Soviet Union and civil war, and averaged 7.3% per year during 1998–2002. Agriculture now employs more than 60% of the workforce, including many displaced from urban jobs. As a landlocked country with a small market, Tajikistan needs access to regional markets to achieve sustainable economic growth.

3. Roads comprise the most important transport mode in Tajikistan, excluding Uzbek transit traffic carried on the railway. The combined length of Tajikistan's road network is about 26,000 kilometers (km), consisting of 4,700 km of national and 21,300 km of local roads. The length of the network is adequate to accommodate existing traffic levels and support economic growth and sustainable development in the medium term. The Ministry of Transport (MOT) has jurisdiction over 13,700 km, including all of the national roads and 42% of the local roads (9,000 km). The remaining 12,300 km of local roads not under MOT jurisdiction are mostly rural and farm roads. The major part of the network was constructed before 1970, and inadequate maintenance and damage from civil conflict and recent natural disasters have left it in a state of severe deterioration. Of the national roads, 42% are asphalt, 50% are other pavement, and 8% are gravel. Many of the asphalt roads are in a seriously deteriorated condition, and in many places the asphalt has been worn away. Of the total roads in Tajikistan, 20% are estimated to be in fair condition, 48% in poor condition, and 32% in very poor condition. Practically none of the roads are estimated to be in good or very good condition.

4. The state budget allocation for road rehabilitation and maintenance varies from year to year according to the Government's priorities and fiscal constraints. Prior to 2000, road subsector expenditures were financed from the Road Fund, the state budget, and development agencies. In January 2000, the Government terminated the Road Fund to meet the International Monetary Fund requirement to maintain one consolidated state budget. The taxes and receipts formerly contributing to the Road Fund are still collected, but now are paid directly to the national treasury. Road maintenance and construction are now funded from the general state budget. The following amounts (in million somoni) have been allocated to the road subsector in the national budget for 2003: 5.3 for maintenance, 10.5 for new construction, and 10.6 for rehabilitation, for a total of 26.4. These are approximately equivalent to the following amounts

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[1] The TA was first listed in *ADB Business Opportunities* (Internet edition) on 4 March 2004.
[2] International Monetary Fund. 2003. *Country Report No. 03/10*. Washington, DC.

(in million dollars): 1.8 for maintenance, 3.5 for new construction, 3.5 for rehabilitation, and 8.8 total. The allocations for the road subsector comprise approximately 3% of total planned Government expenditures for 2003. The annual requirement for maintenance of the 4,700 km of national roads is estimated at $16 million, which is almost twice the total road subsector budget.

5. Funding for road maintenance has decreased substantially since independence in 1991, and this inadequate funding is reflected in the deteriorated condition of the road network. Maintenance funding was also unavailable during the civil war, when numerous bridges and road sections were damaged. Allocation of funding is often restricted to emergency maintenance needs and is insufficient for routine or periodic maintenance requirements. Little preventive maintenance is currently being undertaken outside of Dushanbe as part of a planned road maintenance program. MOT is responsible for planning and coordinating the maintenance of the road network in the country. MOT maintains roads and bridges through five regional maintenance divisions that are responsible for maintaining approximately 13,700 km of road, and employed 3,291 people in 2001. The road maintenance divisions are state entities, attached to MOT.

6. The Government's Transport Sector Policy Statement of 1998 outlines the policy directive requiring development of the transport sector to be based on market-oriented reforms and restructuring to improve efficiency. The Government's strategy for the road subsector is to rehabilitate and maintain the road infrastructure and to develop an efficient road transport industry through an increased role for the private sector in providing transport services, greater reliance on cost recovery to finance road maintenance, and rehabilitation of the critical parts of the road network and transport services that remain under state control. The Government aims to increase expenditures on road maintenance, and has been doing so in line with ADB's policy dialogue, and to implement changes to the regulatory framework necessary to encourage greater involvement by the private sector in road transport. The Government's strategy includes the development of international road corridors to facilitate Tajikistan's external trade.

7. ADB has provided the largest amount of assistance to the transport sector of any of the international organizations, with four loans and six TAs fully or partly related to the sector.[3] ADB has been intensively involved in policy dialogue for the transport sector in general, and the road subsector in particular, since it began its involvement with the transport sector in 1998. The areas covered by the policy dialogue include financing of road maintenance, commercialization of transport services, improvement of management efficiency in the transport sector by improving key institutions, separation of regulatory and operational functions of the sector, and other areas primarily related to the transition to a market economy. Market-oriented reforms for the transport sector have been and are now being introduced through implementation of ongoing project loans, the completed program loan, and advisory TA. The policy dialogue has achieved substantial progress in establishing the legal framework for the transport-sector institutions, through passage of laws and regulations, but less progress has been made in commercialization of transport enterprises.[4] As a result of policy dialogue with and TA from ADB, the administration of the transport sector was reorganized and MOT was created.

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[3] ADB. 2003. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Tajikistan for Dushanbe-Kyrygz Border Road Rehabilitation Project (Phase I).* Manila; ADB. 2000. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Tajikistan for Road Rehabilitation Project*. Manila; ADB. 1999. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Tajikistan for Emergency Flood Rehabilitation Project*. Manila; ADB. 1998. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Tajikistan for Postconflict Infrastructure Program.* Manila.

[4] ADB. 2002. *Program Completion Report on Postconflict Infrastructure Program*. Manila.

MOT is now responsible for planning and coordinating all modes of transport within the country. In the future, most state-owned enterprises will play a minor role and will be expected to operate as independent commercial enterprises. MOT's Roads Department is responsible for administration, maintenance, and construction of roads in Tajikistan, and has a number of associated entities involved in these activities. Tariffs for road freight have been completely deregulated; road haulage organizations enter into agreements with customers at negotiated rates. Tariffs for passenger transport are still regulated, but in practice fares vary according to competition. Separate deputy ministers have regulatory and oversight responsibilities for rail transport and air transport.

8. The Dushanbe-Kyrgyz Border Road Rehabilitation Project (Phase I) (footnote 3), approved in 2003, will improve about 140 km of the road from Dushanbe to the Kyrgyz border, which has a total length of 350 km. The first phase includes (i) a combination of rehabilitation of km 22–95, minor rehabilitation of km 95–150, and minor works on the km 9–22 section; and (ii) improvement of 77 km of rural roads in the project area. The project's policy dialogue is addressing the issue of financing road maintenance through loan covenants requiring specified increases in financing of maintenance of the project road and other roads under MOT jurisdiction. The proposed Project will continue ADB's improvement of the road from Dushanbe to the Kyrgyz border, focusing on the two-lane section from km 140 (between Nurobod and the Tavildara Junction) to Nimich (km 217, the Tajikabad Junction), a distance of approximately 77 km.[5] In addition, about 100 km of rural roads in the project area will also be rehabilitated.

9. The project road is important both as a national and international transport corridor for Tajikistan. As a key national road, the project road provides the primary link between Dushanbe and the Rasht Valley, to the northeast. For several months during the winter, the road also serves as a link between the northern Sugdh region of Tajikistan and the rest of the country. The road is also important from a regional perspective, as it forms part of the corridor connecting Afghanistan and Tajikistan to the People's Republic of China and other countries in the region. After crossing the Tajik-Kyrgyz border, the road connects to Sary Tash in the Kyrgyz Republic, and to the Osh-Sary Tash-Irkeshtam road corridor. Improvement of the Osh-Sary Tash-Irkeshtam road was studied under ADB's TA for Regional Cooperation in Transport Projects in Central Asia.[6] ADB's program for the Kyrgyz Republic for 2004 includes a loan for the rehabilitation of sections of this road as well as a loan for regional customs modernization, which will facilitate regional trade. In addition to rehabilitating this key transport corridor, the proposed Project will address the national problem of road maintenance through continued policy dialogue.

10. The initial poverty and social assessment and rapid environmental assessment for the Project are in Appendix 2. The project area is rural and mountainous, and agriculture is the primary economic activity. Approximately 174,000 people live in the three districts through which the proposed project road section passes. Most project beneficiaries live in rural areas where the incidence of poverty is particularly severe. The project area is adjacent to that for the Loan 2062-TAJ(SF), the first phase, and has similar social and economic conditions, although the project area for the proposed Project is further from Dushanbe and thus more remote. The project area was the scene of heavy fighting during Tajikistan's civil war in the mid-1990s. The poverty incidence is expected to be about the same as the 91% incidence in the project area for the first

[5] The works on km 95–150 under Loan 2062-TAJ(SF), phase I (footnote 3) will comprise minor rehabilitation, limited to safety improvements and mitigation of the impact of landslides. The civil works under the proposed Project (phase II) will begin at km 140. This does not comprise duplication of work on km 140–150, as the works on these 10 km under phase I are limited to maintenance necessary before the commencement of the works under phase II.

[6] ADB. 2002. *Technical Assistance for Regional Cooperation in Transport Projects in Central Asia*. Manila.

phase. The main causes of poverty are lack of employment opportunities and low prices received for agricultural produce. The Project will address these causes by improving access to Dushanbe and other locations with more employment opportunities and larger markets for agricultural produce. The Project will lead to reduced transport costs, most of which will be passed on to transport users. The Project will also improve access to health and other social services and improve road safety. The population in the project area is primarily Tajik. The environmental and social impacts are expected to be minimal, as the project will rehabilitate the existing alignment, except for minor deviations due to difficult geotechnical conditions or to improve safety conditions. No resettlement or resettlement effects are anticipated.

11. ADB's operational strategy[7] in Tajikistan focuses on promoting economic growth through (i) rural development, including improving transport and other infrastructure; and (ii) regional cooperation, including rehabilitating transport links to neighboring countries. The Project will contribute to the achievement of ADB's strategy by rehabilitating the road linking Tajikistan to the Kyrgyz Republic and the People's Republic of China, and by improving rural roads.

## III. THE TECHNICAL ASSISTANCE

### A. Purpose and Output

12. The TA will help the Government prepare the Dushanbe-Kyrgyz Border Road Rehabilitation Project (Phase II), suitable for ADB financing, including furthering the progress of institutional development and policy reforms in the road subsector initiated by previous projects.

### B. Methodology and Key Activities

13. The TA will prepare a feasibility study and preliminary design to rehabilitate the section of the road from km 140 (between Nurobod and the Tavildara Junction) to Nimich (km 217, the Tajikabad Junction), a total distance of approximately 77 km, and selected rural roads totaling about 100 km. The feasibility study prepared under the TA will include (i) an update of the transport sector profile for Tajikistan, including financial status, road safety, road maintenance, and traffic management; (ii) a review of the status of institutional development and policy reforms in the road subsector initiated under previous projects; (iii) selection criteria and prioritized rankings, based on poverty and other indicators, for rural roads and bridges to be included in the Project; (iv) cost estimates and the technical and economic feasibility study for the main road and rural roads comprising the Project, including an examination of the appropriate use of labor-intensive techniques for construction and maintenance; (v) an environmental impact assessment; (vi) social impact analysis including any involuntary resettlement effects attributable to the Project; (vii) poverty impact analysis; and (viii) analysis of the need for further advisory TA for institutional strengthening of MOT. The outline terms of reference for the consulting services are in Appendix 3. Implementation of the TA is contingent on the United Nations security classification for the project area (and any areas through which travel is required) remaining at the current level 3 or lower.[8] No deterioration of the security situation is anticipated.

### C. Cost and Financing

14. The total cost of the TA is estimated at $590,000 equivalent, consisting of $298,000 in foreign exchange cost and $292,000 equivalent in local currency cost. The Government has

[7] ADB. 2003. *Country Strategy and Program (2004–2008)*: *Tajikistan*. Manila.
[8] ADB operations are not possible under UN security classification 4.

requested ADB to provide $500,000 equivalent to cover the entire foreign exchange cost and $202,000 equivalent of the local currency cost. The TA will be financed on a grant basis by the Japan Special Fund, funded by the Government of Japan. The Government of Tajikistan will finance the balance of the local currency cost equivalent of $90,000 by providing required office accommodation and services, local communications, remuneration and per diem for counterpart staff, and other items, mostly in kind. The Government has been advised that approval of the TA does not commit ADB to finance any ensuing project. The draft cost estimates for the TA are shown in Appendix 4.

### D. Implementation Arrangements

15. The Executing Agency for the TA will be MOT, which will appoint a project coordinator from its project implementation unit to be responsible for the TA's day-to-day implementation and to provide administrative and technical support to the consultants. MOT's existing project steering committee will monitor the TA's implementation.

16. An international consulting firm in association with domestic consultants will be selected and engaged by ADB, using the quality- and cost-based selection method. The consultants will be engaged by ADB in accordance with the *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants. The simplified technical proposal procedure will be used to select the consultants. A total of about 11 person-months of international and 50 person-months of domestic consulting services will be required. The consultants will have had extensive experience in (i) transport economics, including related financial management; (ii) economic evaluation of road projects; (iii) highway engineering, including mountainous topography, bridges, and drainage structures; (iv) road maintenance and road safety; and (v) environmental, social, and poverty impact assessments. For MOT to obtain the maximum benefit from the consulting services, the consultants will be based full-time in Dushanbe, with a field office in Garm or Nurobod during fieldwork. To facilitate the work and ensure that MOT gains technical expertise and knowledge, the consultant team will work closely with counterpart technical experts from MOT. MOT has agreed to provide the counterpart technical staff, who will assist with the necessary surveys and fieldwork, in a timely manner.

17. The TA will be implemented over 7 months beginning in November 2004. The consultants will submit (i) an inception report within 1 month of the commencement of their services; (ii) an interim report within 3 months; (iii) a draft final report within 6 months, including the environmental, social, and poverty impact assessment reports as separate documents; and (iv) a final report within 3 weeks after the receipt of comments from MOT and ADB. The Government, ADB, and the consultants will meet in Dushanbe to review and endorse the inception report and the draft final report. The consultants will conduct seminars for MOT staff and any other interested Government organizations concerning the techniques, analysis, and findings of the TA. Equipment to be provided under the TA will be procured in accordance with ADB's *Guidelines for Procurement*.

## IV. THE PRESIDENT'S DECISION

18. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of $500,000 on a grant basis to the Government of Tajikistan for preparing the Dushanbe-Kyrgyz Border Road Rehabilitation Project (Phase II), and hereby reports this action to the Board.

## PRELIMINARY PROJECT FRAMEWORK

| Design Summary | Performance Indicators/Targets | Monitoring Mechanisms | Assumptions and Risks |
|---|---|---|---|
| **A. Goals**<br>1. Reduce poverty and promote sustainable economic growth in the project area | • Increase in per capita income | • Economic statistics at regional, district, and township levels | |
| | • Decreased rate of unemployment | • Periodic household surveys, Government statistical data | |
| | • Reduction of poverty rate in project area | • Surveys, Government statistical data | |
| | • Increased production of cash crops in the project area | • Periodic surveys of farmers in the project area | |
| | • Increase in prices received for agriculture products produced in project area | • Periodic household surveys | |
| | • Decrease in prices paid by project area residents for agricultural inputs and other goods | • Periodic household surveys | |
| | • Employment of local residents in civil works and other project activities | • Analysis of employment data submitted by contractors | |
| 2. Increase regional trade and cooperation | • Increase in international traffic | • Surveys, Government statistical data | |
| **B. Purpose**<br>Improve transport efficiency through reduction of transport costs to road users and improved access to markets and social services for people in the project area | • Reduction of vehicle operating costs<br>• Reduction in freight and passenger tariffs | • Surveys of vehicle operators and owners, measurement of road roughness, and other measures by supervision consultants and project implementation units | • Rehabilitation work completed to adequate standard<br>• Provision of adequate maintenance of the project road in accordance with recommendations |
| | • Increase freight and passenger flows for trucks, buses, and cars | • Traffic counts and origin-destination surveys | |

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**PRELIMINARY PROJECT FRAMEWORK**—*Continued*

| Design Summary | Performance Indicators/Targets | Monitoring Mechanisms | Assumptions and Risks |
|---|---|---|---|
| | | • Project administration missions, midterm review, project completion report | |
| | • Improved availability of transport services in the project area | • Increased frequency of public transport services | • Increased availability of transport services following improvement of roads; stable prices |
| | • Decrease in time required to travel to markets, schools, and hospitals | • Periodic household surveys | |
| **C. Outputs** (for the TA) | | | |
| 1. Prepare a feasibility study for the Project, including the local roads, in accordance with ADB requirements | • Project feasibility study and design completed to a level suitable for ADB financing | • Consultant's reports are reviewed and commented on by ADB and the Government | • High-quality services provided by the consultants<br>• Sufficient data, information, and assistance provided by the Government |
| 2. Prepare a poverty and social analysis, including a social action plan, and design a monitoring framework | • Issues on poverty and social aspects are adequately addressed<br>• A project performance management system is designed | | |
| **D. Activities and Inputs** (for the TA) | | | |
| 1. 11 person-months of international and 50 person-months of domestic consulting services | • Timely recruitment of consultants in accordance with ADB guidelines | • Evaluation of consultants' proposals.<br>• Contract negotiations<br>• Review missions | • Engagement of qualified and experienced consultants and timely delivery of good quality services |
| 2. Counterpart staff, information and data, office facilities, and assistance provided by the Government | • Nomination of effective counterpart staff and delivery of funds as required<br>• Timely submission of information and data | • TA review missions and performance of the consultants; quality of the consultant's reports | • Good cooperation of government agencies; availability of qualified counterpart staff |
| 3. ADB supervision of TA implementation | • Timely review of TA implementation and appropriate guidance provided by ADB | • Inception mission, review mission, and tripartite meeting | • Close monitoring of TA implementation by ADB and timely fielding of review missions |
| 4. TA grant financing of $500,000 | • TA paper approved by ADB<br>• TA letter signed by ADB and the Gov't | • Internal review of the TA paper | • Timely approval of the TA |

ADB = Asian Development Bank, Gov't = Government, TA = technical assistance.

## SOCIAL AND ENVIRONMENTAL ASSESSMENTS

### A. Initial Poverty and Social Assessment

1. Table A2.1 summarizes the assessment.

### Table A2.1: Initial Poverty and Social Assessment

**A. Linkages to the Country Poverty Analysis**

| | | | |
|---|---|---|---|
| **Is the sector identified as a national priority in country poverty analysis?** | ☒ Yes<br>☐ No | **Is the sector identified as a national priority in country poverty partnership agreement?** | ☒ Yes<br>☐ No |

**Contribution of the sector or subsector to reduce poverty in Tajikistan**. The road subsector contributes to poverty reduction directly through improved access to and reduced costs for transport of agricultural products to markets, employment opportunities, and social services; and indirectly through stimulating economic development.

**B. Poverty Analysis** **Proposed Poverty Classification: Poverty Intervention**

**What type of poverty analysis is needed?**

Tajikistan is the poorest country among the Central Asian republics, with a poverty incidence of 83%. The poverty incidence in the project area is expected to be higher than the national incidence, with a preliminary estimate of 91%. The project area is rural and mountainous, and agriculture is the primary economic activity. The project road provides the area's only access to the capital and to other urban areas. The Project will reduce poverty by reducing the cost of road transport and improving the access of the rural poor population to market opportunities, other economic activities, and social services by improving the project road and rural roads. The Project will also generate employment in construction activities for local residents.

A detailed poverty analysis will be carried out as part of the technical assistance (TA) to identify the causes of poverty in the project area and demonstrate how the Project will help reduce poverty by incorporating specific measures in the project scope. The analysis will be based on the *Handbook on Poverty and Social Analysis* and *Handbook for Integrating Poverty Impact Assessment in the Economic Analysis of Projects.*

**C. Participation Process**

**Is there a stakeholder analysis?** ☒ Yes ☐ No
Through public consultation and a detailed socioeconomic survey, stakeholder analysis will be carried out by the executing agency and the consultants during the preparation of the initial environmental examination (IEE) and the social and poverty impact analysis.

**Is there a participation strategy?** ☐ Yes ☒ No

**D. Gender Development**

**Strategy to maximize impacts on women:**
Economic opportunities for women, especially female heads of households, will be promoted during design, construction, and operation, including improvement of transport services.

It is anticipated that the gender impact of the project will be minimal, and that the benefits of the project, for example, improving access to health and other social services, will be extended to both male and female members of affected communities. During the TA, a participatory and iterative process of consultation will be carried out with female and male community-members. Key needs and constraints identified by the communities and summarized in the social and poverty impact assessments will be considered in the project design. Economic opportunities for female heads of households will be promoted during construction

**Has an output been prepared?** ☐ Yes ☒ No

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**Table A2.1**—*Continued*

**E. Social Safeguards and other Social Risks**

| Item | Significant/ Not Significant/ None | Strategy to Address Issues | Plan Required |
|---|---|---|---|
| **Resettlement** | ☐ Significant<br>☐ Not significant<br>☒ None | It is anticipated that all construction activities will take place within the existing right-of-way or on unutilized land owned by the state. This will be confirmed during the TA. | ☐ Full<br>☐ Short<br>☒ None |
| **Affordability** | ☐ Significant<br>☐ Not significant<br>☒ None | No tolls will be charged on the Project. Transport costs will be lowered as a result of the improved roads. | ☐ Yes<br>☒ No |
| **Labor** | ☐ Significant<br>☒ Not significant<br>☐ None | Encourage use of local labor in construction contracts. | ☐ Yes<br>☒ No |
| **Indigenous Peoples** | ☐ Significant<br>☐ Not significant<br>☒ None | Ethnic minorities are not adversely or significantly affected. | ☐ Yes<br>☒ No |
| **Other Risks and/or Vulnerabilities** | ☐ Significant<br>☒ Not significant<br>☐ None | None | ☐ Yes<br>☒ No |

## B. Rapid Environmental Assessment

2. Table A2.2 summarizes the assessment.

**Table A2.2: Rapid Environmental Assessment**

| Screening Questions | Answer | | Remarks |
|---|---|---|---|
| | Yes | No | |
| **1. Project Siting**<br><br>Is the project area adjacent to or within any of the following ecologically sensitive areas?<br>• Protected Area<br>• Wetland<br>• Mangrove<br>• Estuarine<br>• Buffer zone of protected area<br>Special area for protecting biodiversity | | X | |

*Continued on next page*

**Table A2.2**—*Continued*

| Screening Questions | Answer | | Remarks |
|---|---|---|---|
| | Yes | No | |
| **2. Potential Environmental Impacts** | | | |
| Will the Project cause… | | | |
| encroachment on historical/cultural areas; disfiguration of landscape by road embankments, cuts, fills, and quarries? | | X | No significant impacts expected |
| encroachment on precious ecology (e.g., sensitive or protected areas)? | | X | No significant impacts expected |
| alteration of surface water hydrology of waterways crossed by roads; increased sediment in streams affected by increased soil erosion at construction site? | | X | Minor disturbance during construction can be mitigated with good work practice |
| deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction? | | X | Minimal impacts at construction camps will be mitigated via appropriate sanitary facilities |
| increased local air pollution due to rock crushing, cutting and filling works, and chemicals from asphalt processing? | | X | Minor dust emissions during construction can be readily mitigated |
| noise and vibration due to blasting and other civil works? | | X | Construction related noise and vibration will be mitigated with engineering controls |
| other social concerns relating to inconveniences in living conditions in the project areas that may trigger cases of upper respiratory problems and stress? | | X | Project area is sparsely populated |
| hazardous driving conditions where construction interferes with pre-existing roads? | | X | Contractors will take steps to ensure safety during construction; Project will improve driving conditions |
| poor sanitation and solid waste disposal in construction camps and work sites; | | X | Minimal volume of wastes generated at construction camps will be managed via appropriate sanitary facilities |
| possible transmission of communicable diseases from workers to local populations? | | X | EA and contractor will take preventive measures |
| creation of temporary breeding habitats for mosquito vectors of disease? | | X | |
| dislocation and compulsory resettlement of people living in right-of-way? | | X | No resettlement or relocation required |
| accident risks associated with increased vehicular traffic leading to loss of life, accidental spills of toxic materials? | | X | The project will improve driving conditions, reducing accident risk |
| increased noise and air pollution resulting from traffic volume? | | X | Long-term increase in emissions related to increased vehicle traffic has not been quantified |
| increased risk of water pollution from oil, grease and fuel spills, and other materials from vehicles using the road? | | X | Long-term increase in risk of water pollution has not been quantified |

## OUTLINE TERMS OF REFERENCE FOR CONSULTING SERVICES

### A. Transport Sector Review and Policy Agenda

1. Review and update the transport sector profile included in the Asian Development Bank (ADB) Report and Recommendation of the President (RRP) for Loan 2062-TAJ(SF).[1] Update lists of past and ongoing investments in transport and roads included in the RRP.

2. Review and update previous analysis of the organizational arrangements for road maintenance, including assessments of the standard of maintenance operations, condition of workshops, workshop equipment, and road maintenance equipment. Assess the minimum financial requirements needed annually to maintain the road network. Identify requirements for investment and training.

3. Analyze the financial situation of the road subsector, emphasizing the achievement of sustainable financing of the subsector. Examine road subsector expenditures within the medium-term framework for public-sector expenditures and sources of financing. Update data on the structure and composition of revenues in the subsector, identify potential sources of additional revenue, and assess the amount of revenue that these sources might generate.

4. Conduct a financial management assessment (FMA) of the Ministry of Transport (MOT), including completion of ADB's FMA questionnaire. The FMA will include a review of MOT's systems for financial and management accounting, reporting, auditing and internal controls, and disbursement and cash flow management arrangements. Prepare financial projections for recurring costs (operating costs, maintenance costs, salaries, supplies, etc.) for the project-financed assets. Review the budget position of the borrower and executing agency to determine the potential impact of recurring costs on the overall financial position. Identify issues or risks associated with the financial management systems and determine the most appropriate risk mitigation measures to be adopted as part of project design and implementation arrangements.

5. Review institutional strengthening and policy reform progress under ongoing projects and define the scope of ADB assistance, including specific policy and institutional measures, needed to continue these processes. If the proposed measures are likely to impact poor or vulnerable people, use the poverty impact assessment matrix in accordance with ADB's *Handbook of Social and Poverty Analysis* to (i) identify likely poverty and social impacts of the measures, (ii) recommend mitigation measures (specifying time-bound actions and resources needed) to address short- and medium-term costs for the poor or vulnerable, (iii) facilitate consultation with key stakeholders on the reform agenda, and (iv) identify areas requiring additional policy reform and institutional strengthening. Based on the foregoing, prepare a detailed program of policy dialogue for the proposed Project, including measures to ensure that project benefits reach the poor; and identify areas requiring advisory technical assistance (TA) or detailed follow-up studies. Prepare the rationale and terms of reference for a possible advisory TA for strengthening MOT and its governance.

6. Review the status of road safety in Tajikistan. Recommend measures to improve road safety nationally and on the project road. Examine the need for detailed studies and/or TAs, and identify the terms of reference for the studies/TAs, if deemed relevant.

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[1] ADB. 2003. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Tajikistan for Dushanbe-Kyrgyz Border Road Rehabilitation Project (Phase I)*. Manila.

7. Review customs procedures and requirements, based on work done under TA 6058-REG,[2] and recommend how ADB can facilitate negotiation of an agreement on cross-border traffic and trade between Tajikistan and the Kyrgyz Republic.

## B. Feasibility Study and Preliminary Design

8. Conduct traffic counts at appropriate locations; conduct origin-destination and axle-load surveys to establish the pattern and volume of vehicle, passenger, and cargo movements, including details on passenger characteristics and type of freight being shipped. Assess the possibility of passenger and freight traffic diversion from other routes. Prepare traffic forecasts by representative vehicle type, taking into account population growth rate, production increase, economic activity, and income in the hinterland of the project road. Identify and describe international traffic and transnational transit traffic.

9. Carry out topographic surveys; and prepare alignment plans, longitudinal sections, cross-sections, and drainage surveys. Assess the right-of-way requirements for the project roads. Study the existing road structure. Review pavement condition and strength through visual inspection, roughness measurement, and deflection measurements, and by making test pits and conducting laboratory tests on the pit samples. Based on the investigation results, determine the most cost-effective way of rehabilitating the pavement to accommodate the forecast traffic and meet Tajik and international standards, and undertake necessary preliminary engineering design. Confirm the suitability of locally available construction materials, and identify quarries and borrow pits. If warranted by social surveys, include in the preliminary design possible locations for "roadside stations" (for provision of roadside services, sale of local goods, etc.)

10. Examine rockfall and landslide hazards, study the properties of rocks and soils of mountain slopes, study slope stability of embankments and cuttings, and propose possible remedial actions. Study the geology, soil and rock properties, and hydrology of the problem areas. Prepare a preliminary design for the chosen remedial structures. Study the feasibility of retaining walls, galleries, and tunnels to address difficult topographical and geological road conditions, if applicable. Examine the existing bridges, culverts and other drainage structures, and retaining structures on the project roads to determine their condition, adequacy, load-bearing capacity, anticipated future serviceability, and the general extent of repairs and strengthening needed.

11. Develop criteria, including poverty-reduction and other economic and social criteria, to evaluate rural roads for inclusion in the Project. Based on the criteria, and in cooperation with MOT and local residents, develop a prioritized list of rural roads for possible inclusion in the Project.

12. Prepare cost estimates for the road sections, indicating a breakdown of foreign and local costs and tax and duty components. Also, prepare cost estimates for maintenance of the project road following project completion based on country- and site-specific factors. Prepare a road maintenance program for the project road, including a plan for monitoring and addressing the impact of natural events such as landslides and floods on the project road.

13. Calculate economic vehicle operating costs for each homogenous road section, including rural roads, with and without the proposed improvements, based on estimated changes in road surface roughness, and quantify the benefits (using shadow prices) for each project road section

[2] ADB. 2002. *Technical Assistance for Trade Facilitation and Customs Cooperation.* Manila.

and for each improvement option, including benefits (or savings) generated from reduced congestion and travel distance, road maintenance savings, reduction in road accident costs, etc.

14. Undertake an economic evaluation of all project components, including rural roads and bridges, according to ADB's *Guidelines for the Economic Analysis of Projects* (1997), by comparing the with- and without-project cases. Calculate the economic internal rate of return and net present value for the individual project components and the overall project. Identify the tradable and nontradable components of the project costs/benefits and convert financial costs-benefits to economic ones. Benefits from increased agricultural and other production, including those due to the improved rural roads, and increased trade should also be examined and quantified, if relevant. Estimate separately the benefits arising from international traffic as the overall corridor is rehabilitated. Also, examine nonquantifiable impacts such as regional/national economic development, improved road safety, etc. Taking into consideration the economic evaluation, least cost analysis, social benefits, and environmental impact, recommend the most suitable kind of road rehabilitation and/or improvement options and rank the recommended improvements by priority.

15. In cooperation with the poverty impact analyst, estimate the expected distribution of project net benefits among users of freight and passenger transport, vehicle owners, labor, the Government, the economy in general, and where appropriate, lenders.

16. Undertake sensitivity tests on the recommended improvements by appropriately varying benefits, project costs and the implementation period, expected overall future volume of traffic, traffic dimension, and a combination of these factors. Carry out quantitative risk analysis by considering the possible values for key variables and the probability that they may occur. Recommend ways by which project risks may be reduced.

17. Formulate, in a participatory manner, a detailed logical framework and project performance management system for monitoring and evaluation of project goals, purposes, outputs, and inputs, and for project postevaluation, including of poverty reduction objectives. Collect preliminary baseline data for the indicators and targets, including mitigation measures. Emphasize indicators for which data can be collected by Government staff during and after project implementation. Prepare appropriate formats, schedules, and cost estimates for collection of baseline data for benefit monitoring and evaluation following project completion.

18. Provide training and/or seminars on aspects of conducting feasibility studies, or other road subsector topics related to the TA, as requested by MOT and approved by ADB.

## C. Social Impact Assessment

19. Assist MOT and local governments (if appropriate) in conducting stakeholder consultations on social, environmental, and other project impacts, and identifying local roads for inclusion in the Project. The consultations should be conducted with different socioeconomic groups and documented in accordance with ADB practice (including dates, places, participants, and issues discussed, in text and table format). Prepare a program of follow-up consultations during and after project implementation.

20. Undertake a social analysis in accordance with ADB's *Guidelines for Incorporation of Social Dimensions in Bank Operations, Handbook of Social and Poverty Analysis, Handbook for Integrating Poverty Impact Assessment in the Economic Analysis of Projects, Guidelines for the Economic Analysis of Projects,* and *Handbook of Social and Poverty Analysis*. The analysis will

(i) identify the affected population and potential beneficiaries; (ii) assess the stage of development of different groups of the population, and prepare socioeconomic profiles based on indicators; (iii) assess the gender impact of the Project; (iv) assess the needs of the affected population and their expectations about the Project; and (v) assess the affected population's absorptive capacity to receive benefits from the Project, and potential to participate in implementing the Project, e.g., through use of “roadside stations.” Prepare a social action plan to enhance participation.

21. If applicable, review and assess the impacts of relocation and resettlement on affected people (in accordance with ADB's *Handbook on Resettlement*, especially the poor, women, and ethnic minorities. Include impacts caused by acquisition of right-of-way for rural roads and impact on land within the right-of-way that is being used by local residents. If there are resettlement impacts or is a potential for such impacts, assist the Government in preparing a time-bound resettlement framework or resettlement plan for land acquisition and resettlement to ensure compliance with ADB policy and Government laws.

22. Review and assess the Project’s impacts on ethnic minorities in accordance with ADB’s *Policy on Indigenous Peoples*, including adverse impacts and equitable distribution of benefits.

23. Based on the findings of the social analysis, recommend mitigation measures to be incorporated in the project design and implementation, including components for the monitoring and evaluation program.

## D. Poverty Impact Assessment

24. Organize and conduct surveys in the project area to collect data for poverty impact analysis, including (i) cost of agricultural inputs in various districts, including the proportion attributable to transport costs; (ii) prices received for and levels of production of agricultural produce, including the proportion of transport costs and the proportion received by the producer, in primary markets accessible to project beneficiaries; (iii) similar information for other products currently/potentially produced in the project area; (iv) income levels, unemployment levels, number of poor, proportion of women, and proportion of poor and other vulnerable people among road users (i.e., vehicle owners, passengers, freight shippers), and those who do not use the road themselves but indirectly benefit from the Project; and (v) use of the road (frequency and purpose). Analyze the survey data and information gathered from interviews with relevant stakeholders, and document the consultations.

25. Provide an overview of the objectives of the national and provincial policies for poverty reduction and of the poverty-reduction activities of other funding agencies, including a list and brief description of other projects under implementation in the project area. Describe how the Project relates to the overall context of and strategy for poverty reduction in Tajikistan. Help develop criteria for evaluating and selecting rural roads for inclusion in the Project.

26. Prepare poverty impact analysis in accordance with ADB guidelines. Analyze the survey data to assess the adequacy of and competitiveness within the transport services sector; how fares and charges are determined; to what extent cost savings for vehicle owners will be passed on to final users; the extent to which enhanced capacity and reduced costs may lead to additional economic activities; the extent to which the poor, very poor, women, and other vulnerable people use the road and associated transport services; and opportunities to enhance project benefits for the poor and participation of women.

27. Estimate the number of poor and extremely poor people who will benefit from the Project, by calculating the Project's poverty impact ratio based on the distribution analysis and in accordance with ADB guidelines. Identify constraints to poor people's direct or indirect use of the project road (i.e., availability and affordability of transport services, vehicle ownership, etc.) taking into account aspects related to gender and vulnerable people. Assess the likely involvement and employment of poor local people during the construction of the project road. Prepare a social action plan recommending changes in the project design and actions the Government can take to (i) increase poor people's use of the road, (ii) improve poor people's involvement in the Project, and (iii) extend project benefits and participation opportunities specifically to women in order to maximize the Project's positive impact on the poor.

## E. Initial Environmental Examination

28. Review possible environmental impacts during and after construction, including possible need for land acquisition and compensation/resettlement arrangements along the proposed alignment. Ensure that the consultation process satisfactorily addresses environmental issues.

29. In accordance with ADB's *Environmental Policy* (2002) and *Environmental Assessment Guidelines* (2003), prepare an initial environmental examination (IEE) and a summary IEE for the project roads. This activity should include profiles of the environment and the required mitigation measures in the design, construction, and maintenance of the road. If the IEE indicates that adverse impacts are likely, prepare a detailed environmental impact assessment report (EIA) covering mitigation measures for the project roads, and draft any proposed mitigation measures that will be required for inclusion in the general conditions of contract. Mitigation measures to be considered during design include, but are not limited to, alignment, slope stability, slope erosion, flooding, and pedestrian safety. Mitigation measures to be considered during the construction and maintenance phases should cover natural surroundings, air pollution, water pollution, noise pollution, quarry operations and borrow pits, and solid and human wastes. Draft and incorporate into the project components all necessary mitigation measures identified by the environmental assessments.

## F. Reporting Requirements

30. The consultants are required to submit

(i) an inception report, 1 month after commencement of services;
(ii) an interim report (including results of the technical, environmental, and social surveys), 3 months after commencement of services
(iii) a draft final report (including safeguard checklists), draft IEE and summary IEE or EIA and summary EIA, draft resettlement plan, if necessary, and the draft social impact assessment 6 months after commencement of the services; and
(iv) the final report (including safeguard checklists), social impact assessment, summary IEE/summary EIA, and resettlement plan, if necessary, 3 weeks after receiving comments from ADB and the Government. The draft final and final reports should be prepared in a format following ADB's RRP, including core and supplementary appendixes.

**COST ESTIMATES AND FINANCING PLAN**
($'000)

| Item | Foreign Exchange | Local Currency | Total |
|---|---|---|---|
| **A. Asian Development Bank Financing[a]** | | | |
| 1. Consultants | | | |
| a. Remuneration and Per Diem | | | |
| i. International Consultants | 207.0 | 0.0 | 207.0 |
| ii. Domestic Consultants | 0.0 | 151.0 | 151.0 |
| b. International and Local Travel | 30.0 | 8.0 | 38.0 |
| c. Reports and Communications | 8.0 | 2.0 | 10.0 |
| d. Transport services for fieldwork of local consultants | 0.0 | 8.0 | 8.0 |
| 2. Equipment[b] | 15.0 | 0.0 | 15.0 |
| 3. Training, Seminars, and Conferences | 0.0 | 5.0 | 5.0 |
| 4. Miscellaneous Administrative and Support Costs | 0.0 | 10.0 | 10.0 |
| 5. Representatives for Contract Negotiations[c] | 10.0 | 0.0 | 10.0 |
| 6. Contingencies | 28.0 | 18.0 | 46.0 |
| **Subtotal (A)** | **298.0** | **202.0** | **500.0** |
| **B. Government Financing** | | | |
| 1. Office Accommodation and Services | 0.0 | 30.0 | 30.0 |
| 2. Local Communications | 0.0 | 15.0 | 15.0 |
| 3. Remuneration and Per Diem for Counterpart Staff including the PIU | 0.0 | 45.0 | 45.0 |
| **Subtotal (B)** | **0.0** | **90.0** | **90.0** |
| **Total** | **298.0** | **292.0** | **590.0** |

[a] Will be financed on a grant basis by the Japan Special Fund, funded by the Government of Japan.
[b] Office equipment such as computers, copiers, printers, telephones, and facsimile machine will be purchased by the consultants, and ownership will be transferred to the Government upon completion of the study.
[c] Provision for Government officials to attend contract negotiations and discuss policy matters at ADB headquarters.
Source: Asian Development Bank estimates.