



Report and Recommendation of the President to the Board of Directors

Project Number: 35290
June 2009

Proposed Multitranche Financing Facility India: North Eastern Region Capital Cities Development Investment Program

CURRENCY EQUIVALENTS

(as of 20 May 2009) -

Currency Unit	-	Indian rupee/s (Re/Rs) -
Re1.00	=	\$0.02092 -
\$1.00	=	Rs47.779 -

ABBREVIATIONS

ADB	-	Asian Development Bank
CAA	-	Constitutional Amendment Act
DEA	-	Department of Economic Affairs
DSMC	-	design, construction supervision, and management consultants
EARF	-	environmental assessment and review framework
FFA	-	framework financing agreement
FGIA	-	first-generation imprest account
FIRR	-	financial internal rate of return
IDC	-	institutional development consultant
IEE	-	initial environmental examination
IPCC	-	investment program coordination cell
IPDF	-	indigenous people development framework
IPEC	-	investment program empowered committee
JNNURM	-	Jawaharlal Nehru National Urban Renewal Mission
LIBOR	-	London interbank offered rate
MFF	-	multitranches financing facility
MOUD	-	Ministry of Urban Development
NEA	-	national executing agency
NER	-	North Eastern Region
NERCCDIP	-	North Eastern Region Capital Cities Development Investment Program
NGO	-	nongovernment organization
NRW	-	non-revenue water
NSC	-	national steering committee
O&M	-	operation and maintenance
PFR	-	periodic financing request
PHED	-	public health engineering department
PMMC	-	program management and monitoring consultant
PSP	-	private sector participation
SEA	-	state executing agency
SGIA	-	second-generation imprest account
SIPMIU	-	state investment program management and implementation unit
SOE	-	statement of expenditures
SSC	-	state steering committee
ULB	-	urban local body
WSS	-	water supply and sanitation

NOTES

- (i) - The fiscal year (FY) of the Government of India ends on 31 March. "FY" before a calendar year denotes the year in which the fiscal year ends, e.g., FY2009 ends on 31 March 2009.
- (ii) - In this report, "\$" refers to US dollars.

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FACILITY AND INVESTMENT PROGRAM SUMMARY

Borrower	India
Classification	<p>Targeting classification: General intervention</p> <p>Sector (subsector): Water supply and other municipal infrastructure and services (water supply and sanitation, waste management, urban sector development)</p> <p>Theme (subtheme): Environmental sustainability (urban environmental improvement), governance (public administration [national and decentralized]), capacity development (institutional development)</p> <p>Location impact: urban (high), national (low).</p>
Environment and Social Safeguards Assessment	<p>An environmental assessment and review framework has been prepared for the multitranche financing facility (MFF). The first periodic financing request (PFR) has been classified as environment category B. An overall summary initial environmental examination (IEE) and four IEEs have been conducted.</p> <p>A resettlement framework and an indigenous peoples' development framework have been prepared for the MFF. The first PFR is classified as category B for involuntary resettlement and as category C for indigenous peoples' development. A draft resettlement plan has been undertaken for Gangtok's water supply rehabilitation subproject.</p>
Sector Investment Program	<p>The proposed North Eastern Region Capital Cities Development Investment Program (NERCCDIP) has been designed to improve the urban environment and promote reforms for sustainable, efficient, and responsive urban service delivery in the capital cities of five states in the North Eastern Region (NER), namely, Agartala (Tripura), Aizawl (Mizoram), Kohima (Nagaland), Sikkim (Gangtok) and Shillong (Meghalaya). The physical investments involve improvements in water supply, sanitation and sewerage, and solid waste management infrastructure. Physical improvements will be coupled with urban governance, finance, and service delivery reforms and a capacity-building program to support the implementation of NERCCDIP and the urban reform agenda.</p>
Multitranchise Financing Facility	<p>The MFF will finance subprojects under NERCCDIP, provided the central Government and the state governments of Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura comply with the assurances to the Asian Development Bank (ADB), and the constituent subprojects are in line with those assurances and the criteria set out in the framework financing agreement (FFA).</p>

ADB will provide loans to finance projects under the MFF as soon as the projects are ready for financing and after a satisfactory related PFR is submitted. Each loan will constitute a tranche and may carry terms different from the financing terms of previous or later loans. The choice of financing terms will depend on the project and ADB's financing policies at the time the loan is documented in a legal document. Tranches may be provided in sequence or simultaneously, and may overlap.

Rationale

A core objective of the 11th Five-Year Plan (2007–2012) of the Government is reducing regional disparities. Investments in infrastructure and services in the NER, one of India's less-developed regions, have priority. The 10th and 11th plans highlight the vital role of capital cities in NER's socioeconomic transformation. Given the difficult access to and remoteness of NER, the capital cities perform a function of a much higher order than other cities of similar size in India. With the opening up of trade with neighboring countries and the emergence of transport corridors in the region, these cities are expected to play an even greater strategic role in NER's economy as commercial and business hubs besides being administrative centers. Investments in urban infrastructure and services will be the key to unleashing the potential of these cities to catalyze the growth of NER.

The 11th plan also stresses the importance of improving the quality of governance and service delivery systems, to pace NER's development. It advocates a two-pronged approach linking funds for capital investments with reforms. The plan's main reference for reforms is the 74th Constitutional Amendment Act of 1994, which promotes decentralized urban governance. With the Jawaharlal Nehru National Urban Renewal Mission, the Government has reaffirmed its commitment to urban development through investments in a number of cities, subject to the cities' commitment to reforms for decentralized and sustainable urban service delivery. NERCCDIP, as well as the sector road maps from which it is derived, is guided by this policy framework. Its aim is to contribute to the Government's goal of bringing the NER up to par with developed regions of India. The Program links capital investments to reforms for sustainable impact. It targets the capital cities that will spearhead the development of NER linking India to the neighboring states.

Impact and Outcome

The expected impact of NERCCDIP is improved environment and well-being of urban residents in the five capital cities. The expected outcome at the end of the program will be sustainable and increased access to better urban services in five program cities. To this end, NERCCDIP will (i) improve and expand urban infrastructure and services in the cities, including slums; and (ii) strengthen the urban institutional, management, and financing capacity of the local institutions, particularly the urban local bodies. NERCCDIP will ensure that benefits from investments are

enjoyed by the poor, women, and all other vulnerable groups.

Cost Estimates

Of the estimated \$1.9 billion in long-term investment requirements for the NER capital cities according to the sectoral road maps, NERCCDIP is expected to provide \$285.7 million equivalent.

Financing Plan

(\$ million)		
Source	Total	%
Asian Development Bank	200.0	70
Government of India and state governments	85.7	30
Total	285.7	100

Source: Asian Development Bank estimates.

Facility Amount and Terms

A facility of up to \$200.0 million from the ordinary capital resources of ADB will be provided under ADB's London interbank offered rate (LIBOR)-based lending facility. The Government will ensure that the state governments of Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura use the proceeds of each tranche for the expenditures of NERCCDIP, according to the conditions set forth in the FFA and the legal agreements for each tranche.

A loan of \$30.0 million has been requested under the first PFR to cover part of the cost of project 1. The Government will make the loan proceeds available to the state governments through government grants (90%) and government loans (10%).

Period of Utilization

NERCCDIP resources will be tentatively available in three tranches (or more if needed) until 30 June 2016 (the last PFR is expected to be submitted by 31 December 2012).

Estimated Program Completion Date

31 December 2015

Executing Agency

The national executing agency will be the Ministry of Urban Development (MOUD). The state executing agencies (SEAs) will be the Urban Development Department for Tripura and Nagaland, the Urban Development and Poverty Alleviation Department for Mizoram, the Urban Affairs Department for Meghalaya, and the Urban Development and Housing Department for Sikkim.

Implementation Arrangements

An investment program coordination cell (IPCC) will be established in MOUD. IPCC will be responsible for the overall management of NERCCDIP in the five cities. This team of administrative and financial, technical, and social and environmental officials (at least three), under an investment program manager, will (i) monitor overall NERCCDIP physical progress and implementation, (ii) review the subprojects submitted by the states according to the subproject selection criteria and submit PFRs to the Department of Economic Affairs, (iii) consolidate payment and reimbursement requests, (iv) report

to ADB on the progress of NERCCDIP implementation and other matters, (v) monitor implementation of the overall reform program and compliance with loan covenants, and (vi) provide assistance to the states. A national steering committee will monitor the overall use of the MFF.

A consolidated state investment program management and implementation unit (SIPMIU) will be established in each of the five SEAs. A state steering committee (SSC) and an investment program empowered committee will also be established in each state. The SIPMIU, to be headed by a state investment program director, will be responsible for managing and implementing NERCCDIP in the state, including monitoring its progress; preparing and forwarding subprojects for approval to SSC and MOUD; ensuring compliance with the design and monitoring framework, subproject selection criteria, loan covenants, and urban reform targets; and coordinating with MOUD and other state agencies in the selection of consultants and contractors, the approval of the detailed designs of the subprojects, the preparation of disbursement requests and their forwarding to MOUD for submission to ADB, the administration of the contracts of consultants and contractors, the certification of payments and the preparation of change orders, and the implementation of awareness programs and environment and resettlement plans.

Procurement

All goods and services under NERCCDIP will be procured according to ADB's *Procurement Guidelines* (2007, as amended from time to time). Civil works contracts estimated at \$5.0 million or more, and supply contracts valued at \$1.0 million or higher, will undergo international competitive bidding. Civil works and supply contracts costing less than those amounts will be procured through national competitive bidding. Goods below \$100,000 in value will be procured through shopping. The feasibility of community contracting will be examined individually for low-cost sanitation and other community works not exceeding \$100,000 in value.

Consulting Services

Consultants will be hired by each of the five SIPMIUs to support design, construction supervision, and management, and institutional development activities. The need for consulting services is expected to decline gradually during implementation as the SIPMIUs and SEAs increase their capacity, and will be reviewed after the first two tranches are completed.

MOUD will also be supported by a program management and monitoring consultant, who will (i) assist program coordination by monitoring and reporting regularly on progress, identifying implementation bottlenecks, and recommending corrective actions; (ii) review the subproject appraisal reports prepared by the SIPMIUs and support the preparation of PFRs for submission; (iii) support capacity-building activities; and (iv) draft an urban

reform action and monitoring plan.

Agencies or institutions, including established registered nongovernment organizations (NGOs), will also be hired for participatory planning, community awareness activities, and surveys, among others. All consultants and NGOs will be recruited according to ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time).

**Investment Program
Benefits and
Beneficiaries**

NERCCDIP will benefit the estimated 1.2 million people who are expected to be living in the five cities by 2015, by improving the urban environment and thus the health and living conditions and productivity of the residents. The rise in productivity and urban efficiency resulting from the urban infrastructure and service improvements will benefit their economies. As their infrastructure and services improve, the cities will be better able to answer the growing needs of industry and trade resulting from investments in transport and NER connectivity. All NERCCDIP interventions will benefit the poor directly or indirectly. Improvements in citywide infrastructure, e.g., sanitation and sewerage, will have a profound impact on the poor, most of whom live in vulnerable and low-lying areas. Further, NERCCDIP will ensure sustainable urban development by supporting urban reforms and capacity building for better urban governance and service delivery. All these improvements will reduce the disparities between NER and the developed regions of India.

Risks and Assumptions

NERCCDIP's potential risks include the following: (i) public resistance to the water metering program; (ii) low connectivity to the new sewerage network; (iii) delayed implementation of the urban reform agenda by the state governments, and unwillingness of the public to pay for the services; and (iv) slow program implementation due to the states' unfamiliarity with ADB procedures.

Measures incorporated into the program design will address these potential risks. Civic awareness programs will stimulate demand for better services and willingness to pay. Regulations to be issued will require residents to connect to the new networks. NERCCDIP's strategy of linking investments to reforms will create incentives for reforms and ADB's continued policy dialogue during NERCCDIP implementation will provide further reinforcement.

The risk of slow implementation is being addressed from several angles including (i) ongoing technical assistance in project implementation and capacity development, (ii) the early appointment of project management consultants, and (iii) the proposed establishment of an ADB extension office in the NER.

Finally, to address the risk of destruction to assets due to natural hazards, earthquake faults and slip lines have been mapped and

various components have been designed to protect against damage. All detailed designs will incorporate further measures, such as comprehensive geotechnical assessments.

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed multitranche financing facility (MFF)¹ for India for the North Eastern Region (NER) Capital Cities Development Investment Program (NERCCDIP). The design and monitoring framework for the NERCCDIP is in Appendix 1.

II. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES

A. Performance Indicators and Analysis

2. The NER, where the five states of Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura are located, is one of India's least-developed regions. It is remote, landlocked, and far from the markets in the mainland. Only 2% of its territory connect the region to the rest of India through a narrow land corridor. The five states share an international boundary with Bangladesh, Bhutan, the People's Republic of China, Myanmar, and Nepal. The five states are encumbered by difficult terrain and a mountainous periphery. In these predominantly agricultural and government service economies, there is scant exploitation of natural resources and progress in industry, the private sector and foreign direct investment are negligible, and unemployment is high. In 2003/04–2006/07 economic growth in the NER was 3.4% yearly, compared with the national average of around 7.8%. The region contributes only 0.2% to the national output but 4.4% of the total population. Social indicators in the NER have nonetheless improved over the last decade. Literacy is nearly 100% in three of the five cities and about two thirds of the population of all five cities² has had at least a secondary education. While life expectancy at birth is lower than the national average, the infant mortality rate is better than the national average of 68 per 1,000 live births.

3. The urbanization rate in NER (15%) is lower than in the rest of India (27.8%). The rapid growth of urban populations since independence has been driven by high natural growth rates, accession to statehood, insurrections in the countryside, and the flow of government funding into NER. Urban development in the five states is dominated by the capital cities, which account for more than 60% of the states' total urban population. The population in the five capital cities ranges from a low of 93,000 in Gangtok to a high of about 380,000 in Agartala. These cities have grown annually by up to more than 5% in the past. The growth rates are projected to decline in the future but are still expected to range from 1.8%–3% yearly over the next 15 years.

4. All five capital cities are in seismic zone V and are therefore highly susceptible to earthquakes. All have tropical monsoon climates. The location of all the cities except Agartala, on top of steep mountain slopes, constrains physical growth, makes development costly, and contributes to vulnerability to landslips. The NER's poor connectivity with and isolation from the rest of India and the countries on its borders severely limits the development of the five cities. But the geographic status of the states and the capital cities is changing as ongoing and planned transport projects link the capital cities to one another, to the rest of India, and to the neighboring countries. Improved connectivity, combined with India's recent policy of opening up its borders to trade with neighbors and to a better relationship with the rest of South Asia, as

¹ NERCCDIP has been designed as an MFF primarily because of the broad and complex institutional and financial reform agenda associated with the Government's road map, which requires a long-term partnership between ADB and India and the North Eastern states, and performance-based approaches. MFF will allow flexibility in investment decisions based on the needs and constraints in each city, progress with the reform agenda, and the readiness of individual subprojects and cities. It will enable long-term engagement to build the capacity of urban local bodies and will provide proper incentives for performance improvements, with individual loans linked to reform targets stretched over a realistic time frame.

² Agartala (Tripura), Aizawl (Mizoram), Gangtok (Sikkim), Kohima (Nagaland), and Shillong (Meghalaya).

well as with Southeast and East Asian countries, presents immense opportunities for NER's capital cities, which could become dynamic economic hubs.

5. All the states rank low on the infrastructure index. The five capital cities are held back by inadequate urban infrastructure and services from fulfilling the development potential created by a latent productive labor force and increasing connectivity. From 15% to 25% of the population in these cities lives below the poverty line, according to the states' income-based classification. Poverty based on non-income factors (access to basic urban services) is higher, indicating that the lack of basic infrastructure and services not only constrains the economic growth of the cities but also contributes in a major way to poverty.

B. Analysis of Key Problems and Opportunities

1. Inadequate Urban Infrastructure and Services

6. Urban infrastructure and services (water supply, sanitation, drainage, solid waste management, urban transport, and roads) in the five NER cities are considered grossly inadequate.³ The percentage of the population with access to central piped water supply ranges from 50% in Shillong to 80% in Gangtok. Service is poor. Agartala has piped water for only a few hours a day; Aizawl, Kohima, and Shillong are supplied with water for only a few hours a week in the dry season. Distribution systems in all the cities are old and inadequate, and production capacity in Aizawl and Kohima is substantially below demand. Most cities have "bunched" service connection systems, where consumers make their own connections to small supply tanks. These individual connection pipes, mostly laid along drains, cause system inefficiencies, are prone to contamination, and interfere with other services. A critical issue is the high rate of unaccounted-for water in the cities: officially it ranges from 35% to 50%, but the actual figures are higher. Water is unmetered in the cities except Aizawl, and to a limited extent Kohima, where metering and volumetric charging have recently been introduced.

7. There are no centralized piped sewer systems in the cities except Gangtok, and its system serves only about 12% of the population. About 72% of households in the region have septic tanks or soak pits with wastewater percolating into the soil, and an overflow to the nearest drain or stream. Sullage water is often directed to drains. On average, about 95% of the population of the cities has access to a toilet (or a shared toilet) at home, while 5% uses either a public toilet or an open field. Septic tank emptying services are insufficient in all the cities except Aizawl, and there are no waste treatment facilities. Public health regulations that control the discharge of sewage are still to be met. Inadequate sanitation causes pollution of the ground, streams, and roadside drains, presenting a severe environmental and health risk. Inadequate sanitation is also a major cause of landslips in all the hill cities.

8. On average, only 30%–50% of solid waste generated is collected and, depending on the State, 3%–34% of households have access to house-to-house services. There is little or no provision for the collection and disposal of hazardous wastes; these are generally disposed of through open dumping and burning. A substantial proportion of households dump their wastes in the nearest open space or drain, and many others do the same from time to time. The situation is worse in low-income areas, where, despite the communities' best efforts, there are simply not enough resources to provide the necessary services, and in the hill towns, where the hills are too steep to allow collection vehicles to enter and bins are difficult to use. Equipment use is generally inefficient, and wastes collected, transported, and disposed of are not recorded.

³ LEA International. 2006. *TA4348-IND: North Eastern Region Urban Development Project*. Final Report. Guwahati.

Although management is not without difficulties, Gangtok and Shillong operate composting plants. Other cities have no treatment facilities.

2. Urban Governance and Management

9. An analysis of urban institutions and finances in the five NER states suggests that inadequate urban governance and management systems contribute significantly to poor urban planning, infrastructure, and services in the cities. Dedicated urban local authorities are still at an early stage of development in several capital cities. Only Agartala has a fully functioning urban local body (ULB) with a service area that encompasses most of the urban built-up area, but its jurisdiction, ward boundaries, and municipal limits still have to be finalized. Shillong has a municipal board but no elected council, and the board serves only about 30% of the city. Kohima has a municipality with an elected council, but its effectiveness is circumscribed by legal provisions inconsistent with the concept of a ULB, its pure-conservancy functions, and small area of coverage. In Gangtok, no ULB has existed since 1985; the Sikkim Municipal Bill was passed in 2007 but is yet to be implemented. The Aizawl Municipal Council was formed in June 2008 and elections to the council are to be held within 12 months, but jurisdiction has yet to be defined and functions are still to be transferred.

10. Urban governance is further complicated by conflicts between modern legislation and traditional governance structures in some cities. Shillong, for example, comes under the 6th Schedule to the Constitution, which calls for traditional systems of governance for scheduled tribes.⁴ The overlapping jurisdictions of modern and traditional structures affect service delivery. Moreover, without fully functioning ULBs, these cities provide many urban services through their states' departments. But these departments, having limited resources and wide responsibility for both urban and rural areas within the states, cannot provide the dedicated management needed to meet the diverse demands of the growing and densely populated cities. Water supply and sanitation are generally the responsibility of the state departments of public health engineering (PHEDs). Infrastructure builders by tradition, PHEDs are not equipped with operation and maintenance (O&M) skills and resources. They lack proper asset management systems and their operating costs are often high. Sanitation regulations are also poorly enforced.

3. Urban Finance

11. Urban infrastructure and services in the five capital cities are mostly financed by the central Government through the state governments. Only a few small schemes are financed by the private sector. Most funding goes to major capital works; little funding is set aside for the repair and replacement of infrastructure. The states and ULBs lack revenues of their own to attend to the O&M of infrastructure and services and to sustain service delivery.

12. User charges and urban-based taxes are only partially implemented, if at all. Among the five capital cities, only Agartala and Shillong⁵ levy property taxes.⁶ The introduction and rationalization of user charges is also a challenge. Water charges are levied in all the cities but

⁴ In Shillong, the *dorbar* (traditional assembly or council of elders) system of governance coexists with the state government.

⁵ The Shillong Municipal Board has already set up a unit area-based system with a property database backed by a geographic information system. Agartala, on the other hand, is still to migrate to such a system.

⁶ In Aizawl a government notification regarding the introduction of property tax has been issued. Kohima has no property tax, although the Nagaland Municipal Act, 2001, provides for one. In Gangtok, the introduction of property tax should follow the formation of a ULB.

are far below the operating costs and are, for the most part, not based on consumption.⁷ They cover no more than 10%–30% of O&M costs. Aizawl and, to a lesser extent, Kohima have introduced water metering and volumetric charges, not without problems. Aizawl and Kohima levy no solid waste charges. Agartala and Shillong obtain revenues from a solid waste management tax included in the property tax. Gangtok levies small “toilet charges” monthly and solid waste management fees yearly. Again, revenues are substantially below O&M needs. Poor financial management and accounting systems⁸ are also responsible for the poor services. In these cities the gap between the residents’ desire and willingness to pay for better services and the level of services is widening.

4. External Assistance and Lessons Learned

13. **External Assistance.** The five NER states have not received any large-scale external assistance for urban sector development. Only the roads sector has had sizable external assistance, from the World Bank and the Asian Development Bank (ADB). External assistance to the urban sector has been confined to pilot small-scale infrastructure schemes and capacity building. The Australian Agency for International Development (AusAID) recently completed a small water supply, sewerage, and solid waste management project in Gangtok and Shillong.

14. Until recently, ADB assistance to the urban sector in India has been directed toward other states. ADB has provided 38 technical assistance (TA) grants totalling \$36.75 million to India’s urban sector since 1993, and has approved \$3.61 billion in loans for 14 projects. The assistance, mostly for integrated urban infrastructure and services projects, has been aimed at poverty reduction through shared growth, social development, and good governance. Recently, given the need to redress the growing regional disparities in the country, ADB committed to diversify its operations to the northern states, which it identified as priority geographic areas of assistance. An advisory TA for the preparation of an urban sector profile of the North Eastern states was followed by a project preparatory TA for the NERCCDIP. In addition, an advisory TA⁹ for capacity building in NER is being implemented to provide project management and implementation support to agencies and improve their project preparedness. Appendix 2 gives details of external support to the urban sector in India.

15. **Lessons.** ADB’s experience in the urban sector in India reveals that complex issues in urban development projects¹⁰ (i) require greater coordination among concerned agencies, stronger institutional capacity, and the active participation of stakeholders; (ii) delay project implementation, especially during project start-up; and (iii) compromise the sustainability of project assets. The experience suggests that (i) up-front support for capacity building in project management and implementation minimizes delays in project start-up; and (ii) more attention must be paid to ensuring sustainability by building the capacity of ULBs and other urban institutions and service providers to plan, manage, and finance urban development. A number of NER-specific lessons can also be gleaned from the ongoing World Bank–funded roads project. In particular, low institutional capacity, poor connectivity, and difficult terrain delay implementation, constrain supply, and raise costs beyond the amounts envisaged at the design stage. These lessons indicate the need to extend the period of implementation, including

⁷ In Agartala and Shillong, revenue functions for water services are vested in the ULB, while capital works and O&M (only partly for Shillong) rest with PHED. In other states, all three functions are PHED responsibilities.

⁸ Accounts of ULBs in Agartala, Kohima, and Shillong are based on single-entry, cash-based systems. Other agencies (PHED, etc.) all keep regular accounts on the same basis. Aizawl, on the other hand, still has to prepare a state accounting manual.

⁹ ADB. 2006. *Technical Assistance to India for the Project Implementation and Urban Management Improvement in the North Eastern Region (Phase I)*. Manila (approved for \$1 million).

¹⁰ ADB. 2006. *Special Evaluation Study on Urban Sector Strategy and Operations*. Manila.

construction, and to address land ownership issues by concentrating public services on government land. The design of NERCCDIP takes the foregoing lessons into account.

5. Rationale: North Eastern Region Capital Cities Development Road Map

16. As reflected in its policies, the Government of India attaches increasing importance to urban development. Under the 10th Five-Year Plan (2002–2007) the Government committed to invest more in less-developed states and to build sustainable infrastructure in major urban areas.¹¹ The Jawarhalal Nehru National Urban Renewal Mission (JNNURM) was of particular significance in defining a common framework for reform¹² and the associated conditional infrastructure investment program.¹³ The five capital cities covered by NERCCDIP are among the 63 JNNURM cities. All five NER state governments have signed memorandums of agreement with the Ministry of Urban Development (MOUD). The agreed targets and the status of their implementation are summarized in Supplementary Appendix A.

17. The 11th Five-Year Plan (2007–2012), while focused on more broad-based and inclusive growth, sets to reduce poverty and disparities between regions and communities by ensuring access to basic physical infrastructure and a comprehensive strategy for better health, among others.¹⁴ The recently approved National Urban Sanitation Policy is an immediate outcome of this vision. The private sector is identified as a key partner for rapid growth, although the 11th Plan also recognizes that public-private partnerships may not always be possible, especially in more economically disadvantaged areas of the country, and that continuous support from the public sector is required. The strategic role of the capital cities in NER's socioeconomic transformation is also recognized. Given the difficult terrain and remoteness of NER to mainland India, the capital cities perform a function of a much higher order than capital cities of similar size in the rest of India. With border trade with neighboring countries opening up and emerging transport corridors improving the connectivity of the cities with one another, with mainland India, and with neighboring countries, these cities are expected to play an even greater role in the region's economy as commercial and business hubs in addition to being administrative centers. The timely provision of urban infrastructure and services in the capital cities would be a key to harnessing the emerging economic potential of these cities.

18. **The Vision.** The North Eastern Region Capital Cities Development Road Map (Appendix 3) is guided by the 10th and 11th plans, major urban policy and legislative instruments, and state-specific policies, targets, and aspirations.

¹¹ The main reference for reform was defined to be the 74th Constitutional Amendment Act of 1994 (74th CAA), creating an enabling framework for ULBs to play a pivotal role in urban service delivery and to be equipped with necessary financial and administrative powers and capacity. Key areas of support were (i) broad-based urban sector reforms giving the ULBs autonomy and debt servicing capability so that they could gain access to capital market funds, (ii) rationalization and improvement of the property tax system, (iii) promotion of public-private partnerships in urban sector activities, (iv) studies to develop a disaggregated picture of urban growth, and (v) better O&M of municipal assets.

¹² JNNURM reiterates the need for the states to empower ULBs to pursue reforms for the levy of user charges, the enhancement of property tax, the rationalization of establishment costs, and the improvement of financial management systems. It also advocates balancing asset creation with asset management, incorporating private sector efficiencies into service delivery, and making service providers financially sustainable.

¹³ The 10th Plan supported a two-pronged approach whereby funds for capital investments were linked to urban governance, finance, and service delivery reforms. With this program, the Government reaffirmed its promise of sustainable urban development by committing sizable funds for fast-track investments in 63 cities across the country, subject to the cities' commitment to a range of reforms.

¹⁴ Preliminary exercises suggest that investment in infrastructure (defined as road, rail, air, and water transport; power generation, transmission, and distribution; telecommunication; water supply; irrigation; and storage) will need to increase from 4.6% of GDP to around 8% in the 11th Plan period. Specific targets set forth in the 11th Plan include (i) the provision of clean drinking water for all by 2009, and (ii) the treatment of all urban wastewater by 2011–2012.

19. The long-term investment requirements (for the next 20 years), assessed as part of the road map, is estimated to exceed \$1.9 billion,¹⁵ of which \$1.1 billion is needed for water supply, sewerage and sanitation, and solid waste management. NERCCDIP constitutes over 12% of the longer-term urban infrastructure investment requirements and about 21% of the total required investment in the three captioned subsectors. It covers priority investments with emphasis on upgrading infrastructure and services, improving operational efficiencies, testing new methods of delivery of better services, and establishing the institutional, operational, and financial foundation for sustainable improvements. Improvements are envisaged to continue after the completion of NERCCDIP, on the basis of proven approaches and enhanced institutional and financial capacity to increase service coverage by 2027. The states will need to avail themselves of alternative sources of financing to meet the remaining investment requirements, from potential sources like JNNURM, the non-lapsable central pool of resources, multilateral institutions, and the private sector.

20. The road map, in line with the Government's policies, also sets a vision for the development of urban governance, finance, and service delivery frameworks in the capital cities. The vision entails a number of sequenced municipal reforms to develop legislative and institutional frameworks for ULBs and strengthen the capacity of ULBs for effective and accountable urban service delivery. The road map stipulates as well the need for infrastructure and service provision to have a commercial and self-sustaining basis and for the required institutional mechanisms to be put in place. The cities are foreseen to gradually move toward developing water and sewerage agencies that are capable of performance-based service delivery and financial self-sustainability. The institutional reform measures are also accompanied with reforms that will create sustainable sources of revenues by introducing and rationalizing user charges and urban-based taxes.

21. NERCCDIP is designed to use the MFF because of the broader and complex agenda for the development of the NER capital cities. The road map involves providing core urban infrastructure and services in five capital cities with similar geographic and locational attributes and growing interconnectedness but with needs and absorptive capacities that vary in degree. MFF, while enabling a single development framework, allows investment decisions to be flexible and based on the specific needs of each city and the readiness of individual subprojects, and not on a strict definition of needs up-front. The road map also involves a complex agenda of institutional and financial reforms that necessitates a long-term partnership between ADB and India and its NER states, and performance-based approaches. MFF allows long-term engagement to build the capacity of urban institutions and ULBs and proper incentives for improved performance, with individual loans linked to reform targets over a realistic period.

III. THE PROPOSED INVESTMENT PROGRAM

A. Impact and Outcome

22. The expected impact of NERCCDIP is improved environment and well-being of urban residents in the five capital cities. The expected outcome at the end of the program will be sustainable and increased access to better urban services in five program cities. To this end, (i) urban infrastructure and services in the capital cities, including slums, will be improved and expanded; and (ii) the institutional, managerial, and financial capacity of the urban institutions, including ULBs, will be strengthened. The benefits from investments will be enjoyed by the poor,

¹⁵ This value has been derived from adding the estimate for infrastructure development in each individual city development plan (as required under JNNURM) and updated in value as of October 2008.

women, and all other vulnerable groups, and any negative environmental and social impact will be minimized or prevented.

B. Outputs

23. There are two groups of outputs: (i) urban infrastructure and service improvements, including the rehabilitation, improvement, and expansion of water supply, sewerage and sanitation, and solid waste management facilities (part A); and (ii) program management and implementation assistance, and comprehensive capacity building for institutional and financial reforms, planning, O&M, revenue mobilization, and financial management, to increase sustainability (part B). The size and type of the urban infrastructure and service improvements under part A may vary depending on the specific needs and demands of each city, as determined in infrastructure master planning exercises, social surveys, and stakeholder consultations.¹⁶

1. Part A: Urban Infrastructure and Service Improvement

24. **Water Supply.** Investments in this regard will be aimed at improving the quality of water and extending the service duration all year round to at least 12 hours a day throughout the system and 24 hours a day in most parts of the cities, and completely meeting demand by the end of the NERCCDIP. The investments, to be made in Agartala, Aizawl, Gangtok, and Kohima, will involve expanding water production capacity through source and treatment works (in Agartala); expanding and rehabilitating distribution systems, reservoirs, and machinery; replacing “bunched” service connections (in the four hill cities) and old and leaking connections; installing bulk and consumer meters; and reducing non-revenue water (NRW). The infrastructure improvements will be supported by awareness campaigns to promote water conservation, demand for water supply improvements, and sustainability and cost recovery objectives.¹⁷

25. **Sewerage and Sanitation.** The sewerage and sanitation improvement program will take a two-pronged approach comprising (i) the construction of central piped sewerage and sewage treatment systems and the provision of service connections; and (ii) the improvement of sanitation systems that rely on individual systems, particularly septic tanks and soak pits, until sewerage systems can be built. Community latrines will also be provided in low-income areas and low-income households will be assisted in improving sanitation. The sewerage improvements are designed as modestly sized components serving the worst-affected areas of all cities but Agartala¹⁸ as the first stage of the development of sewerage master plans. The improvements take into account (i) availability of enough wastewater to provide for gravity flows; (ii) efficient zoning of each city to minimize the number of treatment plants while still relying on gravity flows, and to avoid pumping; (iii) avoidance of sewage overflows due to pumping station failure from power supply shortage; (iv) alignment and avoidance of landslip and earthquake risk; and (v) affordability. The infrastructure improvements will be supported by awareness campaigns to promote understanding of the need for better sanitation, increase demand for the improvements, and gain broad acceptance of higher service rates to cover the cost of the

¹⁶ A comprehensive description of all activities proposed under the NERCCDIP and the first periodic financing request for each of the cities can be found in Supplementary Appendix B.

¹⁷ Improvements in water schemes for Shillong are being considered for JNNURM financing.

¹⁸ The government of Tripura has indicated that financial assistance for the construction of a sewerage system in the Central Zone has been allocated from other financiers, such as JNNURM. In the interim, according to data from the socioeconomic surveys, consumers must be more willing to pay for sewerage services. Awareness programs under the MFF will support this initiative.

improvements. Assistance in implementing sanitation regulations to prevent unsafe discharge of sanitary wastes also forms part of the sewerage improvements.

26. **Solid Waste Management.** The improvements in solid waste management will increase service coverage to more than 80%. To this end, (i) awareness campaigns will be launched to promote understanding of the importance of good sanitation and in-house waste collection, segregation, and recycling; (ii) solid waste collection, transportation, treatment, and disposal will be improved through the provision of solid waste equipment, the construction of transfer stations as needed, and the development of sanitary landfill sites and composting plants;¹⁹ and (iii) solid waste operations will be made more efficient through the introduction of improved management systems for the routing and scheduling of vehicles, other machinery, and staff and training programs to maximize the benefits from investments in infrastructure and equipment. All program components are described in detail in Supplementary Appendix B.

2. Part B: Capacity Building and Investment Program Management

27. **Urban Governance and Financing.** NERCCDIP will support the state governments and ULBs in meeting their commitments to the institutional and financial reform agenda in line with the policies of the central and state governments. In particular, it will help (i) further reforms associated with the creation and strengthening of ULBs, (ii) incorporate efficiencies and commercial principles into service delivery through the gradual introduction of sustainable service delivery agencies especially in water supply and sewerage, and (iii) implement financial management reforms to promote sustainable sources of financing and the transparent use of financial resources for service delivery.

28. **Municipalization.** NERCCDIP will assist the states in implementing the 74th CAA by supporting them in (i) conducting civic awareness campaigns and public hearings toward the creation and strengthening of ULBs, (ii) preparing or strengthening municipal legislation²⁰ with a view to transferring functions from the state to the ULB, and (iii) conceptualizing and implementing organizational development measures and introducing operational systems improvements.²¹ Efforts will be made to integrate traditional structures into emerging urban governance frameworks. Such improvements will be complemented by comprehensive human resource development programs and training for officials.

29. **Municipal Financial Reform.** Improvements will be made in accounting and budgeting systems and practices through the adoption of accrual-base accounting, the use of geographic information systems in revenue administration, and the computerization of financial systems. Assistance will also be extended in the design, introduction, and implementation of consumption-based and progressive user charges and improved property taxation to enable the recovery of full O&M costs by the end of the NERCCDIP implementation period.

¹⁹ Improvements will be introduced in all program cities. Composting facilities will be built in all towns but Shillong and Gangtok, which already have such facilities.

²⁰ One or more of the following actions may be included: (i) framing rules under the Municipal Act to govern day-to-day administration, (ii) issuing an executive order constituting a municipality, (iii) agreeing on general principles of demarcating municipal boundaries and wards, (iv) amending the Municipality Act according to the 74th CAA, (v) issuing government orders and notifications transferring functions listed under the 12th Schedule of the 74th CAA, (vi) framing the rules for ward delimitation, (vii) holding municipal elections, (viii) agreeing on a proposed staffing and reporting structure and manpower requirements and submitting recommendations on these to the State Finance Commission, (ix) constituting the State Finance Commission and implementing its recommendations, and (x) submitting recommended municipal budget allocations to the State Finance Commission.

²¹ Such as (i) fixing of cadre strength and responsibilities for various levels of officers; (ii) definition of job functions, skills, and qualification requirements; (iii) short-term training for new staff and officers; and (iv) improving recruitment and transfer policies.

30. **Improved Service Delivery.** NERCCDIP will also support the states in (i) improving operational and financial efficiency and asset management,²² and (ii) restructuring over the short term the states' departments into a single ring fenced area with dedicated responsibility for city water supply and sewerage, and for accounting and financial management. The capacity-building component will also include an umbrella program of civic awareness and community participation (in waste segregation, among other activities) to support the implementation and positive impact of all the physical improvements under NERCCDIP.²³ The participation of the city residents, including the women, the poor, the slum communities, and other vulnerable groups, in program implementation and their equal sharing in its benefits will be ensured.

31. **Improved Capacity to Manage NERCCDIP.** This component will provide funding support for costs associated with NERCCDIP management and implementation, including the incremental administrative and operating costs of program management units in MOUD and the states, equipment, logistics, and the services of consultants who will assist these units in managing NERCCDIP and carrying out detailed design and construction supervision. Such support is considered essential to the implementation of NERCCDIP in view of the proposed executing agencies' lack of experience with undertakings of this size, and implementation through separate design and construction contracts.

C. Special Features

32. **Planned and Integrated Approach to City Development.** The design of NERCCDIP benefits from a planned approach. Long-term investment requirements were identified, and NERCCDIP and subprojects designed, on the basis of city growth strategies and infrastructure master plans. NERCCDIP also follows the principle of integrated provision of urban infrastructure and services to harness synergies and realize the full potentials from individual sector improvements.

33. **Reform Orientation: Urban Governance, Finance, and Service Delivery Reforms.** In support of the Government's urban policy NERCCDIP will combine infrastructure improvements with reforms intended to make service delivery more efficient, sustainable, and equitable. In particular, it will (i) support the establishment and promotion of ULBs in NER, (ii) enhance efficient and self-sustainable service delivery through the gradual introduction of dedicated service delivery entities in water supply and sewerage, and (iii) create sustainable revenue sources by rationalizing service charges and taxes. The NERCCDIP focus will be on operating efficiency, sustainability, and accountability rather than pure commercialization or private sector provision of infrastructure. Until revenue levels are enough to cover O&M and asset depreciation and financing costs, private sector participation (PSP) is envisaged to be limited to either (i) short-term service contracts, to reduce non-revenue water, among other objectives; or (ii) medium-term management contracts for certain service operations, to improve efficiency. The forms and details of PSP will be worked out through a study under the NERCCDIP.

²² In addition to the introduction of appropriate financial management systems, the activities may include, among others, energy and non-revenue water reduction programs, environmental audits, introduction of management information systems, and quality assurance and quality control.

²³ The civic awareness activities will stimulate demand for improved urban infrastructure and services by (i) disseminating information on the scope and nature of the improvements; (ii) educating the people on the link between the environment and health, the benefits to be derived from the interventions, and their role in and responsibility for good environmental practices in solid waste and septic management; and (iii) raising awareness of the cost implications of improved services.

34. **Climate Change Mitigation.** In line with the Government's 11th Plan objectives and ADB's long-term strategic framework 2008–2020 (Strategy 2020),²⁴ NERCCDIP will seek to identify opportunities for environmental improvement and climate change mitigation. It will therefore promote improvements in urban sanitation and a reduction in fugitive methane emissions by providing treatment systems for sewage and biodegradable waste. Opportunities have been identified and a preliminary assessment of carbon emission reduction has been made to estimate the impact of the proposed composting and wastewater treatment subprojects and financing possibilities (Supplementary Appendix C).

D. Cost Estimates and Financing Plan

35. The cost of the entire investment plan for water supply, sewerage and sanitation, and solid waste management in the five capital cities of NER for the next 20 years is estimated at \$1.1 billion. Of this total, the estimated cost of NERCCDIP is \$285.7 million, as shown in summary in Table 1 below. Detailed cost estimates are in Appendix 4 and Supplementary Appendix D.

Table 1: Program Investment Plan
(\$ million)

Item	Amount	Percentage
A. Base Cost^a		
1. Urban Infrastructure and Service Improvement		
a. Water supply	73.8	25.8
b. Wastewater management	83.4	29.2
c. Solid waste management	16.0	5.6
2. Capacity Development and Investment Program Management		
a. Capacity building	5.9	2.1
b. Investment program management	18.8	6.6
3. Taxes and Duties	26.8	9.4
Subtotal (A)	224.7	78.6
B. Contingencies^b	31.9	11.2
C. Financing Charges during Implementation^c	29.1	10.2
Total (A+B+C)	285.7	100.0

Note: Numbers may not sum precisely because of rounding.

^a In end-2008 prices. Purchasing power parity was used as the base assumption in forecasting foreign exchange rates during project implementation, as suggested in ADB. 2002. *Guidelines for the Financial Governance and Management of Investment Projects Financed by the Asian Development Bank*. Manila.

^b Physical contingencies were computed at 10% for civil works and 5% for equipment. Price contingencies were computed at 0.5% for domestic inflation and 0.4%–1.4% for international inflation.

^c Includes interest and commitment charges. Financing charges assume an interest rate computed at the 6-month London interbank offered rate, a spread of 20 basis points, and a commitment fee of 0.15%. Available: <http://www.adb.org/Media/Articles/2007/12313-asian-loans-charges/>

Source: Asian Development Bank estimates.

36. The Government has requested financing of up to \$200.0 million equivalent from ADB's ordinary capital resources for NERCCDIP (Table 2). The remaining \$85.7 million equivalent will be provided by the Government and will cover (i) taxes and duties, (ii) land acquisition and compensation costs, (iii) incremental recurrent government staff costs, (iv) interagency payments, and (v) a small fraction of civil works costs. Financing will be provided under an MFF according to ADB's policy.²⁵ The Government and ADB will enter into a framework financing

²⁴ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank 2008–2020*. Manila.

²⁵ According to MFF guidelines (ADB. 2008. *Operations Manual*. Section D14/BP: Multitranchise Financing Facility. Manila), the MFF will extend several loans to finance a range of subprojects under NERCCDIP, subject to the submission of a related periodic financing request (PFR) by the Government and the execution of the related loan and project agreements.

agreement (FFA). A minimum amount of \$30 million is proposed for periodic financing requests (PFRs). The proposed ADB loans under the MFF will finance civil works, equipment, consulting services, and capacity-building costs. All the provisions of the ordinary operations loan regulations applicable to London interbank offered rate (LIBOR)-based loans dated 1 July 2001 will apply to each loan, subject to any modifications that may be included in the loan agreement. The Government may choose between eligible currencies and interest rate regimes for each loan. The specific terms of each loan will be based on the related PFR, with interest determined according to ADB's LIBOR-based lending facilities. The Government will make the proceeds of the loan available to MOUD and each state, promptly and on terms and conditions acceptable to ADB, for the implementation of NERCCDIP.

Table 2: Financing Plan
(\$ million)

Source	Total	%
Asian Development Bank	200.0	70.0
Government of India and state governments	85.7	30.0
Total	285.7	100.0

Source: Asian Development Bank estimates.

37. **Project 1.** The Government has submitted the first PFR, in line with the FFA. Project 1 is estimated to cost \$42.8 million equivalent (Table 3), including taxes and duties of \$4.2 million equivalent to be financed by the Government. The total cost figure will cover consulting services in design, construction supervision, and management, as well as civil works and equipment for (i) emergency works, and (ii) two small sample subprojects (water supply in Gangtok and solid waste management in Kohima). A loan of \$30.0 million from ADB's ordinary capital resources has been requested under the first PFR to cover part of the cost of project 1. The ADB loan will have a term of 25 years, including a grace period of 5 years, an interest rate to be determined according to ADB's LIBOR-based lending facility, a commitment charge of 0.15% yearly, and other terms and conditions in the FFA and the loan and project agreements.

Table 3: Cost Estimates and Financing Plan for Project 1
(\$ million)

Item	ADB	India	Total
A. Base Cost			
1. Urban Infrastructure and Service Improvement -	10.5	3.2	13.7
2. Capacity Development and Investment Program Management	16.9	0.1	17.0
3. Taxes and Duties -	0.0	4.2	4.2
Subtotal (A)	27.4	7.5	34.9
B. Contingencies	2.6	0.4	3.0
C. Financing Charges during Implementation	0.0	4.8	4.8
Total (A+B+C)	30.0	12.8	42.8

ADB = Asian Development Bank. -

Note: Numbers may not sum precisely because of rounding. -

Source: Asian Development Bank estimates. -

E. Implementation Arrangements

1. Investment Program Management

38. The national executing agency (NEA) for NERCCDIP will be MOUD. An investment program coordination cell (IPCC) will be established in MOUD. The Government will set up a national steering committee (NSC) within 3 months of the effectiveness of the first loan, to monitor the use of funds under MFF and the overall implementation performance of NERCCDIP. NSC will be chaired by the MOUD secretary and will have as members

representatives from the Department of Economic Affairs (DEA), the Ministry of Development of North Eastern Region (MDONER), the Planning Commission, and the states. IPCC will be responsible for the overall management of NERCCDIP in the five cities. This team of at least three administrative and financial, technical, and social and environmental officials, headed by an investment program manager, will (i) prepare and submit consolidated quarterly reports on NERCCDIP implementation progress and other matters to ADB; (ii) review the compliance of subprojects submitted by the states for financing with subproject selection criteria, and submit PFRs to DEA; (iii) consolidate payment and reimbursement requests; (iv) coordinate policy-related activities and ensure that actions highlighted during the quarterly NSC meetings are acted on; (v) prepare the overall NERCCDIP implementation plan and consolidated annual work plan; (vi) coordinate training programs and allocations for each of the states; (vii) conduct monitoring and evaluation to ensure compliance with loan covenants and agreed targets; and (viii) design and implement NERCCDIP performance management system surveys.

39. A state executing agency²⁵ (SEA) in each state will carry out the part of the loan falling under the state government. In each state a state steering committee (SSC) and an investment program empowered committee (IPEC) will also be formed before the loan takes effect. SSC, chaired by the chief secretary, will have the secretaries and heads of the departments concerned as members. It will meet quarterly, review progress, provide policy guidance, advise on necessary actions (particularly regarding the scope or cost and urban reform agenda of the NERCCDIP), and facilitate interagency coordination. The convening officer for the SSC will be the SEA secretary for NERCCDIP. IPEC will decide on matters related to NERCCDIP that do not affect its scope or cost, including financial and administrative approvals, procurement, tenders, purchases, staff recruitment, post creation, consultant recruitment, land acquisition, and other similar matters. IPEC will be chaired by the SEA secretary, and will have as members representatives from ULBs and the concerned departments. IPEC will meet as often as needed, at the request of its members.

40. A consolidated state investment program management and implementation unit (SIPMIU) will be formed in each of the five SEAs.²⁶ The SIPMIU will prepare and forward subprojects for approval to SSC and MOUD and provide state-level support as part of appraisal before PFR approval. The IPEC and SSC secretary will be the SIPMIU program director.

41. Each state investment program director must be a senior civil service officer empowered to make decisions. He or she will be assisted by a deputy director, also a senior civil service officer, who will be responsible for overall implementation. The core supporting staff of the

²⁵ The SEAs will be as follows: (i) for Meghalaya, the Urban Affairs Department; (ii) for Mizoram, the Urban Development and Poverty Alleviation Department; (iii) for Nagaland, the Urban Development Department; (iv) for Tripura, the Urban Development Department; and (v) for Sikkim, the Urban Development and Housing Department.

²⁶ Each SIPMIU, headed by a state investment program director, will be responsible for overall management and implementation, including (i) recruiting consultants and nongovernment organizations; (ii) carrying out detailed surveys, investigations, and engineering designs for investment activities before starting any tendering process; (iii) coordinating with other government agencies and obtaining all required statutory clearances; (iv) conducting all aspects of procurement in compliance with ADB's *Procurement Guidelines* (2007, as amended from time to time); (v) ensuring compliance with loan and grant covenants; (vi) administering the contracts of consultants and contractors, certifying payments, and preparing change orders; (vii) submitting disbursement requests to MOUD for forwarding to DEA and thence to ADB; (viii) maintaining project documents and submitting reports, including audit reports, on time to IPCC and ADB; (ix) collecting data for key indicators; (x) supervising the implementation of summary poverty reduction and social strategy activities (including gender-related programs); (xi) obtaining all necessary clearances; (xii) guiding awareness campaigns and participation programs; (xiii) organizing and operating state program performance monitoring systems; (xiv) reviewing and facilitating the progress of the urban reform action plan and compliance with loan covenants; (xv) designing and organizing capacity-building programs; (xvi) ensuring compliance with the design and monitoring framework and subproject selection criteria and loan covenants, and targets of reform agenda; and (xvii) monitoring NERCCDIP progress at the state level, through baseline and completion surveys.

investment program director and deputy director will include a senior administration officer, a senior accounts officer, technical staff (in charge of various fields of engineering), a public relations officer, and a management information system specialist—all supported by junior staff (see Schedule 3 of the FFA for further details on SIPMIU's staffing). For the implementation of the infrastructure components, the SIPMIU will have a number of small engineering cells with staff appointed by the line departments and ULBs, where applicable. The engineering units will design, contract out, supervise, and administer work in various sectors of NERCCDIP. There will also be units to implement awareness campaigns, consultations with affected persons, rehabilitation and resettlement, environmental management, and capacity building and training. The investment program organization chart is in Appendix 5.

42. **Subproject Selection Criteria and Implementation Procedure.** All subprojects to be included under NERCCDIP will meet the selection criteria stated in the FFA. Each PFR will have been technically prepared, financially appraised, and processed in compliance with the applicable social and safeguard frameworks. The PFR will specify the tranche amount, the conversion instruments, the financing terms, the cost estimates and financing plan, the implementation arrangements, advance contracting, and the amount and purpose of retroactive financing.²⁷

2. Implementation Schedule for the Investment Program

43. NERCCDIP will be implemented in three tranches (or more if necessary) over 7 years (2009–2015). Tranching will be based on the subproject selection criteria and on the readiness of subprojects in terms of land acquisition and safeguard requirements for environment and resettlement, technical links between components, and institutional capacity. Tranches will be sequenced according to the following principles:

- (i) - Works pertaining to emergency repairs, and infrastructure and operational efficiency improvements, will be taken up in the first tranche. These include the rehabilitation of water supply systems, e.g., reducing leakage, introducing bulk and individual metering, raising awareness of water conservation and improved sanitation and solid waste practices, and building capacity. Tranche 1 will also include two subprojects, in water supply and in solid waste management, which will serve as samples for replication in other cities in succeeding tranches.
- (ii) - Subprojects involving the expansion of infrastructure and services will be taken up in the second and third tranches as they require commitments from the states (e.g., regarding the availability of water sources or suitable land with necessary safeguard clearances) and progress toward cost recovery for O&M to sustain improvements.

44. The NERCCDIP implementation schedule in tranches is presented in Appendix 6 and a schedule for each of the cities is in Supplementary Appendix E. While the minimum contract period is envisaged to be 2 years, contract packages worth over \$7.0 million are envisaged to be implemented over 3 years. The implementation schedule for the tranches will therefore be as follows: (i) for tranche 1, May 2009–October 2015; (ii) for tranche 2, March 2010–December 2013; and (iii) for tranche 3, December 2012–December 2015.

²⁷ The Government will submit to ADB, along with the PFR, the summaries of feasibility studies and engineering designs (as necessary), terms of reference for the engagement of advisers, the results of any advance actions taken, and relevant economic and financial assessments. Each PFR will refer to an attached procurement plan and appropriate safeguard documents, including safeguard plans required under the safeguard frameworks prepared for the MFF. Each PFR will confirm that the general understandings under the FFA remain true and will describe the client's compliance with the undertakings.

3. Procurement

45. **Civil Works and Goods.** All procurement activities will be carried out by the SIPMIUs for their respective states. Procurement to be financed by the loans under MFF will conform to ADB's *Procurement Guidelines* (2007, as amended from time to time). International competitive bidding will be used for civil works contracts estimated at \$5.0 million or more, and for supply contracts valued at \$1.0 million or higher. Civil works and supply contracts costing less than those amounts will be procured through national competitive bidding. Equipment worth up to \$100,000 will be procured through shopping. Before the start of any procurement under national competitive bidding, ADB and the Government will review the public procurement laws of the central and state governments to ensure consistency with ADB's *Procurement Guidelines*. The feasibility of community contracting will be examined for each individual case for low-cost sanitation and other community works not exceeding \$100,000 in value. The procurement plan for the first PFR is in Appendix 7, and a preliminary procurement assessment of the SEAs and a preliminary procurement plan for the entire financing facility are in Supplementary Appendixes F and G.

46. Procurement packages will be sized (i) to suit the particular nature of the works involved, (ii) to allow reasonable competition in the bidding, and (iii) to optimize contract administration and management by the SIPMIUs, and enable gradual capacity building. The procurement packages—indicative other than for the first tranche—will be further elaborated and updated annually by the SIPMIUs for approval by ADB. On the basis of an assessment of the states' procurement capacity and experience during the implementation of the first tranche, ADB will review the contract packages under succeeding tranches.

47. **Advance Action and Retroactive Financing.** Under each MFF loan, advance contracting of civil works, equipment and materials, and consultants may be requested, subject to eligibility according to the agreed procedures and guidelines indicated above. Except as otherwise agreed with ADB, expenditures incurred for civil works, equipment and materials, and consulting services that are eligible for advance contracting qualify for retroactive financing of up to 20% of the proposed amount of the loan, for eligible expenditures in each category incurred before loan effectiveness but no earlier than 12 months before the signing of the loan agreement.

4. Consulting Services

48. Design, construction supervision, and management consultants (DSMCs) and institutional development consultants (IDCs) will be hired by each of the five SIPMIUs, according to ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). Each state DSMC team will be headed by urban development and municipal engineering specialists with experience in India and abroad. The team will (i) support the SIPMIUs in identifying, preparing, and appraising subprojects; (ii) ensure compliance with the subproject selection criteria, as well as the safeguards and other policy requirements and guidelines of the central and state governments and ADB; (iii) undertake detailed surveys and investigations, prepare detailed engineering designs, technical specifications, and procurement and contract documents, and supervise construction according to established good practices; (iv) support technical evaluation during the tender process and supervise the construction of the NERCCDIP investments; and (v) support the SIPMIU in program management, awareness and public relations activities, financial management, monitoring and evaluation, technical capacity building programs, etc. The IDCs will support the SIPMIUs and government agencies (particularly ULBs and, where relevant, parastatals) in (i) implementing the institutional, financial, regulatory, and operational reform agenda; (ii) conducting capacity-building programs to improve asset

management; and (iii) updating action plans and strategies to meet the reform objectives. Outline terms of reference for the consulting services in each of the SIPMIUs are in Supplementary Appendixes H and I.

49. The IPCC will be supported by a team of program management and monitoring consultants (PMMCs), comprising urban management and finance and management information systems specialists, and headed by an urban development and municipal engineering expert with extensive experience. The central PMMC team will (i) support the IPCC in MOUD in program coordination by monitoring and reporting regularly on progress, identifying implementation bottlenecks, and recommending corrective actions; (ii) review subproject appraisal reports prepared by the SIPMIUs, and support the IPCC in preparing PFRs for submission to DEA; and (iii) support IPCC in capacity building. The consultants will also be required to assist the IPCC in implementing the urban reform plan and undertaking relevant studies, establishing systems, and preparing strategy and action plans for the solid waste management and PSP packages. The services of both nongovernment organizations (NGOs) and community-based organizations are also likely to be needed to support civic awareness raising, community-level solid waste management, and resettlement monitoring. Outline terms of reference for the PMMC services are in Supplementary Appendix J.

50. It is estimated that a total of 1,985 person-months of national consulting services in project management and in design and construction supervision, and 549 person-months of national expertise in institutional development, will be required over the NERCCDIP period.²⁸ The specific number of consultants deployed at any point in time will depend on the work requirements, but it is estimated that, on average, 5–6 consultants will be deployed at the central IPCC and 10–12 consultants in each of the five state DSMCs at any one time. For consulting contracts valued at \$100,000 and above, the selection will be quality- and cost-based. For consulting contracts below that amount, least-cost selection or individual recruitment will be followed. The need for consulting services is expected to decline gradually as SEAs gain more capacity during implementation, and will be reviewed during the MFF midterm review.

5. Anticorruption Policy

51. ADB's *Anticorruption Policy* (1998, as amended to date) was explained to and discussed with the Government and states. Consistent with its commitment to good governance, accountability, and transparency, ADB reserves the right to examine and review, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Investment Program. In this regard, investigation of government officials, if any, would be requested by ADB to be undertaken by the Government. To support these efforts, relevant provisions of ADB's *Anticorruption Policy* are included in the loan regulations and the bidding documents for the Investment Program. In particular, all contracts financed by ADB in connection with NERCCDIP shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agencies and all contractors, suppliers, consultants, and other service providers as they relate to the Investment Program

52. To supplement the policy, these following specific measures are included: (i) information technology will be used to increase transparency, accountability, and efficiency, through (a) public disclosure of NERCCDIP information through government and program websites (to be prepared), and (b) an expedited program of e-governance in the states; (ii) communities will participate in state steering committee decisions, and the minutes of meetings will be disclosed

²⁸ In addition, support staff will be hired for project management, design, and construction supervision (1,386 person-months), and for services in support of the IDCs (640 person-months).

to the public through the program webpage; (iii) independent procurement and performance audits, commissioned by MOUD, will be carried out as often as necessary, and at least once before the NERCCDIP midterm review; (iv) fiduciary issues will be reviewed; and (v) the Right to Information Act 2005 (RTI Act), the Prevention of Corruption Act (1998), and the Service Rules and Codes of Conduct of Public Officials will be strictly applied in all the five states, thus empowering departments to investigate the conduct of their officials, and to investigate allegations of corruption, through internal vigilance offices or state equivalents of the Central Bureau of Investigation, and take legal action if required.

6. Disbursement

53. Loans will be disbursed according to ADB's *Loan Disbursement Handbook* (2007, as amended from time to time). Immediately after the first loan takes effect, the Government will open and maintain a first-generation imprest account (FGIA) in the account of the controller of aid accounts and audit of the Reserve Bank of India in Delhi to ensure the timely release of loan proceeds and expedite implementation. The FGIA will be denominated in US dollars. Imprest accounts will be opened separately for each PFR.²⁹ The advance to be paid into the FGIA will be equivalent to 6 months' estimated expenditure or 10% of the loan amount, whichever is lower. The initial advance or replenishment by ADB into the FGIA will be converted into equivalent rupees by the controller of aid accounts and audit according to Reserve Bank policy, and transferred in rupees to each of the states through the budget.

54. Concurrently, second-generation imprest accounts (SGIAs) may be opened in a commercial bank by the governments of Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura, subject to the commitment by each of these governments and urban departments, as SEAs, to adhere to ADB procedures for operating the SGIA. The governments will assure ADB that all ADB disbursements for imprest advance or replenishment will be passed on to urban development departments for deposit into the commercial-bank SGIAs within 30 calendar days of receipt of the advance or replenishment from ADB. The amount to be deposited initially into each SGIA account will not exceed the state's estimated expenditure for the first 6 months of program implementation or 10% of the loan amount allocated to the state, whichever is lower. The SIPMIUs will warrant that funds in each of the SGIAs will be used only to fund eligible expenditures according to the terms of the loan agreements and to meet the immediate short-term disbursement requirements of the loans. Both the FGIA and the SGIA will be established, managed, and liquidated according to the guidelines in ADB's *Loan Disbursement Handbook*. The NERCCDIP funds flowchart is in Appendix 8. The statement of expenditures (SOE) procedure will be adopted in reimbursing and liquidating SGIAs for eligible expenditures not exceeding \$100,000 per payment.

7. Accounting, Auditing, and Reporting

55. The IPCC and each of the SIPMIUs will maintain separate project accounts for each PFR according to generally accepted accounting principles, for all NERCCDIP expenditures, whether funded out of loan proceeds or other sources. Separate records will be established and maintained for works, goods, and services financed out of loan proceeds.

56. The central and state governments will cause their respective project accounts, as maintained by the IPCC and the SIPMIUs, to be audited by independent auditors, whose qualifications, experience, and terms of reference must be acceptable to ADB. State governments will submit their audited accounts to MOUD for endorsement and further

²⁹ Charges associated with opening and maintaining imprest accounts will be financed by the Government.

submission to ADB within 9 months of the end of the fiscal year.³⁰ This period will be reviewed during the midterm and may be subsequently reduced to 6 months. The annual audit report will include the audit of the central imprest account, the SGIA, and the SOE procedure, and will specifically include a separate audit opinion on the use of the loan proceeds, the operation of the SGIA, and compliance with SOE procedures. MOUD and the states have been made aware of ADB's policy regarding delayed submission, and ADB's requirements for satisfactory and acceptable audited accounts.

8. Investment Program Performance Monitoring and Review

57. IPCC in MOUD will establish an investment program performance monitoring system acceptable to ADB within 3 months of the effectiveness of the first loan under MFF, including (i) data collection and reporting procedures; (ii) performance indicators relating to physical infrastructure, capacity development, and program management support, including those in the design and monitoring framework (for individual loans and the overall NERCCDIP); and (iii) corresponding target dates, including those for institutional and financial reforms and capacity building. The IPCC will help the SIPMIUs set baseline values for each of the indicators and conduct annual surveys to update these baseline values.

58. The IPCC will provide ADB with quarterly progress reports informing ADB of overall MFF progress (subproject and tranche preparation and approval) and the implementation progress of ongoing individual loans. The reports should consolidate the quarterly reports prepared separately by the SIPMIUs and provide summary financial accounts of NERCCDIP, including (i) a summary financial account for each of the states, (ii) expenditures to date, (iii) a benefit monitoring report, and (iv) a safeguard compliance report. Within 3 months of the physical completion of each loan, the IPCC will also submit to ADB a completion report covering the details of project implementation, costs, monitoring and evaluation, safeguard compliance, and other information requested by ADB. An ADB program inception mission will be fielded soon after MFF approval, and regular review missions for each loan will be held at least every 6 months. In addition, an MFF midterm review will be conducted in 2012 for NERCCDIP.

IV. INVESTMENT PROGRAM BENEFITS, IMPACT, ASSUMPTIONS, AND RISKS

A. Economic Analysis

59. NERCCDIP consists of 13 clearly defined projects in the five states, which will be financed by ADB with several sequenced loans. All 13 projects were appraised by ADB due-diligence missions. A "project economic analysis" for each of the 13 projects was therefore deemed appropriate.³¹ The economic analysis covered (i) the macroeconomic context, (ii) the sector context, (iii) the justification for public intervention, (iv) demand analysis, (v) the project rationale, (vi) project alternatives, and (vii) project costs and benefits. The development of basic urban infrastructure in NER supports the Government's economic policies, such as the "look east" policy of establishing closer economic relations with the rest of South Asia and with East

³⁰ This exceptional consideration, based on ADB. 2001. *Project Administration Instructions*. PAI 5.09: Submission of Audited Project Accounts and Financial Statements. Manila (revised January 2009, para. 17), is dictated by the large number of stakeholders involved, the weak capacity of the five SEAs, and the need to introduce both SEAs and the NEA to ADB's requirements.

³¹ Since this is a project loan, the scope of this economic analysis is governed by ADB. 2006. *Operations Manual*. Section F1/BP: Environmental Considerations in ADB Projects. Manila rather than by Dole, David.. 2005. *Assessing Aid for a Sector Development Plan: Economic Analysis of a Sector Loan. ERD Technical Note Series No. 14*. Manila. Affordability assessment is a part of ADB. 2005. *Financial Management and Analysis of Projects*. Manila (Section 4.3.3.5.5), and was therefore done in the financial analysis. Project sustainability was assessed by estimating the financial internal rate of return in the financial analysis.

Asia through the NER, and a number of regional trading agreements since 1992. The economic rationale for government intervention is justified, since all the projects support basic public services, with monopolistic conditions, externality management, and impact on income distribution. Targeting less-developed regions like the NER supports the 11th Plan objective of “faster and more inclusive growth,” given the increasing disparities between states, between regions within states, between urban and rural areas, and between various sectors of the community, resulting from inequitable share in growth.

60. The projects are intended to (i) overcome gaps between service demand and supply, and (ii) reduce the cost associated with providing inadequate services. An emphasis on increasing efficiency in infrastructure and systems has given rise to least-cost designs for each project. All the projects demonstrate an economic internal rate of return (EIRR) above the economic opportunity cost of capital of about 12%; all are therefore economically viable. The sensitivity analysis indicates that the EIRRs are sensitive to a reduction in the realized benefits and that the planned coverage of services must be achieved to realize higher economic benefits. The economic analysis is presented in Supplementary Appendix L.

B. Financial Management Assessment and Financial Analysis

61. The financial management assessment revealed that the asset owners, after construction, will not have enough operating income to meet operating expenses. To improve their financial base, there will be a need for institutional reforms including (i) property tax base increase, reassessment, mapping, and computerization; (ii) a gradual increase in user charges; and (iii) improvements in collection efficiency. An indicative financial improvement action plan for achieving these reforms, which the state governments in the NER have approved, is shown in the financial analysis (Supplementary Appendix M). It provides specific figures for introducing new user charges, increasing tariffs, widening service coverage, and improving tariff collection efficiency. State agencies and ULBs now use cash-basis accounting, which does not provide an accurate picture of their assets (including receivables) and liabilities. Further, asset recording, physical verification, and reconciliation with records is not kept current because staff are overworked and also lack the necessary skills. To strengthen financial management capacity and work efficiency, accountants from relevant state departments and asset owners will be trained in budgeting, financial information management and reporting, accrual-based double-entry accounting, and the use of information technology.

62. The financial sustainability of all 13 projects was assessed according to ADB’s financial management and analysis procedures.³² For revenue-generating sectors—water supply, sewerage, and solid waste management—incremental revenue and cost due to the subprojects were estimated on a with-project and a without-project basis. To meet the objective of the financial improvement action plan of achieving full O&M cost recovery within the NERCCDIP implementation period, water supply, sewerage, and solid waste management tariffs must be increased. The financial internal rate of return (FIRR) ranges from 3.1% to 14.7% for water supply projects, is negative for all sewerage projects, and ranges from 3.0% to 41.7% for solid waste management projects. Water supply and solid waste management have an estimated FIRR above the weighted average cost of capital of 2.88%. Despite the negative FIRR for all sewerage projects, revenues will cover O&M expenditures. Sensitivity analysis shows generally robust FIRRs, showing them to be highly sensitive to an increase in revenue. In other words, to obtain desirable returns on investment, coverage and revenue must increase.

³² ADB. 2005. *Financial Management and Analysis of Projects*. Manila.

C. Poverty Reduction and Social Development

63. NERCCDIP will have positive impact on the poor. Safe drinking water is a basic need, yet it is not easily accessible to significant numbers of poor people in the cities. NERCCDIP will reduce the burden of water collection now placed on vulnerable segments of the population, particularly the women. Free water connections and lifeline tariffs will enable the poor to afford drinking water. Improvements in sewage treatment, sanitation, and solid waste management will lead to public health improvements, resulting in a reduced burden of disease—treatment costs and productivity losses—experienced to a higher degree by the poor. Low-cost sanitation facilities will be pilot-tested in poor areas, and waste collection will be undertaken through NGOs in slums and poor neighborhoods that are inaccessible to vehicles. Program components will also create jobs for the poor. The summary poverty reduction and social strategy is in Appendix 9.

64. Women's issues were considered in the program design. Stakeholders involved in women and gender affairs, e.g., female councilors, self-help groups, NGOs, and other institutions, were consulted. Because of women's primary role in household management and water collection, the lack of basic urban infrastructure and services has greater impact on women—their health, well-being, and participation in productive activities—than it has on men. NERCCDIP will have a major positive impact on women. A gender action plan (Supplementary Appendix N) will further mainstream gender issues in subproject design, implementation, and monitoring.

D. Social and Environmental Safeguards

65. **Social.** The Program is designed to minimize land acquisition and resettlement impact. Rehabilitation subprojects will be carried out within the existing facilities' premises and will not involve any land acquisition or resettlement. Subprojects involving the construction of water supply, sanitation, and sewerage systems, and solid waste management improvements are proposed on government land wherever possible. The overall impact will be further minimized through careful subproject siting and alignment during detailed design and subproject implementation. To ensure compliance with the Government's and ADB's policy and requirements for involuntary resettlement, a resettlement framework was prepared on the basis of national laws—the Land Acquisition Act of 1894 (amended in 1984) and the National Rehabilitation and Resettlement Policy of 2007—as well as state laws and regulations³³ and ADB's *Involuntary Resettlement Policy* (1995, as amended from time to time). The resettlement framework, outlining the objectives, policy principles, and procedures of land acquisition (if required), compensation, and other assistance measures for affected persons, will guide the implementation of subprojects. The resettlement framework is summarized in Appendix 10 and presented in full in Supplementary Appendix O. Resettlement plans based on the resettlement framework will be prepared for program subprojects. Subprojects with significant³⁴ impact will require full resettlement plans, while subprojects with insignificant impact will require short

³³ The relevant state laws are: (i) for Agartala: the Tripura Municipal Act of 1994 and the Tripura Land Revenue and Land Reform Act of 1960; (ii) for Aizawl: the Mizoram Prevention of Government Land Encroachment Act of 2001 and the Mizoram Urban and Regional Development Act of 1990; (iii) for Gangtok, the Sikkim Urban and Regional Planning Development Act of 1998 and the Sikkim Land (Requisition and Acquisition) Act of 1977; (iv) for Kohima, the Nagaland Land (Requisition and Acquisition) Act of 1965, the Nagaland Eviction of Persons in Unauthorized Occupation of Public Land Act of 1971, the Nagaland (Ownership and Transfer of Its Land Resource) Act of 1990, and the Nagaland Town and Country Planning Act of 1966; and (v) for Shillong: the Meghalaya Town and Country Planning Act of 1973.

³⁴ Resettlement is significant when 200 or more people experience major impact. The impact is major when it physically displaces the affected people from housing or causes them to lose 10% or more of their productive, income-generating assets.

resettlement plans. The resettlement plans will ensure that the socioeconomic conditions, needs, and priorities of vulnerable groups are recognized and that the process of land acquisition and resettlement does not disadvantage vulnerable groups.

66. In all cities, initial screening for impact on indigenous peoples showed no impact. In the urban program areas of Agartala, Aizawl, and Gangtok, where scheduled tribes do not form a majority of the population, the groups are no different from other groups in their social, cultural, economic, and political characteristics. In Kohima and Shillong, where scheduled tribes are strongly attached to natural resources, habitats, and ancestral territories, they compose the mainstream or dominant society, and the urban areas are socially, culturally, economically, and politically homogeneous. NERCCDIP will result in environmental and public health benefits for the whole program population. The likelihood that subprojects will affect indigenous peoples is small; resettlement plans address the likely impact. Further, subproject design prioritizes rehabilitation over new construction of basic social infrastructure, avoiding land acquisition and consequent resettlement, and subproject siting in built-up areas. An indigenous peoples development framework (IPDF) has been formulated (Supplementary Appendix Q) to ensure that appropriate indigenous peoples development plans or specific actions enable equal sharing of NERCCDIP benefits should a future subproject have impact on indigenous peoples.

67. **Environmental Safeguards.** NERCCDIP is designed to improve environmental quality and living conditions in urban areas through the provision of basic urban services. Initial environmental examinations (IEEs) show that net subproject environmental benefits are positive and extensive, and include (i) reduced water pollution as a result of investments in sanitation, sewage treatment, and municipal solid waste management facilities; (ii) increased availability of potable water at appropriate pressure from water supply subprojects; (iii) better public health, including reduced waterborne and infectious diseases, through improvements in water supply and sewage treatment, and municipal solid waste management investments; and (iv) improved aesthetics from the improvement of sewage treatment and municipal solid waste works.

68. The potential negative environmental impact is mostly localized and temporary, and mostly related to dust, noise, and disruptions in access due to construction activities and construction-related waste disposal. Such impact can largely be avoided through proper subproject design (particularly in siting), or mitigated through proper mitigation measures and environmental management (Appendix 11).

69. Environmental subproject selection criteria will further ensure that any adverse environmental impact is not significant or permanent. An environmental assessment and review framework has been developed to ensure compliance with the policies, guidelines, and requirements of the Government and ADB, and to guide the implementation of future subprojects (Supplementary Appendix R).

E. Risks

70. The main risks identified are: (i) potential public resistance to water metering, (ii) low connectivity for the sewerage component, (iii) lack of state actions to implement the institutional and financial reform agenda, (iv) public refusal to pay for the services, and (v) slow program implementation due to the states' unfamiliarity with ADB procedures and the difficulties associated with acquiring land for subproject implementation. NERCCDIP will mitigate the risks through a number of measures. Civic awareness programs will stimulate demand for the improved services and make the public more willing to pay the higher tariffs. Regulations will be issued to enforce connection to improved services. The risk of destruction from earthquakes and landslips was addressed at the feasibility stage through the mapping of earthquake faults,

slip lines, and landslip hazard areas and the design of the various components to include protection from damage. Other measures building on the initial designs (such as detailed geotechnical surveys) will be incorporated during detailed design.

71. NERCCDIP assumes (i) a stable political environment and positive economic growth, and (ii) a commitment by all institutions (modern and traditional) to participate actively in planning and development. SIPMIUs will regularly brief ADB on the progress of each package, immediately highlighting any security-related disruption. The following mitigation measures will be implemented: (i) careful and continuous monitoring of security developments; (ii) balanced recruitment of qualified staff from within and outside the states; (iii) complete participatory and transparent implementation, including the disclosure of financial information; (iv) mobilization of strong community support and trust in project staff; and (v) encouragement of local employment, possibly through joint ventures.

72. The risk of slow program implementation is being addressed from several angles, including (i) the early training of program directors and other key SIPMIU staff in project implementation, (ii) early support through the ongoing project implementation and capacity development TA,³⁵ (iii) the early appointment of project management consultants, and (iv) the proposed establishment of an ADB extension office in the NER.

V. ASSURANCES AND CONDITIONS

A. Framework Financing Agreement Undertakings

73. In addition to the standard assurances, the Government of India and the governments of the states have given the following assurances, which will be incorporated into the FFA as well as the individual loan and project agreements as applicable, subject to any amendment to be mutually agreed on by ADB, on the one hand, and the Government of India and the state governments, on the other.

- (i) - The Government of India will ensure that the facility funds are utilized effectively and efficiently to implement NERCCDIP and achieve its objectives.
- (ii) - States will implement the urban institutional, finance, regulatory, and operational reform program (Appendix 12) in accordance with the time frame set in the action plan.
- (iii) - Empowered committees and SIPMIUs, headed and staffed by officers with suitable qualifications and experience who are acceptable to ADB, will be in place in each state throughout NERCCDIP.
- (iv) - The Government of India and the states will ensure that adequate funds are provided to meet any shortfall in financing for the O&M of assets created under NERCCDIP.
- (v) - Prior to any investment in the augmentation of water supply in any of the capital cities, the city concerned will have approved a plan for increased investments in sewerage and sanitation.
- (vi) - The Government of India and the states will ensure that all land and right-of-way required for NERCCDIP are made available in a timely manner, adequate compensation is provided prior to the signing of the relevant civil works contracts, and involuntary resettlement is carried out in accordance with the resettlement framework and the resettlement plans agreed on by the Government of India and ADB, the Government's National Policy on Resettlement and Rehabilitation, and

³⁵ ADB. 2006. *Technical Assistance to India for Project Implementation and Urban Management Improvement in the North Eastern Region*. Manila.

ADB's *Involuntary Resettlement Policy* (1995), and applicable laws and regulations of the Government of India and the States. A resettlement plan will be prepared for each subproject that involves land acquisition or resettlement and submitted to ADB for review and approval prior to the award of any related civil works contracts. For sample subprojects, updated resettlement plans will be provided to ADB for review and approval following detailed design and prior to the award of civil works contracts.

- (vii) - The Government of India and the states will ensure that all subproject facilities are designed, constructed, operated, and implemented in accordance with the environmental assessment and review procedures and IEEs for core subcomponents agreed on by the Government of India and ADB, and with the Government's environmental laws and regulations and ADB's *Environment Policy* (2002). Any adverse environmental impact arising from the construction, operation, and implementation of subcomponent facilities will be minimized through environmental mitigation and management measures, and other recommendations specified in the environmental assessment reports (e.g., IEEs). The Government of India will ensure that environmental requirements are incorporated in the bidding documents and civil works contracts. Bid documents will be issued after review and clearance of the IEE or the environmental impact assessment by ADB and the state environmental impact assessment authority or the Ministry of Environment and Forests. The Government of India will prepare and submit annually to ADB an environmental monitoring report that describes progress in the implementation of the environmental management plan and the environmental assessment and review plan, issues encountered, and measures adopted, and compliance with the relevant assurances and loan covenants.
- (viii) - The Government of India and the states will ensure that subprojects do not negatively impact vulnerable groups, such as indigenous peoples. In the event that indigenous peoples are involved in any of the subprojects, the Government and the states will ensure that the subprojects are carried out in accordance with the IPDF agreed on by the Government of India and the states and ADB, with ADB's *Policy on Indigenous Peoples* (1998) and India's and the States' laws and regulations.
- (ix) - The Government of India and the states will ensure that all civil works contractors comply with all applicable labor laws, including those on occupational health and safety, equal pay for men and women for work of equal value, and do not employ child labor as defined in national legislation for construction and maintenance activities.
- (x) - The states will take all appropriate and necessary measures to encourage adequate representation of all sections of society in ULBs.
- (xi) - In cities receiving funds from the water and sewerage facility, the state or the ULB in charge of service delivery will make information on water and affluent testing publicly available.
- (xii) - The Government of India and the states will comply with the gender action plan agreed on by the Government and ADB.
- (xiii) - The Government of India and the states will ensure that all subprojects meet, to the satisfaction of ADB, the selection criteria and implementation arrangements and procedures specified in the FFA.

B. Conditions for First Loan Effectiveness

- 74. - The following conditions for the effectiveness of the first loan will apply:

- (i) - MOUD will establish the investment program coordination cell with one full-time investment program manager and three key staff.
- (ii) - The Government will establish the national steering committee.
- (iii) - Each state will establish the state investment program management and implementation units comprising the state program director and key staff with suitable qualifications and experience acceptable to ADB.

C. Conditions for Contract Award

75. - The following conditions for the award of specific contracts will apply:

- (i) - Civil works contract award for the sanitary landfill site in Shillong is subject to (a) the concurrence of the Pollution Control Board, and (b) the identification of adequate land for long-term landfill and notification of land acquisition and transfer.
- (ii) - Civil works contract award for water supply rehabilitation in Agartala is subject to (a) the submission by the state government of Tripura to ADB of a comprehensive water monitoring report for all replacement wells (samples must be taken and sampled at the end of the dry season), and (b) a demonstration by the state government that none of the replacement wells have detectable levels of arsenic.

VI. RECOMMENDATION

76. I am satisfied that the proposed multitranche financing facility would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the provision of loans under the multitranche financing facility in an aggregate principal amount not exceeding \$200,000,000 equivalent to India for the North Eastern Region Capital Cities Development Investment Program from ADB's ordinary capital resources, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, and such other terms and conditions as are substantially in accordance with those set forth in the Framework Financing Agreement presented to the Board.

Haruhiko Kuroda
President

01 June 2009

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
<p>Impact</p> <p>Improved environment and well-being of urban residents in the five program cities</p>	<p>By 2017:</p> <ul style="list-style-type: none"> • Contribution to reducing regional disparities and improved well-being as measured on the states' infrastructure index by 2017 • Significant contribution to meeting Millennium Development Goal 7 targets in program cities (halving by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation) in five program capital cities • Reduced incidence of waterborne disease in program areas (halved by 2017) • All significant water bodies in the immediate vicinity of the five program cities fully meet class B or D standards by 2017 (http://cpcb.nic.in/Water_Quality_Criteria.php) 	<ul style="list-style-type: none"> • Central, state, and local government statistics • Household consumer expenditure and employment surveys • 2011 census (next scheduled census) • BPL surveys • Baseline and completion socioeconomic surveys • Program environmental surveys • NERCCDIP completion report and tranche completion reports 	<p>Assumptions</p> <ul style="list-style-type: none"> • Political support for development in NER continues • Urban infrastructure improvements attract enough private sector investments into the program cities and NER. <p>Risk</p> <ul style="list-style-type: none"> • Parallel development in other key areas for the NER does not materialize on time
<p>Outcome</p> <p>Sustainable and increased access to better urban services in five program cities</p>	<p>By the end of NERCCDIP (2015):</p> <p>Water Supply</p> <ul style="list-style-type: none"> • Population of 1.2 million in the program cities provided with treated 12-24/7 water; Unaccounted for water reduced to a reasonable level around 30% <p>Sanitation and Sewerage</p> <ul style="list-style-type: none"> • Population of 0.3 million in the central zone of the four cities provided with sewerage; reduction in the volume of wastewater discharged to water bodies <p>Solid Waste Management</p> <ul style="list-style-type: none"> • Population of 0.9 million provided with solid waste collection treatment facilities; sanitary disposal practiced in five cities <p>Service Delivery</p> <ul style="list-style-type: none"> • Full compliance with water distribution and effluent discharge standards in program support area • Full compliance with India's solid waste management and handling rules in program support area <p>State and ULB Project Capacities</p> <ul style="list-style-type: none"> • Project development, implementation, and management capacity of state agencies (UDD and Public Health Engineering Department) and ULBs developed, as demonstrated by capability to prepare feasibility and detailed studies independently, and to handle consultancy management, procurement, and safeguard compliance with requirements by 2015 • All municipalities empowered, as defined in 74th Constitutional Amendment Act and MOAs signed with MOUD, by 2015. 	<ul style="list-style-type: none"> • State and local government statistics and reports • Household consumer expenditure and employment surveys • 2011 (and subsequent) census • IPCC and progress reports • ADB review mission reports • Resettlement and environmental external monitoring results • NGO reports • Baseline and completion socioeconomic surveys • NERCCDIP completion report and tranche completion reports • Baseline poverty line surveys 	<p>Assumptions</p> <ul style="list-style-type: none"> • Local governance improves, institutional issues are resolved, and improved urban services are effectively run and managed • Funding is mobilized for O&M and replacement of project facilities <p>Risks</p> <ul style="list-style-type: none"> • Beneficiaries may be unwilling to pay for services • There may not be enough skilled staff to run and manage urban services in the program cities • Natural disasters (e.g., major floods and landslides) occur in the program cities • Environmental regulations may not be strictly enforced

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
<p>Outputs</p> <p>Part A: Improved urban infrastructure and services</p> <p>A.1 Expanded and rehabilitated water supply systems</p>	<p>By the end of 2013:</p> <ul style="list-style-type: none"> • Agartala (South and Central zones): Source augmentation and distribution through provision of (i) infiltration galleries at the College Tilla, (ii) augmented treatment capacity, (iii) 24 rehabilitated tube wells and 9 new ones, (iv) 17 rehabilitated IRPs and 8 new ones, (v) 7 groundwater treatment plants, (vi) 17.5 ML capacity reservoirs, (vii) 67 km of primary pump mains and 140 km of secondary pipelines, (viii) NRW program, and (ix) 50,000 metered connections. • Aizawl: Provision of (i) dedicated 132 kilovolt line to the Tlawng river intake (17 km), (ii) replacement for the “bunched” connection system (through 22 km of primary mains and 88 km of secondary pipelines), (iii) 7 replacement reservoirs and 9 new ones, (iv) chlorinators at major reservoirs (2), (v) NRW program, and (vi) 41,000 metered connections • Gangtok: Provision of (i) repair of rapid sand filtration at WTP, (ii) replacement for the “bunched” connection system (through 31 km of primary mains and 38 km of secondary pipelines), (iii) 3 new reservoirs, (iv) chlorinators at major reservoirs (4), (v) NRW program, and (vi) 19,000 metered connections • Kohima: Provision of (i) refurbished WTP, (ii) replacement for the “bunched” connection system (through 17 km of primary mains and 90 km of secondary pipelines), (iii) 7 new and 19 replacement reservoirs, (iv) chlorinators at major reservoirs (2), (v) NRW program, and (vi) 19,000 metered connections • In all the above towns: Works result in (i) water quality improvements; (ii) more efficient and expanded operation of source, treatment, and distribution systems; (iii) increased water security and service reliability through the provision of dedicated power supply systems; and (iv) improved environmental conditions through the construction of sludge drying and disposal facilities at treatment plants 	<ul style="list-style-type: none"> • Quarterly SIPMIU/IPCC progress reports • Budgets and annual work plans • IPPMS reports • ADB review mission reports • Disbursement records • Tranche completion and commissioning certificates 	<p>Assumptions</p> <ul style="list-style-type: none"> • Water source allocations are confirmed in Kohima • Public awareness campaign develops support for replacement of connections and provision of meters • Consumers prefer central piped water supply to alternative sources • Poor are connected and able to afford both the connection and the service • Required land acquisition and compensation are completed on time <p>Risks</p> <ul style="list-style-type: none"> • Further deterioration of water supply systems increase costs and result in scope changes • Integration of various water systems into the central system in each program city is delayed
<p>A.2 Sewage collection, management, and treatment, and improved sanitation</p>	<p>By the end of 2014:</p> <ul style="list-style-type: none"> • Aizawl: Provision of (i) sewerage system for zone I (23 km of primary mains and 30 km of secondary collectors; 3,592 HH connections); (ii) 7 MLD STP; (iii) 6 community toilet blocks; and (iv) assistance to 1,000 HH to convert to upgrade latrines for connection to sewers 	<ul style="list-style-type: none"> • SIPMIU/IPCC quarterly progress reports • Budgets and annual work plans • IPPMS reports 	<p>Assumptions</p> <ul style="list-style-type: none"> • Public awareness campaign encourages households to connect to the sewerage systems • Adequate number of staff are trained and placed to operate STP

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
	<ul style="list-style-type: none"> • Gangtok: Provision of (i) sewerage system for zones II and III (24 km of primary mains and around 40 km of secondary collectors; around 8,000 HH connections); (ii) 2 STPs each of 4 MLD capacity; (iii) 6 community toilet blocks; and (iv) assistance to 1,000 HH in converting to upgrade latrines for connection to sewers • Kohima: Provision of (i) sewerage system for zones I and II (57 km of primary mains and secondary collectors; around 6,700 HH connections); (ii)) 2 STPs with 5MLD and 7 MLD capacities; (iii) 6 community toilet blocks; and (iv) assistance to 1,000 HH in converting to upgrade latrines for connection to sewers • Shillong: Provision of (i) sewerage system for zone I (33 km of primary mains and around 60 km of secondary collectors; around 6,500 HH connections); (ii) 12 MLD STP; (iii) 6 community toilet blocks; and (iv) assistance to 1,000 HH in converting to upgrade latrines for connection to sewers 	<ul style="list-style-type: none"> • ADB review mission reports • Disbursement records • Tranche completion and commissioning certificates 	<ul style="list-style-type: none"> • Poor connect and can afford the connection and the service <p>Risk</p> <ul style="list-style-type: none"> • Connection rate to the sewerage systems id lower than expected
A.3 Solid waste management systems	<p>By the end of 2014:</p> <ul style="list-style-type: none"> • Agartala: (i) Introduction of house-to-house waste collection (15,000 HH); (ii) improvement of primary and secondary collection and transportation system; (iii) development of a compost plant (50 TPD); (iv) development of sanitary landfill site; and (v) construction of garage/transfer station • Aizawl: (i) Introduction of house-to-house waste collection (2,000 HH); (ii) improvement of primary and secondary collection and transportation system; (iii) development of a compost plant (50 TPD); (iv) development of sanitary landfill site; and (v) garage/transfer station • Gangtok: (i) Introduction of house-to-house waste collection (2,000 HH); (ii) improvement of primary and secondary collection and transportation system; (iii) development of sanitary landfill site; and (iv) construction of transfer station • Kohima: (i) Introduction of house-to-house waste collection (2,000 HH); (ii) improvement of primary and secondary collection and transportation system; (iii) development of a compost plant (50 TPD); (iv) development of sanitary landfill site; and (v) construction of garage/transfer station and approach road 	<ul style="list-style-type: none"> • SIPMIU/IPCC quarterly progress reports • Budgets and annual work plans • IPPMS reports • ADB review mission reports • Disbursement records • Tranche completion and commissioning certificates 	<p>Assumptions</p> <ul style="list-style-type: none"> • Public awareness campaign encourages households to dispose of their wastes in designated places and voluntarily segregate their wastes. • Private operators find composting profitable. • Poor are served and able to afford the service. <p>Risks</p> <ul style="list-style-type: none"> • Environmental clearances are not obtained on time • Compost is not well marketed in the areas

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
	<ul style="list-style-type: none"> • Shillong: (i) Introduction of house-to-house waste collection (2,000 HH); (ii) improvement of primary and secondary collection and transportation system; (iii) development of short-term sanitary landfill site and transfer station; and (iv) permanent landfill 		
<p>Part B: Strengthened institutional development and investment program management</p> <p>B.1 Urban institutional, financial, and service delivery reforms and strengthened municipal capacity</p>	<p>By the end of 2012:</p> <ul style="list-style-type: none"> • (i) New ULBs constituted in Gangtok and Aizawl, (ii) ULB in Shillong reconstituted and municipal election held, and (iii) ULBs in all 5 states strengthened • Double-entry accounting systems installed and financial systems computerized in program ULBs • Property tax strengthened to yield at least 0.5% of property value • Geographic information system operational in priority areas • Planning process/legislation amended to strengthen development controls and sanitation regulations • Municipal staff trained in O&M of services, financial management, and regulation enforcement • Private sector participation studied and tried in selected subprojects 	<ul style="list-style-type: none"> • SIPMIU quarterly progress reports • Budgets and annual work plans • IPPMS reports • Review mission reports • Disbursement records • Tranche completion and commissioning certificates • Records of consultations and meetings • Financial statements of agencies and ULBs 	<p>Assumptions</p> <ul style="list-style-type: none"> • Reforms lead to more efficiency, transparency, and accountability • Public participates in election • Roles of existing villages and dorbars can be suitably incorporated in proposed structures • Political leaders and high-rank bureaucracy support reforms creating financially viable service providers and tariff reforms • Staff with expertise and experience required for various infrastructure sectors and management tasks are available
<p>B.2 Improved public utility management</p>	<ul style="list-style-type: none"> • Dedicated city water and sewerage units established in all cities by 2014 • Asset management systems improved and performance-based operational systems introduced for water, sewerage, and solid waste management services by 2014, as measured by benchmarking indicators in IPPMS and 2009 baseline • Sustainable user charge structure, including volumetric water charges, sewerage charges, and solid waste management charges implemented; recovery to be no less than as agreed under JNNURM MOAs by 2012 and full O&M costs in all cities by 2015 		<p>Risks</p> <ul style="list-style-type: none"> • Tariff reforms are hampered by lack of understanding among general public and politicians • Village and <i>dorbar</i> leaders disagree on the new urban governance arrangements
<p>B.3 Increased public awareness</p>	<ul style="list-style-type: none"> • Acceptance of ULB creation among public and village leaders, as shown in support for election process, by 2015 • Broad understanding of the need for, and compliance with, service charges • Segregation at source by no less than 50% of the population by 2015 		
<p>B.4 Investment program capacity</p>	<ul style="list-style-type: none"> • On-the-job capacity-building program prepared for implementation • SIPMIU capacity developed in consultant recruitment/management, procurement and contract management, disbursement management, project and performance monitoring, safeguard compliance, land acquisition, preparation of feasibility studies and detailed design 		

Activities with Milestones	Inputs (\$ million)
Preparatory Activities 0.1 IPCC in MOUD and SIPMIUs established and core staff appointed by October 2008 0.2 Consultants short-listed by January 2009 and appointed by September 2009 0.3 Acquisition of private lands and resettlement (according to ADB's <i>Involuntary Resettlement Policy</i> [1995]) begun by December 2008 0.4 Project performance monitoring, reporting, and accounting and auditing protocols formulated by IPCC by February 2009 0.5 Requests for environmental clearance submitted and obtained from State Pollution Control Board and Central Pollution Control Board by February 2009 0.6 Tranche 1 Engineering designs for completed by July 2009 and tendered by September 2009	Total ADB 200.0 Government of India 85.7 Grand Total 285.7
Subproject Implementation for the First Tranche 1.1 Baseline surveys (with gender-disaggregated data) undertaken 1.2 Initiate awareness campaign and community consultations in all five towns by May 2009 1.3 All lands for subproject construction under tranche 1 secured by June 2009 1.4 All required environmental clearances and no-objection certificates obtained by June 2009 1.5 Complete tender and award of all contracts under tranche 1 by June/July 2009 1.6 Undertake construction works and equipment installation till December 2011	Tranche 1 ADB 30.0 Government of India 12.8 Grand Total 42.8
Subproject Preparation and Implementation for the Second tranche 2.1 Design, construction supervision, and management consultants recruited by SIPMIUs in all five states (from November 2008 to September 2009) 2.2 Preliminary designs undertaken and project viability (economic, financial, etc.) reassessed by SIPMIUs for tranche 2 by February 2010; detailed designs undertaken and all associated documentation (IEEs, resettlement plans, bidding documents) prepared and submitted to ADB and IPCC for review and consolidation by July 2010 2.3 All lands for subproject construction under tranche 2 secured by July 2010 2.4 All required environmental clearances and no-objection certificates obtained by July 2010 2.5 Tender and award of all contracts under tranche 2 completed by January 2011 2.6 Construction works and equipment installation undertaken till December 2013	
Subproject Preparation and Implementation for the Third Tranche 3.1 Preliminary designs undertaken and project viability (economic, financial, etc.) reassessed by SIPMIUs for tranche 3 by September 2010; detailed designs undertaken and all associated documentation (IEEs, resettlement plans, bidding documents) prepared and submitted to ADB and IPCC for review and consolidation by January 2011 3.2 Secure all lands for subproject construction under tranche 3 by March 2011 3.3 All required environmental clearances and no-objection certificates obtained by March 2011 3.4 Tender and award of all contracts under tranche 3 completed by June 2011 3.5 Construction works and equipment installation undertaken till February 2015 3.6 Completion surveys (with gender-disaggregated data) undertaken	
Institutional Strengthening and Capacity Building 4.1 Institutional development consultants recruited for Agartala and Shillong in tranche 1, and Kohima, Aizawl, and Gangtok in tranche 2. 4.2 Drafting of regulations, preparation and implementation of institutional development plans and operating procedures, decentralization of urban services to ULBs initiated by Mar 2009 4.3 Drafting regulations, preparation and implementation of institutional development plans, and operating procedures for new water supply and sanitation agencies by March 2009. 4.4 Improvement of financial management and accounting and computerization initiated by March 2009 and completed in all five towns by the end of 2012. 4.5 Operational improvement of urban infrastructure services: Operation management programs developed, staff trained, and implementation ongoing 4.6 Volumetric charges developed and other user fees to make services affordable and financially sustainable initiated in all states by December 2009 4.7 Support for design and implementation of stronger property tax systems in all Program cities, and introduction of property taxes in Aizawl and Kohima initiated by July 2010 4.8 Gender action plan implemented throughout NERCCDIP, 2009–2015	

ADB = Asian Development Bank, HH = household, IEE = initial environmental examination, IPCC = investment program coordination cell, IPPMS = investment program performance monitoring system, IRP = iron removal plant, JNNURM = Jawaharlal Nehru National Urban Renewal Mission, km = kilometer, ML = megaliter, MLD = million liters per day, MOA = memorandum of agreement, MOUD = Ministry of Urban Development, NER = North Eastern Region, NERCCDIP = North Eastern Region Capital Cities Development Investment Program, NGO = nongovernment organization, NRW = non-revenue water, O&M = operation and maintenance, SIPMIU = state investment program management and implementation unit, STP = sewage treatment plant, TPD = tons per day, UDD = urban development department, ULB = urban local body, WTP = water treatment plant.

EXTERNAL ASSISTANCE IN URBAN DEVELOPMENT, WATER SUPPLY, AND SANITATION IN INDIA

Project	Year Approved	Source	Amount (\$ million)
A. Loan-Financed Investment Projects			
Second Chennai Water Supply Project	1995	WB	61.00
Lake Bhopal Conservation and Management Project	1995	Japan	64.91
Chennai Sewerage Renovation and Functional Improvement Project	1995	Japan	157.30
Karnataka Urban Infrastructure Development	1995	ADB	105.00
Bangalore Water Supply and Sewerage	1995	Japan	261.76
Setting up of a Water Treatment Plant	1996	France	6.30
Master Plan, leakage study, ground water recharge study	1996	France	4.20
Mumbai Sewage Disposal Project	1996	WB	192.00
Urban Water Supply and Sanitation Improvement Project	1996	Japan	96.00
Kerala Water Supply Project	1996	Japan	286.00
Rural Water Supply West Bengal	1997	KfW	22.53
Housing Finance – I	1997	ADB	300.00
Rajasthan Urban Infrastructure Development	1998	ADB	250.00
Setting up of a Water Treatment Plant	1998	France	7.00
Karnataka Urban Development and Coastal Environmental Project	1999	ADB	175.00
Urban and Environment Infrastructure Facility	1999	ADB	90.00
Setting up of Dam Fuse Gates	1999	France	4.76
Improvement of Water Supply and Network Rehabilitation	1999	France	13.72
Setting up of a Water Treatment Plant	1999	France	4.44
Groundwater Study	1999	France	0.63
Pilot for Rehabilitation and Improvement of Calcutta Network	1999	France	5.04
Study on Impact of Mining Activities on Subarnarekha Catchment Area	1999	France	2.52
Housing Finance – II	2000	ADB	120.00
Rural Water Supply Maharashtra	2000	KfW	21.00
Kolkata Environment Improvement Project	2000	ADB	250.00
Kerala Rural Water Supply and Environmental Sanitation	2000	WB	65.50
Gujarat Earthquake Rehabilitation and Reconstruction Project	2001	ADB	500.00
Urban Water Supply and Environmental Improvement in Madhya Pradesh	2003	ADB	200.00
Karnataka Urban Water Supply Improvement Project	2004	WB	39.50
Multisector Project for Infrastructure Rehabilitation in Jammu and Kashmir	2004	ADB	250.00
Kerala Sustainable Urban Development Project	2005	ADB	221.20
North Karnataka Urban Sector Investment Program	2006	ADB	270.00
Jammu and Kashmir Urban Sector Development Project	2006	ADB	454.00
Uttarakhand Urban Sector Development Investment Program	2008	ADB	350.00
Urban Water Supply and Environmental Improvement in Madhya Pradesh (Supplementary)	2008	ADB	71.00
Guwahati Water Supply	2009	JICA	299.00
B. Grant-Financed Investment Projects			
Hyderabad Waster Management Project	1995	AusAID	4.38
Keshopur Sewage Management Project	1997	AusAID	0.39
Cuttack Urban Services Improvement Project	1998	DFID	18.43
Calcutta Slum Improvement Project	1998	DFID	2.80
Cochin Urban Poverty Reduction Project	1998	DFID	17.31
Karnataka Watershed Development Project	1998	DFID	22.02
Capacity Building for Municipal and National Decision Makers	1998	UNDP/WB	1.00
Strategic Sanitation Planning	1998	UNDP/WB	0.25
Strategic Planning for Solid Waste Project in Kuppam	1998	UNDP/WB	0.01
Participatory Learning Assessment with Dutch-Assisted WSS	1998	UNDP/WB	0.02
Public-Private Partnership in WSS Management in Meerut District	1998	UNDP	0.02
Community-Based Sustainable Portable Drinking WS in West Bengal	1999	UNDP/WB	0.16
Environment and Sanitation	1999	UNICEF	15.20
Small Grants Facility to Support Initiatives in the Water and Environment Sanitation Sector	1999	UNDP	3.00

Project	Year Approved	Source	Amount (\$ million)
Municipal Services for Urban Poor, Hyderabad, Andhra Pradesh	1999	UNDP/WB	0.08
Improvement of Community-Based Environmental Infrastructure	1999	USAID	0.35
Andhra Pradesh Urban Services for the Poor	1999	DFID	177.48
UNICEF/Government of India, Child's Environment: Hygiene, Sanitation and Water Supply Programme	1999	DFID	26.86
Maharashtra Water and Environment Sanitation Project	1999	DFID	118.50
Translating RWSS Policy Reforms into Reality : A Strategy for Change	1999	UNDP/WB	1.39
Bangalore Water Supply and Environmental Sanitation Master Plan	2000	AusAID	3.96
Community-Based Environmental Improvement Program	2000	USAID	0.10
Kolkata Urban Services for the Poor	2001	DFID	101.44
Gangtok and Shillong Urban WS and Environmental Sanitation Project	2003	AusAID/WB	11.85
Imphal Sewerage and Sewage Treatment		France	
C. ADB Technical Assistance			
Institutional Strengthening of KUIDFC	1995	ADB	0.10
Resource Mobilization Study for Local Governments in Karnataka	1995	ADB	0.30
Rajasthan Urban Infrastructure Development	1995	ADB	0.60
Housing Finance Facility Project	1996	ADB	0.10
Karnataka Coastal Environment Management & Urban Development	1997	ADB	0.80
Urban and Environmental Infrastructure Fund	1997	ADB	0.40
Strengthening Housing Finance Institutions	1997	ADB	0.60
Restructuring State-Level Housing Institutions	1998	ADB	0.50
Calcutta Environmental Improvement	1998	ADB	1.00
Strengthening Institutional Capacities for Urban Infrastructure Finance and Development	1999	ADB	0.50
Community Participation in Urban Environmental Improvement.	1999	ADB	0.15
Strengthening Microfinance Institutions for Urban and Environmental Infrastructure Finance	1999	ADB	0.50
Capacity Building for Social Development	1999	ADB	0.80
Strengthening Disaster Mitigation and Management	1999	ADB	1.00
Reducing Poverty in Urban India	2000	ADB	0.30
Integrated Urban Development in Madhya Pradesh	2001	ADB	1.00
Support for Improvements in Accounting System of Kolkatta Municipality	2001	ADB	0.15
Conservation and Livelihood Improvement in the Sundarbans	2001	ADB	0.45
North East Region Urban Sector Profile	2002	ADB	0.15
Urban Sector Review and Strategy	2003	ADB	0.48
Kerala Sustainable Urban Development Project	2003	ADB	1.00
Cap Building for Project Managmnt & Community Mobilisation in MP	2003	ADB	0.52
North East Region Urban Development Project	2004	ADB	1.00
Capacity Building for Kerala Sustainable Urban Development	2004	ADB	0.63
Capacity Building for Municipal Service Delivery in Kerala	2004	ADB	1.06
Jammu & Kashmir Urban Infrastructure Development Project	2004	ADB	0.50
Karnataka Urban Development III	2004	ADB	0.40
North East Region Urban Development Project (Phase II)	2005	ADB	0.96
Uttaranchal Urban Development	2005	ADB	0.60
TA Cluster for Project Processing and Capacity Building	2006	ADB	15.00
Project Implementation and Urban Management Improvement in the North Eastern Region	2006	ADB	1.50
Strengthening Urban Project Management in Jammu and Kashmir	2006	ADB	0.40
Preparing the Bihar Urban Development Project	2008	ADB	1.00
Preparing the National Capital Region Planning Board Project	2008	ADB	0.70

ADB = Asian Development Bank, AusAID = Australian Agency for International Development, Danida = Danish International Development Assistance, DFID = Department for International Development, KfW = Kreditanstalt fur Wiederaufbau (Reconstruction Credit Institute), KUIDFC = Karnataka Urban Infrastructure Development Finance Corporation, MP = Madhya Pradesh, RWSS = rural water supply and sanitation, TA = technical assistance, UNDP = United Nations Development Programme, UNICEF = United Nations Children's Fund, USAID = United States Agency for International Development, WB = World Bank, WS = water supply, WSS = water supply and sanitation.

Source: Asian Development Bank database.

SECTOR ASSESSMENT, ROAD MAP, AND INVESTMENT PROGRAM

A. Urban Development and Current Sector Performance

1. **Overview.** The five states share an international boundary with Bangladesh, Bhutan, PRC, Nepal, and Myanmar. They are often hilly, landlocked, and far from mainland markets. Their economies are largely agrarian. Urbanization rates range from 11% to 50%. By 2027, the urban population of the states is estimated to be 30% of their total population. Urbanization is dominated by the capital cities, which account for over 60% of the total urban population. The largest cities are Agartala (Tripura) and Shillong (Meghalaya), with populations of over 300,000. Aizawl (Mizoram) has 230,000 people, Kohima (Nagaland) 120,000, and Gangtok (Sikkim) 90,000. The cities had high annual growth rates in the past (over 5%); future growth rates are estimated to range from 1.8% to 3%.

2. **Water and Sanitation Coverage and Service Levels.** The development potential created by increasing connectivity and a productive labor force in the capital cities is hampered by inadequate urban infrastructure and services. Coverage is limited to a reduced number of beneficiaries: the percentage of the population with access to piped water supply ranges from 50% to 80%.¹ All of the cities have a tropical monsoon climate, with rainfall that ranges from 2,000 mm (Kohima) to 3,500 mm (Gangtok) per year. There are, however, marked differences in rainfall during the year, with a rainy season from June to November and a dry season the rest of the year, when water shortages are more acute. Non-revenue water (NRW) levels are high (ranging in most cities from 40% to 60%), water is supplied for 2–4 hours a day, schemes are often stretched beyond their design life resulting in operational deficiencies,² and service does not meet the required standards.³ Where pipe-borne drinking water is not available, water is generally sourced from private or public streams, dug or tube wells, public tanks, ponds, and channels; however, the quality of extracted water is often compromised and seldom verified. In addition to limited access, water supplies are usually insufficient, particularly at the end of the dry season. Demand and willingness to pay for water and sanitation are nonetheless reasonably high.⁴

3. All five capital cities present size and densities where sanitation is a problem. In all cities, the dominant mode of sanitation is a septic tank or soak pit for toilet wastes, with wastewaters that percolate into the soil and an overflow to the nearest drain or stream, while sullage wastes drain directly into the nearest drain or stream. Only Gangtok has a central piped

¹ Agartala's coverage is around 70%, Aizawl's around 50%, Gangtok's around 80%, Kohima's 50% (of which half depends on stand-post supplies), and Shillong's around 50% (but only about 44% have taps in their dwellings).

² Agartala's production system is reportedly operating at 50% of the total capacity, and Aizawl's at about 50%. Gangtok is operating at 40% of its treatment capacity (lower if abstraction levels are considered). In the case of Kohima, the treatment plant is not operating at present.

³ In all instances, water pressures are also below the recommended 7 meters at the consumer outlet. Water quality is, in many instances, not monitored often enough (in Kohima, samples are only occasionally taken and sent to Dimapur for analysis; in Shillong, many of the tests are done off-plant; in Agartala, iron concentrations are sometimes above recommended levels) and does not always meet the water quality standards of the Bureau of Indian Standards and the World Health Organization (WHO).

⁴ Lack of adequate water supplies has created severe hardship for the population of all five cities and hampered the development of the cities. In Agartala, particularly in older parts of town, distribution pipes are blocked by iron deposits, and supplies are restricted. In Aizawl and Kohima, where production capacity is substantially below demand, and the distribution system pipelines are old and inadequate, water may be available for only a few hours a week during the dry season. In Kohima, the shortages are so severe that private operators have begun providing piped water supplies in competition with the Public Health Engineering Department. Gangtok and Shillong have recently improved their water production capacity, but neither city has carried out the distribution system improvements needed to serve the population better. Although some of the traditional *dorbars* (tribal villages) surrounding Shillong operate their own piped water supply systems, these are now under pressure from population growth and limited sources. Gangtok is perhaps the most advanced of the five cities in water supply services, because of its access to a substantially large source of water and the introduction of certain operational and management improvements.

sewer system of substantial size, but even there the present system caters to only about 12% of the population.⁵ In Kohima, a small piped sewerage system providing only basic treatment has been constructed by the residents of Chota Basti slum community. On average, about 95% of the population in program cities has access to a toilet at home or a shared toilet.⁶ In Agartala and Aizawl, most households have a toilet in their dwelling, whereas in Gangtok, Kohima, and Shillong a fraction share toilets. About 5% of households have no access to a toilet in the dwelling or shared with others, and use either public toilets or defecate in the open. About 19% of toilets are pit latrines or dry toilets; therefore, about 24% of the population of the program cities use pit latrines, dry toilets, or open fields and streams. About 72% of households have septic tanks or soak pits. On average, about 26% of households have their septic tanks or soak pits emptied by vacuum trucks, while the rest empty them manually. It is common practice to dump the wastes into the nearest stream or drain.⁷

4. Although the levels vary, it is estimated that only 30%–50% of solid waste generated is collected. Despite efforts, service is limited in low-income areas, slums, and inaccessible areas including those with steep, hilly terrain. Biodegradable wastes are not segregated from nonbiodegradable wastes; the latter often contain biomedical and industrial hazardous wastes. No storage bins are provided; waste generated accumulates at the roadside. Manual multi-handling of waste continues through manual loading of waste into refuse vehicles. Sanitation workers, at high risk to their health, often do not use personal protective gear like gloves dust masks. The transport fleet is often insufficient in capacity, vehicles are uncovered and old, and parking and garage facilities are not available. None of the cities have compost facilities except for Gangtok and Shillong, and even in these towns compost marketing is a problem. No sanitary landfills are available in any of the five program cities. Crude dumping and burning of waste is still common.

5. **Water and Sanitation Sector Governance and Financial Performance.** Deficiencies in urban systems, management, and finance are responsible for the poor infrastructure and service provision. Urban local bodies (ULBs) are still at an early stage of development. Among the five cities, only Agartala has a fully functioning ULB. Existing and emerging ULBs in Shillong and Agartala at this point are mostly in solid waste management, minor roads, drains, and water supply. In Kohima, 12th Schedule functions have only partially been included in the state Municipal Act and transferred to the ULB, whereas in Aizawl and Gangtok, the functions have for the most part been incorporated in the Municipal Acts but are still held by the parastatal agencies.⁸ The situation is further complicated by conflicting legislation and traditional governance structures with overlapping jurisdictions, resulting in poor service delivery. The operation and maintenance of water supply and sanitation (WSS) services is generally the duty of public health and engineering departments, but these are traditionally oriented to infrastructure building and do not have the capacity to deliver good service. Overly complex

⁵ The sewerage system in Gangtok suffers from several problems. One of these is lack of connectivity. Connections are difficult to make, given the mountainous terrain. Houses above the sewer line are relatively easy to connect, while those immediately below the sewer line often must connect farther down the hillside. Households are not required to connect to the sewer system. The main outfall line is badly deteriorated and leaking; the bottom of the pipe has been eroded by the mix of high velocities, and the joints are of poor quality or damaged. The treatment plant is soon to be replaced.

⁶ Toilet coverage in 2006 was 98% in Mizoram, 97% in Tripura, 86% in Nagaland, 71% in Meghalaya, and 89% in Sikkim.

⁷ All the cities in the NER have public health rules that regulate the discharge of human wastes, but these rules are widely ignored. Although septic tank emptying services are provided by both public and private entities, there are no facilities for treatment. In all the program cities, the shallow groundwater table and streams are often polluted by wastewater, which is commonly discharged into roadside drains, exposing the inhabitants of the city and downstream water users to the health risks that go with poor environmental sanitation. Generally, the problems are worse in lower-lying areas, along the rivers, and in slum and squatter communities. Wastewater percolating into the soil causes the landslips that cause problems for all the hill cities, particularly Aizawl, Gangtok, and Kohima.

⁸ Gangtok approved its Municipal Act in 2007, and Mizoram, in 2008. It may take some time for all functions to be progressively devolved.

design, high rates of NRW, and high establishment costs have raised operating costs, even as tariffs have stayed low. Weak accounting systems do not produce the financial information needed to make sound improvement decisions.

6. The main problems facing the WSS sector are low self-financing ratios, insufficient tariff recovery, and high production costs. The vast majority of urban infrastructure and services are funded by the Government through the state governments. User charges and urban taxes are limited. Water charges as flat and/or volumetric (Aizawl and Kohima) tariffs are levied in all cities, but they are far below the operating costs. No sewerage charge exists, except in Sikkim. Solid waste charges are being levied in Gangtok and proposed to be levied in Aizawl and Kohima while a solid waste tax is levied as part of property tax in Agartala, and service charges is in place in Shillong. The gap between the residents' desire for better services and the current level of services in the cities is growing. All the cities need to develop a new tariff method to meet their revised cost-recovery objectives, introduce sewerage tariffs and solid waste charges, and monitor financial and operating indicators quarterly. In addition to reducing NRW, they need to achieve progress in strengthening financial management, reducing power consumption, and improving operating and institutional efficiency. The following areas must be developed: (i) asset management, (ii) asset planning, and (iii) public utility management. Private sector involvement in service provision is severely limited⁹ by the lack of regulation, commercially oriented delivery systems, and adequate tariffs. The lack of own-source revenues among the states and ULBs contributes to poor operation and maintenance and the consequent low sustainability of service delivery.

B. Road Map

7. A core objective of the Government's 11th Five-Year Plan (2007–2012) is to reduce poverty and regional disparities by ensuring, among other, access to basic physical infrastructure and a comprehensive strategy for better health.¹⁰ NER, as one of the least-developed regions, has been prioritized for infrastructure and social service investments. The 11th Plan highlights the vital role of the capital cities in NER's socioeconomic transformation. Given the difficult terrain and inaccessibility of the region, these cities perform a function of a much higher order than other cities of similar size in India. With the opening up of trade with neighboring countries and the emergence of transport corridors in the region, these cities are expected to play an even greater role in the NER economy as commercial and business hubs besides being administrative centers. Investments in urban infrastructure and services will unleash the potential of these cities to catalyze growth in NER. The 11th Plan, as did the 10th Plan before it, also stresses the importance of improving the quality of governance and service delivery systems. The plans advocate a two-pronged approach to urban development that couples funds for capital investments with reforms.¹¹ With the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), the Government has reaffirmed its commitment to sustainable urban development. JNNURM looks forward to fast-tracking investments in urban infrastructure in a large number of cities, subject to the cities' commitment to a range of reforms in line with the 74th Constitutional Amendment Act of 1994 (CAA). JNNURM also advocates balancing asset creation with asset management, incorporating private sector efficiencies into service delivery, and making ULBs financially sustainable service providers.

⁹ Other than a private composting venture in Shillong, no other activities with private sector participation are in place in the major urban sectors.

¹⁰ The recently approved National Urban Sanitation Policy is an immediate result of this vision.

¹¹ The plans' main reference for reforms is the 74th Constitutional Amendment Act of 1994 (CAA), which promotes decentralized urban governance. The CAA enables the broadening of the role of ULBs from being mere providers of civic services to encompassing the wider arena of socioeconomic planning. Further, it acknowledges that functional delegation can work only if it is accompanied by financial devolution. The CAA stipulates that the states should empower the ULBs to raise revenues and undertake reforms to levy user charges, enhance the property tax, rationalize establishment costs, and improve municipal accounting and budgeting.

8. The Government's road map and investment program derives its rationale from the above development agenda and policy priorities. Its aim is to pave the way for the Government to attain its goal of bringing NER up to par with the developed regions of India. It intends to address the urban infrastructure and service needs that continue to be a critical constraint on the development of the NER cities and on the improvement of living conditions for their rapidly growing populations. The road map and investment program links capital investments to reforms for sustainable impact. It targets those capital cities that will spearhead the repositioning of NER as a gateway joining India with neighboring states and the rest of South Asia, as well as with Southeast and East Asia. It will provide a unique opportunity to improve environmental conditions in all five program cities, address problems of poor hygiene and sanitation, and reduce vulnerability within a disaster-prone environment. Moreover, the investment program seeks to provide adequate services to all, including the poor, and incorporates in its design the tools, mechanisms, and resources needed to ensure that the views and aspirations of communities within the program cities (often characterized by strong identities) are adequately reflected.

9. **Vision.** The road map and investment program underpinning the North Eastern Region Capital Cities Development Investment Program (NERCCDIP) is guided by the Government's policy framework and development priorities. The vision is to "provid[e] sustainable urban infrastructure and services leading to better quality of life for a population of 2.07 million people by 2027" and thereby create more efficient and productive cities, strengthen their economy, and reduce poverty. The road map and investment program follows these principles: (i) simultaneously providing investments in the five capital cities that will spearhead the repositioning of NER as the gateway linking India to the neighboring states and to Southeast and East Asia, (ii) providing urban infrastructure and services to realize the full potential benefits of integrated subsector development; and (iii) linking investments to reforms for urban governance, finance, and service delivery. NERCCDIP will meet priority investment and reform needs and pave the way for the attainment of the vision for the NER capital cities.

10. **Long-Term Sector Needs and Proposed Investment Program.** The assessment of the long-term (20-year) urban infrastructure and service improvement needs and the prioritization exercise prepared to match the requirements of the five cities over the next 10 years are based on growth strategies and conceptual infrastructure master plans. The demographic and physical growth of the cities and its distribution was assessed.¹²

11. NERCCDIP forms part of the medium- to long-term road map for the NER capital cities. To be implemented over a 7-year period, it places emphasis on increasing operational efficiencies, carrying out pilot initiatives to test methods of service delivery, and establishing the institutional, operational, and financial foundations and building capacity for further improvements. In the 12 years after that, the systems established would be consolidated around the proven approaches and operations would continue to expand to cover most urban services by 2027. The states will need to identify alternative sources of financing to meet the remaining investment needs. Sources include JNNURM, the Non-lapsable Central Pool of Resources, the Ministry of Urban Development and Poverty Alleviation (10% of funding), financial institutions, and private sector.

¹² Conceptual master plans in the form of city development plans (<http://jnnurm.nic.in/>) were prepared on the basis of growth strategies, existing master plans (where available), consultations with stakeholders, socioeconomic surveys, and an analysis of infrastructure deficiencies, demand projections, and institutional absorptive capacity to develop and sustain infrastructure assets.

C. Strategic Context

12. Urban development has been a key priority of the Government over the last decade. The 11th FYP recognizes that “Indian cities will be the locus and engine of economic growth over the next 2 decades, and realization of the ambitious goal of 9%–10% growth in GDP depends on making Indian cities much more livable, inclusive, bankable and competitive.” Both the 11th FYP and the Asian Development Bank’s strategy stress (i) the existence of intra-urban, intrastate, and interstate differences in the level of urban services and the need for balanced development, and (ii) the urgency of reducing urban poverty as part of the strategy of promoting inclusive growth. Environmental protection and environmental sustainability—the need to avoid water pollution, improve wastewater and solid waste management and increase environmental awareness—are also deemed critical to inclusive growth. The 11th FYP remains committed to strengthening urban governance and management through decentralization, enhancing accountability, and establishing regulatory frameworks for service delivery. NERCCDIP, in line with the 11th FYP targets, will set out to provide the urban populations of the capital cities of Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura in the NER with (i) better access to water and sanitation, an essential Millennium Development Goal; and (ii) improved environment and public health.

D. Policy Framework: Urban Institutional, Financial, and Service Delivery Reforms

13. In accordance with the Government’s urban policy framework, the road map sets a vision for developing urban governance, finance, and service delivery frameworks in the capital cities. The vision entails a number of sequenced interventions to (i) advance municipal governance and management by developing legislative and institutional frameworks for ULBs and enhancing their capacity for effective and accountable urban governance and management, (ii) gradually establish efficient and financially sustainable WSS service providers, and (iii) create sustainable sources of financing for urban infrastructure and services.

14. **ULBs and Local Governance.** The road map supports the development of new ULBs in Aizawl and Gangtok. In both instances, reforms will involve enabling recently enacted municipal legislation and the constitution of the ULBs in each of these cities. Pending elections a dedicated administrative unit will be created and its organizational, staffing, and management systems will be developed. Then, from early 2011, the transfer of functions from state government to the ULBs will be fully pursued.

15. In Shillong, where there is an operating but unelected municipal board, the immediate efforts will be directed at transforming it into a statutory municipal body within the existing boundaries; the medium-term target will be establishing an urban governance framework for the Greater Shillong area. The process will involve enabling the representation of traditional governance structures within the municipal system, amending municipal legislation, and developing an organizational structure, improved management systems and tools, and human resources for the ULB. In Kohima, where municipal legislation and an elected municipal body exist, reforms will accelerate municipal capacity building, including the actual transfer of functions, assets and financial resources, and staff to the municipality, the upgrading of administrative and management systems, and the development of ward and village structures and capacity according to the state’s “communitization policy.” In addition, the current Municipal Act will undergo minor revisions in line with the CAA. In Agartala, which is the most advanced city in terms of ULB reforms, efforts will be directed at providing the Agartala municipality and its zones and wards with adequate administrative, management, and operating systems and staffing. In all the three existing ULBs of Agartala, Kohima, and Shillong, steps will be taken to better define the roles of the legislative and executive branches; streamline key processes such as those for budgeting and for financial and asset inventory and management; amend the organizational structure, e.g., by creating new wings, units, or sections; and introduce a

personnel code of practice (office administration regulation rules) and performance-based management systems.

16. **Efficient and Sustainable Service Providers.** The road map stipulates that cities will gradually develop ring-fenced WSS service providers focused on good-quality service delivery and financial sustainability. In the short term, existing state departments will be restructured into divisions with dedicated responsibility for city water supply and sewerage, to be eventually transformed into financially viable WSS providers. The divisions will be provided with (i) double-entry accounting systems that can record assets, liabilities, revenues, and costs; (ii) management systems for carrying out in the short term a NRW reduction and metering program, later to become an asset management program, and performance-based service delivery systems; and (iii) the ability to levy user charges, adjust tariffs, and retain and use funds for gradual cost recovery, as well as to optimize and redistribute staff. In the medium term, efforts will be directed at developing well-tailored options for WSS service providers operating in a client-oriented, cost-effective, and sustainable manner, with their own sources of funds. This process would involve (i) awareness campaigns; (ii) valuation of assets and financial modeling of options; (iii) proposals for the structure, functions, organization, staffing, and financial and human resource management systems for the preferred option; (iv) stakeholder consultations to generate consensus on the preferred option; (v) the passage of legislation to implement the preferred option; and (vi) the creation of the agency. While a number of options—such as a publicly owned agency under the state, a community-owned agency, or an agency owned jointly by the state, the ULB, and the community—are available, given the decentralization framework, ring-fencing the WSS operations at ULB level would be the most appropriate option to contemplate.

17. Appropriate arrangements would be made initially at the state level and eventually at the ULB level for regulating the WSS service provider and any future concessionaires and for advising on policy development. Due consideration will be given to the rights and roles of water rights holders and private and community water suppliers. In the case of Kohima, support would be provided for the development of a sustainable partnership agreement between the state and the water rights holders, involving compensation measures for water withdrawals based on metered water consumption.

18. **Municipal Finance Reforms.** Institutional reforms will be accompanied with reforms to set in motion a system of sustainable funding. Reforms in this regard will involve the introduction and rationalization of user charges through (i) volumetric metering of water supplies, coupled with volumetric water charges; (ii) imposition of a new sewerage service charge as a percentage of the water bill; (iii) levy of solid waste service charges based on the level of service provided; and (iv) improved collection efficiencies. The charges will be set low for basic consumption and increased according to consumption level, allowing all consumers, even the poor, to afford the services.

19. The interventions will also involve reforming the property tax as a major source of local revenue. The property tax will be introduced in those cities where it is not currently levied (i.e., Aizawl, Gangtok, and Kohima) and enhanced in Agartala and Shillong. It will be set at a level that generates revenues of 1%–2% of capital value, and the tax rate will be increased as public acceptance grows. The property tax reforms will involve improving tax administration (area-based methods supported by geographic information systems and computerization of billing and other functions), periodically revising property tax assessment, and improving tax collection efficiency. Finally, the reforms will include measures to promote the efficient and transparent use of financial resources: (i) a modern, accrual-based double-entry system of accounting will be implemented to enable the regular issuance of financial statements on urban operations and the recording of all bills, state grants, fixed assets, and physical inventories; (ii) accounting will be computerized; and (iii) an efficient and transparent budget process that

links financial targets to physical targets set as part of city investment programming will be put in place.

20. **Potential for Private Participation.** Under NERCCDIP, the dominant mode of service delivery is government-led (ULBs, state departments, future water and sewerage agencies). This is justified, as NERCCDIP is limited to basic urban infrastructure sectors in which (i) a natural monopoly exists; (ii) the services and benefits are of the nature of public good; and (iii) the externality and interdependence of multiple sectors require integrated management. In the short term, private sector participation (PSP) on a major scale is constrained by the lack of regulatory frameworks, commercially oriented service delivery systems, and adequate tariff structures and rates that allow the private sector to have satisfactory cost recovery. However, the NERCCDIP reform initiatives creating regulatory frameworks, efficient and financially viable service delivery systems, and enhanced tariffs will gradually create an enabling environment for PSP. NERCCDIP will also finance a PSP study to examine specific components with PSP potential.¹³ The study, to be conducted in each city through adequate awareness-raising and participatory methods, will propose detailed time-bound road maps for realistic PSP in the sectors where potential is identified and will survey interest among potential private partners.

E. Investment Program

21. It is estimated that over \$1.9 billion will be needed over the next 20 years to meet all the infrastructure requirements of the five cities, and \$1.1 billion will be needed to meet essential service delivery functions relating to water supply, sewerage and sanitation, and solid waste management.¹⁴ Financial assistance from NERCCDIP to cover 26% of the estimated cost of the overall program is proposed.

22. **Impact and Outcome.** Both the Government's investment program and NERCCDIP are expected to improve the quality of life for 1.2 million people and enhance urban productivity in the five capital cities by (i) making urban infrastructure and services more accessible to the city populations, including the poor; and (ii) supporting urban institutional, management, service delivery, and financial reforms to create an environment and capacity for sustainable provision of urban infrastructure and services. NERCCDIP constitutes an opportunity to finance priority investments.

¹³ PSP may take the form of build-operate-transfer arrangements for new compost plants, outsourcing of solid waste collection, management contracts for sewage treatment plants, and outsourcing of maintenance for water distribution and of user charge billing and collection.

¹⁴ This value corresponds to an updated assessment as of October 2008.

COST ESTIMATES AND FINANCING PLAN

Table A4.1: Detailed Program Investment Plan

Item	(\$'000)						Total
	Agartala Tripura	Aizawl Mizoram	Gangtok Sikkim	Kohima Nagaland	Shillong Meghalaya	Program Coordination	
A. Base Cost^a							
1. Urban Infrastructure and Service Improvement							
a. Water Supply							
Tranche 1	1,340.7	2,342.4	4,832.8	1,254.4	0.0	0.0	9,770.2
Tranche 2	33,442.6	18,724.5	2,693.0	9,206.1	0.0	0.0	64,066.2
Tranche 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
b. Sewerage and Sanitation							
Tranche 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tranche 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tranche 3	0.0	17,636.8	17,477.6	20,370.2	27,898.9	0.0	83,383.5
c. Solid-Waste Management							
Tranche 1	0.0	0.0	0.0	3,511.3	304.3	0.0	3,815.7
Tranche 2	2,430.1	982.1	1,683.3	398.0	2,134.0	0.0	7,627.4
Tranche 3	552.5	2,516.2	0.0	0.0	1,474.3	0.0	4,542.9
2. Capacity Development and Investment Program Management							
a. Capacity Building							
Tranche 1	1,176.2	0.0	0.0	0.0	1,176.2	0.0	2,352.4
Tranche 2	0.0	1,176.2	1,176.2	1,176.2	0.0	0.0	3,528.6
Tranche 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
b. Investment Program Management							
Tranche 1	2,801.7	2,942.1	2,779.3	2,787.3	2,769.3	613.1	14,692.9
Tranche 2	572.5	572.5	572.5	572.5	572.5	613.1	3,475.7
Tranche 3	0.0	0.0	0.0	0.0	0.0	613.1	613.1
3. Taxes and Duties							
Subtotal (A)	5,742.2	6,275.1	4,339.7	5,618.3	4,579.8	246.8	26,801.9
48,058.5	53,167.8	35,554.5	44,894.3	40,909.4	2,086.1		224,670.5
6,255.1	7,725.5	5,175.9	6,800.1	5,790.0	135.3		31,881.9
6,625.8	6,925.5	4,544.8	5,802.8	4,960.8	258.7		29,118.4
Total (A+B+C)	60,939.4	67,818.7	45,275.1	57,497.2	51,660.1	2,480.0	285,670.7

^a In end 2008 prices.

^b Physical contingencies computed at 10% for civil works; and 5% for equipment. Price contingencies are computed at 0.5% for domestic inflation and at 0.4%–1.4% for international inflation.

^c Includes interest and commitment charges. Financing charges are estimated, assuming an interest rate computed at the 6-months London interbank offered rate and a spread of 20 basis points and a commitment fee of 0.15%. (<http://www.adb.org/Media/Articles/2007/12313-asian-loans-charges/>)

Source: Asian Development Bank estimates.

Table A4.2: Proposed Financing Plan by Tranche
(\$ million)

Item	Tranche 1	Tranche 2	Tranche 3	Total	Percentage
Asian Development Bank	30.0	79.3	90.7	200.0	70.0
Government of India	12.8	33.9	39.0	85.7	30.0
Total	42.8	113.2	129.7	285.7	100.0

Source: Asian Development Bank estimates.

Table A4.3: Cost Estimate and Financing Plan for Tranche 1 under Multitranche Financing Facility by Component Activity
(\$ 000)

Items	Total Cost	ADB Financing	SG/ULB Financing	Total Financing
A. Base Cost^a				
1. Agartala, Tripura				
Water supply	1,340.7			1,340.7
Sewerage	0.0	1,084.5	256.2	1,340.7
Solid waste management	0.0	0.0	0.0	0.0
Design, supervision, and management consultants ^b	2,229.2	2,229.2	0.0	2,229.2
Financial and institutional development consultants ^c	1,176.2	1,176.2	0.0	1,176.2
Project implementation and administration	572.5	572.5	0.0	572.5
Tax and duties	723.7	0.0	723.7	723.7
Base Costs after Taxes and Duties	6,042.4	5,062.4	980.0	6,042.4
2. Aizawl, Mizoram				
Water supply	2,342.4	1,957.0	385.4	2,342.4
Sewerage	0.0	0.0	0.0	0.0
Solid waste management	0.0	0.0	0.0	0.0
Design, supervision, and management consultants ^b	2,369.6	2,369.6	0.0	2,369.6
Financial and institutional development consultants ^c	0.0	0.0	0.0	0.0
Project implementation and administration	572.5	572.5	0.0	572.5
Tax and duties	722.8	0.0	722.8	722.8
Base Costs after Taxes and Duties	6,007.3	4,899.1	1,108.1	6,007.3
3. Gangtok, Sikkim				
Water supply	4,832.8	3,496.7	1,336.1	4,832.8
Sewerage	0.0	0.0	0.0	0.0
Solid waste management	0.0	0.0	0.0	0.0
Design, supervision, and management consultants ^b	2,206.8	2,206.8	0.0	2,206.8
Financial and institutional development consultants ^c	0.0	0.0	0.0	0.0
Project implementation and administration	572.5	572.5	0.0	572.5
Tax and duties	1,061.2	0.0	1,061.2	1,061.2
Base Costs after Taxes and Duties	8,673.3	6,276.0	2,397.3	8,673.3
4. Kohima, Nagaland				
Water supply	1,254.4	977.5	276.8	1,254.4
Sewerage	0.0	0.0	0.0	0.0
Solid waste management	3,511.3	2,624.7	886.7	3,511.3
Design, supervision, and management consultants ^b	2,214.8	2,214.8	0.0	2,214.8
Financial and institutional development consultants ^c	0.0	0.0	0.0	0.0
Project implementation and administration	572.5	572.5	0.0	572.5

Items	Total Cost	ADB Financing	SG/ULB Financing	Total Financing
Tax and duties	1,048.8	0.0	1,048.8	1,048.8
Base Costs after Taxes and Duties	8,601.8	6,389.5	2,212.3	8,601.8
5. Shillong, Meghalaya				
Water supply	0.0	0.0	0.0	0.0
Sewerage	0.0	0.0	0.0	0.0
Solid waste management	427.0	336.9	90.1	427.0
Design, supervision, and management consultants ^b	2,196.8	2,196.8	0.0	2,196.8
Financial and institutional development consultants ^c	1,176.2	1,176.2	0.0	1,176.2
Project implementation and administration	572.5	572.5	0.0	572.5
Tax and duties	590.4	0.0	590.4	590.4
	4,962.9	4,282.4	680.5	4,962.9
Base Costs after Taxes and Duties				
6. Ministry of Urban Development				
Investment program management consultants	473.8	473.8	0.0	473.8
Investment program coordination and administration	139.2	0.0	139.2	139.2
Tax and duties	78.9	0.0	78.9	78.9
	692.0	473.8	218.1	692.0
Base Costs after Taxes and Duties				
B. Contingencies^a				
1. Agartala, Tripura				
Physical contingency	80.5	63.7	16.8	80.5
Price contingency	390.8	374.2	16.6	390.8
Subtotal (B1)	471.3	438.0	33.4	471.3
2. Aizawl, Mizoram				
Physical contingency	137.4	112.1	25.3	137.4
Price contingency	360.4	338.2	22.3	360.4
Subtotal (B2)	497.8	450.3	47.5	497.8
3. Gangtok, Sikkim				
Physical contingency	312.1	224.4	87.6	312.1
Price contingency	565.5	465.0	100.5	565.5
Subtotal (B3)	877.5	689.4	188.2	877.5
4. Kohima, Nagaland				
Physical contingency	299.6	223.3	76.3	299.6
Price contingency	537.6	457.7	80.0	537.6
Subtotal (B4)	837.2	680.9	156.3	837.2
5. Shillong, Meghalaya				
Physical contingency	26.1	20.2	5.9	26.1
Price contingency	324.5	319.9	4.6	324.5
Subtotal (B5)	350.6	340.1	10.5	350.6
6. Ministry of Urban Development				
Physical contingency	0.0	0.0	0.0	0.0
Price contingency	18.1	18.1	0.0	18.1
Subtotal (B6)	18.1	18.1	0.0	18.1
C. Financial Charges During Implementation^e				
Agartala, Tripura	819.7	0.0	819.7	819.7
Aizawl, Mizoram	818.6	0.0	818.6	818.6
Gangtok, Sikkim	1,201.8	0.0	1,201.8	1,201.8
Kohima, Nagaland	1,187.8	0.0	1,187.8	1,187.8

Items	Total Cost	ADB Financing	SG/ULB Financing	Total Financing
Shillong, Meghalaya	668.6	0.0	668.6	668.6
Ministry of Urban Development	89.3		89.3	89.3
Subtotal (C)	4,785.8	0.0	4,785.8	4,785.8
Total	42,818.0	30,000.0	12,818.0	42,818.0

ADB = Asian Development Bank, SG = state government, ULB = urban local body.

^a In end 2008 prices. Purchasing power parity was used as the base assumption to establish a foreign exchange rate forecast during project implementation years, as suggested in ADB. 2002. *Guidelines for the Financial Governance and Management of Investment Projects Financed by the Asian Development Bank*. Manila.

^b Figures for design, supervision, and management consultants contains costs of surveys for (i) detailed engineering design, (ii) resettlement, (iii) environmental assessment, and (iv) benefit monitoring and evaluation.

^c Figures for financial and institutional development consultants contains costs of assistance to (i) accounting reform, (ii) development of geographic information system-based property tax, and (iii) asset management improvement.

^d Physical contingencies computed at 10% for civil works and 5% for equipment. Price contingencies are computed at 0.5% for domestic inflation and at 0.4%–1.4% for international inflation.

^e Includes interest and commitment charges. Financing charges are estimated, assuming an interest rate computed at the 6-month London interbank offered rate and a spread of 20 basis points and a commitment fee of 0.15%. (<http://www.adb.org/Media/Articles/2007/12313-asian-loans-charges/>)

Source: Asian Development Bank estimates.

Table A4.4: Cost Estimate and Financing Plan for Tranche 1 under MFF by Disbursement Categories
(\$ 000)

Disbursement Categories	Total Cost	ADB Financing	SG/ULB Financing	Total Financing
A. Agartala, Tripura				
Civil works	865.7	609.4	256.2	865.7
Equipment	475.1	475.1	0.0	475.1
Consulting services ^a	3,405.4	3,405.4	0.0	3,405.4
Safeguards compliance	0.0	0.0	0.0	0.0
Project implementation and administration	572.5	572.5	0.0	572.5
Tax and duties	723.7	0.0	723.7	723.7
Contingencies ^c	471.3	438.0	33.4	471.3
Financing charges	819.7	0.0	819.7	819.7
Subtotal (A)	7,333.4	5,500.4	1,833.0	7,333.4
B. Aizawl, Mizoram				
Civil works	1,301.9	916.5	385.4	1,301.9
Equipment	1,040.5	1,040.5	0.0	1,040.5
Consulting services ^a	2,369.6	2,369.6	0.0	2,369.6
Safeguards compliance	0.0	0.0	0.0	0.0
Project implementation and administration	572.5	572.5	0.0	572.5
Tax and duties	722.8	0.0	722.8	722.8
Contingencies ^c	497.8	450.3	47.5	497.8
Financing charges	818.6	0.0	818.6	818.6
Subtotal (B)	7,323.7	5,349.5	1,974.3	7,323.7
C. Gangtok, Sikkim				
Civil Works	4,513.8	3,177.7	1,336.1	4,513.8
Equipment	319.0	319.0	0.0	319.0
Consulting services ^a	2,206.8	2,206.8	0.0	2,206.8
Safeguards compliance	0.0	0.0	0.0	0.0

Disbursement Categories	Total Cost	ADB Financing	SG/ULB Financing	Total Financing
Project implementation and administration	572.5	572.5	0.0	572.5
Tax and duties	1,061.2	0.0	1,061.2	1,061.2
Contingencies ^c	877.5	689.4	188.2	877.5
Financing charges	1,201.8	0.0	1,201.8	1,201.8
Subtotal (C)	10,752.7	6,965.4	3,787.3	10,752.7
D. Kohima, Nagaland				
Civil works	3,930.7	2,767.2	1,163.5	3,930.7
Equipment	835.0	835.0	0.0	835.0
Consulting services ^a	2,214.8	2,214.8	0.0	2,214.8
Safeguards compliance	0.0	0.0	0.0	0.0
Project implementation and administration	572.5	572.5	0.0	572.5
Tax and duties	1,048.8	0.0	1,048.8	1,048.8
Contingencies ^c	837.2	680.9	156.3	837.2
Financing charges	1,187.8	0.0	1,187.8	1,187.8
Subtotal (D)	10,626.8	7,070.5	3,556.3	10,626.8
E. Shillong, Meghalaya				
Civil works	304.3	214.2	90.1	304.3
Equipment	122.6	122.6	0.0	0.0
Consulting services ^a	3,373.0	3,373.0	0.0	3,373.0
Safeguards compliance	0.0	0.0	0.0	0.0
Project implementation and administration	572.5	572.5	0.0	572.5
Tax and duties	590.4	0.0	590.4	590.4
Contingencies ^c	350.6	340.1	10.5	350.6
Financing charges	668.6	0.0	668.6	668.6
Subtotal (E)	5,982.1	4,622.5	1,359.6	5,982.1
F. Ministry of Urban Development				
Civil works	0.0	0.0	0.0	0.0
Equipment	0.0	0.0	0.0	0.0
Consulting services ^a	473.8	473.8	0.0	473.8
Safeguards compliance	0.0	0.0	0.0	0.0
Project implementation and administration	139.2	0.0	139.2	139.2
Tax and duties	78.9	0.00	78.9	78.9
Contingencies ^c	18.1	18.1	0.0	18.1
Financing charges	89.3	0.0	89.3	89.3
Subtotal (F)	799.4	491.9	307.5	799.4
Total	42,818.0	30,000.0	12,818.0	42,818.0

ADB = Asian Development Bank, MFF = multitranche financing facility, SG = state government, ULB = urban local body.

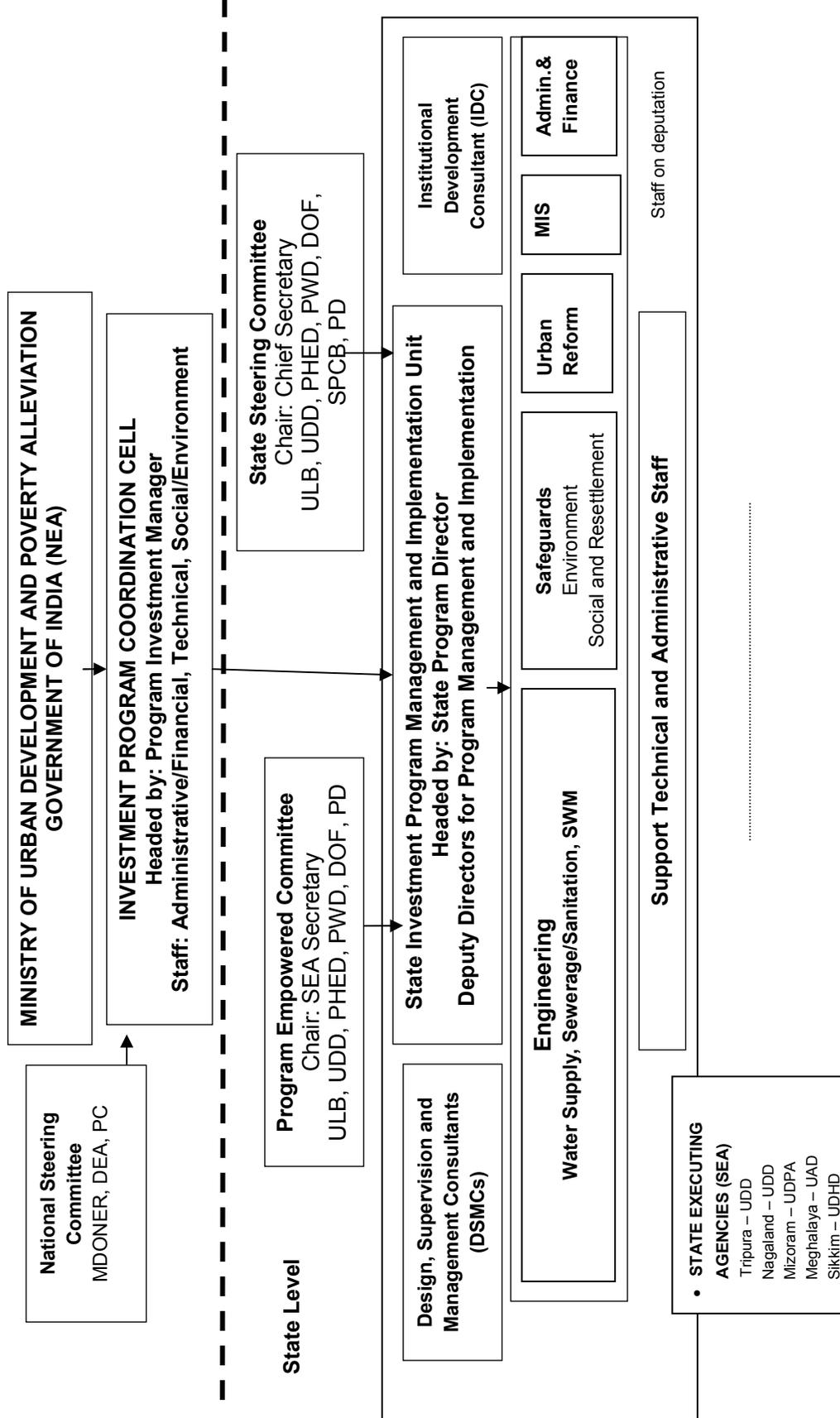
^a Figures for consultants include equipments, surveys, and training programs to be procured by the consultants.

^b Includes interest and commitment charges. Financing charges are estimated, assuming an interest rate computed at the 6-month London interbank offered rate and a spread of 20 basis points and a commitment fee of 0.15%. (<http://www.adb.org/Media/Articles/2007/12313-asian-loans-charges/>).

^c Physical contingencies computed at 10% for civil works and 5% for equipment. Price contingencies are computed at 0.5% for domestic inflation and at 0.4%–1.4% for international inflation.

Source: Asian Development Bank estimates.

INVESTMENT PROGRAM ORGANIZATION CHART



DEA = Department of Economic Affairs, DOF = department of forest, DSMC= design, construction supervision and management consultants, FA = financial advisor, IDC = institutional development consultants, MDONER = Ministry for Development of North Eastern Region, MIS = Management information system, MoUD&PA = Ministry of Urban Development and Poverty Alleviation, NEA = national executing agency, PC = Planning Commission, PD = planning department, PHED = Public Health Engineering Department, PWD = Public Works Department, RR = resettlement and rehabilitation, SEA = state executing agency, SPCB = state pollution control board, SWM = solid waste management, UAD = Urban Affairs Department, UDD = Urban Development Department, UDHD = Urban Development and Housing Department, UDPA = Urban Development and Poverty Alleviation Department, ULB = urban local body.

Source: Asian Development Bank.

SUMMARY INVESTMENT PROGRAM IMPLEMENTATION

Description	2009		2010		2011		2012		2013		2014		2015		
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
ADB's FFA and PFR Approval Loan Signing Loan Effectiveness	◆			◆											
◆ FFA & FR1 ◆ ◆ FR2 ◆ ◆ PFR3 ◆															
Preliminary Tasks															
Staffing/Operationalizing of SIPMIU															
Staff Orientation															
Environmental Clearances															
Project Lands Acquired and R&R Activities															
◆ clear PFR1 ◆ IEE/EIA ◆ PFR1 complete															
◆ clear PFR2 ◆ IEE/EIA ◆ PFR2 complete															
◆ clear PFR3 ◆ IEE/EIA ◆ PFR3 complete															
Tranche 1 (ADB loan \$30.0 million including financial charges)															
Optimization of Water Supply Systems															
Introduction of NRW Programs in All Five States															
Immediate Refurbishment and Emergency Repairs															
Sample Comprehensive Water Supply for Gangtok															
Sample SWM Comprehensive Site in Kohima and Emergency Scheme in Shillong															
DSMC Consultancy for All Five States															
IDC Consultancy in Agartala and Shillong															
Tranche 2 (ADB loan \$80.0 million including financial charges)															
Water Supply Rehabilitation and Expansion Schemes for Agartala (South Zone), Aizawl, and Kohima															
SWM Schemes for Agartala, Aizawl, Gangtok, and Shillong															
SWM Equipment for Kohima															
IDC Consultancy in Aizawl, Gangtok, and Kohima															
Tranche 3 (ADB loan \$90.0 million including financial charges)															
Water Supply Rehabilitation and Expansion for Agartala (Central Zone)															
SWM Equipment for Aizawl, Gangtok, and Shillong															
Sewerage Schemes for Aizawl, Gangtok, and Kohima															

ADB = Asian Development Bank, DSMC = design, construction supervision and management consultant, EIA = environmental impact assessment, FFA = framework financing agreement, IDC = institutional development consultant, IEE = initial environmental examination, NRW = non-revenue water, PFR = periodic financing request, R&R = rehabilitation and resettlement, SIPMIU = state investment program management and implementation unit, SWM = solid waste management.
Source: Asian Development Bank estimates.

**PROCUREMENT PLAN AND INDICATIVE CONTRACT PACKAGING:
FIRST PERIODIC FINANCING REQUEST**

Loan Number: 35290	Program Name: North Eastern Region Capital Cities Development Investment Program
Loan/Grant Amount: \$200 million	National Executing Agency: Ministry of Urban Development State Executing Agency: State-level urban development departments
Date of First Procurement Plan: May 2009	Date of This Procurement Plan: May 2009

Process Thresholds, Review, and 18-Month Procurement Plan

A. Program Procurement Thresholds

1. Except as the Asian Development Bank (ADB) may otherwise agree to, the following process thresholds shall apply to the procurement of goods and works.

Procurement of Goods and Works	
Method	Threshold
International Competitive Bidding for Works	\$5,000,000 or more
International Competitive Bidding for Goods	\$1,000,000 or more
National Competitive Bidding for Works	Below \$5,000,000
National Competitive Bidding for Goods	Below \$1,000,000
Shopping for Works	Below \$100,000
Shopping for Goods	Below \$100,000
List here any other methods of procurement approved for use (see section III of ADB's <i>Procurement Guidelines</i> [2007, as amended from time to time])	—

B. Prior Review or Post-Review by ADB

2. Except as ADB may otherwise agree to, the following prior review or post-review requirements apply to procurement and consultant recruitment methods to be used in the program.

Procurement of Goods and Works		
Procurement Method	Prior or Post	Comments
International Competitive Bidding for Works	Prior	
International Competitive Bidding for Goods	Prior	
National Competitive Bidding for Works	Prior	
National Competitive Bidding for Goods	Prior	
Shopping for Works	Post	
Shopping for Goods	Post	
List other methods of procurement		—

Recruitment of Consulting Firms		
Procurement Method	Prior or Post	Comments
Quality- and Cost-Based Selection	Prior	Value \geq \$100,000
Least-Cost Selection	Prior	Value < \$100,000; nongovernment organizations may be recruited to conduct surveys and promote community awareness and participation
Single-Source Selection	Prior	Not under the first periodic financing request
Recruitment of Individual Consultants		
Individual Consultants	Prior	

C. Consulting Services Contracts Estimated under the First Periodic Financing Request

3. The following table lists the consulting service contracts for which procurement activity is either ongoing or expected to begin within the next 18 months.

General Description	Contract Value (base cost)	Recruitment Method (cost ratio)	Advertisement Date (quarter/year)	International or National Assignment	Comments
Agartala					
Package A1: Agartala DSMCs ^a	\$2.23 million	QCBS (80:20)	Q4 2008	National	Recruited by Tripura's UDD/SIPMIU
Package A2: Agartala IDCs	\$1.17 million	QCBS (80:20)	Q4 2008	National	Recruited by Tripura's UDD/SIPMIU
Aizawl					
Package B1: Aizawl DSMCs ^a	\$2.37 million	QCBS (80:20)	Q4 2008	National	Recruited by Mizoram's UD&PA/SIPMIU
Gangtok					
Package C1: Gangtok DSMCs ^a	\$2.21 million	QCBS (80:20)	Q4 2008	National	Recruited by Sikkim's UDHD/SIPMIU
Kohima					
Package D1: Kohima DSMCs ^a	\$2.21 million	QCBS (80:20)	Q4 2008	National	Recruited by Nagaland's UDD/SIPMIU
Shillong					
Package E1: Shillong DSMCs ^a	\$2.20 million	QCBS (80:20)	Q1 2009	National	Recruited by Meghalaya's UAD/SIPMIU
Package E2: Shillong IDCs ^a	\$1.17 million	QCBS (80:20)	Q1 2009	National	Recruited by Meghalaya's UAD/SIPMIU
MOUD					
Package F: IPCC PMCCs ^a	\$0.47 million	QCBS (80:20) for PFR1	Q4 2008	National	Recruited by MOUD/IPCC
Various survey packages					
NGOs, surveys, independent assessment, awareness campaigns, etc.	\$10,000–\$100,000 (estimated)	LCS	N/A	National	Recruited by SIPMIUs

DSMC = design and construction supervision and management consultant, ICB = international competitive bidding, IPCC = investment program coordination cell, LCS = least-cost selection, MOUD = Ministry of Urban Development, NCB = national competitive bidding, NGO = nongovernment organization, PMCC = program management and coordination consultant, QCBS = quality- and cost-based selection, S = shopping, SIPMIU = state investment program management and implementation unit, UAD = Urban Affairs Department, UDD = Urban Development Department, UDHD = Urban Development and Housing Department, UD&PA = Urban Development and Poverty Alleviation Department.

^a DSMC, IDC, and PMCC contract values have been estimated as base costs inclusive of all costs for surveys, operating expenses, training, and equipment (exclusive of contingencies and taxes).

D. Goods and Works Contracts Proposed under the First Periodic Financing Request

4. The following table lists goods and works contracts for which procurement activity is either ongoing or expected to begin within the next 18 months.

List of Contract Packages

S. No.	Contract Packages	Number of Packages	Total Cost (\$ million)	Procurement Method	Expected Date of Advertisement	Prior Review Required
1	Agartala					
	Water Supply					
	a. Civil, Mechanical, Electrical Works					
1.1	TW&IRP/WS/AGT/T1/NCB Replacement of 25 tube wells, 17 IRPs, and associated chlorinators	1	0.9	NCB	July 2009	Y
	b. Materials and Equipment					
1.2	LD/WS/AGT/T1/SHP Procurement of leak detection equipment and ancillary supplies, testing, and training	1	0.08	SHP	June 2009	N
2	Aizawl					
	Water Supply					
	a. Civil, Mechanical, Electrical Works					
2.1	OHT1/WS/AIZ/T1/NCB Construction of 7 (replacement) ground-level RCC zonal tanks	1	0.97	NCB	June 2009	Y
	b. Materials and Equipment					
2.2	CHL/WS/AIZ/T1/NCB Supply and installation of chlorinators	1	0.17	NCB	June 2009	Y
2.3	WM1/WS/AIZ/T1/NCB Supply, installation, and testing of 13,000 HH meters	1	0.70	NCB	June 2009	Y
3	Gangtok					
	Water Supply					
	a. Civil, Mechanical, Electrical Works					
3.1	OHT1/WS/GTK/T1/NCB Construction of 3 new ground-level RCC zonal tanks	1	0.29	NCB	August 2009	Y
3.2	P&S/WS/GTK/T1/NCB Supply, laying, and jointing of 29 km DI pipes for main feeder pipelines, 38 km of secondary and tertiary network pipelines and 18,000 connections	1	5.07	ICB	August 2009	Y
3.3	EMZ5/WS/GTK/T1/NCB Construction of sump of 10.5 m diameter and pump house, and supply and installation of 2 pump sets of 45 kw	1	0.06	SHP	August 2009	N
	b. Materials and Equipment					
3.4	CHL/WS/GTK/T1/NCB Supply and installation of chlorinators	1	0.16	NCB	August 2009	Y

4	Kohima					
	Water Supply					
	a. Civil, Mechanical, Electrical Works					
4.1	OHT1/WS/KOH/T1/NCB Construction of 19 (replacement) ground-level RCC zonal tanks	1	0.32	NCB	July 2009	Y
4.2	WTP/WS/KOH/T1/NCB Refurbishment of the 1.5 MLD treatment plant	1	0.35	NCB	July 2009	Y
	b. Materials and Equipment					
4.3	CHL/WS/KOH/T1/NCB Procurement and installation of chlorinators	1	0.12	NCB	July 2009	Y
4.4	WM/WS/KOH/T1/NCB Supply, installation, and testing of 30 electromagnetic bulk meters (plus 5-year maintenance)	1	0.19	NCB	July 2009	Y
4.5	NRW/WS/KOH/T1/NCB NRW assessment and repairs	1	0.25	QCBS	December 2009	Y
	Solid Waste					
	a. Civil, Mechanical, Electrical Works					
4.6	CP&LF/SWM/KOH/T1/NCB Civil works and procurement of equipment for development of sanitary landfill, compost plant, and internal access	1	4.55	NCB	June 2009	Y

5	Shillong					
	Solid Waste Management					
	a. Civil, Mechanical, Electrical Works					
5.1	LF&R/SWM/SHI/T1/NCB Procurement of equipment and ancillary supplies, civil works, testing, commissioning, provision of record drawings and operating manuals and training of operating staff for short-term landfill site at Mawlai (approx. 6 acres), as well as 1 bulldozer	1	0.41	NCB	July 2009	Y

AGT = Agartala, AIZ = Aizawl, CHL = chlorinator, CP&LF = compost plant and landfill site, GTK = Gangtok, ICB = international competitive bidding, KOH = Kohima, LD = leak detection, LF&TG = landfill and transfer station, NCB = national competitive bidding, NRW = nonrevenue water, OHT = overhead tank, P&S = primary and secondary distribution, QCBS = quality cost based selection, SHI = Shillong, SHP = shopping, SWM = solid waste management, T1 = tranche 1, TW&IRP = tube well and iron removal plant, WM = water meter, WS = water supply, WTP = water treatment plant.

Note: Contract values have been estimated as base costs (exclusive of contingencies).

Source: Asian Development Bank estimates.

SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

Country/Project Title: India/Northeast Region Capital Cities Development Investment Program

Lending/Financing
Modality:

Multitranche Financing Facility

Department/
Division:

South Asia Department/
Urban Development Division

I. POVERTY ANALYSIS AND STRATEGY

A. Links to the National Poverty Reduction Strategy and Country Partnership Strategy

ADB's strategies are aligned with India's 11th Five-Year Plan. The Government continues to focus on infrastructure investment, social development, and agriculture and rural development to make the growth process more inclusive. Northeastern Region Capital Cities Development Investment Program is consistent with ADB's strategy and the Government's 11th Plan. It will have direct impact on poverty reduction by increasing access to safe drinking water, a basic need. Improvements in sewerage and sanitation and in solid waste management will result in public health improvements for the poor, who have less access to basic urban services.

B. Poverty Analysis

Targeting Classification: General intervention

1. Key Issues

Using both primary (socioeconomic survey and community consultations) and secondary data (including reviews of central and state government programs on poverty alleviation), poverty analysis with poverty mapping was undertaken during program preparation.

Statistics from the Planning Commission of India (2001) shows that the Northeast region is home to 3.1 million persons living below poverty. Official statistics quote poverty to be largely rural with 2.9 million persons in rural areas classified as poor (this corresponds to a poverty headcount of 40%). While the poverty headcount is relatively low in urban areas (8% with 0.16 million persons classified as poor), due to urban population growth including the increasing rural-to-urban migration, urban poverty is an emerging issue. It should also be noted that the urban-rural distinction in the Northeastern Region suffers from unclear definitions, and studies show that there are areas classified as rural, which should actually fall under the urban category. While official estimates show relatively low levels of urban poverty—other definitions suggest urban poverty is likely to be underestimated. The socioeconomic survey undertaken in program cities show that 14% to 39% have incomes below \$1 per capita per day. This is consistent with State estimates of poverty used for determining households who will receive assistance which ranges from 16% to 25% in program cities.

2. Design features

Basic urban infrastructure and services from the Program will have positive impacts on the poor. Safe drinking water is a basic need which significant numbers of poor people in the Northeastern region do not have easy access to. The burden of water collection on vulnerable segments of the population such as women will be reduced. Improvements in sewage treatment, sanitation, and solid waste management will lead to public health improvements resulting in reductions in burden of diseases—treatment costs and productivity losses—whose impacts are experienced by the poor in higher degrees. Low cost sanitation facilities will also be piloted in poor areas. Program components will also generate employment opportunities for the poor.

II. SOCIAL ANALYSIS AND STRATEGY

A. Findings of Social Analysis

The North Eastern Region, largely because of geographic isolation, deficient infrastructure, and low investment, has low gross domestic product and few employment opportunities, and remains a highly underdeveloped region in India. Low access to basic urban infrastructure and services in the region, particularly for poor segments of the population, is also detrimental to public health.

Primary data show that in the program cities^a up to 60% of the poor have no access to water connections. Many depend on public water sources, hand pumps, streams, and rivers for their water supply, and devote time and energy to water collection. Most, having very limited access to safe drinking water, apply some form of treatment before consumption. Most of the poor are not connected to sewerage systems and many have no access to adequate sanitation: up to two thirds rely on unsanitary pit latrines. Up to 40% dump solid waste in open spaces or drains, for lack of collection systems. All these factors contribute to poor public health. Water-borne diseases such as hepatitis, diarrhea, malaria, and typhoid are common among poor households.

B. Consultation and Participation

1. Provide a summary of the consultation and participation process during the project preparation.

Extensive consultations in the form of consultation workshops, meetings, FGDs, and structured interviews have been undertaken with the following stakeholders: beneficiary communities and affected households (including poor and other vulnerable households and households headed by women or indigenous persons), NGOs and CBOs, elected representatives (such as councilors and ministers), traditional organizations, ULBs, administrative departments, state governments, and the central Government.

2. What level of consultation and participation (C&P) is envisaged during the project implementation and monitoring?

Information sharing Consultation Collaborative decision making Empowerment

3. Was a C&P plan prepared? Yes No

If a C&P plan was prepared, describe key features and resources provided to implement the plan (including budget, consultant input, etc.). If no, explain why.

Extensive information dissemination and consultations have been undertaken to ensure stakeholder participation in program design. During program preparation, it was noted that a key factor in the nonperformance of many poverty reduction programs is the lack of participation by the poor. A stakeholder participation framework, which engages key stakeholders in design, implementation, and operation and maintenance, has been formulated for each program city. The gender action plan also includes a gender-responsive participation framework, which identifies the role of women in program design, implementation, and operation and maintenance.

C. Gender and Development

1. Key Issues

Primary and secondary data have been analyzed to assess the status of women in program cities. While there are differences in the status of women in the different program cities, there are also common trends. In education, although female literacy is high, it is a few percentage points lower than male literacy. Unemployment is higher among women than among men, and the disparity in unemployment levels increases with lower incomes. For example, in Agartala, unemployment is 24% among poor female-headed households but only 10% in poor male-headed households. There is also a high correlation between poverty and the gender of the household head. Again, in the case of Agartala, women head 18% of all households but 32% of poor households. While day-to-day household decisions are made by women, all major decisions, such as those related to children's education, and the purchase and sale of property, are made by male members of the family.

Women's issues and priorities were identified during program design. Stakeholders concerned with improving the status of women, including female councilors, self-help groups for women, NGOs involved in gender issues, and institutions involved in women's development, were consulted. The lack of basic urban infrastructure and services affects women more than men. The burden of water collection falls on women because of their primary role in managing the household. During program preparation, it was noted that water collection takes an average of 4–5 hours per day, reducing the time women have to engage in productive activities that would increase the household income and improve their position within the household. Lack of clean water supply also burdens women who handle water more than men. Women are more exposed to diseases from contaminated water in the process of collecting water, and using water in cooking and washing. A reduction in diseases, aside from reducing treatment costs and productivity losses, would also reduce the burden of caring for sick household members, a role often taken on by women in the household. The lack of toilet facilities also has larger impact on women's sense of privacy. NERCCDIP responds to these issues in the design of its subprojects. In addition, it will provide enclosed bathing spaces as part of public sanitation subprojects, extend waste collection to unserved areas to reduce unhygienic conditions near homes, and involve women in water management.

2. **Key Actions.** Measures included in the design to promote gender equality and women's empowerment—access to and use of relevant services, resources, assets, or opportunities and participation in decision-making process:

Gender plan Other actions/measures No action/measure

Summarize key design features of the gender plan or other gender-related actions/measures, including performance targets, monitorable indicators, resource allocation, and implementation arrangements.

The gender strategy ensures that gender issues are addressed, women benefit equally from NERCCDIP, and interventions avoid gender bias. A gender action plan has been formulated to maximize program benefits for women through gender mainstreaming in the program and a gender-responsive participation framework. Gender mainstreaming will be done in four areas: awareness generation, gender sensitization, institutional arrangements, and training and capacity building. The participation framework identifies the role of women in program design, implementation, and operation and maintenance.

III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS			
Issue	Significant/Limited/ No Impact	Strategy to Address Issue	Plan or Other Measures Included in Design
Involuntary Resettlement	Limited. For tranche 1 subprojects only one subproject has potential IR impact and the impact would be temporary.	A short resettlement plan has been prepared for the tranche 1 subproject with temporary IR impact, and a resettlement framework has been prepared to guide future subprojects.	<input type="checkbox"/> Full Plan <input checked="" type="checkbox"/> Short Plan <input checked="" type="checkbox"/> Resettlement Framework <input type="checkbox"/> No Action
Indigenous Peoples	No impact. Screening during program preparation showed no impact on IPs.	An IP development framework has been prepared to guide future subprojects.	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> Indigenous Peoples Framework <input type="checkbox"/> No Action
Labor <input checked="" type="checkbox"/> Employment opportunities <input type="checkbox"/> Labor retrenchment <input checked="" type="checkbox"/> Core labor standards	Limited. No job losses are associated with the NERCCDIP. On the other hand, construction will create temporary jobs for local people.	Core labor standards are part of the assurances.	<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> No Action
Affordability	Limited. Free water connections and lifeline tariffs for the poor, which would ensure that the poor can afford drinking water, will be explored.		<input type="checkbox"/> Action <input checked="" type="checkbox"/> No Action
Other Risks and/or Vulnerabilities <input type="checkbox"/> HIV/AIDS <input type="checkbox"/> Human trafficking <input type="checkbox"/> Others(conflict, political instability, etc), please specify	No impact. No other risks or vulnerabilities have been identified.		<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> No Action
IV. MONITORING AND EVALUATION			
Are social indicators included in the design and monitoring framework to facilitate monitoring of social development activities and/or social impacts during project implementation? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

ADB = Asian Development Bank, C&P = consultation and participation, CBO = community based organization, IP = indigenous peoples, IR = involuntary resettlement, NERCCDIP = North Eastern Region Capital Cities Development Investment Program, NGO = non-government organizations, ULB = urban local body.

^a Agartala, Aizawl, Gangtok, Kohima, and Shillong.

DRAFT SUMMARY RESETTLEMENT FRAMEWORK

A. Introduction

1. The North Eastern Region Capital Cities Development Investment Program (NERCCDIP) will improve the environment and well-being of urban residents in five capital cities¹ in the region. It will improve and expand urban infrastructure and services in the cities, including the slums, and strengthen the management and financing capacity of urban institutions. NERCCDIP will have the following outputs: (i) improved urban infrastructure and services, including rehabilitated, improved, and expanded water supply, sewerage and sanitation, and solid waste management facilities; and (ii) capacity building and investment program management.

2. NERCCDIP is designed to minimize land acquisition and resettlement impact. Rehabilitation subprojects will be accommodated within the premises of existing facilities and will not involve land acquisition or resettlement. Subprojects involving the construction of water supply, sanitation and sewerage, and solid waste management systems will be carried out on vacant government land wherever possible. The overall impact will be further minimized through careful subproject siting and alignment during detailed design and subproject implementation. A short resettlement plan has been prepared for the Gangtok water supply subproject (Supplementary Appendix G), the only subproject in tranche 1 with resettlement impact.²

B. Resettlement Framework and Policy

3. This summary captures the salient points of the resettlement framework in Supplementary Appendix F. The resettlement framework outlines the objectives, policy principles, and procedures of land acquisition (if required), compensation, and other assistance measures for affected persons. The resettlement framework is based on national laws (the Land Acquisition Act of 1894, amended in 1984, and the National Rehabilitation and Resettlement Policy of 2007), state laws and regulations,³ and the *Involuntary Resettlement Policy* (1995) of the Asian Development Bank (ADB). These documents are compared and gaps are addressed in the resettlement framework.

4. With all these in mind, core involuntary resettlement principles have been put together for NERCCDIP: (i) as a policy principle, land acquisition and other involuntary resettlement impact will be minimized as much as possible; (ii) any land acquisition or resettlement will be carried out and compensation provided in order to improve or at least restore the income and living standards of affected persons to their level before the program; (iii) affected people will be consulted on compensation options; (iv) compensation will be paid for acquired assets at market or replacement rates; (v) compensation for lost land, housing, and assets and resettlement allowances will be paid in full before the contractor takes physical control of the land and any construction activities begin; (vi) resettlement assistance will be offered to affected persons

¹ Agartala, Aizawl, Gangtok, Kohima, and Shillong.

² The subproject will have temporary impact from the laying of water supply distribution networks. The transect walks show that disruption is minimal and can be mitigated.

³ The relevant state laws are: (i) for Agartala: the Tripura Municipal Act of 1994 and the Tripura Land Revenue and Land Reform Act of 1960; (ii) for Aizawl: the Mizoram Prevention of Government Land Encroachment Act of 2001 and the Mizoram Urban and Regional Development Act of 1990; (iii) for Gangtok: the Sikkim Urban and Regional Planning Development Act of 1998 and the Sikkim Land (Requisition and Acquisition) Act of 1977; (iv) for Kohima: the Nagaland Land (Requisition and Acquisition) Act of 1965, the Nagaland Eviction of Persons in Unauthorized Occupation of Public Land Act of 1971, the Nagaland (Ownership) and Transfer of Its Land Resource) Act of 1990, and the Nagaland Town and Country Planning Act of 1966; and (v) for Shillong: the Meghalaya Town and Country Planning Act of 1973.

including non-titled persons (e.g., informal dwellers or squatters, and encroachers) before the contractor takes physical control of the land and any construction activities begin; (vii) income will be restored and rehabilitated; (viii) appropriate grievance redress mechanisms will be established to speed up the resolution of disputes; (ix) special attention will be given to vulnerable groups; and (x) women will be involved in resettlement planning, implementation, and monitoring. The entitlement matrix for NERCCDIP is in Table A10.1.

5. Compensation will be paid for loss of land, structures, trees and crops, and other assets, at replacement cost. A valuation committee will be formed to determine replacement values. It will comprise the land acquisition officer from the revenue department of the state government, the resettlement officer and social development specialist from the state investment program management and implementation unit (SIPMIU), and representatives of affected persons and nongovernment organizations (NGOs). Vulnerable households will be given additional assistance in the form of land-for-land replacement options, preferential consideration in subproject employment, skills and livelihood training, and income-generating assets. Short-term income restoration activities include the provision of short-term allowances such as (i) subsistence allowances (3 months), and (ii) shifting assistance. Medium-term income restoration activities, such as the provision of income-generating assets and longer-term training will also be provided.

C. Procedure for Resettlement Plan Preparation

6. Resettlement plans for subprojects will be prepared in the following manner. SIPMIUs will undertake socioeconomic surveys for each identified subproject, based on the preliminary technical design. If the impact is found to be significant,⁴ full resettlement plans will be prepared for the subproject; if not, short resettlement plans will be prepared. The resettlement plans will include measures to ensure that the socioeconomic conditions, needs, and priorities of vulnerable groups are identified and that the process of land acquisition and resettlement does not disadvantage vulnerable groups. Social development specialists familiar with ADB policies and procedures for the preparation of subproject resettlement plans will be among the consultants. The resettlement plans will comply with national and state policies, ADB's *Involuntary Resettlement Policy* (1995) and other social safeguard guidelines, and the resettlement framework. The resettlement plan for tranche 1 will be used as a model for the preparation and implementation of other subproject resettlement plans. Approval of subproject resettlement plans by ADB and compensation before displacement will be conditions for the contracting of civil works.

7. The Executing Agency, through the investment program coordination cell (IPCC), will ensure that this resettlement framework is closely followed when a resettlement plan is formulated for a subproject. The Executing Agency will further ensure that adequate resettlement budgets are delivered on time to SIPMIUs, and that NGOs are involved in the timely implementation of the resettlement plans.

D. Institutional Arrangements

8. The Ministry of Urban Development (MOUD) will be the national EA for NERCCDIP. The IPCC, to be established in MOUD, will include a social officer. A national steering committee will monitor fund use and overall implementation performance of NERCCDIP. A state executing agency will execute the part of the loan falling under each state government.

⁴ Resettlement is significant when 200 or more people experience major impact. The impact is major when it physically displaces affected people from housing or causes them to lose 10% or more of their productive, income-generating assets.

Table A10.1: Entitlement Matrix

Ref. No.	Type of Loss	Application	Entitled Persons	Compensation Policy	Implementation Issues	Responsible Agency
1a	Loss of private land	Agricultural land, homestead land, or vacant plot	Legal titleholders	<ul style="list-style-type: none"> Compensation at replacement or land for land where feasible (including option for compensation for nonviable residual portions) Transitional allowance¹ based on 3 months' minimum wage rates Shifting assistance² to households Notice issued to harvest standing seasonal crops If notice cannot be given, compensation for crops (or share of crops) will be provided Additional compensation to vulnerable households³ (item 7) whose livelihood is affected by the subproject 	<ul style="list-style-type: none"> If land-for-land option is offered to husband and wife, ownership will be in the name of both while respecting legal ownership Charges will be limited to those for land purchased within a year of compensation payment and for land of equivalent size Vulnerable households will be identified during the census conducted by the implementing NGO 	Valuation committee will determine replacement value; the NGO will verify the extent of impact through a full survey of AHs to determine the required assistance, and identify vulnerable households
1b	Loss of private land	Agricultural land, homestead land, or vacant plot	Tenants and leaseholders	<ul style="list-style-type: none"> Transitional allowance based on 3 months' minimum land rentals Notice issued to harvest standing seasonal crops If notice cannot be given, compensation for share of crops will be provided Moving assistance to households Additional compensation to vulnerable households 	<ul style="list-style-type: none"> Landowners will reimburse the land rental deposit or unexpired lease of tenants and leaseholders Vulnerable households will be identified during the census conducted by the implementing NGO 	NGO will confirm land rental and ensure that tenants and leaseholders are reimbursed for land rental deposit or unexpired lease, and report to SIPMIU
1c	Loss of private land	Agricultural land, homestead land, or vacant plot	Sharecropper	<ul style="list-style-type: none"> Notice issued to harvest standing seasonal crops If notice cannot be given, compensation for share of crops will be provided Additional compensation to vulnerable households 	<ul style="list-style-type: none"> Harvesting before acquisition will be accommodated to the extent possible Work schedule will avoid harvest season Vulnerable households will be identified during the census conducted by the implementing NGO 	SIPMIU will ensure that the notice is issued; NGO will identify vulnerable households
1d	Loss of private land	Agricultural land, homestead land, or vacant plot	Encroachers and squatters	<ul style="list-style-type: none"> 60 days' advance notice to move out of encroached land Additional compensation to vulnerable households 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted during resettlement plan preparation 	SIPMIU will ensure that the notice is issued; NGO will identify vulnerable households
2a	Loss of government land	Vacant plot, agricultural land, homestead land	Leaseholder	<ul style="list-style-type: none"> Transitional allowance based on 3 months' land rentals Reimbursement of unexpired lease Additional compensation to vulnerable households (item 7) 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO 	
2b	Loss of government land	Vacant plot	Encroachers	<ul style="list-style-type: none"> 60 days' advance notice to move out of encroached land Additional compensation to vulnerable households (item 7) 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO 	SIPMIU will ensure that the notice is issued; NGO will identify vulnerable households
2c	Loss of government land	Vacant plot	Squatters	<ul style="list-style-type: none"> 60 days' advance notice to move out of occupied land Additional compensation to vulnerable households 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO. 	SIPMIU will ensure provision of notice. NGO will identify vulnerable households.

Ref. No.	Type of Loss	Application	Entitled Persons	Compensation Policy	Implementation Issues	Responsible Agency
3a	Loss of residential structure	Residential structure and other assets ⁴	Legal titleholders	<ul style="list-style-type: none"> Replacement value of the structure and other assets (or part of the structure and other assets, if remainder is viable) Moving assistance to households. Right to salvage materials from structure and other assets All fees, taxes, and other charges (registration, etc.) incurred for replacement structure Transitional allowance based on 3 months' minimum wage rates Additional compensation to vulnerable households (item 7) 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO 	Valuation committee will determine the replacement value. ⁵ NGO will verify the extent of impact through a full survey of AHs to determine assistance, and to verify and identify vulnerable households
3b	Loss of residential structure	Residential structure and other assets	Tenants and leaseholders	<ul style="list-style-type: none"> Replacement value of the structure and other assets (or part of the structure and other assets, if remainder is viable) constructed by the affected person Moving assistance to households. Right to salvage materials from structure and other assets Transitional allowance based on 3 months' minimum wage rates Additional compensation to vulnerable households (item 7) 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO Structure owners will reimburse the rental deposit or unexpired lease of tenants and leaseholders 	NGO will verify the extent of impact through a full survey of AHs to determine assistance, and to verify and identify vulnerable households
3c	Loss of residential structure	Residential structure and other assets	Encroachers and squatters	<ul style="list-style-type: none"> 60 days' advance notice to move out of occupied land Right to salvage materials from structure and other assets Additional compensation to vulnerable households (item 7) 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO 	NGO will verify the extent of impact through a full survey of AHs to determine assistance, and to verify and identify vulnerable households
4a	Loss of commercial structure	Commercial structure and other assets	Legal titleholders	<ul style="list-style-type: none"> Replacement value of the structure and other assets (or part of the structure and other assets, if remainder is viable) Moving assistance to households. Right to salvage materials from structure and other assets All fees, taxes, and other charges (registration, etc.) incurred for replacement structure Transitional allowance for 3 months based on structure rental rates Additional compensation for vulnerable households (item 7) 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO 	Valuation committee will determine replacement value; NGO will verify the extent of impact through a full survey of AHs to determine assistance, and to verify and identify vulnerable households
4b	Loss of commercial structure	Commercial structure and other assets	Tenants and leaseholders	<ul style="list-style-type: none"> Replacement value of the structure and other assets (or part of the structure and other assets, if remainder is viable) constructed by the affected person Moving assistance to households Right to salvage materials from structure and other assets Transitional allowance for 3 months based 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO Structure owners will reimburse the rental deposit or unexpired lease of tenants and leaseholders 	NGO will verify the extent of impact through a full survey of AHs to determine assistance, and to verify and identify vulnerable households

Ref. No.	Type of Loss	Application	Entitled Persons	Compensation Policy	Implementation Issues	Responsible Agency
4C	Loss of commercial structure	Commercial structure and other assets	Encroachers and squatters	<ul style="list-style-type: none"> on structure rental rates Additional compensation to vulnerable households (item 7) Replacement value of the structure and other assets (or part of the structure and other assets, if remainder is viable) constructed by the affected person 60 days' advance notice to move out of occupied land Moving assistance to vulnerable groups Right to salvage materials from structure and other assets Transitional allowance for 3 months based on structure rental rates Additional compensation to vulnerable households (item 7) 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO 	NGO will verify the extent of impact through a full survey of AHs to determine assistance, and to verify and identify vulnerable households.
5	Loss of livelihood	Livelihood	Owner/tenant/ leaseholder/ employee of commercial structure, agricultural worker	<ul style="list-style-type: none"> Assistance for lost income based on 3 months' minimum wage rates Additional compensation to vulnerable households. 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO 	NGO will verify the extent of impact through a full survey of AHs to determine assistance, and to verify and identify vulnerable households
6	Loss of trees and crops	Standing trees and crops	Legal titleholder, sharecropper, leaseholder	<ul style="list-style-type: none"> Notice issued to harvest standing seasonal crops If notice cannot be provided, compensation for standing crop (or share of crop for sharecroppers) at market value Compensation for trees based on timber value at market price to be determined by the Forest Department for timber trees and by the Horticultural Department for other trees 	<ul style="list-style-type: none"> Harvesting prior to acquisition will be accommodated to the extent possible Work schedules will avoid harvest season Market value of trees/crops has to be determined 	SIPMIU will ensure that the notice is issued; valuation committee will undertake valuation of standing crops, perennial crops, and trees, and finalize compensation rates in consultation with affected persons
7	Impact on vulnerable affected persons	All types of impact	Vulnerable affected persons	<ul style="list-style-type: none"> Agricultural land, homestead land, or vacant plot; further to item 1, land-for-land compensation Government land; further to item 2, provision for skill training for vulnerable households Residential structure; further to item 3, in case of total loss of structure, skill training for vulnerable households Commercial structure; further to item 4, in case of total loss of business, skill training for vulnerable households, including assistance for purchase of income-generating assets, up to a maximum of Rs30,000 per vulnerable household Livelihood; vulnerable households will be given priority in subproject employment. 	<ul style="list-style-type: none"> Vulnerable households will be identified during the census conducted by the implementing NGO 	NGO will verify the extent of impact through a full survey of AHs to determine assistance, and to verify and identify vulnerable households

Ref. No.	Type of Loss	Application	Entitled Persons	Compensation Policy	Implementation Issues	Responsible Agency
8	Temporary loss of land	Land temporarily required for subproject activities	Legal titleholders	<ul style="list-style-type: none"> Provision of rent for the period of occupation Compensation for assets lost, at replacement value Restoration of land to its previous quality or better 		Valuation committee will determine rental value and duration of lost income through survey and consultation with affected persons; NGO to take a photograph of the pre-project state; NGO and SIPMIUs will ensure that compensation is paid before temporarily taking over the site
9	Temporary disruption of livelihood	Commercial and agricultural activities	Legal titleholders, tenants, leaseholders, sharecroppers, employees, hawkers or vendors	<ul style="list-style-type: none"> 30 days' advance notice regarding construction activities, including duration and type of disruption For construction activities involving disruption for a period of more than a month, provision of alternative sites for hawkers and vendors for continued economic activities; if not possible, allowance based on minimum wage rate for vulnerable households for 1 month or the actual period of disruption, whichever is higher 	<ul style="list-style-type: none"> During construction, SIPMIU will identify alternative temporary sites to the extent possible, for vendors and hawkers to continue economic activity SIPMIU will ensure that civil works are phased to minimize disruption through construction scheduling in coordination with the contractors 	Alternative locations, if any, will be identified for the said duration of disruption
10	Loss and temporary impact on common resources	Common resources	Communities, government agencies, dorbars, village councils	<ul style="list-style-type: none"> Replacement or restoration of the affected community facilities, including public water stand posts, temples, shrines, bus shelters Enhancement of community resources 		SIPMIU and contractor
11	Any other loss not identified	—	—	<ul style="list-style-type: none"> Unanticipated involuntary impact shall be documented and mitigated according to the principles stated in ADB's <i>Involuntary Resettlement Policy</i> (1995) 		

ADB = Asian Development Bank, AH = affected households, NGO = nongovernment organization, SIPMIU = state investment program management and implementation unit.

Notes

- To be provided to affected persons whose livelihood is affected by a subproject. The transitional allowance (for 3 months; 26 working days a month) will be based on minimum wage rates for semiskilled labor in the respective cities (Agartala, Rs150/day; Shillong, Rs196/day; Aizawl and Gangtok, Rs170/day; and Kohima, Rs200/day). This allowance will be used by the affected person until an alternative means of livelihood is found. In case of vulnerable households, the transitional allowance will be supplemented by livelihood-related skill training.
- To be provided to affected persons who will relocate from the site proposed for acquisition to a new place of the person's choice. The amount will be equivalent to 1 day's hire charges for a truck, including moving within a radius of 50 km (around Rs3,000).
- Vulnerable households comprise households headed by females, the disabled, and indigenous persons (consistent with the IPDF in Supplementary Appendix Q), and households living below the poverty line.
- Other assets include, but are not limited to walls, fences, sheds, wells, trees, etc.
- The assessment of the replacement value will be based on the current schedule of rates of the respective cities.

Source: Asian Development Bank estimates.

9. In each state, there will be a state steering committee and an investment program empowered committee. SIPMIUs will be responsible for overall program implementation, monitoring, and supervision. The SIPMIU will have a safeguards and social unit. A resettlement officer and social development specialist will be in this unit and, with the implementing NGOs, will be responsible for resettlement plan implementation. Further details on the agencies responsible for resettlement plan activities are in Table A10.2.

Table A10.2: Institutional Roles and Responsibilities

Activity	Agency Responsible
Subproject Initiation Stage	
Finalization of sites/alignments for subprojects	SIPMIU
Disclosure of proposed land acquisition and subproject details through public notice	SIPMIU
Meetings at community/household level with persons affected by land/property acquisition	NGO
Creation of valuation committees	SIPMIU
Resettlement Plan Preparation Stage	
Conduct of census of all affected persons	SIPMIU/NGO
Conduct of FGDs/meetings/workshops during SIA surveys	SIPMIU/NGO
Computation of replacement values of land/properties proposed for acquisition and for associated assets	VC/SIPMIU
Categorization of affected persons to finalize entitlements	SIPMIU
Formulation of compensation and rehabilitation measures	SIPMIU
Conduct of discussions/meetings/workshops on this matter with all affected persons and other stakeholders	SIPMIU/NGO
Fixing of compensation for land/property with titleholders	VC/SIPMIU
Finalization of entitlements and rehabilitation packages	SIPMIU
Disclosure of final entitlements and rehabilitation packages	SIPMIU/NGO
Approval of resettlement plan	IPCC/ADB
Sale deed execution and payment	SIPMIU
Takeover of land	
Resettlement Plan Implementation Stage	
Implementation of proposed rehabilitation measures	NGO/RO
Holding of consultations with affected persons during rehabilitation activities	NGO/RO
Grievance redress	NGO/RO/GRC
Internal monitoring	SIPMIU
External monitoring	External agency

FGD = focus group discussions, GRC = grievance redress committee, IPCC = investment program coordination cell, NGO = nongovernment organization, RO = resettlement officer, SIA = social impact assessment, SIPMIU = state-level investment program management and implementation unit, VC = valuation committee.

Source: Asian Development Bank estimates.

E. Consultation, Disclosure, and Grievance Redress

10. The short resettlement plan was prepared in consultation with stakeholders. Focus group discussions, meetings, and individual interviews were held with stakeholders, particularly affected households, and a survey was conducted to determine the potential impact of land acquisition. Information was, and continues to be, disseminated to the affected persons. Local-language versions of the resettlement framework and resettlement plans will be placed in libraries. The resettlement framework and resettlement plans will be disclosed on ADB's website and state government websites. Finalized resettlement plans will also be disclosed on ADB's website, state government websites, and SIPMIU websites, and information dissemination and consultation will continue throughout program implementation. Grievances of affected persons will first be brought to the attention of the implementing NGO or the resettlement officer and social development specialist. Grievances not redressed by either will be brought before the grievance redress committee (GRC) established in each state. Each GRC will comprise the state investment program director, the resettlement officer and social development specialist, the land acquisition officer of the state government, a representative of the implementing NGO,

female and male representatives of the affected persons (including vulnerable households), and an eminent member of the community. The GRC will meet every month, determine the merit of each grievance, and resolve grievances within a month of receiving the complaint, failing which the grievance will be addressed by the IPEC.⁵ Further grievances will be referred by affected persons to appropriate courts of law. All grievances received, including contact details of the complainant, the date the complaint was received, the nature of the grievance, the agreed corrective actions and the date these were carried out, and the final outcome, will be recorded.

F. Monitoring and Evaluation

11. Resettlement plan implementation will be closely monitored to provide the Executing Agency with an effective basis for assessing resettlement progress and identifying potential difficulties and problems. Internal monitoring will be undertaken by the SIPMIU. Internal monitoring will involve: (i) administrative monitoring to ensure that implementation is on schedule and problems are dealt with on time; (ii) socioeconomic monitoring during and after any resettlement impact, using baseline information established through the socioeconomic survey of affected persons undertaken during subproject preparation; and (iii) overall monitoring to assess the status of affected persons. Job charts will be given to the resettlement officer and social development specialist. The job charts will indicate the targets to be achieved during the month. Monthly progress reports of actual achievements against the targets fixed in the respective job charts and the reasons for any shortfalls will be prepared and submitted to the Executing Agency. The SIPMIU will be responsible for managing and maintaining databases on the affected, documenting the results of the census of affected persons, and verifying asset and socioeconomic survey data to be used as the baseline for assessing the impact of resettlement plan implementation. The Executing Agency will appoint an independent agency to undertake external monitoring to document: (i) the restoration of income levels; (ii) changes and shifts in occupation pattern; (iii) changes in the type of housing of affected persons; (iv) assessment of affected persons' access to amenities, such as water, electricity, and transportation; and (v) performance of the NGO and the SIPMIU in resettlement implementation. The independent agency will monitor subprojects twice a year and submit reports directly to the Executing Agency, which will submit all external monitoring reports to ADB for review.

G. Resettlement Budget

12. Detailed budget estimates for involuntary resettlement will be prepared for each resettlement plan by the SIPMIU and will be included in the overall subproject estimate. The budget will include (i) detailed costs of land acquisition, relocation, and livelihood and income restoration and improvement; (ii) source of funding; (iii) arrangements for approval; and (iv) flow of funds and contingency arrangements. All land acquisition funds will be provided by the Executing Agency. Land acquisition, compensation, relocation, and rehabilitation of income and livelihood will be considered an integral component of program costs.

⁵ The IPEC will be fully empowered by the state government to decide on all matters related to NERCCDIP. These matters will include financial and administrative approvals; approval of procurement, tenders, and purchases; appointment of staff; creation of posts; recruitment of consultants; and decisions related to land acquisition.

SUMMARY INITIAL ENVIRONMENTAL EXAMINATION

A. Introduction and Description of the Investment Program

1. The North Eastern Region Capital Cities Development Investment Program (NERCCDIP) envisages the achievement of sustainable urban development in the project cities of Agartala (in the state of Tripura), Aizawl (Mizoram), Kohima (Nagaland), Gangtok (Sikkim), and Shillong (Meghalaya) through investments in urban infrastructure sectors. NERCCDIP will support the Government of India and the five state governments in their policy of balanced regional socioeconomic development and poverty reduction through improvements in urban governance, management, and infrastructure and service provision. NERCCDIP will support (i) water supply; (ii) sewerage and sewage treatment; (iii) municipal solid waste management; and (iv) planning and design, institutional and capacity development, and awareness raising.

B. Environmental Impact and Mitigation Measures

2. NERCCDIP is designed to improve environmental quality and living conditions in urban areas through the provision of basic urban services. Initial environmental examinations (IEEs) conducted for NERCCDIP show that net subproject environmental benefits are positive and large, and include (i) reduced pollution resulting from investments in sewage treatment and municipal solid waste management; (ii) increased availability of adequate potable water at appropriate pressure from water supply subprojects; (iii) better public health, particularly reduction in waterborne and infectious diseases, through investments in water supply and sewage treatment, and in municipal solid waste management; and (iv) improved aesthetics from the improvement of sewage treatment and municipal solid waste works.

3. There will be no adverse cumulative or sector-level impact. The potential negative subproject impact during construction and operation will not be significant, and most of it will be localized and temporary. Environmental subproject selection criteria will further ensure that NERCCDIP has no significant adverse impact on the environment. Impact that is potentially significant and permanent in nature has been identified; the environmental subproject selection criteria will not allow subprojects with such impact. The potential negative impact and mitigation measures are summarized in Table A11.1.

Table A11.1: Summary of Potential Adverse Environmental Impact and Mitigation Measures

Potential Negative Impact	Mitigation Activities and Method
A. Location Impact	
Loss of land and resettlement impact	Tranche 1 subprojects do not require land acquisition, and temporary resettlement impact will be addressed through resettlement plans. If future subprojects involve land acquisition and resettlement impact, resettlement plans based on the resettlement framework agreed on by the Government and ADB will be prepared.
Impact on reserve forests and protected areas	No subproject will be sited within sanctuaries, national parks, and core zones of biosphere reserves. Through proper alignment or site selection, NERCCDIP will avoid or minimize locating facilities in forested areas. If location on reserve forest land is unavoidable, work will be undertaken only after consultation and clearance from the state forest department.
Erosion due to subproject development	Adopt erosion control measures such as stabilization of topsoil and vegetation cover to arrest erosion.
B. Design Impact	
Impact due to disposal of untreated or partially treated sewage from STPs	Adopt best proven treatment technology considering site-specific characteristics and design the facility to meet the CPCB disposal standards. Prepare O&M manual for STPs. Effluent will be monitored by the State Pollution Control Board.
Impact due to sludge disposal from STPs and WTPs	Design proper sludge collection, treatment, and disposal system.
Tree cutting and clearance of	Minimize tree cutting to the extent possible. Comply with all tree felling and forest clearance requirements of the Government and state forest departments. Use trees

Potential Negative Impact	Mitigation Activities and Method
vegetation	as buffer in the design. Plant two trees for each tree cut as a compensation measure.
Nuisance due to odor, and influx of rodents and insects from STP and landfill operations	Site STP and landfill away from inhabited areas in accordance with government regulations and standards. Conduct air and odor dispersion modeling as an input to the selection of STP technology. Develop a physical barrier and visual screen in the form of greenbelt around the sites.
Contamination of groundwater by leaching of leachate	Develop compost and landfill facility according to the MSWM Rules of 2000. Design landfill cells as impermeable units. Ensure that all leachate is captured and treated.
Impact due to methane gas emissions	Provide gas control systems in accordance with MSWM Rules of 2000.
Facility breakdown leading to undisposed waste or effluent	Prepare O&M manuals as a ready reference tool for emergency situations. Make sure that a service tool kit with the necessary spare parts is available. Install standby generator to ensure continuous treatment process operations.
Health and safety risk for workers	Prepare O&M manuals for water and sewage treatment plants, and compost and landfills, to include operational safety. Provide/Procure maintenance equipment with adequate safety design features for safe cleaning or maintenance of sewers and septic tanks.
C. Construction Impact	
Impact on forested areas	No subproject will be sited within sanctuaries, national parks, and core zones of biosphere reserves. Through proper alignment or site selection, NERCCDIP will avoid or minimize locating facilities in forested areas. If location on reserve forest land is unavoidable, work will be undertaken only after consultation and clearance from the state forest department. Work will be confined to the actual subproject site, and no auxiliary activities will be carried out in these areas. No work will be undertaken when it rains.
Impact due to haphazard disposal of construction waste and mining of construction materials	Identify beneficial use of waste soil. Use waste for construction or to fill up low-lying areas. Obtain construction material from licensed quarries.
Dust, noise, and emissions from construction activities	Use construction equipment that complies with CPCB emission standards. Ensure regular wetting of soil. Conduct no noise-generating activities at night. Inform the public beforehand about the activity.
Social conflicts due to employment generation	Ensure that the majority of the workforce is drawn from the local community.
Pollution due to disposal of waste from labor camps	Ensure that water and sanitation facilities are well maintained.
Worker safety	Provide personal protection equipment and skilled supervision.
Public safety, inconvenience, and traffic disruptions	Notify the public beforehand and provide notice and caution boards for that purpose. Do not restrict access to private and common properties. Leave spaces for access between mounds of soil. Provide walkways and metal sheets to maintain access across trenches for people and vehicles where required. Increase the workforce to finish work in areas with impact on access. Time works to reduce disruption during business hours. Phase the construction schedule and work one segment at a time and one side of the road at a time.
Other construction impact	Prepare and implement a CSMP.
D. Operation Impact	
Risks associated with handling of chemicals in treatment plants	Provide staff training in the handling of chemicals such as chlorine. Provide protective equipment such as gloves and boots.

ADB = Asian Development Bank, CPCB = Central Pollution Control Board, CSMP = construction site management plan, MSWMH = municipal solid waste management, O&M = operation and maintenance, STP = sewage treatment plant, WTP = water treatment plant.

Source: Asian Development Bank estimates.

C. Institutional Requirements and Environmental Monitoring Plan

4. The national Executing Agency (NEA) for NERCCDIP will be the Ministry of Urban Development (MOUD). An investment program coordination cell (IPCC) will be established in MOUD. IPCC will be responsible for the overall management of NERCCDIP in the five cities and will include social and environmental safeguard specialists, who will monitor NERCCDIP implementation and review and screen the subprojects submitted by the states in accordance with the subproject selection criteria, including the environmental provisions. A national steering

committee (NSC) will be set up by the Government within 3 months of loan effectiveness to monitor the use of funds under the multitranche financing facility and the overall implementation performance of NERCCDIP. A project management consultant to IPCC will support and coordinate the environmental assessment and review. A state executing agency (SEA) in each state will be responsible for executing the part of the loan falling under the state government.

5. A consolidated state investment program management and implementation unit (SIPMIU) headed by a program director will be established in each of the five SEAs. SIPMIU will oversee environment and resettlement planning for NERCCDIP. This task includes the preparation of all documentation needed for decision making, contracting, and supervision of work, and the provision of progress monitoring information to the SIPMIU program director. The SIPMIU will have a safeguards and social cell staffed with an environment officer, who will implement the environmental safeguard provisions including (i) ensuring that the environmental criteria for subproject selection in the environmental assessment and review framework (EARF, also see Table A11.2) are followed; (ii) ensuring that the mitigation requirements are included in contractor bidding documents; and (iii) coordinating with various central and state government agencies in compliance matters. The SIPMIU will appoint and manage construction contractors to build elements of the infrastructure; they will be required to submit environmental implementation plans (EIPs) to SIPMIU for approval.

6. SIPMIU will be assisted by design, construction supervision and management consultant, who will design the infrastructure, manage the tendering of contracts, and supervise the construction process. An environment specialist in the DSMC team will be responsible for addressing the environmental issues in the program components during design and implementation. The specialist will ensure that all mitigation requirements are included in contractor bidding documents and EIPs, and will supervise the effective implementation of environmental provisions during construction. In addition, the specialist will assist the SIPMIU in the procurement needs and other project implementation aspects and will have a central role in building the environmental management capacity of the SIPMIU, the contractor, and the line departments through support and training.

7. The DSMC team will submit periodic monitoring and implementation reports to SIPMIU, which will take the necessary follow-up actions. SIPMIU will submit monitoring reports to the program director, who will then forward these to ADB. SIPMIU will also prepare annual monitoring reports for IPCC and assist the latter in preparing an annual monitoring report to the Asian Development Bank (ADB). The annual report will focus on the progress of implementation of the environmental management plans, and EARF implementation, issues encountered and measures adopted, follow-up actions required, if any, and the status of NERCCDIP compliance with subproject selection criteria and relevant loan covenants. IPCC will seek clearance for the submission and disclosure of the annual environmental monitoring report to ADB.

D. Public Consultation and Information Disclosure

8. Stakeholder consultation was an integral part of the environmental assessment process. During project preparation, consultations were undertaken with various stakeholder groups including state government representatives, elected representatives, nongovernment organizations and environmental groups, urban residents, and affected persons. These consultations were conducted at various levels (project, state, and subproject levels) and employed various methods (socioeconomic survey of 5,000 households, formal meetings, individual interviews, structured discussions, and focus group discussions). Consultations with

each of the five states were held in November 2005. Regular and continued stakeholder participation at all stages of project design and implementation is envisaged.

9. During program preparation, consultations and presentations were made to affected persons and the general population in the subproject sites in January and February 2006. The consultations detailed potential impact due to the subprojects, and discussions were held on measures proposed in the IEEs to address the foreseen impact. The IEEs will be translated into the local language and disclosed through public notices at urban local bodies and SIPMIU offices through posters presenting the subproject's environmental impact and mitigation measures. These posters will be posted on state government and SIPMIU websites. SIPMIU will issue notices 1 month ahead of the start date of subproject implementation to create awareness of subproject implementation among the public. Moreover, a grievance redress cell will be set up within the SIPMIU to register grievances of the people regarding technical, social, and environmental aspects. This participatory process will ensure that all views of the people are adequately reviewed and suitably incorporated in the design and implementation process.

E. Findings, Recommendations, and Conclusion

10. IEEs show that sample subprojects will result in large net environmental benefits. Potential adverse environmental impact is largely temporary and localized and can be addressed through subproject design and mitigation measures. No further assessment on environmental impacts is required for sample subprojects.

F. Environmental Selection Criteria and Environmental Review Procedures

11. To ensure compliance with Government and ADB environmental criteria and requirements, environmental subproject selection criteria and an EARF to guide the implementation of future subprojects have been developed. A summary of the environmental subproject selection criteria is provided in Table A11.2.

12. The full EARF, based on provisions of the Government's environmental policies and legislative provisions and the environmental assessment criteria of ADB, is provided in Supplementary Appendix M. The EARF also details (i) the Government's environmental assessment and review procedures, (ii) responsibilities and authorities involved in environmental assessment and review, (iii) the compliance of NERCCDIP with ADB's environmental criteria, and (iv) staffing requirements and budgets.

Table A11.2: Summary of Environmental Criteria for Subproject Selection

Criteria
<p>Overall selection criteria (applicable to all components)</p> <ul style="list-style-type: none"> • Will avoid resettlement/relocation. If unavoidable, the extent of resettlement will be minimized. • Will not result in destruction of or encroachment onto protected areas, including reserve forests or biodiversity conservation hot spots (identified in the state biodiversity strategy and action plans). • Will not result in destruction/disturbance to historical and cultural places/values. • Will avoid conversion of prime agriculture areas for component establishment. • Will not involve social conflicts. • Will reflect inputs from public consultation and disclosure for site selection.
<p>Water supply</p> <ul style="list-style-type: none"> • Will provide adequate buffer around treatment plants and pumping stations to alleviate noise and other possible nuisances.

Criteria
<ul style="list-style-type: none"> • Will not result in excessive abstraction of water affecting downstream water users and other beneficial water uses for surface and groundwater. • Will ensure adequate protection from pollution of intake works or wells. • Will not use raw water of very poor quality evidenced by the presence of high levels of pathogens or mineral content • Will ensure occupational safety measures for the safe handling of chlorine, including wash area, as well as proper handling so as not to result in inadequate/poor treatment and chlorination. • Will ensure proper and adequate treatment and disposal facilities for increased volumes of wastewater generation. • Will ensure that networks and distribution systems are designed considering vulnerability to landslides and earthquakes. • Will not involve the use or handling of asbestos cement (AC) pipes. Existing AC pipes, if any, will be left as is, but project team will ensure that pipes are marked appropriately. • Will ensure that location of water treatment plant takes into account present and future demand, the direction and rate of growth of the service area, and potential deterioration of source quality in the future. • Will ensure that the location of the water treatment plant follows the natural hydraulic gradient so that the service area can be supplied by gravity. • Will be located above the one-in-100-years design flood level of the maximum flood level experienced if records are insufficient for flood analysis. • Will include treatment of all backwash and sludge resulting from water treatment plants and conforming to the discharge standards of the State Pollution Control Board before disposal.
<p>Sewerage and sanitation</p> <ul style="list-style-type: none"> • Will ensure that the sewage treatment plant (STP) site is not close to inhabited areas or flood- and landslide-prone areas, and that effluent disposal points are not close to water intake or water usage points. • Will implement subprojects only with the consent of the State Pollution Control Board. • Will ensure that the location of sewage pumping stations avoids sensitive receptors (e.g., high-density residential areas, schools, hospitals). • Will ensure the design of networks and distribution systems consider vulnerability to landslides and earthquakes. • Will ensure that low-cost sanitation measures proposed do not increase vulnerability to landslides or result in pollution of groundwater. • Will ensure that subproject sewage treatment technology and low-cost sanitation schemes are appropriate to the site and local culture, and do not require sophisticated O&M, but will treat sewage according to the disposal standards. Air/Odor dispersion will be considered during detailed design to reflect appropriate technology, design, and required mitigation measures.
<p>Solid waste management</p> <ul style="list-style-type: none"> • Will base site selection on the provisions (Specifications of Landfills) of Municipal Solid Waste (Management and Handling) Rules of 2000 (Government of India). Will ensure compliance with those rules. • Will ensure no land use conflicts. • Will implement subprojects only with environmental clearance from the Government, and consent from the State Pollution Control Board. • Will not construct subprojects will not be constructed in areas where the groundwater table is less than 2 meters below ground level.

ADB = Asian Development Bank, m = meter, MSWM = municipal solid waste management, O&M = operation and maintenance, STP = sewage treatment plant.

Source: Asian Development Bank estimates.

URBAN INSTITUTIONAL, FINANCIAL, REGULATORY, AND OPERATIONAL REFORM PROGRAM

Item	Agartala	Kohima	Aizawl	Shillong	Gangtok
A.	<p>Institutional</p> <p>Implement 74th Constitutional Amendment (CA). Objective: Implementing decentralization measures through establishing and strengthening elected ULBs</p>	<p>Within 6 months of first-tranche approval, develop and submit to MOUD and ADB an administrative, organizational, operational development strategy and plan approved by the SEC and the Agartala Municipal Council (AgMC) including (i) finalization/clarification of the jurisdictions, mandate, and power of zones/wards and their logistical requirements; (ii) organizational structure of AgMC (considering also the expansion of boundaries of AgMC), its political and administrative wings, departments, sections, and their job descriptions; (iii) asset management and operation systems development; and (iv) personnel management and staff augmentation/development.</p>	<p>Within 6 months of first-tranche approval, develop and submit to MOUD and ADB an action plan approved by the SEC to gradually transfer to KMC responsibility and resources for urban functions and to build necessary capacity, including administrative, organizational, operational, and financial systems, and staffing.</p> <p>Within 1 year of first tranche approval, develop a time-bound plan approved by the SEC to carefully integrate the traditional systems, e.g., panchayats and gaon buras into the Kohima Municipal (KMC) and the ward set up</p>	<p>Within 6 months of first-tranche approval, establish an administrative arm the ULB, including an acting CEO, accounting and engineering units. Transfer/reallocate staff as necessary.</p> <p>Within 1 year of first-tranche approval, conduct a public debate, involving all stakeholders, on the need for an urban governance setup for the Greater Shillong area. Submit a report to ADB and MOUD.</p> <p>Within 4 years of first-tranche approval, finalize the urban governance arrangements for the Greater Shillong area and integrate the traditional governance structures into the urban governance framework.</p>	<p>Within 6 months of first-tranche approval, establish an administrative arm of the Gangtok Municipal Council (GMC), including an acting CEO, and accounting and engineering units. Transfer/reallocate staff as necessary.</p> <p>Within 1 year of tranche approval organize GMC elections.</p>

Within 6 months of loan effectiveness, develop and submit a plan approved by the state empowered committee (SEC) containing (i) a **situational assessment of the capacities of the various functional arms of the urban local body (ULB)**, (ii) a time-bound **ULB capacity development and resource program**, and (iii) a time-bound **action plan for devolving further functions in a phased manner to ULBs** in line with 74th Constitutional Amendment Act of 1994 and JNNURM^a

Within 3 years of first-tranche approval and prior to tranche 3 approval (expected by the end of 2011), all states must have (i) substantially **devolved functions** to their respective capital cities (for no less than those sectors supported under NERCCDIP but also expected in other areas); (ii) adequately **staffed** engineering, administrative, and financial sections of the ULBs, and allocated sufficient budget to initiate activities in newly established ULBs; and (iii) **transferred assets** associated with these functions.

B.	Item	Agartala	Kohima	Aizawl	Shillong	Gangtok
	Service Delivery Reforms for Efficient and Financially Sustainable Water Supply and Sewerage Service Providers	<p>Within one year of first tranche approval, restructure PHED/AgMC (as per agreed model) and create one single city ring fenced area headed by a senior officer with control over city water and sewerage operations as well as separate accounting and balance sheet.</p> <p>Issue order to use double-entry accounting, asset inventory, and asset management in the ring fenced area within 2 years of first-tranche approval and implement within 1 year of approval of WS subprojects (expected second tranche).</p> <p>Develop performance improvement plans within 1 year of approval for WSS subprojects and start implementing them.</p>	<p>Within one year of first tranche approval, restructure PHED/KMC (as per agreed model) and create one single city ring fenced area headed by a senior officer with control over city water and sewerage operations as well as separate accounting and balance sheet.</p> <p>Issue order to use double-entry accounting, asset inventory, and asset management in the ring fenced area within 3 years of first-tranche approval and implement within 1 year of approval of WS subprojects (expected second tranche).</p>	<p>Within one year of first tranche approval, restructure PHED/AiMC (as per agreed model) and create one single city ring fenced area headed by a senior officer with control over city water and sewerage operations as well as separate accounting and balance sheet.</p> <p>Issue order to use double entry accounting, asset inventory and asset management in the ring fenced area within 3 years of first tranche approval and implement within 1 year of approval of WS subprojects (expected second tranche).</p>	<p>Within 18 months of first tranche approval, restructure PHED/SMB (as per agreed model) and create one single city ring fenced area headed by a senior officer with control over city water and sewerage operations as well as separate accounting and balance sheet.</p> <p>Issue order to use double entry accounting, asset inventory and asset management in the ring fenced area within 2 years of first tranche approval and implement within 1 year of approval of WS subprojects (expected second tranche).</p>	<p>Within one year of first tranche approval, restructure PHED and create one single city ring fenced area (as per agreed model) headed by a senior officer with control over city water and sewerage operations as well as separate accounting and balance sheet.</p> <p>Issue order to use double entry accounting, asset inventory and asset management in the ring fenced area within 3 years of first-tranche approval and implement within 1 year of approval of WS subprojects (expected first tranche).</p>
Improved Operational Efficiency Regulatory Compliance		<p>Within 4 years of tranche approval of WS subprojects, approve appropriate arrangements/laws for regulating the water service providers.</p> <p>Before loan effectiveness, issue a government order to implement an NRW reduction program, as well as a bulk and consumer metering program, and commence implementation within 6 months of first-tranche approval.</p>	<p>In states whose capital cities receive funds from the MFF for subprojects in the sewerage and sanitation sector, the states will approve, within 6 months of tranche approval (generally the third tranche), regulations to (i) enforce connection to the sewerage system by those households with access to a sewerage pipeline, within 1 year of network completion; (ii) require all households not to discharge their sanitary waste without treatment and to maintain their septic tanks at specified levels of efficiency; (iii) require new buildings to obtain a sanitary waste discharge permit; and (iv) require generators of large quantities of wastes such as industries not to discharge their wastes without treatment and to maintain their discharges at specified levels of efficiency.</p>			

Item	Agartala	Kohima	Aizawl	Shillong	Gangtok
	In states whose cities receive funds from the MFF for subprojects in the solid waste management sector, the states will approve, at the latest by the start of civil works, regulations regarding (i) the discharge of solid wastes; (ii) the separation of wastes and disposal of hazardous wastes; (iii) the installation of improved procedures for vehicle routing, asset control, and staff management; (iv) the establishment of operation and maintenance procedures for vehicles and other equipment; and (v) the monitoring of waste collection and treatment, revenues and costs, staff costs, and other inputs.				
C.					
Financial					
Municipal Financial Management	Within 2 years of first-tranche approval for Agartala and Shillong, and within 2 years of second-tranche approval for Aizawl, Gangtok, and Kohima, capital cities will have completed migration to an accrual-based, double-entry accounting system. ²				
Property Tax Improvements	Within 18 months of first-tranche approval, Agartala will have implemented property tax reforms, including the preparation of GIS-based property mapping, and a unit area-based and self-assessment-based property tax system, while Shillong will have updated its system and retrained staff. Within 18 months of second-tranche approval, Aizawl, Gangtok, and Kohima will have introduced property tax, following the unit area-based and self-assessment-based property tax system. Within 3 years of first-tranche approval for Agartala and Shillong, and 3 years of second-tranche approval for Aizawl, Gangtok, and Kohima, collection efficiency should be no less than 60%, and 85% 1 year later.				
Introduction and Rationalization of User Charges	Within 1 year of first-tranche approval, develop (with guidance from Supplementary Appendix M) and submit a financial action plan to ensure improved utility financial performance. In line with JNNURM's MOA, within 1 year of third-tranche approval, implement solid waste collection charges to generate sufficient revenues to meet 100% of the cost that is incurred in undertaking O&M of existing and project-created SWM assets and services In line with JNNURM's MOA, within 1 year of third-tranche approval, implement volumetric water charges with regular adjustments in tariffs to generate sufficient revenues to meet 100% of the cost that is incurred in undertaking O&M of existing and project-created water and sewerage assets.				

ADB = Asian Development Bank; CEO = chief executive officer; JNNURM = Jawaharlal Nehru National Urban Renewal Mission; MFF = multitranche financing facility; MOA = memorandum of understanding; MOUD = Ministry of Urban Development; NERCCDIP = North Eastern Region Capital Cities Development Investment Program; O&M = operation and maintenance; PHED = public health engineering department; PSP = private sector participation; SWM = solid waste meter; WS = water supply; WSS = water supply and sanitation.

^a Depending on the level of municipalization in each city, the following activities may need to be considered in the preparation of the action plans: (i) forming a core group/task force to carry out reform and constitution of municipalities; (ii) framing the rules under the Municipal Act for day-to-day administration; (iii) issuing an executive order for constituting a municipality; (iv) agreeing on general principles of demarcating municipal boundaries and wards; (v) amending the Municipality Act to conform to the CAA; (vi) issuing government orders/notification of transfer of functions listed under 12th Schedule of CAA; (vii) framing the rules for ward delimitation; (viii) conducting municipal elections; (ix) agreeing on a proposed staffing and reporting structure and manpower requirements, and recommending these to the State Finance Commission; (x) constituting the State Finance Commission and implementing its recommendations; (xi) recommending to the State Finance Commission the allocation of municipal budgets; (xii) fixing cadre strength and responsibilities for various levels of officers; (xiii) recruiting officers and staff with appropriate skills and qualifications or transferring them from state line departments; (xiv) imparting short-term training to newly recruited staff and officers and transferred staff on municipal council operations; (xv) completing the transfer of functions to the municipal council; and (xvi) transferring assets to the municipal council.

^b This will include, among others, (i) completion and adoption of accounting manual, (ii) passing of government legislation/modification of municipal finance rules for migrating to double-entry accounting system, (iii) training of personnel, (iv) business process reengineering, (v) valuation of assets and liabilities, and (vi) drawing up of opening balance sheet.

Source: Asian Development Bank estimates.

OUTLINE CAPACITY-BUILDING PLAN

1. The proposed capacity development program will target two different levels of assistance: (i) project implementation; and (ii) a comprehensive capacity-building program to support the accomplishment of India's urban institutional and financial reform agenda, enhance planning and operation and maintenance, improve revenue mobilization, and strengthen the financial management capabilities of service providers. Capacity development will be undertaken at five essential levels or entry points: (i) enabling environment, (ii) sector capacity, (iii) organization or entity's capacity, (iv) individual agency employee capacity, and (v) end user or beneficiary.

2. Capacity development will require a variety of learning and development methods (formal training and seminars, study tours, on-the-job work experience, etc.) delivered by two teams of experts in each state. The design, construction supervision, and management consultants will be responsible for strengthening the design, management (including utility management for increased efficiency), and administration capabilities of key state and urban local body (ULB) staff (delegated to the state investment program management and implementation unit [SIPMIU]), while the institutional development consultants will focus on implementing essential sector reform requirements pertaining to municipal governance and financial reform and improved service delivery. Specific outputs and outcomes expected to result from these two assignments are as follows.

A. Enabling Environment

3. The Government's Jawarhalal Nehru National Urban Renewal Mission (JNNURM) framework signed between the five program states and Ministry of Urban Development (MOUD) clearly establishes the major thrusts of the urban reform program. The North Eastern Region Capital Cities Development Investment Program (NERCCDIP) will support the state and ULBs in its implementation through the formulation of (i) municipal acts or amendments to existing ones to ensure compliance with the 74th Constitutional Amendment Act of 1994 (CAA); (ii) government orders/notification of transfer of functions under the 12th Schedule of the CAA; (iii) ward demarcation and creation of ULB election committees; and (iv) preparation of a comprehensive ULB staff and reporting structure, initial budgets, recruitment/redeployment and ULB capacity development programs.

4. The Program will also assist the Government and its departments and later the ULB in achieving sustainability and accountability in the water and sewerage sector by separating service delivery from regulation. For this purpose, the consultants will help the Government (i) drafting applicable acts and rules and other supporting legal documents; (ii) designing a regulatory body and institutional mechanisms; (iii) preparing operating procedures, training and development of regulation, licenses, and rules; and (iv) developing a clear and binding framework for tariff regulation.

B. Sector Network

5. At the sectoral level, the Program will support state governments and ULBs preparing essential documentation applicable across the states, including (i) completion and adoption of accounting manuals for ULBs; (ii) preparation of notifications to pass resolutions regarding introduction of property tax or shifting to unit area-based systems, and preparation of associated road maps; (iii) rationalization of charges; and (iv) introduction of guidelines pertaining to the application of e-governance systems across the states.

6. In addition, NERCCDIP will introduce (i) utility benchmarking principles; (ii) utility restructuring through ring-fencing of urban infrastructure and services, to separate them from the

rest of the rural or semirural areas; and (iii) performance-based systems and asset management concepts.

C. Organization or Entity's Capacity Development

7. At project level, NERCCDIP will establish systems and develop state and ULB staff capacity in project management; project budgeting, accounting, and financial management; monitoring and evaluation; quality assurance and quality control; procurement systems; contract management and contract administration; and safeguard compliance and monitoring. It will also improve SIPMIU design capabilities.

8. NERCCDIP, within the specific context of each of the capital cities, will help (i) pass a ULB resolution regarding the shift from single-entry to double-entry accounting, (ii) complete registers for assets and liabilities of the ULB, (iii) complete the physical verification and valuation of assets and liabilities, (iv) compile all entries required for the preparation of the opening balance sheet and adopt this, (v) develop municipal financial management computer software, and (vi) reengineer municipal management processes to align with the accrual-based accounting system.

9. NERCCDIP will assist each of the above ULBs in (i) conducting a sample property tax survey, (ii) preparing a draft format (road map) for the introduction or shift to the unit area system of property tax, (iii) preparing digital property maps for the municipality, (iv) verifying the digital maps and conducting a full physical survey of the properties, (v) creating a geographic information system (GIS) database of property, (vi) conducting an assessment of guidance value (unit area value), (vii) developing software for the administration and management of the new taxation system using the GIS database, (viii) pilot-testing the introduction of the revised system in one ward, (ix) eliminating exemptions, and (x) setting up a website for property tax issues.

D. Individual Agency Employee Capacity

10. Specialized training to be delivered by the NERCCDIP will include (i) training of ULB and utility accounting staff in double-entry, accrual-based accounting systems and software; (ii) training of ULB assessment, accounting, and budgeting staff in the new property tax systems and software; (iii) training of utility staff in benchmarking, the introduction of performance-based management systems and their monitoring and reporting requirements, and the preparation of asset management programs; (iv) training of utility staff in improved operational management; and (v) training of senior ULB and utility staff in the evaluation of the potential opportunities and benefits of private sector participation, particularly within the context of management contracts.

E. End User or Beneficiary

11. NERCCDIP will target end users through the implementation of a community education and awareness program, specifically focusing on (i) public health, hygiene, and sanitation principles (and the reduction of discharge into drains/streams); (ii) waste segregation and waste management (including the responsibilities of communities for the safe and hygienic disposal of waste and the prevention of dumping and open burning); (iii) introduction to and enhanced understanding of tariffs to secure long-term quality service (sustainability), and taxpayer education program; and (iv) improved understanding of the municipalization process among traditional societies and how both systems can be integrated to ensure improved service delivery. The campaigns will also present NERCCDIP objectives and will seek to adequately manage expectations.