

**REPORT AND RECOMMENDATION
OF THE
PRESIDENT
TO THE
BOARD OF DIRECTORS
ON A
PROPOSED LOAN
TO
INDIA
FOR THE
MULTISECTOR PROJECT FOR
INFRASTRUCTURE REHABILITATION IN JAMMU AND KASHMIR
AND TECHNICAL ASSISTANCE GRANT
FOR THE PREPARATION OF THE
JAMMU AND KASHMIR URBAN INFRASTRUCTURE
DEVELOPMENT PROJECT**

December 2004

CURRENCY EQUIVALENTS

(as of 30 November 2004)

Currency Unit	–	Rupee/s (Re/Rs)
Rs1.00	=	\$ 0.0216
\$1.00	=	Rs44.15 (For the purpose of calculation, a \$1.00 = Rs45.00 was used in this report)

ABBREVIATIONS

ADB	–	Asian Development Bank
CAAA	–	Controller of Aid Accounts and Audit
CAG	–	Control and Audit General
DEA	–	Department of Economic Affairs
DFID	–	Department for International Development
DSC	–	design and supervision consultant
EA	–	executing agency
EAF	–	Environmental Assessment Framework
EIRR	–	economic internal rate of return
EMP	–	environmental management plan
EOI	–	Expression of Interest
ERA	–	Economic Reconstruction Agency
FIRR	–	financial internal rate of return
GDI	–	Gender Disparity Index
HIV/AIDS	–	human immunodeficiency virus/acquired immunodeficiency syndrome
ICB	–	international competitive bidding
IEE	–	initial environmental examination
IPDP	–	Indigenous People Development Plan
IS	–	international shopping
JBIC	–	Japan Bank for International Cooperation
J&K	–	Jammu and Kashmir
J&KPCC	–	Jammu and Kashmir Projects Construction Corporation
LCB	–	local competitive bidding
LIBOR	–	London interbank offered rate
MSL	–	mean sea level
NABARD	–	National Bank for Agriculture and Rural Development
NHAI	–	National Highway Authority of India
NHDP	–	National Highway Development Project
NHDR	–	National Human Development Report
NSDP	–	net state domestic product
O&M	–	operations and maintenance
PHED	–	Public Health Engineering Department
PIU	–	project implementation unit
PMC	–	Project Management Consultant
PMU	–	Project Management Unit
PPM	–	Project Performance Monitoring
PPTA	–	project preparatory technical assistance

PSC	–	Project Steering Committee
PWD	–	Public Works Department
ROW	–	right of way
SGIA	–	Second Generation Imprest Account
SOE	–	Statement of Expenditures
TA	–	technical assistance
TOR	–	terms of reference
UEED	–	Urban Environmental Engineering Department
WACC	–	weighted average cost of capital

WEIGHTS AND MEASURES

ha	–	hectare
km	–	kilometer
km ²	–	square kilometer
lpcd	–	liters per capita per day
m	–	meter
m ³	–	cubic meter
mm	–	millimeter

NOTES

- (i) The fiscal year (FY) of the Government ends on 31 March.
- (ii) In this report, "\$" refers to US dollars.
- (iii) The proposed Project will be carried out in Jammu and Kashmir, an area over which India and Pakistan have been in dispute since 1947. By financing the proposed Project, the Asian Development Bank does not intend to make any judgment as to the legal or other status of any disputed territories or to prejudice the final determination of the parties' claims.

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LOAN AND PROJECT SUMMARY

Borrower	India
Classification	<p>Targeting Classification: General Interventions</p> <p>Sectors: Transport and communication Water supply, sanitation and waste management</p> <p>Subsectors: Roads and highways Water supply and sanitation</p> <p>Thematic: Sustainable economic growth</p> <p>Subthemes: Fostering physical infrastructure development</p>
Environment Assessment	Category B: Initial environmental examination (IEE) was undertaken, and Summary IEE was attached (Supplementary Appendix Q).
Project Description	<p>The Project targets the rehabilitation of existing infrastructure and utility facilities in Jammu and Kashmir (J&K, or the State). The Project represents a first direct intervention by the Asian Development Bank (ADB) into a longer-term endeavor planned by J&K. It is part of a broader economic turnaround plan defined by the central and state governments. In this first phase, the priorities laid out by the State are the restoration of facilities needed to deliver a minimum water service in the two main cities, Jammu and Srinagar, and the rehabilitation of key roads and bridges in 14 districts. The Project will upgrade inherently sound facilities now in a poor state of repair. The objective is to increase their quality and life span. This will save money later but, more importantly, it will raise the quality of life of people now. This rehabilitation mandate will be accompanied by a structured and long-term capacity building component, in essence to help with project implementation itself, but also to strengthen the ability of executing agencies to do more, faster and better in the future.</p>
Rationale	<p>The quality of roads, bridges and water service facilities has deteriorated rapidly over the years, largely on account of limited financial resources but also because of less than adequate continuity in their maintenance and general upkeep. This situation impacts badly on the social and health/sanitary conditions of communities, particularly in key urban centers affected by significant migrant influx in recent years. But the situation also impacts on the mobility of people and goods/services. This curtails employment opportunities, income creation and ultimately general welfare. A set of targeted investments like the ones proposed will not deal with all the economic and social problems in the State at one go. But they will be a start.</p>

Indeed, these investments if adequately executed will go a long way to making life better for a large number of people, especially in the short to medium term. These investments also pave the way for others.

Tourism is potentially the main business activity, but visitors may stay away unless the enabling infrastructure facilities and access to the State can be improved and made more secure. Horticulture, agribusiness and selected manufacturing are prospective growth areas, but investors need to have access to inputs and markets on time and in a cost-effective manner. Trade, competitiveness, attractive production cost structures and ultimately productivity need good logistics and associated infrastructure and utility facilities. The economic recovery plan being put in place by the State also requires stability, reinforced by a stronger enabling environment.

Total infrastructure rehabilitation needs in J&K are high and growing. Several targeted interventions will be required in the future to deal with both rehabilitation and the creation of new assets. It is intended that this first intervention by ADB in J&K will focus on urgent rehabilitation of the existing infrastructure. This be followed by sequential projects in urban, road and power sectors, subject to Board approval, starting with an urban infrastructure development project in 2006. The latter will finance additional rehabilitation needs in the two principal cities not addressed under this Project but it will also cater for the creation of selected new facilities in areas where there are either none or their coverage is limited at present. This Project will also help strengthen the institutional capacity on the ground, a precursor for new and follow-on investments.

The State is responding to the challenge by taking measures now that will help improve this capacity and institutional set up. A nodal agency was set up in July 2004 (Economic Reconstruction Agency, ERA) to help with the coordination of all externally funded development projects in the State, including the proposed operation. The agency needs finance, people and systems. Advisory services for project management, training and policy/planning support are all an integral part of an institutional package proposed under the Project. Besides helping ERA, this component will also provide special support to the various project implementation units (PIUs) linked to the rehabilitation proposal. In this fashion, the operation meets the longer-term institutional building needs of government with shorter-term project management requirements – guided throughout by transparency and efficiency principles.

The Project has been prepared and processed under unique and unconventional circumstances. It had to adapt to the very specific and special situation on the ground, security being a major consideration. In spite of this situation, ADB undertook to respond to the Government's request in a proactive manner. In preparing the Project on a fast track basis but as part of normal lending operations, timing and flexibility are of paramount importance. Investment proposals have been prepared by the State without the benefits of project preparation technical assistance (PPTA). The project team used these investment proposals as the starting point, and conducted thorough investigations and due diligence for selected sample subprojects with regard to technical, economic and institutional viability and environmental and social safeguards. For the rest of the subprojects, the prescribed eligibility criteria will be applied so as to ensure that the subprojects selected will be straightforward rehabilitation investments with no major environmental and social adverse impact being involved. Furthermore, frameworks for environmental assessment, resettlement and indigenous people development were developed to ensure the compliance with ADB's safeguard policies.

The Project has inherent risks. The institutional capability of ERA and PIUs is untested. Security is another risk factor that cannot be completely controlled by risk mitigation measures incorporated in the Project. The cost of project administration is expected to be high. However, the Project team is of the view that the risks of doing nothing far outweigh the risks of moving forward with a rehabilitation of selected, simple and existing assets.

Objective

The Project is primarily designed for the rehabilitation of essential infrastructure in the urban and transport sectors of J&K. Water supply and drainage system improvement will raise the quality of life of the urban populations in Srinagar and Jammu. Road and bridge financing will improve rural connectivity and facilitate trade within the State. The Project also targets capacity building of the executing agency, which will lead to better planning, improved policy formulation and the introduction of more reliable project implementation skills, systems and criteria. Capacity measures will improve transparency and efficiency. The underlying objective is to underpin an economic turnaround.

Cost Estimates

The original request for finance by the State exceeded \$1.3 billion. The proposed investment package has been cut down to less than one third, i.e. \$358 million which covers \$167 million of foreign exchange costs and \$191 million equivalent in local currency.

Financing Plan

Source	(\$ million)			%
	Foreign Exchange	Local Currency	Total Cost	
Asian Development Bank	143.6	106.4	250.0	70
Governments of India and State	23.4	84.6	108.0	30
Total	167.0	191.0	358.0	100

Loan Amount and Terms

ADB loan of \$250 million from ordinary capital resources will be provided under ADB's London interbank offered rate-based lending facility. The proposed tenor is 25-years, including a grace period of 5 years. Interest is to be determined in accordance with ADB's LIBOR-based lending modality. No front-end fee will apply but a commitment charge of 0.75% per annum will. The Borrower will be India. Other standard terms and conditions as set forth in the draft Loan and Project Agreements will apply.

Allocation and Relending Terms

The Government of India (the Government) will provide the loan proceeds in local currency to the State Government of J&K. The Government's financing policy to the State works on the basis of a loan-grant ratio equivalent to 10:90. The Government will bear the foreign exchange risk on the loan.

Period of Utilization

Until 31 December 2009

Completion Date

30 June 2009

Executing Agencies

The State Government of J&K and ERA

Implementation Arrangements (agencies)

The following components/subcomponents will be handled as follows:

- Water supply and drainage subcomponent – Two PIUs (Urban) one each in Jammu and Kashmir
- Roads and bridges subcomponent – Two PIUs (Roads/Bridge) one each in Jammu and Kashmir
- Capacity building and implementation subcomponent – ERA

Procurement

Procurement will be carried out in accordance with ADB's *Guidelines for Procurement* following international and local competitive bidding procedures acceptable to ADB. Civil works contracts valued at more than \$10 million will be procured through international competitive bidding (ICB) procedures. Those valued at \$10 million or less will be procured through local competitive bidding (LCB)

procedures acceptable to ADB. Procurement of civil works for small bridges not exceeding \$0.5 million will be entrusted to the State-owned construction company on a force account basis. Goods and related services valued at \$500,000 or more will be procured through ICB, while those estimated to cost between \$100,000 and \$500,000 will be procured through international shopping (IS). Goods and related services with a cost of less than \$100,000 will be secured through direct procurement procedures acceptable to ADB.

Consulting Services

Consultants will support (i) project management and (ii) project design/supervision. Consultants will be engaged using ADB's quality and cost-based selection procedures, all in accordance with ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants.

Project Benefits and Beneficiaries

The Project targets rural and urban communities, in the latter case with a special focus on Srinagar and Jammu. Rural beneficiaries include farmers, agribusiness companies, and other service providers. At the urban level, the beneficiaries will be end-users falling within priority water service coverage areas.

The investments are economically viable. The investments add value to existing assets funded in the past with public funds, enhance trade and connectivity and improve minimum health/sanitation standards in two significant urban centers.

Technical Assistance

The proposed Project will be accompanied by a technical assistance (TA) grant for preparation of a project related to water, wastewater and waste management in the two main cities—Jammu and Srinagar. The objective of this future project is to deepen the rehabilitation work started under the proposed operation, but also to extend the coverage, quality and continuity of both water and other services in these urban areas. The future investment will also look into reforms needed to make the delivery of water services more cost effective, efficient and sustainable over time. The total cost of the TA is estimated at \$630,000. The Government of the United Kingdom will provide a \$500,000 grant towards this. The State will finance the balance. ADB will administer this TA. A consulting firm will be engaged using ADB's quality and cost-based method of selection under ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for engaging domestic consultants. The Executing Agency for the TA will be ERA.

Risks and Assumptions

The Project is fundamentally sound but it will be implemented under circumstances of (i) limited institutional capacity and (ii) some security concerns. The first risk can be tackled through specific operational support for project management and design and construction supervision. The institutional capacity of ERA will be strengthened by capacity building training and operational support by a project management consultant (PMC).

Institutional capacity of PIUs will also be strengthened by design and supervision consultants (DSCs). The staff of PIUs will include those from PHED, UEED and PWD, which are already doing rehabilitation work. Their capabilities are limited but in many respects the situation in J&K is not all that different from that in other states where ADB has provided loans in India. They have all started with similar limitations to those seen in the J&K agencies, but quickly these have developed the capacity to successfully implement their projects. This is indeed the track record from many ongoing state level projects. Furthermore, in consideration of this limited institutional capacity, the Project has been designed to cover only simple and straightforward rehabilitation works. Subprojects calling for significant land acquisition, resettlement and environmental measures (which will by implication require extensive assessments upfront) have been excluded from the Project.

To tighten the implementation further, and in particular to move the Project faster towards its effectiveness and ultimate implementation stage, ADB intends to put in place the equivalent of a transitional assistance. This assistance includes the services of experienced staff consultants whose mandate will be to provide special assistance to ERA and PIUs until the Project-financed consultants are recruited and come on stream.

Another risk factor associated with the Project concerns security measures during the implementation. This risk will be addressed partially or in full by taking several measures. The use of local resources, including the use of a State-owned construction company on a force account basis for small works will go a long way to minimizing some of the problems. The Project will allow contractors and consultants to make their own security arrangements. The security situation may limit the ability of ADB staff in headquarters to monitor the Project directly. But the job can and should be delegated to India Resident Mission (INRM), which will establish a project support unit (PSU) consisting of one oversight staff consultant based at INRM and two staff consultants based in J&K - one for the urban component and the other for the road component. This team will be

dedicated solely to the Project supervision and will move between Delhi, Jammu and Srinagar, as required, security concerns permitting. INRM senior staff will supervise and have responsibility for the activities of the PSU. The objective of this local team is to be on call and fully mobile in order to inform, guide and monitor actions taken on all fronts by ERA and PIUs, especially in areas related to ADB's policies and procedures. ADB security advisor will periodically update general security situation in J&K and provide security advice from time to time to INRM and PSU. This may entail rescheduling of the project monitoring and supervision activities, such that project implementation will not be affected.

Lack of counterpart funding is a common cause of implementation delays for the State level projects. In this case, the central and state governments have committed to provide the entire local counterpart funds required during the project implementation period.

Another cause of delays is the time it takes to make land acquisitions and to put in place resettlement plans, particularly if both of these actions have to be carried out in line with ADB operational policies and procedures. The Project is not expected to encounter problems in these areas. The eligibility criteria for subprojects specifically exclude from the financing subprojects with difficulties in these areas. ADB policies and procedures will be followed where any such requirements are needed.

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to India for the purposes of the Multisector Project for Infrastructure Rehabilitation in Jammu and Kashmir. The report also describes a proposed technical assistance (TA) for preparing a Jammu and Kashmir Urban Infrastructure Development Project. The TA will be financed by the Government of the United Kingdom (UK) and will be administered by the Asian Development Bank (ADB). If the Board approves the proposed loan, I, acting under the authority delegated to me by the Board, will approve the TA.

II. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES

A. Introduction

2. The economy of Jammu and Kashmir (J&K or the State) lags behind that of most other States in India. Investment has been constrained, mainly because of instability derived from the security situation. Lower than average investment has impinged on employment, income and growth. There are also deep-seated structural problems, but in the scheme of problems, these rank lower in relation to growth, at least in the short term. And yet the State has interesting economic and business possibilities. It has the ingredients of a landmark tourist destination, and its climate, location and traditions provide a good base for the development of a successful horticultural and agricultural production/processing industry.

3. But for that potential to be tapped, the overall socioeconomic environment needs mending. Confidence building also requires investment matched by visible and meaningful improvements to the physical and institutional infrastructure, including better basic public services. Jobs will come from these investments.

4. The central Government and the State Governments have made a commitment to an economic turnaround plan for J&K. In the first phase, this plan calls for investments to repair and/or upgrade priority parts of the existing infrastructure and public services network, including roads, bridges, power generation and distribution, water, wastewater, health and education. At a later stage, the investment plan will deepen the rehabilitation of existing facilities but also create new assets. The underlying objective is to make a real impact on the quality of life of local communities, but also to facilitate the mobility of people and trade, open the way to private investment over time and ultimately raise the level of prosperity to reduce poverty.

5. The central Government, and past state governments in J&K developed reasonably good infrastructure facilities and public services up to 1989. These were financed through the public purse and their quality was generally on par with that of similar facilities in other parts of the country, particularly in the case of roads, bridges and water services. However, unlike some other parts of the country, the quality of these assets has since deteriorated, mainly on account of limited financial allocations to cover maintenance and repairs. A weak institutional capacity has contributed to the problem. Some of the extra wear and tear is also a function of the specific physical and climatic conditions in the area. The extent of deterioration varies between the assets and location. In general, it can be concluded that the life span and quality of most facilities are at risk. Unless tackled soon, some assets may need to be completely reconstructed. This will not only be expensive, but also leave fewer funds free to target an expansion of these facilities into areas currently with rather limited coverage. In the case of water services, water losses are high (on account of a rundown secondary network) and service is erratic. Coverage is also an issue. The two main cities in the State (Jammu and Srinagar)

have witnessed an influx of migrants over the years, putting extra pressure on the entire system. This is also creating health and environmental hazards. In road infrastructure, the problem is so severe that many sections in the State actually need to be reconstructed from the sub-base.

6. A study commissioned by ADB¹ estimates investments for infrastructure rehabilitation and development in J&K to be in excess of \$4 billion over the next several years. But such an investment plan would be beyond the financial capacity of J&K. Its current capital investment account stands at \$400 million to \$450 million a year.² The State Government understands the constraint but also the investments needed. During country programming in 2003, the central Government and ADB discussed the proposal in general terms. The subject was then taken up at a high level meeting in Manila in March 2004, where a specific agreement was reached between the two parties to consider a loan for the rehabilitation of selected infrastructure facilities with understanding that the Project is to be prepared on a fast track basis but as a part of the normal lending operations. ADB has responded by putting together a team to carry out due diligence on the proposals.

B. Socioeconomic Features

7. J&K is located in the northernmost part of India. Climatically, it is divided into three parts: subtropical Jammu, temperate zone Kashmir Valley and arctic Ladakh. Administratively, it has two divisions: Jammu and Kashmir. The capital changes with the seasons—Srinagar in the summer and Jammu in winter (Supplementary Appendix A).

8. The State has a unique status under Article 370 of the Constitution of India. Unlike others, it has residuary powers to promulgate its own constitution and laws covering political, economic and social affairs.

9. The population exceeds 10 million (2001 census) with a working age group growing rapidly (currently 43% of the population). Unemployment is high. Over a 10-year period 1990/2000 it increased by 48.8%. According to the 2001 census, the workforce comprised 3.7 million of which 68.8% were classified as “workers” and 31.2% as “marginal workers” (part time workers). Female workers comprise 28.4% of the total work force, of which 66.8% are considered as “marginal workers”. The Net State Domestic Product (NSDP) rose from around Rs55,000 million in 1994–95 to Rs141,210 million in 2001–02 (12.7% a year at current prices but only 4.9% measured in real terms). This growth is attributed mainly to recurrent expenditure on security. It is not driven by growth in productive sectors or trade. The recently approved 10th State Five-Year Plan (2002–2007) sets out a growth target of 6.3% a year. Achieving and maintaining this will depend on the level of investment put in place now. The proposed Project will help the cause, but other investments are also needed.

C. Urban Sector Overview

10. One fourth of the population lives in urban areas, slightly below the national average (28%). Urban population growth between 1991-2001 reached 35%, much higher than in the rural sector (27%). Extensive migration from rural to urban areas is the main reason, security concerns being the main driver. Jammu and Srinagar account for the largest share of the influx. This has put considerable pressure on the quality of all public services. The State has initiated a number of public works, but many could not be completed because of financial constraints

¹ Jammu and Kashmir Economy: Reform and Reconstruction by Haseeb A. Drabu, June 2004.

² 10th Five-Year Plan for the State.

and security problems. Rehabilitation of the existing facilities should be given priorities, especially the case in Srinagar and Jammu.

11. Srinagar lies at an altitude of 1,600 meters (m) above mean sea level and has a population of 1.5 million. The River Jhelum flows through it. Large water bodies surround the city, including the famous Dal and Nagin Lakes. The average annual rainfall is 1,200 millimeters (mm). Raw water supply is not a problem, but treatment and distribution is. The water system has five partially interlinked subsystems, each with a surface water source, but all in a poor state of repair. In all the subsystems, water from the treatment plants is fed into the bulk transmission system, flowing by gravity into a deteriorated distribution network. The gravity mains from the five treatment plants enter the city along the road network. The city has had to accommodate 200,000 migrants over the years. The new migrants settled along this road system, tapping into the gravity mains for supply. This has reduced greatly the quantity of water reaching core city areas, from five hours daily in the early 1990's to just one hour now.

12. The State has tried to increase water production and treatment capacity. However, the existing transmission network is unable to carry an increased production. This is exacerbated by old and inefficient pumping machinery and dilapidated pipelines, leading to high leakage losses. The service fails to meet minimum Indian standards. Drainage is also a major problem. Parts of the city are lower than both the river and the Dal Lake. Dewatering pumps are worn out or damaged and natural drains have not been maintained. Large-scale water logging is the result, especially in low-lying areas, even during the dry season. During the spring run off and the rainy season, these polluted bodies of water become a threat to public health. The problem is compounded by the lack of sewers. Night soil and septic tank effluents are discharged into open street drains, resulting in contamination and blockages, particularly in the older areas with high population density. Sewerage is not included in this initial Project because of the need to first have a comprehensive master plan, detailed environmental impact assessments and land acquisition, which will require considerable work before construction can begin.

13. Jammu has a population of 1.26 million and undulating terrain ranging from an elevation of 290 m to 450 m above mean sea level. The average annual rainfall is 1,000 mm. The River Tawi flows through it. Water supply comes from 130 tubewells adjacent to the River Tawi. These account for 70% of the supply. The rest comes from the River Tawi. Water is treated at two plants at Sitlee and pumped to two large ground level reservoirs at Chinore and Manda.

14. The water supply system in Jammu also suffers from aging equipment and poor pipes, leading to high losses, inequity in distribution especially in higher elevations and at the end of the system, including the migrant population in the center and outlying areas. Supply varies between 25 to 300 liters per capita per day (lpcd). The outlying areas had been serviced by tube well based piped water service, but groundwater has almost been dried up. The city was planned to grow in a southerly direction. However, most of the migrants settled in the west (land was cheaper). This area is far from existing water sources. Integration with the Jammu network is difficult. Water is being supplied through tankers. As in Srinagar, the general state of repair of water facilities is poor. Expenditures on operations and maintenance (O&M) stand at less than 1% of asset value. The national average is closer to 4%. Drainage is also a problem. Lack of maintenance of both natural and constructed channels is a contributing factor, aggravated by the accumulation of municipal solid waste dumped indiscriminately into the drains. Recurring flooding is standard, a clear risk to public health. There is no piped sewerage system in any part of the city. Wastewater is disposed by septic tanks with discharge into open drains. A sewerage master plan has been prepared but the works require \$264 million. Only a small part of this plan has been implemented.

15. The State Public Health Engineering Department (PHED) is responsible for water supply. The State Urban Environmental Engineering Department (UEED) deals with sewerage and drainage. The State is looking into a number of reforms for both services in Jammu and Srinagar. Devolution of the management and maintenance responsibilities are likely to be part of this change agenda. The reform will be defined over the next 12 months. While practices of these agencies have not yet been fully in compliance with ADB's Water Policy³ (see Supplementary Appendix X), they are moving toward that direction by initiating the process of reform under the piggy backed project preparatory technical assistance (PPTA) for the follow-on urban infrastructure development project. On the planning front, PHED and UEED have already developed master plans for water supply, sewerage and drainage. These are an important start, but some updating and improvements are needed, especially to accommodate investments in new assets. A tentative investment plan has been prepared amounting to \$ 700 million over the medium to long term. Clearly, this plan needs to be stripped into manageable packages, matching priorities against the financial reality of local government and the affordability or payment capacity of end-users.

D. Transport Sector Overview

16. The State itself has an extensive roads network totaling 29,041 kilometers (km), of which 823 km are national highways. The Ministry of Road Transport and Highways and National Highways Authority of India (NHAI) look after this subsector, while their maintenance is handled by the Border Roads Organization. The State Public Works Department (PWD), Road and Bridge Division, deals with state roads, major district roads, and "other district" roads, the latter being rural roads in nature. PWD is responsible for 14,858 km, of which 5,082 km are in the Jammu region, 7,984 km in the Kashmir region, and 1,792 km in Ladakh. Of the total, 12,109 km is surfaced, either black topped, metalled, or shingled, but 2,749 km are unsurfaced, with no cover for all weather access. The Project will cover only road systems falling under the jurisdiction of PWD.

17. The Forest Department and Rural Development Departments also cover road development and maintenance work. Their network covers 13,660 km, of which 1,901 km are surfaced and 11,759 km are unsurfaced. The major arterial urban roads fall under the jurisdiction of the PWD. Municipal corporations look after the remaining parts of the network.

18. The network has deteriorated in quality and coverage over the past 15 years. This has affected both roads and bridges alike due to limited funding for rehabilitation and maintenance, coupled with the security situation. A number of state highways and district/rural roads are simply not passable during the rainy season. Many bridges are in very poor condition - a large number being accessible only to light vehicles and pedestrian traffic. There are missing links across rivers, traffic movement here taking place only over the riverbed during the dry season. The system also suffers from frequent landslides, difficult terrain and soil conditions, a short working season and the effects of severe winters. Roads in the higher altitude areas are affected by snowfall during January-March. At the onset of the summer season starting in April, snow melts and water ingresses into pavement layers through cracks, causing additional damage. Despite these constraints/conditions, during 1989–2000 road traffic increased more than 2½ times. This has resulted in congestions at certain key junctions.

19. The State has put in place several road improvement programs in the past, most funded through the central government budget. One of most important programs is the four laning of

³ ADB, 2001, *Water for All – The Water Policy of the ADB*, Manila.

the national highway between Jammu and Srinagar and the Srinagar bypass, an investment spearheaded under the National Highways Development Project (NHDP). The rural road networks are also being upgraded under the Prime Minister's Rural Road Program. Rural infrastructure has obtained support from the National Bank for Agriculture and Rural Development (NABARD). The NABARD assistance received by PWD under the Rural Infrastructure Development Fund (RIDF) focuses on roads in rural areas. While the J&K also receives funds for state highways from the Central Road Fund (CRF), these funds are far from adequate. These indicate that state and district roads are the segments that have the least access to funds from the Central Government for their development.

20. O&M is a critical element for securing the sustainability of the state road network, however, PWD has not received adequate funds from the State Government for maintenance. While an amount of \$52 million is required per year for O&M, PWD has been receiving only about \$7 million. O&M is an institutional issue requiring a system wide approach (see para 92).

21. The local construction industry is relatively small. Business is fragmented and shared by small operators. An exception to this is Jammu and Kashmir Projects Construction Corporation Ltd. (J&KPCC), a 100% state owned company. J&KPCC has been responsible for bridge works at J&K for years. It has the capacity and equipment to carry out significant works on bridges, including those in the less accessible areas. The alternatives are certainly limited.

22. The 10th Five-Year Plan (2002–2007) includes a relatively simple road development plan, which stresses the importance of (i) expanding urban road networks to cope with the expansion of urban areas, particularly in Srinagar and Jammu and (ii) reconstructing damaged bridges (237 in total). In the wake of the general election in May 2004, rural roads have now been given a much higher priority than hitherto. Another priority includes the widening of roads serving the principal tourist spots.

E. External Assistance

23. ADB operations in the urban sector in India started in 1995. Since then, 8 loans have been approved - Karnataka (2 loans), Rajasthan, Kolkata, Madhya Pradesh, housing finance (2 loans) and the earthquake emergency loan to Gujarat, which is mostly urban in nature - with a total loan amount of \$2.1 billion. There are 6 more loans to the urban sector in the pipeline, three of which are under an early stage of preparation (see Supplementary Appendix B for external assistance). Road sector operations started in 1988. Since then, ADB has approved 12 loans, totaling \$2.8 billion. ADB's role has been stepped up since the operationalization of NHAI in 1995. Between 2000–2003, ADB provided four loans to NHAI, and is currently preparing another one for 2004. At the state level, a road operation started in 2002 to Madhya Pradesh, followed by another in 2003 to Chhattishgarh. In the last couple of years, the Department of Economic Affairs (DEA), Ministry of Finance, has steered ADB towards the smaller and less developed states, including the North Eastern states, the recently created states of Chhattishgarh and Uttaranchal, and now to J&K. Rural roads are now another priority. The first rural road project was approved in 2003 and a second is currently under preparation. The pipeline for 2005-2007 includes eight loans for the road sector.

24. The World Bank has provided four loans to the urban sector, although none as a stand alone or direct to J&K. The value of these loans is \$0.4 billion. Water supply and sanitation are the main targets of these loans. The road sector occupies a larger share of the World Bank's lending program. It has provided 19 loans to date, amounting to about \$4.5 billion, mainly targeting the upgrading of national highways, improvement of state highways and construction

and rehabilitation of rural roads. ADB and the World Bank have agreed a coordinated strategy in 2001 for the road sector. This is updated from time to time to blend lending with the Government's own development and financing agenda. Both banks hold regular tripartite meetings with the Government on these issues.

25. Bilateral agencies also work in both the urban and road sectors in India. The most active are those agencies from Germany, France, Scandinavia, Japan, Netherlands, UK and the United States. None have worked in J&K before. Their combined assistance, loan and grant, amount to \$1.6 billion. Their involvement in the road sector has been muted. For instance, JBIC provided \$300 million to the road sector over recent years, but has not been too active lately. This situation might change, although it will be quite selective, probably with a focus on bridges. The Government of the United Kingdom has supported ADB programs extensively through the financing of technical assistance. Urban and road projects have benefited from this finance. Indeed, in the context of this Project, the Government of the United Kingdom has agreed to finance a PPTA to help prepare an Urban Infrastructure Development Project⁴.

F. Lessons Learned

26. Main lessons learned from ADB's urban, transport and emergency projects are summarized below.

- (i) Delays in setting up project management units (PMUs) and/or project implementation units (PIUs) have resulted in implementation delays of up to 6 months or more. PMUs/PIUs need experienced experts for at least 3-4 years. Continuity and experience contribute to success. The Government is now taking a position that PMUs should be established before loan negotiations;
- (ii) Delays in the engagement of project management consultants (PMCs) affect implementation. This process can often take between 12–18 months, after the PMUs/PIUs are established. Advance actions are needed. Some of ADB practices could also be made more efficient.
- (iii) Counterpart funding requirements must be clearly agreed upon during processing, and during each succeeding year of implementation.
- (iv) ADB's Standard Bidding Documents should be followed not only for international competitive bidding (ICB) but also for local competitive bidding (LCB). PMUs often prefer to work with their own documentation. Making the conversion to ADB's formats takes time.
- (v) Implementation benefits from the issuance of an operational manual during the preparatory stage. This defines the role of each entity and outlines their appropriate decision-making and delegation powers. Clarity saves time and money. It also enhances transparency and efficiency.
- (vi) Advance actions on procurement and engagement of consultants need the right capacity at the level of the PMUs, especially to prepare bidding documents and requests for proposal. Good early support to these is necessary to avoid delays.

⁴ ADB received a written confirmation from DFID on 26 October 2004 for allocation of the funds.

The use of staff consultants to bridge the gap between project appraisal and loan effectiveness has been effective.

G. Government Policy

27. The 10th Five-Year Plan of the Government of India sets forth a comprehensive policy agenda for 2002–2007. This emphasizes, among others: (i) rehabilitation and expansion of infrastructure; (ii) reduction of regional economic disparities; (iii) delivering greater economic efficiency through more competitive infrastructure development and improved O&M; and (iv) road safety, energy efficiency and environmental conservation. Following the 2004 General Election, the new Government has also adopted a Common Minimum Program (CMP), placing emphasis on rural development, as well as on the improvement of basic public services. The latter includes roads, water supply, sewage treatment and sanitation. The Program also calls for the execution of growth-driven plans in J&K. Infrastructure development lies at the core of these proposals. The proposed Project fits into the CMP framework.

H. ADB Strategy

28. ADB's core mandate is poverty reduction. The 2003 Country Strategy and Program (CSP) for India sets out three strategic themes around this: pro-poor growth, social development and governance. The 2004 CSP Update (CSPU) also highlights interventions in the poorer states, including Northeast states, Uttaranchal and J&K. Infrastructure is one of the vehicles to achieve these goals.

29. ADB assistance to J&K will be provided in a programmatic manner, starting with this Project, but followed by three subsequent and sequenced sector specific investments, subject to Board approvals, covering urban, road and power needs. Each future project will include a preparation facility in the form of a piggy-backed TA to prepare the next subsequent project. In this manner, ADB will offer India not only critical mass but also selectivity and continuity, all ingredients for success. The first of these follow-up projects will, subject to Board approval, take place in 2006.

III. THE PROPOSED PROJECT

A. Rationale and Approach

30. The proposed Project is a first input⁵ into a longer-term endeavor to rehabilitate and later expand the coverage of the water, drainage and roads/bridges networks across the State. Although J&K has substantial rehabilitation and new asset creation needs, this Project is confined to priority rehabilitation needs. Rehabilitation works are expected to add years to the life span of existing facilities. Rehabilitation will also reduce budget outlays for maintenance, by definition freeing funds for other purposes. Unless arrested now, the deterioration of these existing assets will get to the point where the only way forward will be their total reconstruction from scratch. That would be expensive and also disruptive.

⁵ The first intervention from a multilateral was under a Social Forestry Project in Haryana and J&K in 1982/83 (the World Bank). The loan amount was \$23 million. A second intervention was again the World Bank Project for the development of an Integrated Watershed in Haryana, Himachal Pradesh, Punjab and J&K, in 1992 (\$125 million). These are multi-state projects, but not a J&K specific assistance. The proposed Project is the first stand-alone project in J&K with funding from a multilateral.

31. The State has little experience in implementing large externally financed projects. Putting in place too many investments at one go would exert pressure on this capacity and raise the risk profile of the entire ADB intervention. Narrowing the coverage of the Project to only two sectors and limiting this further to straight rehabilitation, help contain risk. It also gives ADB a chance to develop a closer working relationship with the State, and to start the process of capacity building for staff of key line departments. Most states in India have adapted and/or adopted fast-track ADB procedures. J&K should be no exception, even allowing for the more difficult conditions on the ground. Starting slowly with a narrow focus and straightforward jobs (even if the financing plan is large) provides a chance to get things right. A matrix of tasks versus risks has been considered too in terms of the funding allocations. Roads/bridges are simpler to deal with so they were accorded the higher share of the financing. Urban works are more complex and need greater capacity on the ground in order to cut risks. The PMUs/PIUs will be given time to learn and get ready, both via the transitional assistance being considered prior to loan effectiveness and through the more structured and longer-term support planned at the implementation stage. The team has also taken into account the availability and experience of potential contractors. For the road sector and the type of works envisaged, there would be a relatively large number of contractors. In the urban field the number of specialized contractors is fewer.

32. The decision to tap multilateral finance to rehabilitate key infrastructure facilities and services at this stage is being accompanied by the creation of a new institutional–cum–economic coordination body within the structure of the State Government - the Economic Reconstruction Agency or ERA (see Supplementary Appendix C). The State Government approved the establishment of ERA in July 2004, basically to deal with the proposed Project, but also to plan ahead. The establishment of this nodal agency provides an opportunity to ring fence project implementation work while working on broader capacity, governance and policy needs. ERA will operate on both fronts, using this first project to develop its own in-house capabilities. The same applies to the PIUs. While the Project targets rehabilitation, it also earmarks money and time to improving capacity at the State Government.

B. Objectives

33. The Project targets the rehabilitation of essential infrastructure in J&K. Water supply and drainage system improvement will raise the quality of life of the urban populations in Srinagar and Jammu. Road and bridge financing will improve rural connectivity and facilitate trade within the State. The Project also targets capacity building of ERA, which will lead to better planning, improved policy formulation and the introduction of more reliable project implementation skills, systems and criteria. Capacity measures will improve transparency and efficiency. The underlying objective is to underpin an economic turnaround. The Project Framework is in Appendix 1.

C. Components and Outputs

1. Urban Sector Component

34. This component addresses the most immediate rehabilitation needs of the water and drainage systems in J&K. Total investment requirements for this purpose have been estimated by the State at around \$700 million. Although this need is real, capacity concerns, narrowed down this first ADB intervention to works in the most badly affected parts of the system/network as described below (see Appendix 3 for details):

- (i) Water Supply Rehabilitation in Kashmir. Includes the replacement of dilapidated water supply transmission lines, upgrading of old/damaged pumping machinery and provision of standby generators and power supply protection equipment.
- (ii) Drainage Rehabilitation in Kashmir. Includes the extension of drainage systems in selected areas including Bemina, a heavily waterlogged sector of the city. Works will also include the rehabilitation of pump stations and unclogging of drains, and equipment/vehicles for garbage collection (drain cleaning purposes).
- (iii) Water Supply Rehabilitation in Jammu. Includes rehabilitation of damaged networks and facilities, pipes, pumps and standby generators, and includes a low cost sanitation system for selected migrant areas.
- (iv) Drainage Rehabilitation in Jammu. Includes restoration of drains linings, widening and re-grading, and equipment and vehicles for garbage collection for drain cleaning.

35. The ADB team worked with the State on the appraisal of two sample subprojects under this component. The objective was to appraise the subprojects according to ADB's procedures, but also to show to counterpart staff the approaches and procedures to subproject selection. The first sample subproject covers the rehabilitation of water supply infrastructure in Jammu. This part of the system serves approximately 530,000 people, of which 180,000 are migrants. The cost of the subproject is estimated at \$7.9 million. The second subproject deals with the rehabilitation of drainage infrastructure in the Talab Tillo area of Jammu. Its cost is estimated at \$2.1 million. It will benefit 68,000 people (by reducing flooding and public health risks). The appraisal of these two sample subprojects found them to be implementable and viable in terms of technical, economic, environmental and social criteria (Supplementary Appendixes I and J for summary appraisal reports). Future investments or subprojects will be identified and studied in line with the Eligibility Criteria and Procedures Framework and the Frameworks for Resettlement, Environmental Assessment, and Indigenous People Development (Appendices 2 and 10 and Supplementary Appendixes D and E).

36. The Project includes a PPTA grant administered by ADB to help prepare a more comprehensive investment in 2006 on water supply, sewerage, drainage and solid waste management. In line with both ADB's and India's water policies,⁶ the PPTA will address sector plans, policy and institutional issues to promote cost recovery through tariff reforms. Water conservation and sustainability will be part of the mandate. The efficiency of service delivery will also be considered. The follow-on project, if approved by ADB's Board, is expected to focus on coverage, quality and continuity. In this sense, new assets are expected to expand coverage to areas not serviced at present. O&M and investment cost recovery will imply a modified tariff structure and new rates. Metering will also be part of the investment. In addition, the PPTA will work on a non-revenue water program to reduce both the administrative and physical losses throughout the water system, in this manner carrying forward the work under this first Project. The State has already agreed to double tariffs on all connections under this Project but further analysis of the O&M needs and revenue streams have to be carried out. Efficiency measures are also needed in the commercial part of the business, especially billing and fee collection. Other forms include administration and the computerization of records, tax rolls, water user lists, accounting, audits, establishment of O&M budgeting and budgets and training on O&M. A

⁶ ADB, 2001, *Water for All – The Water Policy of ADB*. India's water policy was developed in 1992, which was updated in 2002.

sewerage fee/tariff will also be needed. The PPTA will help address all these issues. The proposed Project itself cannot address them at one go and upfront. The quality of the service is simply too poor to encourage end-users to pay much higher fees than at present. The Project will provide the basis for working on these reforms. It will also allow ADB and local government to improve public awareness, community participation and education, basically to broadcast the message that water will no longer be free, but that as an economic good with value, it needs to be paid for through fair and transparent tariff regimes and metering systems.

2. Transport Sector Component

37. PWD requested ADB to finance transport sector investments amounting to \$640 million. In common with the urban component, this amount falls outside the institutional and financial capacity of the State. For this reason, it was agreed to narrow the scope and coverage of the component to the most urgent rehabilitation needs. The Project will focus on existing roads and bridges in a poor state of repair in 14 major districts. ADB and the State Government will consider a broader sector project at a later stage. ERA agrees with this strategy. The narrow scope of the Project now will still make the investments meaningful and relevant to local communities. The rehabilitation process will help with trade and personal mobility (Appendix 4).

38. Potential subprojects include the rehabilitation/reconstruction of about 80 damaged and weak bridges, and the rehabilitation and upgrading of about 1,500 km of roads which fall under the jurisdiction of PWD, and which include state, urban, major district, "other district" and village roads. The priority project list provided by the State Government in September 2004 indicates that around 40% of the roads to be rehabilitated are village roads, 30% fall under the category of "other district roads", 12% are urban roads, 8% are major district roads, and 10% are other miscellaneous roads. In each case, the road segments will properly be planned to ensure connectivity with the greater road network. The average cost of road subprojects is about \$1.5 million, while that of a typical bridge is \$0.5 million. The Project will also fund the procurement of equipment required for the maintenance management system.

39. To demonstrate how transport subcomponents will be appraised, three sample subprojects were used by the Project team: (i) Quazikund-Kulgam road with a length of 16.5 km in Ananthnag district; (ii) Raithan-Palmaidan-Arizol road with a length of 14.1 km in Budgam district; and (iii) Kannikadal bridge of a total length of 31m in Srinagar. These subprojects are considered to be representative of others expected in the future under the Project. The Quazikund-Kulgam road sample subproject calls for the repair and widening of an existing single lane carriageway to one and half lane standard with the improvement/construction of paved shoulders and roadside drainage. The project cost is estimated to be \$3.4 million. The Raithan-Palmaidan-Arizol road sample subproject involves the simple upgrading from gravel to a paved road, but with the same single lane standard, together with construction of paved shoulders and roadside drainage. The cost is estimated to be \$2.2 million. Adequate road safety measures will be provided for both cases through the construction of guardrails on a raised footpath to separate roadside settlements from the main carriageway. The Kannikadal bridge sample subproject is the upgrading of a bridge from the current timber structure into a permanent solid structure, albeit with the same two lane carriageway, but with a minor widening for a pedestrian footpath along the bridge. Its cost is estimated at \$0.3 million. ADB appraised the three sample subprojects and found them to be technically and economically viable. The team subjected each of the samples to detailed due diligence on economic, environmental and social aspects. The results of the appraisals were used to create a standard appraisal format for later use in appraising follow-on subprojects (Supplementary Appendices I and J). Additional subprojects will be identified and implemented in accordance with the Eligibility

Criteria and Procedures and Frameworks for Resettlement, Environmental Assessment, and Indigenous People Development (Appendixes 2, 10, and Supplementary Appendixes D and E).

3. Capacity Building

40. The Project is the first direct intervention of its kind by a multilateral in J&K (footnote 5). This leads to a concern about the institutional capability of ERA and PIUs which have little experience in implementing externally funded projects (Supplementary Appendixes T and U). This is not an insurmountable problem, but most of ADB's procedures are unfamiliar to the state line agencies. Procurement, documentation, reporting and safeguards are only some of the areas where this unfamiliarity takes place. The second concern relates to the size of the investment which, although quite small by India standards, is still considerable. This requires greater care and attention on the coordination and sequencing front. J&K is not new to the world of civil works contracts, or to operations implemented in various sectors at the same time across the State. But in this case, the transaction does not mean it will cancel out all others normally undertaken by the State. The operation is over and above those normally carried out by the local administration. It replaces some works, but it is not the total or complete universe of all the civil works. This scenario suggests extra pressures on the existing organizational set up and line agency systems.

41. The Project team has paid special attention to institutional base and capacity building. In doing so, the team focused on two parts of the equation. The first deals with the broad structures of state government, and in particular, with the coordination of the global economic plan and sequencing of investments. The second addresses the needs of the Project itself. The two tasks require specific measures to ensure quality, coherence and efficiency. There is in particular a need to link them. There is also a need for continuity. This Project is only a first stage of a larger economic turnaround program. As such, the measures put in place today have to stand the test of time, and ensure coherence between these and other investments tomorrow. The priority here is the training of a few but qualified staff of ERA and line departments. The understanding with the authorities is that this staff will be retained in PMU/PIUs for a reasonable period of time on a fixed-term or permanent basis.

42. The capacity building component has two main modules: (i) project management support to be provided by the project management consultant (PMC) and (ii) design/supervision support to be provided by the design supervision consultants (DSCs).

- (i) Project management support module.
 - (a) Operational support including: appraisal of subprojects; due diligence for all aspects of subprojects including ADB's safeguard policies; review and authorization of subproject designs; review and endorsement of procurement decisions; endorsement of design as you build and force account contracts; and overall monitoring including financial and non-financial audits, other warranties and representations given to ADB (Supplementary Appendix G).
 - (b) Training covering all aspects related to the project cycle, including: preparation and appraisal, due diligence and execution of safeguard policies, consultant selection, procurement and financial management including disbursement and project accounts/audits.

- (c) Policy and planning advice including: master plans for water supply, sewerage, drainage and solid waste management for Jammu and Kashmir; a cost recovery study for water including tariff review, tariff regime, metering system, billing and fee collection, O&M needs and approaches; a sustainability study on road O&M, including a review of current O&M structure, O&M systems such as contracting out and community based O&M, establishment of road funds and other funding methods; specific support to PWD to set up a road maintenance system, including a road maintenance model, a road condition database, and the development and scheduling of maintenance programs; and updating of sector development plans to make up for the gaps encountered at this stage and ensure compliance with ADB policies.
- (ii) Design/supervision support module.
 - (a) Operational support to PIUs for: preparation of subprojects including feasibility studies, environmental impact assessments, resettlement plans and other pertinent safeguard work in line with ADB policies and procedures; preparation of preliminary and detailed designs; preparation of bidding documents and evaluation of bids; and construction supervision including checking of adherence to safeguard arrangements.
 - (b) Training for: feasibility studies preparation (backed by due diligence work on technical and economic/financial aspects required by ADB); preliminary and detailed designs; safeguards work including environmental assessments, poverty assessments, land acquisition and resettlement plans, indigenous people development plans, gender assessments, community participation in planning and implementation of works; procurement and bid evaluation; and best practices related to engineering design, quality assurance and O&M.

D. Special Features

1. Structure

43. Because of special circumstances faced by the Project team, the Project has incorporated several unique features. A first consideration was the method of processing the loan. In order to be responsive to the Government request for urgent infrastructure rehabilitation, covering multiple sectors, the Project could not be processed as either a standard project loan or a standard sector loan.⁷ The Project followed procedure similar to a sector loan with some innovation as described below.

- (i) The Project focuses on supporting ERA established as the key nodal agency specialized in handling externally aided projects for the State, and instituting an institutional arrangement for systematic development and management of those projects, instead of developing detailed sector plans and policies. The support of ERA is viewed as a key initial institutional policy dialogue that will assist the State in developing sector policies.

⁷ ADB recognizes that approaches in specific projects may require a "hybrid" approach. See, for example, OM Section F2/OP, para 40.

- (ii) The eligibility criteria for subprojects have been defined, which confines the types of the subprojects to be financed under the Project to those investments for rehabilitation with no major environmental and resettlement being involved.
- (iii) Necessary frameworks for environmental assessment, resettlement and indigenous people development have been developed to ensure the compliance of ADB's safeguard policies.
- (iv) To demonstrate how subprojects are to be appraised, five sample subprojects have been selected and fully appraised with development of a standard summary format for subproject appraisal.
- (v) The remaining subprojects will be developed in accordance with these criteria and appraised by the nodal agency, which will then be approved by ADB to ensure the compliance with ADB's policy and procedural requirements.

44. Another feature of the structure is the adoption of a design-as-you-build concept for the road/bridge component. The latter consists of a large number of subprojects (100 for roads and 80 for bridge) scattered over 14 districts. Under the design-as-you-build concept, contractors will design one section of a contract package followed by its construction. These contractors will then move successively onto the next sections, repeating the same process until the entire contract package is completed. Each contract will be packaged on a district by district basis. Although limited in scope (less than \$10 million in total), ADB also proposes the introduction of a force account procedure for the rehabilitation of smaller bridges with works valued at less than \$0.5 million. These two types of contracts require good supervision, particularly with regard to design and cost estimate/verification. For this reason, the Project has incorporated a two-tier reviewing system. The DSCs will examine and approve traffic forecasts, project costs and design aspects. These reviews would then be further checked by the PMC, looking in design standards, administration matters, sequencing, safeguard policies, competition and transparency.

2. Implementation

45. Implementation ranks first among the various potential risks. It is only natural that this aspect should receive the greatest level of attention from the State and ADB. Past experience indicates that direct and focused support on a regular basis is helpful when dealing with less experienced executing agencies and PIUs. The support should not start only after project effectiveness. It should do so between project approval and effectiveness. For this purpose, ADB intends to engage a team of staff consultants through its administrative budget (under a transitional assistance) to provide immediate support after project approval and until loan effectiveness (see Supplementary Appendix F for outline TOR). The key task under this transition assistance will be to take advance actions for the engagement of a PMC and DSCs. The team of these staff consultants will also work with ERA staff on putting together operational manuals, assist with the establishment of the PMU and PIUs, and provide training to the staff of PMU and PIUs. Once the loan becomes effective, ERA will be in a position to kick-start the Project, by this time already supported by PMC. This will pave the way for the work and assistance to be provided through the DSCs and the PMC. This type of transitional assistance can save 12–18 months in the project implementation cycle.

46. Furthermore, once the Project becomes effective, the India Resident Mission (INRM) will set up a mobile project support unit (PSU) specializing in the supervision of the Project. The latter will consist of one oversight staff consultant based at INRM and two staff consultants based in J&K- one for the Urban Sector Component and the other for the Transport Sector Component. They will report to senior staff at INRM. These experts will stay with the Project until its implementation is completed.

E. Cost Estimates

47. The total Project cost is estimated at \$358.0 million equivalent, including taxes and duties, of which \$167.0 million (46.7%) represents foreign exchange costs, including \$23.4 million of interest during construction and other charges, and \$191.0 million (53.3%) represents local currency costs. A summary cost estimate is given in Table 1, with more details shown in Appendix 5.

Table 1: Cost Estimates

Component	(\$ million)		
	Foreign Exchange	Local Currency	Total
1. Component A: Rehabilitation of Urban Infrastructure			
Rehabilitation of Water Supply	39.2	34.8	73.9
Rehabilitation and Improvements of Drainage Systems	12.3	20.9	33.2
2. Component B: Rehabilitation of Roads and Bridges	91.5	72.9	164.5
3. Component C: Capacity Building Support and Implementation Assistance			
Project Management Support	0.6	5.0	5.6
Design and Construction Supervision Support	0.0	8.7	8.7
Training for capacity building	0.0	0.9	0.9
Incremental Administration, Equipment and Vehicles	0.0	5.0	5.0
4. Interest During Construction and Commitment Charges	23.4	0.0	23.4
5. Taxes and Duties	0.0	42.8	42.8
Total	167.0	191.0	358.0

Source: staff estimates.

Note: Figures may not add up to totals due to rounding.
Contingencies are not included

F. Financing Plan

48. ADB will provide a loan of \$250.0 million from its ordinary capital resources. This represents 70% of the financing plan. The loan will have a 25-year term, including a grace period of 5 years, an interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, and a commitment fee of 0.75% per annum. No front-end fee will be charged in line with current financial terms and conditions. Other standard terms and conditions are set forth in the draft Loan and Project Agreements. The Borrower will be India, which will transfer the funds under standard terms and conditions to J&K. The Borrower will bear the foreign exchange risk. The Borrower has provided ADB with (i) the reasons for its decision to borrow under ADB's LIBOR-based lending facility on the basis of these terms and conditions, and (ii) an undertaking that these choices were the Borrower's own independent decision and not made in reliance on any communication or advice from ADB.

49. ADB will cover \$143.6 million of the foreign exchange component of the Project and \$106.4 million of local cost contracts. The latter cover civil works, equipment, vehicles, consulting services, and administrative support but exclude land, taxes and duties. The Government of India will finance out of its own resources \$23.4 million equivalent to meet the cost of interest during construction and other charges.

Table 2: Financing Plan
(\$ million)

Source	Foreign Exchange	Local Currency	Total	%
Asian Development Bank	143.6	106.4	250.0	70
The Government of India / Government of Jammu and Kashmir	23.4 ^a	84.6	108.0	30
Total	167.0	191.0	358.0	100

^a Interest during construction and commitment charges.

Source: staff estimates.

50. About 10% of the ADB loan proceeds will be converted by India into a rupee loan at a rate to be determined by the Government from time to time (currently 9% per annum). The remaining 90% of the proceeds will be converted and provided on a grant basis to the State. The Government and State Government have committed to provide the required counterpart funds on a timely basis.⁸ All the foreign exchange risk associated with the borrowing from ADB will be borne by India. The Government of India will provide the required funds directly to ERA on time in line with the Project implementation schedule. The Project will not replace funding to other sectors. It will be incremental.

G. Implementation Arrangements

51. The State Government and ERA will have joint responsibility as Executing Agencies (EAs) for the execution of the Project. The State Government will have overall coordination responsibility for ensuring the participation and performance by its departments of their responsibilities under the Project. ERA will have overall Project execution and coordination responsibility and will also be responsible for coordinating the assistance provided by multilaterals. The State Government will ensure that ERA has all delegated and other powers necessary to carry out its responsibilities as EA. ERA staff will also be engaged on a permanent or fixed-term basis to look after the management of externally aided projects.

52. ERA will establish a PMU to manage the Project. This PMU will be headed by a project director (which will be the Chief Executive Officer (CEO) of ERA since ERA and PMU would be identical in structure because the proposed Project would be the sole project to be handled by ERA for a while). ERA will employ three senior/experienced officers, one dealing with financial matters, another with the urban sector, and a third with the roads and bridges. This team will be backed by 7 other experts who will be engaged for a fixed-term, thus avoiding staff rotations mid way through the implementation process. These experts will cover a set of sector/thematic matters and a number of project implementation functional tasks. One of these experts will deal exclusively with environmental matters. Another will cover social development/resettlement issues. The remaining five will deal with technical (engineering), administration, procurement, monitoring and reporting (information technology) requirements.

⁸ The central government will provide all local counterpart funds.

53. The administration of the Project will be delegated to the INRM, which will, in turn, establish a mobile PSU to monitor the entire implementation work, identify any additional needs (financial, systems and people) and work out tailored plans to address any weakness at short notice.

54. ERA itself will run the Capacity Building Component. It makes sense to assign this responsibility to ERA and thus for ERA to be the focal point for ADB. The capacity building program crosses line departments, although it also benefits ERA itself. The bulk of the Urban Sector Component will be handled by two PIUs established by ERA, one each in Jammu and Kashmir, which will include staff from PHED and UEED. The Transport Sector Component will be handled by two PIUs established by ERA, one each in Jammu and Kashmir, which will include staff from PWD. ERA will also implement procurement of vehicles and equipment for garbage collection under the Urban Sector Component. ERA will set up a simple but effective management information system to track the work of all PIUs. This will start with the work plans and follow the progress made along each phase of the implementation cycle.

55. The PIUs will be headed by separate project managers. These will be recruited locally. They will need to demonstrate past experience with the types of civil works to be carried out under the Project. The approach will be to either outsource the task to management professionals, or to engage the services of qualified line department staff. In either case, a key principle is experience and continuity, thus the call for a fixed term appointment. The PIUs will be supported on a day-to-day basis by the DSCs.

56. The staff of PMU and PIUs will be financed by the loan on an incremental basis. They will be trained/supported by transitional assistance prior to the loan effectiveness, and by PMC and DSCs after the loan becomes effective. A Steering Committee will be set up for this purpose. It will be chaired by ERA's CEO and consist of Commissioners/Secretaries in charge of the Public Works, Planning, Housing and Urban Development, PHED, UEED, Tourism and Power. The Steering Committee will convene as required. The State Government may also wish to place other senior staff as observers or direct members of the Committee. This arrangement will give the key line departments full ownership of the Project and provide a forum to address problems as they arise.

57. The Project will be implemented over a period of 4 years (see Appendix 7). This schedule is tight but realistic if the proposed implementation arrangements work out according to plan. Any weaknesses in the organizational chain will inevitably lead to delays. The security aspect is of paramount importance here and civil works cannot be carried out during winter.

H. Procurement

58. Procurement will be carried out in accordance with ADB's *Guidelines for Procurement*. All procurement contracts under all components will contain anticorruption provisions as specified by ADB. ICB procedures will be used to procure goods and related services estimated at more than \$500,000. International Shopping (IS) procedures will be followed for procurement of goods estimated at between \$100,000 and \$500,000. For small, specialized equipment and materials contracts valued less than \$100,000, direct procurement procedures acceptable to ADB will be followed.

59. Civil works contracts over \$10 million will be procured through ICB, and those estimated to cost \$10 million or less will be procured through LCB procedures acceptable to ADB. International bidders are not likely to show much interest in civil works of less than \$10 million in

this region at this point in time. Main contract bidders are encouraged to use local J&K companies as subcontractors. The subcontractors will not be allowed to further subcontract their work. In addition, to help alleviate unemployment in J&K, all contractors will be encouraged to recruit labor locally, rather than importing this from outside the State. This approach still maintains the principles of competition, fairness, efficiency and transparency. Indicative procurement packages are given in Appendix 8.

60. To ease the procurement process, ADB has agreed with the authorities to a single-stage two-envelope procedure with post-qualification adopted for civil works contracts involving subprojects to be implemented in the first year. For second and third year subprojects, the need for a pre-qualification process will be determined on the basis of the experience gained from the first year of operations.

61. The water component works will involve civil works with equipment/goods supply, including supply of pipes, laying, jointing, testing and commissioning. All water supply contracts (transmission and distribution networks) combining the civil works with equipment/goods supply will be treated as civil works contracts irrespective of the percentage of costs classified as mechanical or material.⁹

62. For the road subcomponent a design-as-you-build form of contract has been adopted. Packages will be developed on a district by district basis. DSCs will review and approve traffic forecasts, design standards and cost estimates and verification, all matters subject to the endorsement of the PMC.

63. The bridge subcomponent covers a large number of small works (each costing around \$0.2-\$0.7 million). Many of these works are in remote areas in the State (scattered across 14 districts). It is unlikely that private contractors will express much interest in such small and scattered works. For decades, J&KPCC has been an implementing agency for the State Government responsible for the construction of bridges and rehabilitation. In view of the size of the works and their location, and the importance to get the rehabilitation process off the ground quickly, the construction of small bridges valued at less than \$0.5 million will be entrusted to J&KPCC on a force-account basis. This approach is deemed to be an optimal solution under the current circumstances.

64. Advance actions for the procurement of civil works to be implemented in the first year were approved by the Management Review Meeting on 23 September 2004. ADB has advised the Government that this approval does not commit ADB to finance the Project. ADB will monitor closely contract awards and contract variations.

I. Consulting Services

65. Consulting services will be provided under the loan in two packages. A first consulting service package targets project management (Supplementary Appendix G). This work is directed at a consulting firm with international and domestic experience, including experience with projects funded by multilaterals such as ADB and the World Bank. Due to the security situation in J&K, it is proposed to select the firm from qualified domestic firms. The estimated person-months budgeted for this contract amounts to 583 and the cost is in the region of \$5.6 million. A second consulting service package is directed to support the line agencies with regard to design and construction supervision. The work will require the services of a domestic firm of

⁹ It is generally expected that the percentage of equipment/goods in such contracts would not exceed 70%.

consultants. It is envisaged that four DSCs will be put in place, each covering urban and road sector components but split between Jammu and Kashmir. The team of advisors will work directly with the PIUs. The estimated person-months needed to staff the four DSCs is 1,626. The cost of this package is about \$8.7 million (Supplementary Appendices M and N).

66. The consultants will be engaged using ADB's quality and cost-based selection procedures for recruiting firms under full technical proposals and ADB's procedures for recruiting individual consultants in accordance with ADB's *Guidelines on the Use of Consultants*, and other arrangements satisfactory to ADB for engaging domestic consultants. However, since the PMC and DSCs need to be mobilized by April 2005, the period of ADBBO listing for the expressions of interest (EOI) is proposed to be shortened to 30 days (subject to ADB approval). This time threshold is followed by all other multilateral banks. Since EOIs can be advertised through the ADB website, this shorter period is considered sufficient for consultants to respond. The Government has requested ADB to approve advance actions for the engagement of advisors for the PMC and the DSCs. The Government has been advised that this action does not commit ADB to finance the Project.

J. Disbursement Arrangements

67. Loan proceeds will be disbursed to ERA in accordance with ADB's *Loan Disbursement Handbook* (January 2001) and *Interim Guidelines for Disbursement Operations for LIBOR-based Loan Products*. A second generation imprest account (SGIA) will be opened in a current account in a commercial bank by ERA, subject to the commitment by the State and ERA to adhere to the ADB procedures for operating second generation imprest accounts. The Department of Expenditure¹⁰ will pass on the rupee equivalent of ADB's imprest advance directly to the commercial bank SGIA established by ERA. The Government of India has assured ADB that all ADB disbursements for imprest advance and/or replenishment will be passed on to ERA for deposit into the commercial bank SGIA within 30 calendar days of receipt of such advance/replenishment from ADB.

68. The initial and all the subsequent amounts to be deposited into the imprest account and into the SGIA will be determined by ADB in consultation with DEA and ERA, with particular reference to the pipeline of awarded contracts. There will be limitations on this. The drawdown will not exceed the lesser of the equivalent of 3 months of current project expenditures or 10% of the total loan amount and will be estimated based on actual disbursements expected under contracts over the upcoming months. ERA will maintain each SGIA advance/replenishment in the separate commercial bank account established for the SGIA (which will be a current account), and draw from it only the portion of expenditures eligible for ADB financing. The ERA will warrant that funds in the SGIA will be used only to fund eligible expenditures in accordance with the terms of Loan Agreement and to meet the immediate short-term disbursement requirements of the Project. The statement of expenditures (SOE) procedure will be adopted for reimbursing and liquidating the SGIA for eligible expenditures not exceeding \$50,000 per payment, except as ADB may otherwise agree during project implementation.

69. Amounts in the SGIA are only to be used to finance the ADB portion of any expenditure. Counterpart funds will be required for each such expenditure. ERA will establish a separate account for consolidating the counterpart funds and the ADB funds. ERA will draw the ADB portion of each expenditure from the SGIA into the consolidating account to make consolidated

¹⁰ Plan Finance I Division, Department of Expenditure, Ministry of Finance.

payments for eligible project expenditures, as incurred. ADB will provide guidance in the establishment of the Project accounts during the implementation inception mission.

K. Accounting and Auditing Requirements

70. The PMU and the PIUs will establish and maintain separate records for works, goods, and services financed out of loan proceeds. They shall also maintain separate project accounts in accordance with generally accepted accounting principles for all expenditures incurred on the Project and the subprojects, whether out of loan proceeds or other sources.

71. Detailed consolidated annual project accounts, as maintained by the PMU, will be audited by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB and will be submitted to ADB within 9 months of the end of the fiscal year¹¹. The annual audit report will include the audit of the imprest account, SGIA, and SOE procedure, and will specifically include a separate audit opinion on the use of loan proceeds operation of the SGIA, and compliance with SOE procedures. ERA has been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited accounts.

L. Project Supervision, Review, and Reporting

72. A project inception mission will be fielded soon after the loan approval of the proposed Project. A discussion will be held during the inception mission on the establishment of necessary arrangements for systematic project performance monitoring (PPM). The PPM system will be developed in accordance with ADB's *Project Performance Management System Handbook*. The PPM system will first select a set of performance monitoring indicators to be collected during the implementation (including those indicators included in the Project Framework in Appendix 1), and then establish baseline data for each of the selected indicators. The PPM system will also include performance monitoring indicators needed for the preparation of ensuing projects in the urban and transport sectors. Thereafter, PIUs will conduct annual surveys with the assistance of DSCs.

73. In addition to the regular reviews at three levels (the first level by PMU, the second by ERA and the third by ADB), a midterm review (MTR) will be conducted in June 2006. The reviews will include a summary of contracts awarded and pricing. The MTR will identify problems or weaknesses in implementation arrangements, and agree on changes needed.

IV. TECHNICAL ASSISTANCE

74. The State proposes starting work on a comprehensive urban infrastructure project to build on the proposed Project. A project preparatory technical assistance (PPTA) is needed for this purpose. Besides carrying out the standard project preparation work, the assistance will also address key policy and institutional reform issues specified under the existing ADB water policy¹². The PPTA will look into investment needs in water supply, sewerage, solid waste management and drainage. The PPTA will be implemented over 8 months, starting in the later part of 2005. An international consulting firm will be engaged for this purpose, subject to review of the security situation in J&K at the time of the engagement. If required, a domestic consulting firm will be engaged. The recruitment will use ADB's quality and cost-based method of

¹¹ Given the limited institutional capability of ERA and PIUs, 9 months is a realistic period.

¹² ADB. 2001. *Water for All – The Water Policy of ADB*.

selection and will follow ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants. An input of 12 person-months of international experts and 32 person-months of domestic experts has been budgeted. The PPTA will be implemented through ERA. It will work with PHED, UEED and two municipal corporations in Jammu and Srinagar. The total cost is estimated at \$630,000 equivalent, comprising a foreign exchange cost of \$202,000 and local currency of \$428,000 equivalent. The entire foreign exchange cost and \$298,000 equivalent in local currency (\$500,000) will be financed on a grant basis by the Government of the United Kingdom. The TA will be administered by ADB. The State will contribute to the remaining local currency cost of \$130,000 equivalent. The full PPTA proposal is shown in a Supplementary Appendix H. The Government has been informed that approval of the PPTA does not commit ADB to finance any ensuing project.

V. PROJECT BENEFITS, IMPACTS, AND RISKS

A. Social Aspects

1. Poverty Assessment

75. J&K ranks 6th in area and 17th in population among the States and Union Territories of India. The National Human Development Report (NHDR) of 2001, prepared by the Planning Commission, Government of India indicated that, the population below poverty line for the year 1993–94 was 30.34% in rural areas and 9.18% in the urban areas. A survey undertaken in July 2004 as part of the socioeconomic study to support project preparation found that 31.35% of the households are still living below the poverty line in two subproject districts of Anantnag and Budgam. If the findings from the two districts were compared with the poverty data quoted in NHDR for the year 1993–94, then it would suggest that poverty within the State has remained almost same during last 10 years. The subproject sample is narrow and may not necessarily be fully representative of the situation in other districts. The Project and other initiatives under the turnaround economic program will go some way to raising the level of welfare.

76. State statistics also indicate that some 80% of the population derives their income from agriculture. Less than 10% of State revenue is generated by this sector. It is also noted in data available for 1995/96 that marginal landowners¹³ comprised around 78% of population. Average land holding size is estimated¹⁴ at 0.76 hectare (ha). There is a high dependency on the sector fundamentally primary commodities instead of value-added agro processing. The services industry, in particular tourism, needs revitalizing. For that to happen many other things have to happen. Greater stability and adequate infrastructure facilities and utility services are key enabling preconditions.

77. The Project will have a positive impact on economic welfare and by definition on poverty reduction. It enhances the mobility and contributes to productivity and efficiency. The water operation reduces health risks and aids investments in other services. The entire operation creates jobs in the construction process (permanent and temporary) and affects on a direct basis the lives of the rural and urban populations in both key cities. The transport sector component will provide the rural poor with access to markets. Some of these opportunities are closed through the sheer physical impossibility to move from one place to another. In the case of the two road subprojects, the team carried out a distribution analysis. The poverty impact

¹³ Defined as having a land holding of below 1.0 ha.

¹⁴ J&K Development Report.

ratio for (i) Qazikund to Kulgam subproject, and (ii) Raithan to Palmaidan to Arizol subproject was 0.43, and 0.37, respectively, both of which are above the percentage of populations below poverty line in these areas (31%). The Summary Poverty Reduction and Social Strategy is given in Appendix 9 and the Poverty Assessment is attached to Supplementary Appendix O.

2. Indigenous People

78. J&K is home to a total of eleven major tribes, namely Gujjars, Bakarwals, Gara/Garba, Mon, etc. (see Supplementary Appendix E). Among these, Gujjars and Bakarwals constitute a significant proportion of the population, with a concentration in Jammu, Rajouri, Udhampur, Poonch, Uri, Ganderbal, Anantnag, Daksum and Kandi areas. A detailed survey was conducted for the purposes of sample subprojects. A small presence of a scheduled tribe group comprising of Ban Gujjars, the nomadic tribe who are primarily engaged in pastoral and herdsman occupation, was found in the sample road subproject districts of Anantnag and Budgam. The scheduled tribe population is largely assimilated with the non-IP population and the Project will not have any impacts on their socioeconomic conditions or lead to any disruption in their community life or culture. The improved road network will improve this tribal community's access to services along with other sections of the subproject population. During preparation of the additional subprojects if any impacts are identified on the indigenous people, an Indigenous People's Development Plan (IPDP) will be prepared in accordance with ADB's *Policy on Indigenous People* in line with an agreed Indigenous People's Development Framework.

3. Gender and HIV/AIDS

79. J&K ranks 25th on the Gender Disparity Index (GDI) with a value of 0.740¹⁵ in comparison to that of India.¹⁶ The gender ratio of the population is 900 females for every 1,000 males (2001 Census). The literacy rate for the State is 54.46% with 65.75% for males and 41.82% for females (Census 2001). Women, especially those who are poor, spend a minimum of 1 hour everyday on water collection and at times the duration doubles, taking into account the non-availability of water in the vicinity. Since women, particularly poor women and children, have the main responsibility within the household for fetching, storing and using water for washing and cooking, a fundamental direct beneficiary of the water supply component will be this gender group. Provision of drainage facilities will also contribute to the improvement of public health, a major area of concern. The roads and bridges component will improve access to educational and medical facilities. It would also facilitate visits from qualified medical practitioners. The lack of access to toilet facilities is also of concern. The NHDR records that only 9.6% of households in the State had access to these facilities, lower than that of the national average (49.3%). The water supply sample subproject provides low cost toilets in the areas where migrants are settled (Supplementary Appendix P).

80. The statistics of the National AIDS Control Organization for 2001 show India to having close to 4 million HIV infected people, around 0.4% of the country's population which is highest in any country in South Asian region. HIV infection was previously concentrated among the marginalized groups, including sex workers and drug users, but the infection is spreading rapidly to the general population including truck drivers. According to the Jammu & Kashmir AIDS Control Society, the state of J&K is estimated to have 24,000 cases of HIV infections as of November 2002, 0.2% of the state population. Researchers in the state have identified migrant laborers, truck drivers and security forces deployed here as the main AIDS carriers. J&K has

¹⁵ National Human Development Report 2001 by Planning Commission, Government of India.

¹⁶ India with GDI value of 0.574 ranks 103rd in the World (UNDP Human Development Indicators 2003).

been categorized as a *low prevalence state* with regard to the HIV/AIDS epidemic. The Project covers mainly secondary road network such as rural roads in which the HIV/AIDS issue is less relevant than is the case with the national corridors where the long distance truck drivers are main users. Given the current level of the transmission of the disease at J&K, an awareness campaign on the epidemic has been a priority area of action being carried out by J&KACS.

B. Land Acquisition and Resettlement

81. Subprojects with significant land acquisition (LA) or resettlement requirements will not be included in the Project. To ensure compliance with ADB's *Policy on Involuntary Resettlement* (1995), in the event that environment, social and safety considerations or engineering requirements result in land acquisition or involuntary resettlement becoming unavoidable during detailed design or project implementation, a Resettlement Framework has been developed (Appendix 10). The Resettlement Framework will apply to all subprojects, including sample subprojects.

82. In the case of the two sample road subprojects, which would be implemented within the existing right of ways (ROW), no resettlement is anticipated. The road width of 7.5 m (inclusive of shoulder of 1 m on either side) is available and therefore would not entail any losses of land. The field survey, however, identified several habitations in which sample roads pass through built up areas and some congestion was noted on the alignment in terms of the width.¹⁷ As per technical design, special provisions are to be made in such case to reduce roadway width, and thus avoid resettlement impacts in terms of loss of land, structure or any other productive asset of any group, person or community. Rehabilitation of the Kanni Kadal Bridge in Srinagar City will be undertaken under the Project. While the bridge will entail a minor widening of 0.5m for construction of pedestrian footpaths at each side of the bridge, it would not affect the access roads since both bridge and access roads are currently of two lane standards. During detailed design of the sample subprojects, if it is determined that bridge construction or road rehabilitation will affect people adversely, a resettlement plan will be prepared and affected persons compensated in accordance with the Resettlement Framework.

83. Land acquisition and resettlement impacts for the two sample urban subprojects are expected to be insignificant. The sample subprojects will lead to better water supply and storm water drainage network conditions. The improvement of water supply systems would not entail any land acquisition as PHED/State Government land is available free from any from encumbrances and encroachments. The laying of water pipes for improving the distribution network and rehabilitation of the drainage system, to be carried out along existing roads/ROW, may lead to some minimal land acquisition and temporary disruption for roadside shops/stalls, which cannot be identified at this stage without detailed design being developed.

84. Resettlement plans for later subprojects that may be identified under the Project will be prepared in accordance with ADB's *Policy on Involuntary Resettlement* (1995), and the agreed Resettlement Framework provided in Appendix 10. The ERA will ensure that under contracts for civil works, no contractor will commence construction or displacement of persons until affected persons have been compensated in accordance with the resettlement plan acceptable to ADB. If during implementation of any subproject there are any changes in the subproject design that result in any additional affected persons or any changes to the impacts on previously identified

¹⁷ When the security situation allows, the transitional assistance consultants and the ERA will carry out a more detailed survey and public consultation and, if necessary, establish a cut off date for affected persons. Because of the sparsely populated nature of the area, it is not expected that designation of the cut off date at that point would cause major problems.

affected persons, the resettlement plan will be promptly updated and implemented satisfactory to ADB.

C. Environmental Assessment

85. The Project is categorized as an environment category “B” project in accordance with ADB’s *Environment Policy* (2002). The rehabilitation of existing roads, bridges, water supply system, and drainage system, falls within the existing ROW or lots without causing any major resettlement of people. It is not subject to the 1994 India Environmental Assessment Notification.

86. An Initial Environmental Examination (IEE) for the entire Project, containing IEEs for five sample subprojects, was prepared in accordance with the ADB’s *Environmental Assessment Guidelines*. The IEE shows that the Project may generate minor environmental impacts, but, by implementing mitigation measures described in the IEE, the environmental impacts could be minimized to an acceptable level. ERA will be responsible for ensuring that PIUs implement the environmental management plan (EMP) included in the subproject IEEs at any phases. A summary IEE (SIEE) was prepared based on the IEE, and attached as Supplementary Appendix Q.

87. For future subprojects, the Environmental Assessment Framework was prepared and attached as Supplementary Appendix D. The eligibility criteria set out that those subprojects that fall under environment categories A or Sensitive B will not be included in the Project. Therefore, no subproject will be in, or close to, national parks, wildlife sanctuaries, or any other environmentally sensitive areas. For each of the subprojects, an IEE and SIEE will be prepared by the PIUs and reviewed/approved by the PMU/ERA for ensuring that the subproject is in compliance with safeguard policies of the national and local governments as well as those of ADB. For the first three subprojects of each component and for subprojects greater than \$1.5 million, these SIEE and IEE will be submitted to ADB for further review and approval. If there are any changes in specific locations or alignments of major infrastructure or project facilities after the process of IEE, additional environmental assessment will be carried out and a process similar to IEE, acceptable to ADB, will be undertaken. ERA will submit to ADB progress reports on the implementation of EMPs. All documents on environmental issues including IEEs, and progress reports will be properly kept as part of the project document and made available to the public if required. Each of PMU/ERA and PIUs will appoint qualified environment specialists. Capacity building on environmental issues will be tackled through training.

D. Economic and Financial Assessment

88. The Project incorporates three economic eligibility criteria for the subprojects: (i) demonstrate the economic rationale in terms of concept and the nature of the market; (ii) demonstrate the cost effectiveness either through the least cost analysis or the calculation of economic internal rate of return (EIRR); and (iii) ensure sustainability, both financially and institutionally.

89. The Project deals with services in demand. Water supply is not only a requirement by end users, it is also an obligation of local government to ensure its delivery. This delivery needs to meet three basic targets: quality, continuity and coverage. Road and bridges provide access to markets and mobility opportunities for people and businesses. Trade, productivity, operating costs and incomes are all linked to a better system and network. The Project will yield substantial short, medium and long-term benefits to the community. Sample subprojects were

subjected to an economic evaluation. The returns were positive in all cases, a priori in excess of the cost of capital (see Supplementary Appendices Q and R). The Project team also worked out a financial internal rate of return (FIRR) for the sample subprojects. The latter was computed on an after tax basis, which is higher than the weighted average cost of capital. The results were positive in all instances.

E. Sustainability

90. Sustainability is related to the quality of the works, but in particular to the future generation and allocation of funds to cover O&M needs. Currently line departments have been getting the annual budget allocation of approximately \$9.5 million for water supply/drainage and road/bridge sectors. This allocation is clearly not enough to cover the incremental costs for maintaining the assets to be rehabilitated under the proposed Project. The State Government needs to make additional allocation to cover potential incremental recurrent O&M cost, and debt service obligation associated with the Project. These additional costs are estimated to be approximately \$3.8 million in 2008/09, which will be further increased to \$9.4 million in 2013/14. Furthermore, for every five years, additional an \$5 million will be required for periodic maintenance of roads and bridges. The State Government has agreed to make these additional funds available. (See Supplementary Appendix V). Given the priority accorded to this Project by the State, it appears that the sustainability issue will be reasonably well covered.

91. While sustainability depends on budget allocations, revenue generation is also a key consideration. In the case of water, basic fees are already being charged. These are not high enough to meet O&M needs. As a result, the State Government has agreed to put up tariffs even in the absence of significant improvements in the quality and coverage of the service. It will also tighten up on the billing and collection practice. Cash flow is limited largely on this account. Operational improvements will come from the reduction in water losses. These are simply too high at present. More in-depth structural, regulatory and operational issues are expected to be tackled through the follow-on project in 2006. In the meantime, the objective is to correct some significant bottlenecks. PHED proposes to double the current water tariff by March 2005 for all types of connections, both domestic and commercial. The State will also introduce metering of bulk water supply at the source and distribution centers, and commercial establishments falling in the project area. These assurances are incorporated in the loan agreement. Over the longer term, connection based charges need to be stepped up and converted into a consumption based system. To achieve this objective it will be necessary to have most, if not all, of the connections metered. Metering requires a broad based dialogue with key stakeholders. To facilitate this process ERA has agreed to do public awareness programs. But before this process can be implemented, end users also need to see real improvements in the delivery.

92. O&M issues for non-tollable roads are basically institutional in nature. They require a system-wide approach, rather than project-by-project approach. The proposed Project calls for the introduction of a road maintenance system supported by the systematic collection of road conditions data throughout the entire State (including the purchase of equipment for measuring road conditions). An agreement was reached on the need to establish a road fund. A study will be carried out on the best financing mechanisms to cater for O&M.

F. Risks

93. The Project is fundamentally sound but it will be implemented under circumstances of (i) limited institutional capacity and (ii) some security concerns. The first can be tackled through

specific operational support for project management and design and construction supervision. The Project scope has been made narrow and the subproject criteria specific. Subprojects calling for significant land acquisition, resettlement and environmental issues are to be excluded from ADB financing. The PIUs will include staff from PHED, UEED and PWD which are already doing rehabilitation work, though on a limited scale. Their capabilities will be boosted by the capacity building component to be provided by PMC and DSCs. J&K mirrors the experience in other states in India. They all start with similar limitations, but soon develop capacity to successfully implement their projects. This has been demonstrated with past ADB projects.

94. Another risk factor of the Project is security. This risk will be addressed partially or in full by taking several measures. The use of local resources, including the use of a State-owned construction company on a force account basis for small works will go a long way to minimizing some of the problems. The Project would allow contractors and consultants to make their own security arrangements under the contracts. The security situation may limit the ability of ADB staff in headquarters to monitor the Project directly. The Project administration will be delegated to INRM, which will establish a PSU consisting of one oversight staff consultant based at INRM and two staff consultants based in J&K- one for the urban component and the other for the road component. This team will be dedicated solely to the Project and will move between Delhi, Jammu and Srinagar, as required, security concerns permitting. INRM senior staff will supervise and be responsible for the activities of the PSU. The objective of this local team is to be on call and fully mobile in order to inform, guide and monitor actions taken on all fronts by ERA and the PIUs, especially in areas related to ADB's policies and procedures. ADB security advisor will periodically update general security situation in J&K and provide security advice from time to time to INRM and PSU. This may entail rescheduling of the project monitoring and supervision activities, such that project implementation will not be affected.

95. Lack of counterpart funding is a common cause of project delays for state level projects. This is not expected to be the case here. The central Government confirmed that it would provide the entire amount of the local counterpart funds to J&K. Another common cause of delays is land acquisition and resettlement, especially when these need to be undertaken in line with ADB policies and procedures. The eligibility criteria and the agreements call for the exclusion of subprojects with difficulties in these areas, though ADB procedures will still be followed where any are identified. The implementation will be supported by experts with experience in safeguards.

VI. ASSURANCES

A. Specific Assurances

96. In addition to the standard assurances, the Government has given the following assurances, which have been incorporated in the legal documents.

- (i) The State Government and ERA will have joint responsibility as executing agencies (EAs) for the execution of the Project. The State will ensure that ERA has all delegated and other powers necessary to carry out its function as EA.
- (ii) The State Government will ensure that adequate budgetary allocations of required counterpart funds are made and released in a timely manner to ERA and by ERA to each PIU for each financial year of the Project implementation period and that the PMU and each PIU applies such counterpart funds to agreed project expenditures. The State Government and ERA will ensure that the

facilities provided under the Project are operated and maintained appropriately, and that adequate budgetary and other resources will be provided for this purpose.

- (iii) The State Government will double the current water tariffs by June 2005 for all types of connections, both domestic and commercial and will introduce metering of bulk water supply at the source and distribution centers, and commercial establishments falling in the Project area. The State Government and ERA will undertake, under the PPTA, public awareness campaigns on water metering of domestic connections and consumption-based tariff systems.
- (iv) The DEA and the Department of Finance of the State will ensure that all ADB disbursements for imprest advance and/or replenishment will be passed on to ERA for deposit into the commercial bank current account SGIA within 30 calendar days of receipt of such advance/replenishment from ADB. The ERA will maintain each SGIA imprest advance/replenishment received in the separate commercial bank current account established for this purpose, and withdraw from it only to fund eligible current project expenditures.
- (v) The State Government and ERA will ensure that consolidated annual Project accounts are audited by independent auditors acceptable to ADB, and that the annual audit report, including a separate audit opinion on the use of loan proceeds and compliance with SGIA and SOE procedures, is submitted to ADB within 9 months of the close of the fiscal year.
- (vi) The State Government and ERA will ensure that staff, consultants, materials, vehicles, equipment and other items required for project implementation will be given reasonable access to the project area, and will take all measures necessary to ensure the safety of all project personnel, including consultants and contractors, during the implementation of the Project.
- (vii) The State Government and ERA will ensure to the extent possible, subprojects will not require land acquisition or involuntary resettlement. If land acquisition and/or involuntary resettlement are required for any subproject, including a sample subproject, the Borrower, the State Government and ERA will ensure that:
 - (a) the applicable PIU will prepare a land acquisition and resettlement plan for that subproject, acceptable to ADB, in accordance with applicable laws and regulations of the State (including the Land Acquisition Act, 1990), ADB's *Policy on Involuntary Resettlement* (1995), and the Resettlement Framework (Appendix 10), and submit it to ADB for review and approval before any land acquisition or involuntary resettlement is initiated and before construction for the subproject commences;
 - (b) all land, rights of way and other land-related rights required for the subproject are acquired or otherwise made available to the PIUs;
 - (c) all affected persons, if any, are compensated in accordance with the agreed land acquisition and resettlement plan before commencement of construction or resettlement for the subproject, and if during Project

implementation there are any changes in the subproject design, for either the sample subprojects or additional subprojects, that result in any additional affected persons or any changes to the impacts on previously identified affected persons, the land acquisition and resettlement plan will be promptly updated and implemented satisfactory to ADB;

- (d) ADB's *Policy on Involuntary Resettlement* (1995) will prevail in case of any difference between such policy and the State's laws and regulations; and
 - (e) ERA will appoint a resettlement officer to supervise implementation of the Resettlement Framework.
- (viii) With respect to environmental assessment and compliance, the Borrower, the State Government and ERA will ensure that:
- (a) the Project is carried out and all project facilities are designed, constructed, operated, maintained, and monitored in compliance with the existing environmental laws and regulations of the Borrower, the State, and ADB's *Environment Policy* (2002), and the Initial Environmental Examination (IEE), including the Environmental Assessment Framework (EAF);
 - (b) the Project does not include any subprojects that are classified as category A or Sensitive B as defined in ADB's *Environment Policy* (2002) and does not include any facilities and lots in, or close to, national parks, sanctuaries, or any other environmentally sensitive areas;
 - (c) all environmental clearances required by any laws, acts and regulations at national and local levels specified in the EAF are obtained in a timely manner and prior to commencement of construction on the relevant subproject;
 - (d) each PIU, shall prepare an IEE report, including an environmental management plan (EMP), with adequate public consultation for each subproject, in accordance with the EAF. Each PIU shall ensure that (i) all mitigation measures identified in the IEEs, the summary IEE, and EMPs prepared for the subprojects, are incorporated in the subprojects' designs, and are carried out during their construction, operation, and maintenance in consultation with stakeholders and (ii) if there are any changes in specific locations or alignments of infrastructure or Project facilities after the process of IEE, additional environmental assessment shall be done and a process similar to IEE, acceptable to ADB, shall be undertaken; and
 - (e) (i) an appropriate budgetary allocation (including vehicles, material and equipment, operating expenses and staff) is provided to PIUs to fulfill their responsibilities for implementation of mitigation measures and monitoring requirements as outlined in the IEE, in particular those mitigation and monitoring requirements arising from the application of the EAF; (ii) ERA assigns an adequate number of environment and social specialists to be

responsible for appraising IEEs and EMPs for subprojects prepared by the PIUs, ensuring the implementation of EMPs, and submitting IEEs and progress reports on implementation of EMPs to ADB; and (iii) each PIU, shall assign an adequate number of environment and social specialists to be responsible for preparing IEEs and EMPs for the subprojects and submitting them to the ERA and ADB, and implementing the EMPs. The Borrower will design and conduct appropriate training programs for environment and social specialist staff on topics related to their areas of responsibility.

- (ix) The State Government and ERA will ensure that during preparation of each subproject, the relevant PIU will undertake a review of the impacts, if any, of the subproject on indigenous peoples, and if any impacts on indigenous peoples are identified, the PIU will prepare an Indigenous People's Development Plan in accordance with ADB's *Policy on Indigenous Peoples* (2003) and the Indigenous People Development Framework in Supplementary Appendix E.

B. Condition for Loan Effectiveness

97. The following is an additional condition for loan effectiveness: that the PMU and each PIU will have been staffed to the satisfaction of ADB.

VII. RECOMMENDATION

98. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and, acting in the absence of the President, under the provisions of Article 35.1 of the Articles of Agreement of ADB, I recommend that the Board approve the loan of \$250,000,000 to India for the Multisector Project for Infrastructure Rehabilitation in Jammu and Kashmir from ADB's ordinary capital resources, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft Loan and Project Agreements presented to the Board.

Joseph B. Eichenberger
Vice-President

3 December 2004

PROJECT FRAMEWORK

Design Summary	Performance Indicators/ Targets	Monitoring Mechanisms	Risks/Assumptions
Goal Bring the economy of Jammu and Kashmir (J&K) back to the normal course of economic growth	Achieve economic growth of 6.3% per annum for 2005–2008	State statistics and surveys	
Purposes Improvement of living condition for the urban population in Jammu and Kashmir Improvement of rural connectivity Strengthened institutional capacity of Economic Reconstruction Agency (ERA) and Project Implementation Units (PIUs) Incorporation of ADB Water Policy in ADB assistance	Improved access to safe drinking water in urban areas for 1.5 million people (including 180,000 migrants) by 2008 (project completion) Improved drainage for 1.02 million people by 2008 (project completion) Reduced number of local communities not being served by all weather roads by 10% by 2008 (project completion) Two-tier system established by April 2005 for efficient and transparent management of externally aided projects Policy and institutional framework adopted by June 2006	State and municipal statistics Project completion report	A: Political will to implement the project and loan covenants A: PHED doubles tariffs by March 2005
Components/Outputs 1.0 Urban sector component 2.0 Transport sector component 3.0 Capacity building component 4.0 Piggy backed PPTA	1.1 By 2008 (project completion), replaced 529 km of old water lines in Jammu and Kashmir. 1.2 By 2008 (project completion), increased water supply by 129,000 cubic meters (m ³) per day in Jammu and Kashmir 1.3 By 2008, (project completion) replaced 191 km drain lines in Jammu and Kashmir 2.0 By 2008, (project completion) rehabilitated 1,500 km of roads and reconstructed 80 bridges in 14 districts 3.0 By December 2005, capacity established in ERA and PIUs with 20 core staff for (i) appraising subprojects in accordance with the project requirements, (ii) preparing and implementing subprojects in compliance with ADB policy and procedure, and (iii) managing the Project in an efficient and transparent manner 4.1 By March 2006, investments identified for the 2006 urban project 4.2 By March 2006, action plan developed to implement policy and institutional reforms	Annual ADB review missions Midterm review in June 2006	A: Reasonable security conditions A: The environmental management plan completed on time
Activities 1.0 Urban sector component 1.1 Civil works (including equipment) for water supply 1.2 Civil works (including	1.1 Contractors engaged by May 2005 for the first-year program 1.2 Contractors engaged by May 2005 for the	Annual ADB review missions	A: Secure working conditions for contractors and consultants

Continued on next page

Design Summary	Performance Indicators/ Targets	Monitoring Mechanisms	Risks/Assumptions
<p>equipment) for drainage</p> <p>1.3 Purchase of vehicles for collection of solid waste</p> <p>2.0 Transport sector component</p> <p>2.1 Civil works for roads</p> <p>2.2 Civil works for bridges</p> <p>3.0 Capacity building</p> <p>3.1 Project management support policy/planning support and training of PMU/PIU staff</p> <p>3.2 Design and supervision support</p> <p>3.3 Operational Support</p> <p>4.0 Attached PPTA</p> <p>5.0 INRM's mobile project support unit (PSU)</p>	<p>first-year program</p> <p>1.3 60 vehicles purchased by 2006</p> <p>2.1 Contractors engaged by June 2005 for the first year program</p> <p>2.2 J&K PCC engaged on a force-account basis by May 2005 for smaller bridges</p> <p>2.3 Contractors engaged by October 2005 for larger bridges</p> <p>3.1 Project management consultant engaged by April 2005</p> <p>3.2 Four design and supervision consultants engaged by April 2005 for Jammu and Kashmir Provinces</p> <p>3.3 Incremental staff engaged by April 2005</p> <p>4.0 Consultants engaged by October 2005</p> <p>5.0 Two to three staff consultants engaged by March 2005 to monitor project implementation</p>	<p>INRM's mobile PSU monitoring reports</p> <p>Monthly steering committee meetings</p> <p>Quarterly PPR updates</p>	<p>A: Effective coordination and supervision by ERA</p> <p>A: No resettlement and land acquisition for the sample projects</p> <p>A: ERA appoints a resettlement officer by January 2005</p>
<p>Inputs</p> <p>1.0 Urban sector component</p> <p>2.0 Transport sector component</p> <p>3.0 Capacity-building component</p> <p>4.0 Attached PPTA</p> <p>5.0 INRM's mobile PSU</p>	<p>1.0 Civil works (including equipment) for</p> <ul style="list-style-type: none"> • Water supply: \$85.6 million • Drainage: \$38.1 million <p>2.0 Civil works (including equipment) for</p> <ul style="list-style-type: none"> • Roads: \$147.1 million • Bridges: \$40.0 million <p>3.0 Consulting services for</p> <ul style="list-style-type: none"> • PMC: \$5.6million • DSCs: \$8.7million • Training: \$0.9 million • Incremental administration, vehicles, and equipment: \$5.0 million <p>(ADB \$250 million; Government \$108 million)</p> <p>4.0 Grant of \$500,000 from Government of United Kingdom</p> <p>5.0 Staff consultants for 12–18 person-months for INRM's mobile PSU for the first year, and 20-30 person months/year for second year onwards.</p>	<p>Procurement reviews and approval by ADB</p> <p>Annual audit of project accounts</p>	<p>A: Adequate and timely availability of counterpart funds</p> <p>A: Advance actions on procurement implemented without delays</p>

ELIGIBILITY CRITERIA AND PROCEDURES

A. Eligibility Criteria for Subprojects

1. The Project would finance only those subprojects, which meet the following eligibility criteria:

- (i) The subproject will be for the rehabilitation of infrastructure in the transport and urban sectors including a reasonable level of upgrading. The judgment on whether a specific investment is expansion or rehabilitation should be made on a system-by-system basis, but not on an equipment-by-equipment or component by component basis.
- (ii) The subproject will have clear economic rationale. The economic rationale includes an analysis of the market for the subproject's output and assess its demand. The problem to be address by subprojects should be defined, together with identification of options for technical solutions.
- (iii) The subproject will be cost effective. This usually involves a review of technical options available to address the identified problem and selecting the least cost option. Alternatively, economic efficiency may be demonstrated by the calculation of economic internal rate of return based on "with and without" subproject basis which will be equal to or higher than 12%.
- (iv) The subproject will be sustainable. Financial sustainability is demonstrated if their financial internal rate of return is equal to or higher than weighted average cost of capital for those subprojects where usages are charged to users. If this criterion is not met, other necessary arrangements/systems should be made/introduced to ensure that operation and maintenance costs of the subprojects are financed and that the project operates over its expected life. Institutional sustainability must also be ensured. This may be demonstrated by assessing the project implementation unit's (PIU's) organization, staffing and skill sets. If they do not have adequate institutional capacity, necessary capacity building assistance would be provided in the Project.
- (v) The subproject will, to the extent possible, not require land acquisition or resettlement (which includes the displacement of squatters or encroachers from the rights of way). If land acquisition or involuntary resettlement is required for a subproject, a Resettlement Plan will be prepared in accordance with applicable laws and regulations of the State Government, ADB's *Policy on Involuntary Resettlement* and the Resettlement Framework (Appendix 10).
- (vi) If any indigenous peoples/scheduled tribes are likely to be affected significantly by a subproject, an indigenous people development plan (IPDP) will be prepared in accordance with the Indigenous people development framework (Supplementary Appendix E).
- (vii) Environmental assessment of the subproject will have been carried out in accordance with the Environmental Assessment Framework (Supplementary Appendix D). The subproject will not have been be classified as Environmental

Category "A" or "B Sensitive" in accordance with ADB's criteria, and an initial environmental examination will have been prepared.

- (viii) The subproject will be technically sound, meeting design standards of the Government of India or other equivalent technical authorities. It should also incorporate appropriate road safety requirements such as guardrail at build up areas, road signage and road marking along the project roads.
- (ix) The subproject will be designed and executed as seismic resistant structure in accordance with relevant government guidelines.
- (x) All necessary approvals of the Government of India and the J&K State will be obtained prior to the award of any contract for civil works or supply of equipment or materials.

B. Procedures

2. All subprojects will be prepared and processed in accordance with the procedures set out below.

- (i) PIUs will select a possible subproject from the priority candidate subproject list (to be developed by the State) in consultation with the Project Management Unit (PMU). PIUs will then conduct a feasibility study for the subproject including its cost estimate. PIUs will also prepare (a) an initial poverty and social assessment (IPSA) and fill out a checklist for (b) involuntary resettlement; (c) indigenous people; and (d) an environmental screening.
- (ii) PIUs will submit to PMU (a) a feasibility study report, (b) IPSA, and (c) the above checklists. PMU will review these reports with support of the Project Management Consultant (PMC). If PMU finds that the proposed subproject is eligible in light of the eligibility criteria and the reports are in order, PMU will send those reports to ADB for further review, to obtain necessary guidance with regard to the extent of relevant analysis, assessment or plans.
- (iii) ADB will review the reports submitted by the PMU. If ADB finds that a proposed subproject is not likely to satisfy the eligibility criteria and/or that the agreed procedures, ADB will advise the PMU either (a) to modify the subproject proposal in a manner that will make it eligible for approval or (b) that the subproject must be rejected. If a subproject is rejected, the PMU may propose a replacement subproject. If the ADB finds that the proposed subproject is likely to satisfy the eligibility criteria and procedures, ADB will advise whether, based on the resettlement checklist a Resettlement Plan is required, and if so, whether a short, or a full Resettlement Plan is required, and based on the indigenous people checklist, whether an IPDP is required. The initial environmental examination (IEE) is required for all subprojects.
- (iv) The above procedure described in (iii) will be applied only to those subprojects whose size of the subproject exceeds \$1.5 million. If the subproject in question is equal to or less than \$1.5 million in project cost, the above review would be carried out by PMU. However, this would not be applied for the first 3 non-sample subprojects for each of water supply, drainage, road and bridge

subsectors: in those cases, the review would be carried out by ADB as set out in (iii).

- (v) Following the review described in (iii) or (iv) by PMU and/or ADB, the relevant PIU will conduct preliminary design and/or detailed design or other similar design works and, based on those works, develop a Resettlement Plan (if required) and IPDP (if required), and undertake an IEE including an environmental management plan (EMP) with support of design and supervision consultants (or transitional assistance consultants).
- (vi) The PIU will disclose the Resettlement Plan (if required), IPDP (if required) and IEE to the affected persons and incorporate the results of the consultation.
- (vii) The reports of preliminary design/other design work, including the Resettlement Plan (if required), IPDP (if required) and IEE, will be submitted by the PIU to the PMU for its appraisal. PMU will appraise the reports with support of PMC in light of the relevant frameworks and following examples provided by the ADB based on the appraisal of the sample subprojects. Based on the review, PMU will prepare a summary appraisal report for each of the subprojects. If PMU finds that the proposed subproject does satisfy the eligibility criteria and procedures, PMU will approve the subprojects if an individual subproject is equal to or less than \$1.5 million in terms of the project cost. If the project cost of a subproject is greater than \$1.5 million, PMU will send the summary appraisal reports, together with relevant safeguard documents (the Resettlement Plan [if required], IPDP [if required] and IEE) to ADB for further review and approval.
- (viii) However, even if the project cost of individual subproject is equal to or less than \$1.5 million, ADB's approval is required for the following cases:
 - When the subproject in question is among the first 3 non-sample subprojects for each of water supply, drainage, road and bridge subsectors;
 - When the subproject in question requires a full resettlement plan; or
 - When the subproject in question requires an indigenous people development plan.
- (ix) In case that the project cost of the subproject is greater than \$1.5 million and ADB received the summary appraisal reports and relevant safeguard documents, ADB will review those documents. If ADB finds that the proposed subproject does satisfy the eligibility criteria and procedures, ADB will approve the subproject. If ADB finds that the proposed subproject does not satisfy the eligibility criteria and procedures, or does not comply with ADB's safeguard policies, ADB may (a) advise PMU on remedial actions to be taken for the proposed subproject in order for it to comply or (b) reject the subproject.
- (x) The ADB review described in para (viii) and (ix) will be carried out by the sector division or India Resident Mission (INRM) except as described in this paragraph. If the subproject in question is valued at more than \$1.5 million, ADB's review of compliance with environmental assessment and indigenous people development

requirements will be carried out by the Regional and Sustainable Development Department (RSDD) in ADB headquarters. If the subproject requires a full Resettlement Plan, ADB review will be carried out by RSDD in ADB headquarters regardless of the value of the subproject. The results of all reviews carried out by INRM will be reported to ADB headquarters.

- (xi) If all necessary approvals of the Government of India and the J&K State have not been obtained prior to ADB approval of a Subproject, then no contract for civil works or supply of equipment and materials will be awarded, and no disbursement will be made for a Subproject until ADB has been provided with evidence that all such approvals have been obtained. The PMU will be responsible for obtaining all such approvals and will provide ADB with a report showing that all approvals have been obtained prior to the award of any contract for civil works or supply of equipment or materials and prior to any disbursement for the Subproject. The review and approval of this report will be carried out by the resident mission or sector division.

3. The above review, appraisal, or approval conducted by PMU is subject to the post-facto review by ADB as needed. If the post-facto review shows that PMU has not complied with these procedures (including if PMU has approved subprojects that do not comply with the eligibility criteria), then ADB may revoke the delegation to PMU. PMU/PIUs will ensure that ADB will be given access to all relevant documents on which PMU/PIUs' screening, preparation and processing of subprojects are based. Those documents will be kept for five years for possible ADB review.

URBAN SECTOR COMPONENT

A. Rationale

1. The Urban Sector Component of this Project Comprises rehabilitation of water supply and drainage infrastructure in Srinagar and Jammu. The current water supply and drainage situation in these two cities is summarized below.

2. **Srinagar:** Srinagar city is in the Kashmir Valley at an elevation of 1,600 m above mean sea level (MSL). The River *Jhelum* flows through the city. The city has a number of large water bodies, including the famous *Dal* and *Nagin* Lakes. The city receives an average annual rainfall of 1200 mm.

3. The water supply system in Srinagar is primarily composed of five partially interlinked sub-systems, each identified with reference to a particular surface water source. In four subsystems raw water is drawn from perennial streams by gravity and by pumping in the *Dal Lake/Nishat Bag* system, up to a treatment plant. In all five subsystems, water from the treatment plants is fed into the bulk transmission system and flows by gravity into distribution network.

4. The city received about 200,000 migrants who have predominantly settled along the major roads out of the city. The gravity mains from the five treatment plants come into the city along these roads. The new habitations along the roads have tapped into the gravity mains thereby greatly reducing the quantum of water reaching the core areas of city where water supply hours have been reduced from daily five hours in the early 1990's to just one hour now. Public Health Engineering Department (PHED) has tried to address this problem by augmenting the water production capacity and has expanded the capacity of treatment plants. However, the existing transmission network is inadequate to carry the increased production due to corrosion and leakage from the pipes, especially the larger diameter feeder mains. Old and inefficient pumping machinery also constrain water production. Quantity and quality of water from the sources is reportedly adequate and satisfactory.

5. The city's saucer bowl shaped topography with many parts of the city being lower than the high flood level has resulted in large-scale water logging and frequent flooding. Unlike most other cities in India, which have open drains (nallas) or open constructed drains, in Srinagar major drains are all underground and covered. This is because the topography is so flat that unless the main drains are very deep, no gradient will be available to ensure flows in the main and secondary network. Public safety concerns require drains of such depths running through the busy areas of the town to be covered. While the covered drain has the advantages of acting like a combined sewer and leads to better sanitation and aesthetics, extensive pumping of storm water is required. This is reflected by the 83 storm water pumping stations spread throughout the city, with the corresponding high Operation and Maintenance (O&M) costs. The indiscriminate dumping of municipal solid waste in city streets and drains further aggravates the drainage problems.

6. **Jammu:** The city has an undulating terrain ranging from an elevation of 290 m to 450m above MSL. The city receives an average annual rainfall of 1,000 mm. The River *Tawi* flows through the city. Water supply to the city is from 130 tubewells, which meet 70% of city's water needs. The balance 30% of the water supply is from the River *Tawi*, abstracted through two intake wells at the Sitlee head works. Water is treated at two treatment plants at Sitlee and pumped up to two large ground level reservoirs at Chinore and Manda. From these reservoirs, water is further distributed to zonal reservoirs and distribution networks.

7. The water supply in Jammu suffers from aging equipment and pipes leading to high pumping and leakage losses, inequity in distribution resulting in very low levels of supply to the migrant population and outlying areas. Due to these reasons, supply level varies between 25 lpcd to 300 lpcd. The outlying areas which have developed over the last 15 years have inadequate groundwater distribution network with small diameter pipes extended from the existing zones which are unable to cope with the demand created by the influx of 0.35 million migrants.

8. The city was planned to grow in a southerly direction, however, most of the migrants who came in over a period of a few months in early 1990's settled in the west since the land was barren and cheap. Even 14 years later, only skeletal water supply and sanitation services exist in this area. The western growth area is far from existing water sources and due to its distance and higher elevation is only partially integrated with existing network of Jammu and the water for part of this area is being supplied through tankers and public stand posts.

9. Groundwater quantity is adequate in low lying areas near the river and the Central Ground Water Board (CGWB), which monitors the ground water quantity and quality, reports that less than 6% of groundwater is exploited. The quality of this groundwater is satisfactory. However, in the upper areas on the west bank of the Tawi River, ground water wells have failed due to lack of maintenance. In general, poor maintenance of water supply infrastructure in Jammu is an issue. PHED spends less than one percent of the asset value towards O&M, against the requirement of 3-4%.

10. A network of natural and constructed drains carries the city's storm water to the river. Drainage in Jammu has become a problem due to lack of maintenance of natural and constructed drainage channels. Indiscriminate dumping of garbage into the drains aggravates the situation. Flooding, common in some areas, is a risk to public health and causes severe hardships for residents. Partial sewerage system exists in the city. Wastewater is disposed off into septic tanks and open drains.

B. Objective and Scope of the Urban Component

11. The urban sector component designed to address the most essential needs is comprised of a number of subprojects as described below:

- (i) Water Supply Rehabilitation in Srinagar (\$26.6 million). The subprojects will principally rehabilitate the existing supply networks, pump stations and water treatment plants, in order to restore them to their original capacities, thereby improving service levels in the city. The identified subprojects include: four subprojects for replacement of dilapidated water supply transmission lines, one subproject for replacement of old/damaged pumping stations and provision of stand-by generators and power supply protection equipment and one subproject to rehabilitate existing water treatment plants and reservoirs.
- (ii) Drainage Rehabilitation in Srinagar (\$13.8 million). Bemina and other areas towards the north of the Srinagar city were swamps, which were reclaimed in the 1980's to provide housing to migrants. Prior to development, storm water was soaked up by the swamps, which have no outlet now that the areas have been developed, resulting in cesspools and flooding throughout the year. In the Bemina drainage district, more severely affected areas were identified and a subproject was formulated to drain the flow into large existing drains along the National Highway,

through underground drains and 6 pump stations. The second subproject envisages improving the performance of 45 of the 83 pumping stations spread throughout the city by replacement of old/under capacity pumps, provision of generators for power back-up (important, since power failure occurs during floods, exacerbating the situation), improving electrical systems, piping and construction of pump houses which currently consists of temporary structures. Provision of garbage collection and drain cleaning equipment will help keep the main drains un-blocked and is included in this subproject.

- (iii) Water Supply Rehabilitation in Jammu (\$59.1 million). The envisaged sub projects include: (a) rehabilitation of the Sitlee water supply scheme to serve settlements on the west side of the *Tawi River*, where a large proportion of the new migrants have settled; (b) 9 different subprojects to rehabilitate existing city water supply systems; and (c) a subproject for provision of water tankers to provide immediate relief to the population currently not served by piped or ground water.
- (iv) Drainage Rehabilitation in Jammu (\$24.3 million). Seven different subprojects for restoration of drain linings, widening, re-grading and covering selected portions of the drains. Provision of garbage and drain cleaning equipment, will help in keeping the main drains unblocked and is included in these subprojects.

12. From the proposed list of subprojects, two sample subprojects were identified and analyzed with reference to ADB's Water Policy and safeguard policies relating to economic and financial analysis, environment and social aspects.

C. Water Supply Sample Subproject

13. The water supply sample subproject (item (a) in para iii above) is located in the west and northwest areas of Jammu, on the west bank of the Tawi River. It would benefit the existing population of 530,000, living in an area of about 45 square kilometers (km²), about 31% of Jammu's total urban area. The subproject will rehabilitate the existing Sitlee water supply system to meet the demands of the existing population, by restoring the system to its original capacity. The areas covered by the proposed subproject are Keran, Chinor, Ban Talab, High Court complex, Odheywala, Muthi, Barnai, Purkho, Roopnagar, Janipur, Patoli Mahgotrian, Manda, Lohar and Sitlee. The majority of migrants who came into the city in the early 1990's settled in these areas, including an estimated 165,000 poor people.

14. The existing water distribution system built in the late 1970's to early 1980's includes 67,250 domestic and 967 commercial connections. In addition there are 750 public stand posts (PSP) and approximately 20,000 unauthorized connections within the subproject area. But because of the poor condition of the water system many of these serviced homes, especially in the higher elevations, do not get regular water service. Because of the major influx of migrants in the early 1990's there are now an estimated 106,000 homes in the area, including approximately 38,000 new houses occupied by the more recently arrived migrants, who have built on empty lots throughout the area and on the fringes, basically infilling. But by the time they arrived, the water supply system had already deteriorated due to lack of maintenance, and there was either no water service or only sporadic supply in much of these infill areas. So an estimated 20,000 of these new residents, did not join the system, to save the connection fee and the monthly service charge, though in most cases the street mains run in front of, or near by, their properties. These homes depend on intermittent tanker service. But in some areas, the streets are narrow and steep and not always accessible by the tankers, especially in inclement weather. Therefore they carry water from the nearest PSPs. In addition, there are 8,700 homes

in the lower reaches, that are supplied regularly through tankers by PHED, and a further 2,000 have access to PSPs in their lanes. There are a further 3,000 homes which have access to neither the distribution system nor tankers.

15. The existing water supply for this area of Jammu was completed by about 1982. It consists of the Sitlee system including the intake from the Tawi River, the water treatment plant (WTP), raw and treated water pump stations, feeder mains, and the distribution system. The installed capacity is 65 million liters per day (mld), however the current output is only 39 mld. The losses are due to lack of preventative maintenance to replace worn parts (mechanical systems should be replaced every 7-10 years), so the intake and high lift pumps are worn out, with only half operating at poor efficiency. In the WTP, chemical feeders and other mechanical systems are in run down condition, and the filters, which are the key component limiting output and quality, are poorly maintained, with partially plugged filter sand. In addition the 30 year old feeder mains to the balancing reservoirs in the service area, are leaking due to corrosion and poorly installed joints and service connections, made worse by partial blockages in the pipes due to build up of solids, as there has been no cleaning done. PHED have constructed water feeder mains from Jammu's main water system to try and bring more water to the area. However, this has been only partially successful since the feeder mains and many distribution mains are in such poor condition that increasing the pressure just causes more leakage, with little increase in supply.

16. The proposed subproject would rehabilitate the existing Sitlee water supply system by replacing most mechanical, and some electrical, equipment in the WTP, replace the filter sand with high rate multimedia, replace the raw and treated water pumps, and modernize all control systems. This will increase the capacity of the WTP to 73 mld, taking advantage of the usual inbuilt 15% extra design capacity, at basically no additional cost, as compared to bringing it back to the original design capacity of 65 mld. A second part of this rehabilitation is replacement of the 400mm feeder main from the WTP to the balancing reservoirs in the service areas, and the more obviously leaking supply mains, so that the increased pressure from the rehabilitated pumping system does not cause increased leakage. System metering would also be included, to start building a better database for major expansion in the proposed follow-on project. The estimated cost of this rehabilitation is about \$7.9 million. The resultant increase in supply will enable more supply to the current connections.

17. While system metering is planned in the Project, the State has committed to introduce metering of commercial connections and doubling the water tariffs for all consumers by 2006. The State is also committed to introduce domestic supply metering as part of the follow-on urban project, which will expand the water supply, to enable connection of the currently unserved households. Extensive policy dialogue, stakeholder consultations and capacity building of the PHED are proposed to be included in the PPTA proposed for the follow on project. Even after doubling the tariff, it will not cover the cost of producing the water, meaning that the small diameter connections will need to be subsidized, from larger connections. In order to set the right climate for introduction of meters, which has not been possible in on going urban projects in India, the larger commercial, wealthy and middle class homes must be metered first, or at least in conjunction with the low income areas.

18. The subproject will also include a pilot program on cost-effective sanitation system which will provide permanent, good quality, low cost private and community toilet units in the refugee settlements areas west of the Tawi River. The pilot will adopt a participatory approach to sanitation through partnership between the Project Implementation Unit (PIU), implementing NGOs and the beneficiary communities.

19. The ERA will finalize the basic framework for implementing the scheme, provide finances and enable adoption of a community-based approach to cost effective sanitation. The NGOs contracted by the Project, and the beneficiary communities will play a proactive role in planning, design, implementation, and operation and maintenance of the toilet blocks. NGOs will facilitate direct beneficiary participation in planning, design, construction and operation and maintenance to ensure project sustainability. The NGOs will build awareness, ownership, technical and organizational preparedness, and willingness to use and pay for the new facilities among the beneficiary groups. They will undertake necessary training and capacity building activities for sustainable management and maintenance of the assets. Women would be mobilized to play a leading role in the design and implementation of the program.

D. Storm Water Drainage Sample Subproject

20. The flood affected *Talab Tillo* area (223 hectares), situated on the west bank of the *Tawi* River has a population of 68,000 (2001 census), including 30% migrants. Water supply to the area is from tube wells and a sewerage scheme is under implementation, using the State's own funds, but progress is slow, and this work may have to be completed under the proposed follow-on urban project. Presently many of the houses have septic tanks and some discharge directly into local drains. Conditions in the drains are therefore unhygienic, which is made worse because people also dump garbage into the open drains. The threats to public health are exacerbated due to the poor condition of the drains, as the municipal corporation is unable to carryout adequate maintenance, due to lack of funds.

21. Part of the drains are lined, but Urban Environment Engineering Department (UEED) could not complete lining of all the drains, due to inadequate budget. Existing drain linings have suffered severe erosion, partially due to large boulders from hills upstream breaking and eroding the linings. Design of drain lining improvements needs to consider this aspect, so as to minimize such erosion after rehabilitation. The design criteria for the sample subproject was based in part on UEED's normal design criteria and Indian standards. The rational formula was used to estimate peak flow in the drain, including runoff coefficients to ensure self scour. A ten year return period (maximum storm intensity) was used. The adopted rainfall intensity of 33 mm/hour will be verified with meteorological data during detailed design. Dry weather flow, including overflow from septic tanks, has been allowed for and in major drains, a dry weather flow channel is provided to ensure self scouring hydraulic conditions. Free board, at maximum flow conditions, varies from 0.2 m to 0.5 m, based on the size of the drain.

22. In summary the proposed subproject will rehabilitate 11.3 km of drains. The works will include covering selected stretches of drains to provide better access to houses, repair of existing drain lining, new lining of drains and four road crossings. The estimated cost of the subproject is \$2.1million.

E. Cost Estimate

23. The total estimated cost of the subprojects proposed under the urban component is \$123.8 million. All the estimates were prepared based on the prevailing market rates. Table 1 summarizes the costs for each sub-sector.

**Table 1. Cost Estimate
(\$ million)**

Component	Foreign Currency	Local Currency	Total
Water Supply Rehabilitation	39.2	34.8	74.0
Rehabilitation and Improvement of Drainage System	12.3	20.9	33.2
Taxes and duties	0.0	16.6	16.6
Total	51.5	72.3	123.8

F. Implementation Arrangement

24. The subprojects will be implemented under the EA (ERA) through the PMU, supported by the PMC, and the Project Implementation Units located in Jammu and Kashmir, supported by the DSC (See Appendix 6 for the organogram of the Project).

G. Procurement

25. The procurement of civil works will be done largely through local competitive bidding (LCB) procedure following ADB's guidelines using the standard bidding documents. The goods will be procured following international competitive bidding/international shopping in accordance with ADB's standard procedures.

H. Sustainability and Operation & Maintenance

26. The PHED is the agency responsible for O&M of water supply systems, the UEED for sewerage, and respective Municipal Corporations for drains and solid waste management. The State government is committed to provide necessary budget for maintenance of the rehabilitated assets. The capacity building component of the Project includes training of line department personnel in O&M practices as per the manuals developed by the PMC/DSCs.

27. Presently water charges are based on a flat rate, with the small diameter connections, common for low income households, paying only Rs15 per month, while larger diameter connections, normally associated with middle and higher income groups, pay Rs28 per month. Metering of domestic connections is not proposed in this Project, but will be taken up in the follow-up urban project. In terms of cost recovery, a tariff increase from Rs15 to Rs30 for lower income small diameter connections group and Rs28 to Rs60 for larger higher diameter connections income group is proposed to be made effective by April 2005 at latest by June 2005, with 10.5% annual increase in real terms thereafter. This is expected to be sufficient to meet the O&M costs, as the cost of producing and pumping water on a unit basis, after rehabilitation, will be lower, due to the increased efficiencies of pumps and the almost doubling of the water supply due to lower leakage combined with the almost doubling of the water supply. The PPTA for the follow-up urban loan, which focuses on expansion of the utilities and service levels, will address these issues in detail including metering and incremental quantity based tariff system.

I. Implementation Schedule

28. The Project is to be implemented over a period of four years. The project implementation schedule is in Appendix 7.

TRANSPORT SECTOR COMPONENT

A. Sector Background

1. Roads have been and will continue to be critical to the transport connectivity throughout the State. The State has a relatively extensive road network, totaling 29,014 km, of which 823 km are national highways. The responsibility for development of these roads is vested with Ministry of Road Transport and Highways/National Highway Authority of India, while its maintenance is largely entrusted to Border Roads Organization (BRO). The State Public Works Department (PWD) – Roads and Buildings (R&B) Division – is responsible for state roads, major district roads and other district roads, the latter of which are rural roads in nature. PWD covers 14,858 km of network, of which 5,082 km are in Jammu region, 7,984 km are in Kashmir region, and 1,792 km in Ladakh region. Of the total, 12,109 km is surfaced (black topped, metalled and shingled) and 2,749 km un-surfaced (fair weather and jeepable). One chief engineer is assigned for Kashmir Province, while another chief engineer is assigned for Jammu area. The Project would focus on those road systems falling under the jurisdiction of PWD.

2. In addition, Forest Department and Rural Development Departments are also involved in road development and maintenance. It covers 13,660 km of roads, of which 1,901 km is surfaced and 11,759 km un-surfaced. The major arterial urban roads fall under the jurisdiction of State PWD and the remaining under the jurisdiction of Municipal Corporations.

3. Over the last 15 years there has been extensive deterioration and damage to the road network in J&K particularly bridges, both major and minor. The paucity of funds for rehabilitation and maintenance transportation, coupled with the law and order problem, has resulted in poor condition of the roads. High transportation costs and poor connectivity are a major problem in the road network in J&K. A number of state roads and district/rural roads are not passable during the rainy season, causing major problems for local farmers who need to get their products to nearby markets. Many of the bridges are in a poor condition, which are accessible only to light vehicles and pedestrians. The road network has some missing links across the river, where the traffic movement can take place over the riverbed during the dry season.

4. Traffic on roads has increased by more than 2 ½ times as against a 1 ¼ increase in the road network during 1989-2000, which has resulted in increased traffic congestion. In addition, other J&K specific problems such as frequent landslides, narrow roads, difficult terrain, soil conditions, short working season and cold weather adds to the problem of road maintenance in the State. The roads in the higher altitudes are particularly affected by snowfall during January to March each year. On the onset of summer season from April, the snow melts and the water ingresses into the pavement layers through cracks causing damage.

5. To cope with the problems, several road improvement programs are being undertaken with use of central Government resources. Most important are the four laning of national highway between Jammu and Srinagar and the Srinagar Bypass, both of which are being carried out under National Highway Development Project (NHDP). Rural road networks are also being upgraded under the Prime Minister's Rural Road Program. In the wake of the State Government's inability to provide the financial resources required to develop and maintain rural infrastructure, loans have been raised from the National Bank for Agriculture and Rural Development (NABARD) as a major supplement to State plan. The NABARD assistance received by the R&B Division of PWD under Rural Infrastructure Development Fund (RIDF) is meant for upgradation of roads in rural areas. Since 1998 NABARD has approved about Rs5,700 million (\$125 million equivalent) for upgradation of

rural roads in the State. While the State Government &K also receives funds for state highways from the Central Road Fund (CRF), it is far from adequate to cover the enormous rehabilitation needs of state/district road networks. It is evident that state and rural roads under the jurisdiction of PWD are the least funded segment among all segments.

6. O&M is a critical element for securing the sustainability of the state road network, but PWD has never received adequate funds from the State Government. While \$52 million per year is required for adequate O&M, PWD has been receiving only about 14% of this amount. In view of the importance of O&M, the Project has incorporated advisory services for establishing a road maintenance system/model, establishing a road database, and provision of necessary training on the concept of asset management.

7. The maintenance and rehabilitation works are entrusted to the local contractors in the state by the PWD. The average value of the rehabilitation works is generally not more than \$1 million. The average value of the maintenance works would be even less than \$0.1 million. In view of the small works being carried out in the state, the state's local construction industry is not well developed. An exception to this is Jammu and Kashmir Projects Construction Corporation Ltd. (J&KPCC), a government owned company that has undertaken substantial civil works in the state and possesses adequate capacity to carry out bridge rehabilitation and construction.

8. During the 9th Five-Year Plan (1996/97-200/02), PWD has placed major focus on the construction/rehabilitation of bridges and culverts and other public assets, the provision of connectivity to isolated villages to nearest road network and the completion of schemes that had been left unfinished from the earlier plans. The 10th Five-Year plan (2002/03-2006/07) stressed the importance of expanding road systems so as to cope with the increased needs due to the expansion of the urban areas, particularly in Srinagar and Jammu. The Plan has also emphasized the importance of reconstructing damaged major bridges (109) and minor bridges (128). Rural roads are now also given priority among all road segments after the general election of May 2004.

B. Objective and Scope of the Component

9. Department of Planning (DOP), whose responsibilities for the Project are now handed over to Economic Reconstruction Agency (ERA), has received a number of candidate subprojects from 14 districts. DOP/ERA is in a process of prioritizing these to achieve a balanced development across the state. The subprojects to be taken up under the Project include rehabilitation/reconstruction of about 80 damaged, weak and missing bridges, rehabilitation of about 1,500 km of state roads, major district roads, other district roads and village roads. The Project will also fund the procurement of equipment needed for operation of a maintenance management system and also for maintenance.

10. Among the various subprojects, three sample subprojects were chosen: (i) Quazikund-Kulgam road of a length of 16.5 km in Ananthnag district; (ii) Raithan-Palmaidan-Arizol road of a length of 14.1 km in Budgam district; and (iii) Kannikadal bridge of a total length of 31 meter in Srinagar. These subprojects represent characteristics of the road and bridge subprojects to be financed under the proposed Project. Brief particulars of the sample subprojects are as below:

- (i) Quazikund-Kulgam road: The road is an Other District Road (ODR) in Ananthnag district. The existing road is generally having a gravel (WBM/Stone base) surface. The surface is highly distressed with raveled stone surface, loss of camber, edge fretting and depressions. The road stretch has several locations with deficient turns and steep gradient. The road reported to be a shorter link for traffic moving towards Jammu from

Shopiyan. The salient features of the improvement works are rehabilitation and widening of the existing single lane carriageway to an intermediate lane (one half lane) with paved shoulders, construction of roadside drainage and rehabilitation/reconstruction of minor bridges and cross drainage structures. Adequate road safety measures will be provided through construction of guardrails on a raised footpath to separate roadside settlements from the main carriageway. The improvement will include a provision of a bituminous surfacing comprising 50 mm thick bituminous macadam and a 20 mm thick premix carpet with liquid seal coat.

- (ii) Raithan-Palmaidan-Arizol road: The road is an Other District Road (ODR) in Budagm district. The existing road is generally having a gravel (WBM/Stone base) surface. The riding quality of the gravel road is poor with undulating and raveled surface. The road stretch has several locations with deficient turns and steep gradient. The salient features of the improvement works are rehabilitation of the existing single lane carriageway and construction of paved shoulders, construction of roadside drainage and rehabilitation/reconstruction of bridges and cross drainage structures. Adequate road safety measures will be provided through construction of guardrails on a raised footpath to separate roadside settlements from the main carriageway. The improvement will include a provision of a bituminous surfacing comprising 50 mm thick bituminous macadam and a 20 mm thick premix carpet with liquid seal coat.
- (iii) Kannikadal bridge: The existing Kannaikadal bridge is located on the road link connecting Chota Bazar Chowk and New Habba Kadal Bridge (which are currently in two lane standard). The existing timber bridge of two lane standard is currently catering only to light vehicles– mostly cars, three wheelers, bicycles and pedestrians. The improvement envisages the replacement of the existing bridge with a permanent bridge of a two-lane carriageway width and footpath for pedestrian movement.

11. The ADB mission appraised and found that these three sample subprojects are viable in light of technical, economic, environmental and social criteria.

12. In the selection of the remaining subprojects, priority would be given to: (i) reconstruction and/or rehabilitation of damaged and/or deteriorated infrastructure facilities; (ii) completion of undertakings which had started earlier, but stalled or slowed down later due the deteriorated law and order situation; (iii) provision of the minimum level of infrastructure services to cater to the needs of migrants/refugees; and (iv) provision of minimum connectivity to rural communities which have deprived of necessary access to administrative services and markets.

13. All investments are expected to meet eligibility criteria of no major environmental impact, no land acquisition (except for minor ones necessitated by engineering, environmental and social reasons), and no major resettlement (see Appendix 2 for the eligibility criteria of subprojects).

14. The design and supervision consultants will assist GoJK for the preparation of the potential subprojects and the project management consultants will assist in the appraisal and of those subprojects. ADB will review and approve the selection of all subprojects for financing under the Project.

C. Cost Estimate

15. The summary of the estimated cost of road and bridge component is as below:

**Table 1. Cost Estimates
(\$ million)**

Component	Foreign Currency	Local Currency	Total
Sample subprojects			
Quazikund-Kulgam road	1.9	1.5	3.4
Raithan-Palmaidan-Arizol road	1.2	1.0	2.2
Kannikadal bridge	0.2	0.1	0.3
Other roads and bridgeworks	85.5	68.1	153.6
Equipment	2.7	2.3	5.0
Taxes and Duties	0.0	22.6	22.6
Total	91.5	95.6	187.1

D. Implementation Arrangements

16. ERA will be the Executing Agency (EA) for the Project. It will establish the Project Management Unit (PMU), headed by the Project Director (in this case, Chief Executive Officer of ERA), and comprised of three deputy directors, one each for financial management, urban and roads; one procurement officer, environmental specialist; social development/resettlement officer; training coordinator; and support staff. PMU would provide overall coordination of PIUs.

17. The PMU will be supported by the PMC, which will provide expertise in subproject appraisal, due diligence, project management, approval of designs, bid documents, bid evaluation reports and preparation of quarterly and annual progress reports.

18. The road works in Component C will be implemented through PIUs to be established for each of Jammu and Kashmir regions. Each PIU, headed by a Project Manager (PM), will comprise professional and support staff who will be assisted by the design & supervision consultants (DSC) in selection of subprojects, development of subproject including preliminary designs and design review, preparation of tender documents, bid evaluation, project implementation including construction supervision and quality and quantity control. The PIUs will include engineers from the PWD who will coordinate project preparation and implementation of the subprojects in the road sector. The PIUs will have its field offices in all the districts where subprojects will be implemented. The PMC and DSCs will be recruited following ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants.

E. Procurement

19. All procurement to be financed under the Project will be carried out in accordance with ADB's *Guidelines for Procurement*. The subprojects included in the indicative list are spread among 14 districts across the regions of Jammu and Kashmir. The estimated cost of most of the road subprojects is about \$1.5 million and bridge subcomponent is \$0.5 million. The experience of both PWD and local contractors over the past 10-15 years is limited to the small road rehabilitation works. As result, the local contracting industry does not have the equipment, financial capacity or experience to carry out large contracts. Because of this limitation, the small construction works would be packaged into larger packages under

“design as you build” concept, where detailed design and construction would be carried out by the contractor in a phased manner. While packages will be finalized with ADB’s prior approval during project implementation, a principle is to generally formulate contract packages on a district by district basis. The contract packages will be formulated taking into consideration the proximity of road sections and the scheduling of subproject implementation.

20. Bridge subcomponent entails a large number of small works (each of which costs around \$0.2-\$1.0 million), many of which are located in remote areas in the State (scattered in 12 districts). J&K Project Construction Corporation (J&KPCC) has been an implementing agency for the State Government in carrying out the construction of bridges and taking up bridge works abandoned by the private contractors. In view of the size of the works and their location, the construction of small bridges whose size is less than \$0.5 million will be entrusted to J&KPCC on a force-account basis.

21. Contract packaging for equipment will be based on required technical features and timing of the need for the equipment. Detailed specifications will be finalized during Project implementation.

F. Operation and Maintenance

22. PWD is responsible for the maintenance of roads. Works are generally entrusted to the local state contractors. In spite of the required amount of \$52 million per year, PWD has been receiving only 14% of this requirement. In view of small value of road rehabilitation and maintenance works being carried out in the state, the state's local contracting industry is not well developed and not equipped and experienced. O&M is a critical element for securing the sustainability of the state road network. To ensure sustainability of the road improvements several measures will be initiated under the project. In order to initiate a system-wide maintenance, assistance would be provided under the project for the systematic collection of road condition data, establishing a road database and a road maintenance system/model, purchase of equipment for road maintenance, updating of maintenance manual, training on the concept of road asset management, road maintenance system and practices. The road sections proposed for improvement under the project are largely rural roads and do not carry substantial traffic to justify levy of direct user charges such as tolls. A study on the financing and implementation mechanisms for O&M would be undertaken by PMC, which would provide a basis for a policy dialogue with the state government. The State has provided assurance for adequate budgetary support to cover maintenance cost of the roads and bridges rehabilitated under the Project.

G. Implementation Schedule

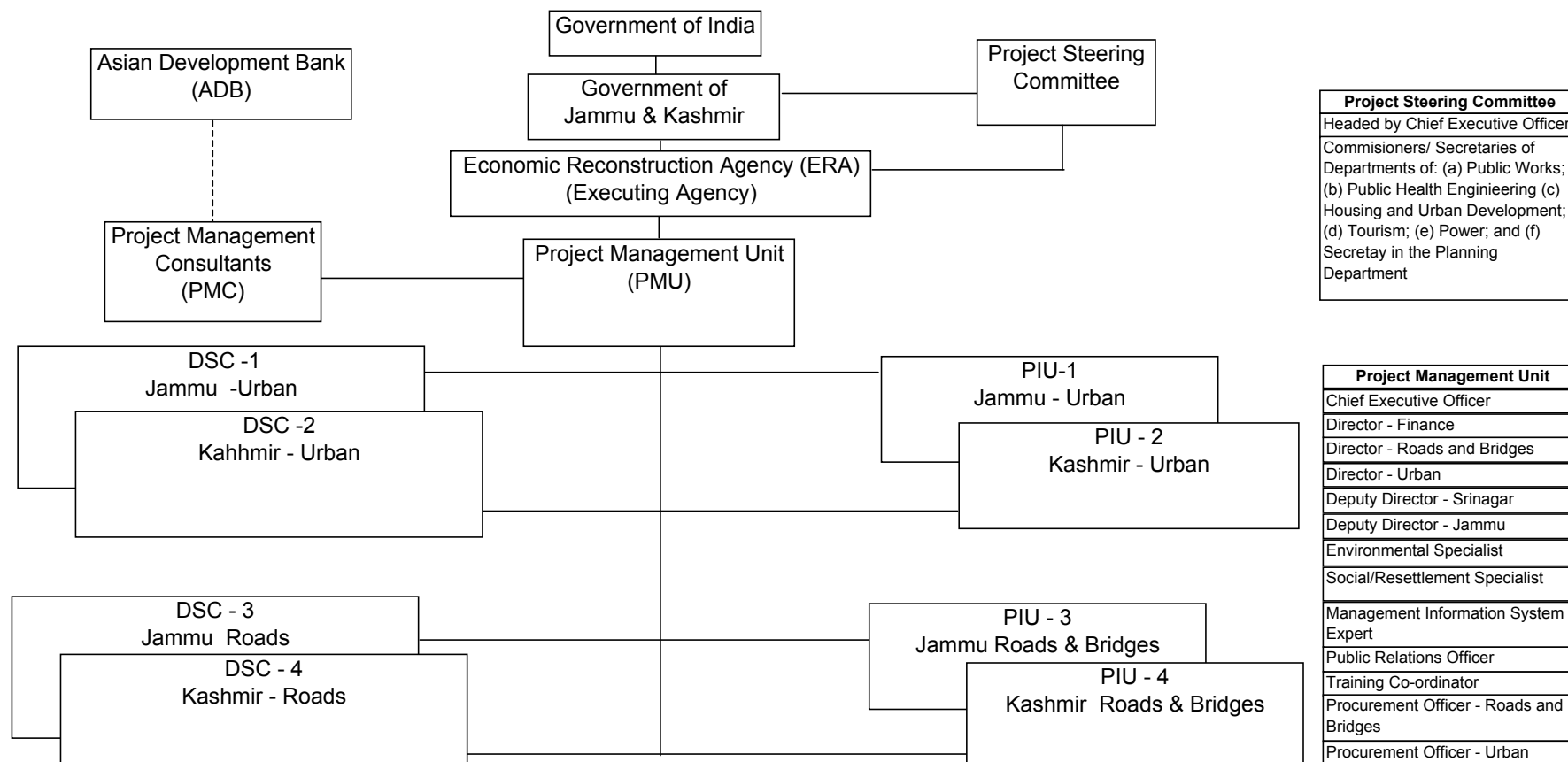
23. The Project will be implemented over a period of four years through June 2009. The implementation schedule is in Appendix 7. To minimize start-up delays, the State has requested ADB for help with preparation of the next priority subprojects to be taken up in first year, training for the staff of the PMU and PIUs, recruitment of PMC and DSCs, and, establishing procedures for project accounts and disbursements, through consultants provided under a transitional technical assistance.

COST ESTIMATES

Component	FX	Local	Total	FX(%)	ADB	Govt
Component A: Rehabilitation of Urban Infrastructure						
Rehabilitation of Water Supply in Jammu						
Civil Works	3.8	12.0	15.8	24.0	12.6	3.2
Equipment and Materials	26.4	8.7	35.1	75.2	33.0	2.1
Rehabilitation of Water Supply in Srinagar						
Civil Works	3.9	12.4	16.3	24.0	13.1	3.3
Equipment and Materials	5.1	1.7	6.8	75.2	6.4	0.4
Rehabilitation of Drainage system in Jammu						
Civil Works	4.8	15.0	19.8	24.0	15.8	4.0
Equipment and Materials	1.2	0.4	1.5	75.2	1.4	0.1
Rehabilitation of Drainage system in Srinagar						
Civil Works	1.2	3.7	4.9	24.0	3.9	1.0
Equipment and Materials	5.2	1.7	7.0	75.2	6.6	0.4
Taxes and Duties	0.0	16.6	16.6	0.0	0.0	16.6
Sub-total Component A	51.5	72.3	123.8	41.6	92.8	31.0
Component B: Rehabilitation of Roads and Bridges						
Rehabilitation of Roads and Bridges						
Civil Works	87.9	71.7	159.6	55.1	133.0	26.7
Equipment and Materials	3.6	1.2	4.8	75.2	4.6	0.3
Taxes and Duties	0.0	22.6	22.6	0.0	0.0	22.6
Sub-total Component B	91.5	95.6	187.1	48.9	137.5	49.6
Component C: Capacity Building Support and Implementation Assistance						
Project management Supportt	0.6	5.0	5.6	10.7	5.6	0.0
Design and Construction Supervision Support	0.0	8.7	8.7	0.0	8.7	0.0
Equipmment and vehicle for Implementation & Incremental Administration	0.0	5.0	5.0	0.0	4.5	0.5
Training on Project Management and O&M	0.0	0.9	0.9	0.0	0.9	0.0
Taxes and Duties	0.0	3.6	3.6	0.0	0.0	3.6
Sub-total Component C	0.6	23.1	23.7	2.5	19.7	4.0
Total Costs	143.6	191.0	334.6	42.9	250.0	84.6
Interest During Construction and Commitment Charges	23.4	0.0	23.4	100.0	0.0	23.4
Total Project Costs	167.0	191.0	358.0	46.7	250.0	108.0

Note: IDC has been calculated on the basis of fixed swap rate for five years i.e. 3.64% and with lending spread of ADB i.e. 0.4%

PROJECT IMPLEMENTATION ARRANGEMENTS



*DSC = Design Supervision Consultants

*PIU - Project Implementation Unit

PIU-1 Jammu-Urban	PIU-2 Kashmir -Urban	PIU-3 Jammu Roads/Bridges	PIU-4 Kashmir Roads/Bridges
Project Manager	Project Manager	Project Manager	Project Manager
Water Supply Engineer	Water Supply Engineer	Road Engineer	Road Engineer
Mechanical & Electrical Engineer	Mechanical & Electrical Engineer	Bridge Engineer	Bridge Engineer
Procurement Engineer	Procurement Engineer	Social Development Officer	Social Development Officer
Accounts Officer	Accounts Officer	Procurement Engineer	Procurement Engineer
Municipal Engineer	Municipal Engineer	Accounts Officer	Accounts Officer
Support Staff including field engineers	Support Staff including field engineers	Support Staff including field engineers	Support Staff including field engineers
Environmental/Social Specialist	Environmental/Social Specialist	Environmental/Social Specialist	Environmental/Social Specialist

IMPLEMENTATION SCHEDULE

Activity	2004		2005				2006				2007				2008				2009	
	Qtr	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	
Project Processing Schedule																				
MRM																				
Board Approval																				
Project effectiveness																				
Transition TA																				
Assist ERA in establishing PMU/PIUs																				
Recruitment of Consultants																				
Updating Preliminary/Detailed designs of sample sub-projects																				
Assist in Recruitment of PMC & DSC																				
Preparation of Bid documents for sample sub-projects																				
Preparation of first year sample sub-projects																				
Overlap with PMC & DSC																				
Recruitment of Consultants																				
Invitation & Receiving EOI																				
Shortlisting of consultants, Approval of ADB on first submission and invitation of RFPs																				
Receipts of Proposals																				
Evaluation of Technical Proposals, Approval of ADB on second submission, invitation for opening of financial proposals																				
Opening of Financial Proposals, evaluation, Approval of ADB on third submission																				
Negotiations, Approval of ADB on fourth submission and contract agreement, Mobilisation																				
Appraisal of Sub-Projects																				
Procurement Activities																				
Advertisement of GPN and SPN for sample sub-projects in ADBBO																				
(Urban)																				
Sale of Bid Documents, pre-bid meeting and submission of bids for sample sub-projects																				
Evaluation of Technical Bids of sample sub-projects, ADB's approval																				
Opening of Price Bids, Evaluation and ADB's approval																				
Award of work, Notice to proceed																				
(Transport)																				
Sale of Bid Documents for sample sub-projects																				
Evaluation of Technical Bids of sample sub-projects, ADB's approval																				
Opening of Price Bids, Evaluation and ADB's approval																				
Award of work, Notice to proceed																				
Construction Activities																				
(Urban)																				
sample sub-projects																				
other sub-projects																				
(Transport)																				
First set of projects																				
other sub-projects																				

INDICATIVE CONTRACT PACKAGES

Item	Name of the Scheme	Bid package cost (\$ million)	Procurement procedure
Urban			
Water Supply Rehabilitation and Improvements			
Jammu city			
1	Completion of proposed water supply scheme with surface water source to improve water supply to migrant areas on west bank of River Tawi and strengthening existing infrastructure in old city areas	7.9	LCB
2	Improvements to ground water sources and strengthening existing infrastructure on west bank of River Tawi	8.0	LCB
3	Improvements to surface water scheme and strengthening related existing infrastructure on east bank of River Tawi and improvements to ground water source and strengthening related existing infrastructure on east bank of River Tawi	8.5	LCB
4	Replacement of worn out primary and secondary distribution pipes in Zones 1, 2, 3, 4 and 6 (in four lots)	24.9	LCB
5	Improving power backup facilities, replacement of worn out machinery, providing 11 KV express feeder at PHE stations & augmentation of electric sub-stations	7.8	LCB
6	Public Toilets	1.6	LCB
7	Procurement of water tankers	0.4	IS
Srinagar city			
8	Improvement to water supply transmission lines and allied works (in four lots)	26.6	LCB*
Rehabilitation and Improvements of Drainage System			
9	Equipment and Vehicle for garbage and drain cleaning in Srinagar and Jammu	3.6	ICB
Jammu City			
10	Storm Water Drainage (SWD) improvement in Landoi choi, Vikram Chowk areas	9.8	LCB
11	SWD improvement in Ashram Nala, Digiana, Gangyal Nala, Rampura, Nai Basti, Vikram Chowk areas	2.8	LCB
12	SWD improvement in Talab Tillo area	2.1	LCB
13	SWD improvement in area b/n BC road and Shivnagar	2.1	LCB
14	SWD improvement in area between Akhnoor road and Janipur road	2.6	LCB
15	SWD improvement U/s of Janipur area	1.3	LCB
16	SWD improvement b/n Panchteerthi and Chandnagar area	1.8	LCB
Srinagar City			
17	Construction of underground drains and 6 pumping stations in Bemina area	8.2	LCB
18	Improvements to pumping stations, replacement of worn out pumps, pipes, electrical works, piping and providing generators	3.8	LCB
Transport			
19	Roads (packages will be developed on a district by district basis)	144.0	LCB*
20	Bridge I (the first year)	10.0	Force Account
21	Bridge II (first year)	10.0	LCB
22	Bridge III (second year)	10.0	LCB
23	Bridge IV (second year)	10.0	LCB
24	Equipment	5.0	LCB/ICB/IS

* Specific packages will be developed during the project implementation.

SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

A. Linkages to the Country Poverty Analysis

Sector identified as a National Priority in Country Poverty Analysis?	Yes	Sector identified as a National Priority in Country Poverty Partnership Agreement?	Yes
<p>Contribution of the sector/sub sector to reduce poverty in DMC - India:</p> <p>The Project is primarily designed for restoring essential infrastructure services in transport and urban sectors that were deteriorated due to the prolonged destruction of infrastructure facilities and general neglect of maintenance. It would contribute to the improvement of living conditions of urban population in Jammu and Srinagar cities, including those who have migrated to the peripheries of those cities over the last fifteen years and settled there with virtually no access to minimum level of urban services. The provision of adequate road infrastructure will improve transport of goods within and between states and serve rural communities with necessary mobility and access to markets and administrative services thereby stimulating economic growth. The provision of basic urban infrastructure will help to keep pace with the continued urbanization pressure and would promote both social and economic development and support pro-poor growth.</p>			

B. Poverty Analysis

Classification: Others

Jammu and Kashmir ranks 6th in area wise and 17th in population among the States and Union Territories of India. The State consists of 14 districts, with 3 municipalities, 54 towns and notified area committee, 6,477 inhabited villages and 281 uninhabited villages. The National Human Development Report (NHDR) of 2001, prepared by the Planning Commission, Government of India indicated that, the population below poverty line (BPL) for the year 1993-94 was 30.34% in rural areas and 9.18% in the urban areas. A survey undertaken as part of the socioeconomic study for the Project found that 31.35% of the total sample households are living below the poverty line in the two subproject districts of Anantnag and Budgam, two representative districts in the State. If the findings of two districts are compared with the poverty data quoted in NHDR for the year 1993-94 it can be implied that the poverty scenario within the State has remained the same during last 10 years with a large population continuing to live below the poverty line. Five sample subprojects out of 150-200 likely possible subprojects have been appraised.

Urban Component:

The right side of the Tawi River has the largest concentration of migrants in Jammu. The sample subproject is intended to replace the tanker and public stand post based water supply by piped water system and will benefit 530,000 people, of which 180,000 are migrants. A large percentage of these migrants are low-income and poor (13.6%) households living below poverty line mostly deriving their livelihoods as wage laborers. These migrants are served with tanker and public stand posts. Availability of portable water at an affordable tariff will improve their quality of life. The improved levels of water delivery and accessibility will reduce overall time taken for water collection and need for storage especially benefiting poor women. While consumers presently connected to PHED piped water supply will benefit from increased quantity of water and saving on expenses incurred on other sources, households with new connections will benefit from cost savings on water by switching from tanker and community supply sources to piped individual supply. The access to clean drinking water will reduce instances of waterborne diseases, contribute towards improved health status of the project communities and reduce environmental health costs.

The Talab Tillo storm water drainage sample subproject will benefit a population of 68,000, out of which 19% are poor households. Nearly 15-20% of the local population, including poor households, are severely affected by seasonal floods and on an average incur an expense of Rs300 per year for house repair works. As a result of implementation of this scheme, poor households will be benefited with an incremental increase in land value of the area as well as cost savings on account of flood mitigation, cleaning of drains and medical expenses on account of water borne diseases.

In terms of immediate poverty reduction impacts, the urban component will provide employment of nearly 340,000 man-days of jobs of unskilled labor benefiting the poor population in the area. The augmentation of water supply and drainage facilities will contribute to overall direct benefits in terms of sustained improvements in basic service provision in Jammu. Indirect benefits will be available to residents of the city, through improved living conditions, a healthier living environment and the prospect of improved health status especially for poor households.

Roads & Bridges Component:

The two sample roads subprojects in the districts of Anantnag and Budgam, passing through 24 villages, will benefit a total population of 67,311 with nearly 31.35% households living below poverty line and the number of BPL families being more concentrated in Budgam district (61%). The social assessment revealed that majority of the households in the project influence area derived their livelihoods from agriculture, allied agricultural activities and as wage labor. The improved road would enable the rural population, including poor households' easy access to essential socio-economic services such as basic medical care, education, administrative services and markets. The two sample roads pass through agricultural areas and as major proportion of beneficiaries are farmers, the improved transport linkages would reduce dependence of cultivators on local markets and expand market options for sale of agricultural produce. The improved project roads would also help timely supply of agricultural produce and perishables to demand areas thereby benefiting both poor and no-poor farmers. Better road condition will especially improve access of the poor farmers to the distant markets where higher prices are available for their produce. In addition, the marketing of such high value perishable products such as fruits would receive a further boost on a commercial basis, with more farmers investing in them, thereby potentially increasing annual incomes of farmers. As a sizeable number of the project population derive their livelihood from wage labor (agricultural and non-agricultural) it is expected that the improved connectivity would provide many of them with increased opportunities to access higher-paid, non-agricultural work, thereby improving their income levels and quality of life. Overall connectivity would increase investments in non-agricultural micro-enterprises and larger investments in transport services. One of the immediate benefits of the project for the laborers would be in terms of labor opportunities in the road construction work and maintenance thereafter.

C. Participation Process

During project preparation, discussion sessions, interviews and small group meetings were conducted with the Project communities in the sample subproject districts of Anantnag and Budgam with the objective of ascertaining their response to the Project, their needs and demands from the project, an estimate of losses, if any that they might suffer and steps to mitigate the same. These interviews, group meetings were held in groups comprising of men, women, farmers, indigenous people as well as other backward classes to ensure a comprehensive perspective on the Project as well as its impacts. The Project beneficiaries were unanimous in their desire for the project to proceed, and keenly aware of its prospective benefits to them.

D. Gender and Development

The improved levels of water supply and accessibility will reduce time, cost and work burden for water collection and storage, benefiting women, particularly poor women. Availability of clean drinking water and improved drainage facilities will decrease the instances of waterborne diseases, thus reducing poor women's health care burden associated with cleaning and family health care and also contributing towards improved health status and overall hygiene in the area. The road component of the Project will provide both men and women and offer special benefits to women by increasing the access to higher levels of health care outside the village.

E. Social Safeguards and other Social Risks

	Significant/ Non-Significant/ None	Strategy to Address Issues	Plan required
Resettlement	Non-Significant	<p>The Project is not expected to entail any significant resettlement issues in sample subprojects. The roads and bridges will be repaired and rehabilitated within the existing ROW.</p> <p>In case of urban sample subprojects in Jammu, no private land acquisition is required. For location of water reservoirs/ tanks, unused government land will be utilized which will not result in any resettlement impacts. Only during laying of water pipelines / distribution network mostly along existing road corridors and construction/ repair of drains might lead to minimal land acquisition and temporary disruption requiring temporary relocation of roadside street vendors. The precise impact, site of minimal land</p>	Resettlement Framework prepared

		<p>acquisition and relocation will not be known until the detailed design / construction stage.</p> <p>However, during detailed design and /or implementation, if there is any change in alignments / scope for any subproject (whether a sample subproject or a future subproject) under either the Urban Component or Roads & Bridges Component, the EA will follow the resettlement framework to prepare appropriate resettlement plans (full or short) to compensate and rehabilitate the project affected persons.</p>	
Indigenous People	Non-significant	<p>The social assessment identified the presence of one indigenous people (IP) group "<i>Ban gujjars</i>" in some project villages in the districts of Anantnag & Budgam. However, this IP group is largely mainstreamed and assimilated into the local population. The study undertaken for sample subproject preparation did not indicate that the Project generates any differential impacts, either positive or negative between and non-IP in project locations.</p> <p>The State Government agreed that, if IPs get affected in a manner (positive or negative) different from the mainstream population, indigenous people development plan (IPDP) would be applied to those IPs. The plan would ensure that they get project benefits equally with other segments of the society and are able to participate in the design of development interventions that affect them.</p>	<p>Not required</p> <p>Indigenous People's Development Framework (IPDF) prepared for additional subprojects</p>
Labor	None	No job loss will occur. The construction and operation of the Project will generate employment opportunities for local people during the construction phase, which would offer opportunities for employment to men and women at minimum wage rates (which are higher than prevailing agricultural wages) and equal wages for men and women.	Not required
Affordability	None	<p>There will be no affordability issues as no road user fees or taxes will be levied on the beneficiaries, other than taxes on the purchase of motorized vehicles.</p> <p>In the case of the water supply subproject, the current tariff for the low-income household would be increased from Rs15 to Rs30 per month, but this increase is still low compared with the average tariff of Rs100 for other Indian states. The communities are prepared to pay more if assured of adequate water supply. The social assessment indicates that 82% of the population purchase water regularly and already spend between Rs100 to Rs300 per month.</p>	Not required
Other Risks/ Vulnerabilities	Significant	During the study it was observed that the density of population along the road was high and with road construction utilizing the entire ROW, safety will be one of the major areas of concern. In addition to requiring ongoing monitoring to ascertain any resettlement impacts during detailed design and implementation stages, road safety measures rail guard and like proper markings at intersections will be integrated into the project design.	Not required

RESETTLEMENT FRAMEWORK

A. Introduction

1. Based on the discussions between the Government of India and Asian Development Bank (ADB), it was agreed to consider the provision of a loan for the investment in the state of Jammu and Kashmir (J&K). The proposed Project in the State of J&K would aim at rehabilitation of social infrastructure facilities including roads and bridges, water supply and other urban facilities, which have deteriorated or been damaged over the last 15 years of conflict in the state. In this regard, Infrastructure Rehabilitation Project in J&K is proposed to be undertaken in the state. The proposed Project primarily covers two components, namely, (i) Roads and bridges, including upgrading of state, urban rural roads, and rehabilitation and/or reconstruction of bridges and (ii) Urban Infrastructure, including repair, upgrading and completion of water supply, drainage and the purchase of garbage/drainage clearing equipment.

B. Land Acquisition and Resettlement in Sample Subprojects

2. In accordance with ADB's procedure for sector lending, sample subprojects have been selected in the provinces of Srinagar & Jammu for project preparation and processing. Out of these subprojects, the road and bridges subprojects have been identified in Srinagar Province and includes upgradation of Quazigund – Kulgam Road (16.5 km), Raithan – Palmaidan Arizal road (14.1 Km) and Kanikadal bridge (31 km). Under the urban infrastructure component, two sample subprojects namely Water supply and Storm water drainage, both in the Jammu city, have been selected. The projects include (i) Right Bank Tawi Water Supply Scheme and (ii) Talab Tilo Drainage Scheme in Jammu City.

3. As the Project entails rehabilitation of the existing infrastructure in the State, the sample subprojects under both the Components primarily involves up-gradation and revamping of the existing facilities wherein the land acquisition and resettlement impacts will be minimal. Under the Roads & Bridges Component the resettlement impact has been avoided by adopting most feasible design option. In case of the Kanni Kadal Bridge in Srinagar, it is noted that a project-associated approach road is being constructed by the Government of J&K through its own domestic funds, under a separate Project. Since the construction of these approach roads is interlinked with the bridge construction, the EA will probe further & assess the resettlement impacts of the approach road once the preliminary designs for this Project have been prepared. Based on this, Resettlement Plan will be prepared by the EA, as per the National Policy on Resettlement and Rehabilitation (NPRR) 2004, and ADB Policy on Involuntary Resettlement as laid down in this framework. The EA shall submit the RP to ADB for approval, prior to the award of civil contracts. In case of the urban infrastructure sample subproject, construction of the two reservoirs and pumping station would not entail any land acquisition as the land in case of pumping station is already available to the government and is free of any encumbrances or encroachments. However, laying pipelines and construction of drainage might lead to temporary disruptions and losses, the exact extent of which can only be measured at the detailed design stage.

4. This Resettlement Framework has been prepared for use in all subprojects, including sample subprojects, where the exact impact can only be measured at detailed design and for additional subprojects as required under ADB policy for sector lending. It outlines the objectives, policy principles and procedures for acquisition of land, if any, compensation and other assistance measures for affected persons, if any, and procedures for preparation of additional subprojects under the Loan. Economic Reconstruction Agency (ERA) will be the Executing Agency for the Project and will be responsible for preparing social analysis and resettlement plans for all subprojects, including sample subprojects (if required) as per this framework and submit to ADB for review and approval prior to contract award for each

subproject. Since the Project involves two sectors and several locations, there would be four Project Implementation Units, two each at Jammu (Urban and Roads) and Srinagar (Urban and Roads). The PIU (Urban) will implement the water supply and drainage components while the PIU (Roads/Bridge) will implement the roads and bridges components of the Project. PMU will oversee PIUs preparation and implementation of all resettlement plans for all subprojects under its responsibility.

C. Resettlement Policy and Framework

5. In India, compensation for land acquisition (LA) and resettlement assistance for project-affected people is generally governed by the Land Acquisition Act (1894), which has been amended from time to time. The State of Jammu and Kashmir holds a special constitutional status under Article 370 of the Constitution of India. The State has a separate Constitution promulgated in 1957. The separate Constitution of the State and Article 370 of the Constitution of India provide the State with much greater flexibility in managing its own affairs. The most important characteristic is that the residual authority of political, economic and social legislation vest with the State Government and not with the Central Government. Consequently, the land acquisition procedure in the State is governed by the State Land Acquisition (LA) Act, 1990. In J&K there is a unique system wherein each government line department has their designated officer known as Collector – Land Acquisition (LA) of the rank of Assistant Commissioner, who has the authority to initiate action on LA which makes the process simple and faster. The compensation under this process is given as per the circle rate. However, the Act is inadequate to provide mitigation to many of the project-related affected persons in accordance with ADB policy.

6. Following the state laws and regulation on land acquisition and incorporating ADB policy on *Policy on Involuntary Resettlement*¹ as well as the National Policy on Resettlement and Rehabilitation (NPRR) which was approved by the Government of India (GOI) in February 2004, the basic principles for the Project will include these elements with respect to each subproject, including sample subprojects, namely (i) as a matter of policy, land acquisition, and other involuntary resettlement impacts would be minimized as much as possible; (ii) any land acquisition and/or resettlement will be carried out and compensation provided in order to improve or at least restore the pre-Project income and living standards of the affected people; (iii) consultation with affected people on compensation options and preparation Resettlement Plan (RP) in accordance with this Framework; (iv) payment of compensation for acquired assets at market/replacement rates; (v) payment of compensation for lost land, housing, assets and resettlement allowances in full prior to prior to the contractor taking physical acquisition of the land and prior to the commencement of any construction activities; (vi) resettlement assistance to affected persons including non-titled persons (e.g., informal dwellers/squatters, and encroachers) prior to the contractor taking physical acquisition of the land and prior to the commencement of any construction activities; (vii) income restoration and rehabilitation; and, (viii) special attention to vulnerable groups.

7. In the absence of a policy consistent with ADB's *Policy on Involuntary Resettlement*, this Framework and resettlement procedural guidelines shall apply to all subprojects (sample as well as additional subprojects) under the Project so as to ensure that persons affected by land acquisition will be eligible for appropriate compensation and rehabilitation assistance. ADB's Policy on Involuntary Resettlement will prevail in case of any difference between such policy and the State's laws and regulations

¹ *Involuntary Resettlement*, Asian Development Bank, Manila, 1995.

8. Regarding the eligibility of compensation, all affected people will be provided with compensation and rehabilitation if their land is reduced, income source adversely affected, houses partially or fully demolished, and other properties such as crops, trees and other facilities or access to these properties will be reduced or damaged due to the Project – including during road/bridge construction or augmentation of water supply/drainage system. Lack of legal documents of their customary rights of occupancy/titles shall not affect their eligibility for compensation. During the Project implementation stage if there are any changes in the sample subproject design thereby adversely affecting the land, livelihood or other assets of the people, the same shall be compensated in keeping with this Framework.

9. Further, in case of land acquisition since land-for-land may not be a feasible option, the Framework stipulates payment of compensation as per the assessed value of the land and structure to the affected persons (AP). In addition to compensation payments made by the competent authority, the APs will receive additional assistance to match replacement costs, which is the difference between the market value and the assessed value, if any, for lost assets (land and houses), transaction costs such as stamps/registration costs (in case of purchase of replacement land) and other cash grants and resettlement assistance such as shifting allowance, compensation for loss of workdays/income due to dislocation. Female-headed households and other vulnerable households (such as ST/SC, disabled, elderly) will be eligible for further cash assistance for relocation and house reconstruction.

10. Income Restoration assistance shall also be made available to all those losing their main source of livelihood as a result of the Project construction in the subprojects. The income restoration strategy will focus on economic activities that will provide a sustained source of income over a longer period of time to enable restoration, or better still, improvements in APs' standard of living. A detailed inventory of losses will be made, based on the different kinds of losses incurred by the APs. In addition, a detailed assessment of existing skills will be made of the affected Persons, in keeping with which skill development inputs and trainings would be provided to them. Assistance will be provided for income generating vocational training and skill upgradation options, including starting suitable production or service activity and establishing linkages to local or national economic development and employment programs in the project area. The affected squatters shall be reorganized and relocated based on the severity of the impact. Enterprise development shall be especially promoted amongst the APs so as to contribute towards a sustainable income restoration opportunity to them.

11. The Entitlement Matrix Table lists various types of losses, identification/eligibility and entitlements and provides basic parameters for preparation of compensation and resettlement benefits. The matrix would apply to sample subprojects as well as additional subprojects, based on the specific project impacts.

D. Procedures for Resettlement Plan (RP) Preparation

12. Each additional subproject will be prepared, and the additional detailed design of each sample subprojects will be undertaken by the ERA in keeping with the following:

- (i) Social impact assessment surveys including Census survey and 20% socio-economic survey of the APs will be carried out for each of the subprojects (for both Roads & Bridges & Urban Infrastructure Components) based on preliminary technical designs;
- (ii) If impacts are found to be “significant,”² a full RP will be prepared for each subproject for approval prior to award of contracts for that subproject; and

² Source: *Asian Development Bank Operations Manual –Operational Procedure on Involuntary Resettlement*

- (iii) If subproject impacts are less than significant, a short RP will be prepared for that subproject for approval prior to award of contracts for that subproject.
- (iv) The RP would also include measures to ensure that socio-economic condition, needs and priorities of women are identified and that the process of land acquisition and resettlement does not disadvantage women.

13. The Project Implementation Consultants for preparatory studies for all subprojects, including the transitional TA consultants for sample subprojects, should include expert resettlement specialist familiar with ADB policy and procedures for preparation of additional subprojects RPs. The RPs must comply with ADB's *Policy on Involuntary Resettlement* and other social safeguard guidelines. In case impacts on Indigenous People are identified, then an Indigenous People's Development Plan (IPDP) must be prepared in keeping with ADB policy on *Indigenous People and IPDP Framework*. The ERA will submit the RPs to ADB for approval, which will be a condition for contract of civil work, including compensation payments prior to displacement.

E. Institutional Responsibilities

14. Resettlement Plan will include adequate institutional arrangements to ensure effective and timely design, planning, consultation, and implementation of compensation, resettlement and rehabilitation measures. The Project Implementation Units (PIUs) will have the primary responsibility of the preparation of RPs and their implementation. ERA/PMN would ensure that RPs are prepared and approved prior to award of contracts for each subproject, and for monitoring any changes to subproject design which may require re-evaluation of the need for and adequacy of the RP. PIUs will hire experienced NGOs/agency for assisting in preparation as well as implementation of RP. The ERA will also appoint a Resettlement Officer (RO) to supervise and do internal monitoring of the implementation work. The Resettlement Officer, PIU and the NGO/agency staff will undergo an orientation and training in resettlement management. The training activities will focus on issues concerning (i) principles and procedures of land acquisition; (ii) public consultation and participation; (iii) entitlements and compensation disbursement mechanisms; (iv) Grievance Redressal and (v) monitoring of resettlement operation. Independent monitoring agency/expert will be hired by ERA in agreement with ADB to undertake external monitoring for the entire project.

15. The ERA will further ensure resettlement budgets are delivered on time to the competent authority and the implementing NGOs for timely RP implementation.

F. Disclosure, Consultation and Grievances

16. Each RP will be prepared and implemented in close consultation with the stakeholders and will involve focus group discussion (FGD) and meetings, particularly with the affected households. This Framework will be made available in local language(s) during the public meetings at the community level. Copies of draft RPs will be made available at the local level public offices such as *tehsil* (revenue) and district offices, Block Development Office (BDO), and *gram panchayats* to stakeholders for local inputs prior to award of civil

Involuntary Resettlement Category A: Significant means 200 or more people will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating). Categories A projects require a full resettlement plan. Some of these projects may require a resettlement framework prior to the full resettlement plan. Involuntary Resettlement Category B: Not Significant include involuntary resettlement impacts that are not deemed significant and require a short resettlement plan. Some of these projects may require a resettlement framework prior to the short resettlement plan.

work contract. The summary of the RP will be disclosed on ADB website and the consultation will continue throughout the project implementation period.

17. Complaints and grievance procedures will be outlined in each RP. The grievances will be redressed at the local level in a consultative manner and with full participation of the affected households, or their representatives, project officials and local government representatives by the Grievance Redressal Committee (GRC). The GRC shall comprise members from District Land and revenue Department, representatives of affected people, including women and vulnerable groups. Grievances will be redressed within two to four weeks from the date of lodging the complaints. All costs incurred in resolving the complaints will be borne by the project.

G. Monitoring and Evaluation

18. The NGO will submit monthly progress report of RP implementation to ERA through the respective PIU. The ERA supported by the PIUs will conduct regular internal monitoring of resettlement implementation and prepare quarterly progress reports for submission to ADB. The reports will contain progress made in RP implementation with particular attention to compliance with the principles and matrix set out in the resettlement plan. The report will also document consultation activities conducted, provide summary of issues or problems identified and actions taken to resolve the issues, and provide summary of grievances or complaints lodged by households and actions taken to redress such complaints. The independent agency/monitoring expert will submit its reports biannually directly to ADB. The monitoring will be carried out biannually during project implementation.

Table 2: Entitlement Matrix Table

Type of Loss	Identification of Affected Households	Entitlement	Details
A: LOSS OF LAND			
1. Loss of agricultural land	Owner/operator of the affected plot	Compensation at Market/Replacement value	<p>a). Replacement land as per the law or cash compensation at replacement cost; Plus refund of transaction cost (land registration cost, stamps etc) incurred for replacement land.</p> <p>b). If the replacement value if land is more than the compensation determined by the competent authority, the difference will be paid as grant by the project directly to AP.</p> <p>c). APs with traditional title/occupancy rights will also be eligible for full compensation for land, plus the difference or additional grant.</p> <p>d) Replacement land would be purchased within one year.</p>
2. Loss of residential and commercial land	Owner and APs with traditional land rights	Compensation at market /replacement value	<p>a). Cash compensation under the LA Act plus replacement value.</p> <p>b). In addition, refund of transaction cost (land registration cost, stamps etc) incurred for replacement land.</p> <p>c) Replacement land would be purchased within one year.</p>
3. Temporarily affected agricultural land due to laying down of pipelines/ drainage system, plant site for contractors etc	Owner/operator of the affected plot	Cash compensation for loss of income potential	<p>a). Compensation for standing crops and trees as per the market rate.</p> <p>b). Restoration of land to its previous or better quality.</p> <p>c). Contractor to negotiate a rental rate with the owner for temporary acquisition of land.</p> <p>d). Compensation for crop losses for the duration of temporary occupation plus one more year necessary for the soil to be adequately prepared to its original productivity. Land restored to its original condition and returned to the owner.</p> <p>e). Project and contractor to ensure that persons other than the owner affected as a result of the temporary acquisition are compensated for the temporary period.</p>
B: LOSS OF RESIDENTIAL & OTHER STRUCTURES			
4. Loss of frontage, residential and commercial structures by owners	Owner of affected structure/ tenants of the structure	Compensation at replacement cost	<p>a). Reconstruction cost (without depreciation) for lost frontage/structure; affected person shall be allowed to take salvageable at no costs.</p> <p>b). A lump sum transfer grant (based on type of structures) as per the prevalent rate for shifting households assets and other belonging to relocated sites.</p> <p>c). Rental assistance as per the prevalent rate in the form of grant to cover maximum three month rental accommodation.</p> <p>d) Tenants would only be given rental assistance for a period of three months.</p> <p>e) Additional structures erected by tenants will also be compensated and</p>

			deducted from owner's compensation amount. f) Any advance deposited by the tenants will be deducted from owners total compensation package.
C: LOSS OF CROPS & TREES			
5. Loss of crops and trees	Owner/sharecropper/ Tenants affected	Compensation at 'market value'	a) Advance notice to APs to harvest their crops. b) Incase of standing crops, cash compensation for loss of agricultural crops at current market value of mature crops based on average production. c) Compensation for loss of timber trees at current market value of wood/timber or firewood depending on the kind of tree. d) In case of fruit trees, compensation at average fruit production for next 15 years to be computed at current market value.
D: LOSS OF LIVELIHOOD SOURCE			
6. Income from business/land through wage earning and other labor	Individual affected (titleholders, squatters & encroachers)	Lump sum	a). This is valid for persons indirectly affected due to the employer having being displaced, on case-by-case, based on local wage rates for three months b). Alternative economic rehabilitation grant for vulnerable groups at the rate of Rs 3,000 per eligible person on a lump sum basis. c) Compensation assistance equivalent to three months income based on type of business – small, medium, large on a case to case basis.
7. Loss of primary source of income	Households affected	Additional Assistance for income restoration and training	a) Assistance will be provided for income generating vocational training and skill upgradation options as per APs choice, including starting suitable production or service activity. b) Economic rehabilitation support and training
E: LOSSES OF NON-TITLEHOLDERS			
8. Encroachers	Household affected by ROW	No compensation for land but assistance for assets to vulnerable	a). Encroachers will be notified a time in which to remove their assets to be affected. b). Encroachers who are vulnerable (BPL) to be assisted case-by-case considering relevant facts on family income and existing assets. c). Compensation for structure at replacement cost to the vulnerable person.
9. Loss of structure by squatters and informal settlers	Households affected by ROW	No compensation for land but compensation for structure at replacement cost and other assistance	a). Compensation for loss of structure at replacement cost to be paid by the Project. b). A lump sum shifting allowance of Rs1,500 for temporary, Rs2,000 for Semi-temporary and Rs5,000 for permanent structures. c). Provision for training, including income generating assistance linked to productive activity.

F: LOSS OF COMMON PROPERTY RESOURCES			
10. Loss of Common Property Resources	Affected community	Cash compensation/reconstruction	a). Cash compensation or reconstruction of the community structure in consultation with the community.
G: REHABILITATION MEASURES			
11. Additional assistance to vulnerable groups	Households categorized as vulnerable (below poverty line households, female-headed households, SC/STs, disabled/elderly)	Lump sum assistance	a). Additional lump sum assistance of Rs2,000 per household to vulnerable groups such as –female headed households, households with disabled family members, indigenous people etc.
12. Any unanticipated adverse impact due to project intervention	Any unanticipated consequence of the project will be documented and mitigated based on the spirit of the principles agreed upon in this policy framework.		