



Technical Assistance Consultant's Report

Project Number: 37313-01
November 2009

India: Project Implementation and Urban Management Improvement in the North Eastern Region (Phase 1) (Cofinanced by the Cooperation Fund for the Water Sector)

Prepared by
SMEC (India) Pvt. Ltd.
India

For Ministry of Urban Development

This consultant's report does not necessarily reflect the views of ADB or the Government concerned, and ADB and the Government cannot be held liable for its contents. (For project preparatory technical assistance: All the views expressed herein may not be incorporated into the proposed project's design.)

Asian Development Bank

Project Implementation and Urban Management Improvement
in the North Eastern Region – Package A

Final Report

Asian Development Bank TA 4779 - IND

November, 2009



Table of Contents

ACRONYMS	4
EXECUTIVE SUMMARY	7
1. INTRODUCTION	10
1.1. BACKGROUND	10
1.2. OBJECTIVE	11
1.3. SCOPE.....	11
1.4. IMPLEMENTATION ARRANGEMENTS	12
1.5. PROJECTS INCLUDED UNDER TA-4779	12
1.6. LIST OF PROJECTS.....	13
1.7. PROJECT OUTPUTS.....	16
2. IMPLEMENTING AGENCIES	17
3. URBAN GOVERNANCE AND MANAGEMENT	18
4. IMPLEMENTATION ARRANGEMENTS FOR THE INVESTMENT PROJECT	20
4.1. PROJECT MANAGEMENT AND ORGANIZATION	20
4.2. DISBURSEMENT ARRANGEMENTS	20
4.3. PROJECT PERFORMANCE AND MONITORING	21
4.4. REPORTS.....	21
4.5. PROJECT REVIEW ACCOUNTS AND AUDIT.....	21
4.6. PROJECT SUSTAINABILITY	21
4.7. SUSTAINABILITY OF URBAN INFRASTRUCTURE PROJECTS TRANCHE 1	22
5. CHALLENGES	25
5.1. URBAN INFRASTRUCTURE	25
5.2. SIPMIU STAFF	29
5.3. OPERATION AND MAINTENANCE	29
5.4. SERVICE DELIVERY	29
5.5. OPERATIONAL PROCESSES.....	32
5.6. URBAN INFRASTRUCTURE FUNDING	32
5.7. PROCUREMENT.....	32
5.8. WORK SUPERVISION	33
5.9. QUALITY CONTROL	33
5.10. PRIVATE SECTOR INVESTMENT.....	34
6. ACHIEVEMENTS	35
6.1. SUPPORT FOR SETTING UP MANAGEMENT AND IMPLEMENTATION UNITS	35
6.2. PREPARATION OF DETAILED ENGINEERING DESIGNS AND ASSOCIATED DRAWINGS (TRANCHE 1).....	35

6.3.	PREPARATION OF DETAILED PROJECT REPORT	35
6.4.	BID DOCUMENTS.....	35
6.5.	RESETTLEMENTS PLAN AND ENVIRONMENT ASSESSMENT PLAN	35
6.6.	SUPPORT TO STATES IN TENDERING AND RECRUITING CONSULTANTS	36
6.7.	PREPARATION OF OPERATIONAL MANUAL.....	36
6.8.	WORKSHOPS	36
6.9.	TRAINING.....	36
7.	LESSONS LEARNED.....	37
7.1.	CHANGES MADE IN THE LIST OF PROJECTS UNDER TRANCHE 1	37
7.2.	LAND REQUIRED FOR THE PROJECT NOT IN POSSESSION OF EA	37
7.3.	GREATER VISIBILITY OF THE CONSULTANTS IN THE PROJECT CITIES	37
7.4.	ABSENCE OF STATE ENVIRONMENT APPRAISAL COMMITTEE.....	37
7.5.	URBAN LOCAL BODIES NOT IN PLACE	38
7.6.	ROLE OF THE CONSULTANTS.....	38
7.7.	OPERATION AND ASSET MAINTENANCE	38
8.	FUTURE CONSIDERATIONS AND CONCLUSIONS.....	40

List of Appendix

APPENDIX.- 1: PROJECT MANAGEMENT STRUCTURE	42
APPENDIX – 2: PRESENT STATUS OF STAFF POSITION IN SIPMIU.....	56
APPENDIX – 3: STATUS OF URBAN LOCAL BODIES IN THE PROJECT CITIES	66
APPENDIX – 4: ALLOCATION AND WITHDRAWAL OF LOAN PROCEEDS.....	67
APPENDIX – 5: DISBURSEMENT ARRANGEMENT	69
APPENDIX – 6: PROCEEDINGS OF THE SECOND WORKSHOP.....	70
APPENDIX -7: SUSTAINABILITY OF PROJECTS.....	74
APPENDIX – 8: PROJECT OUTPUT AS PER TOR AND ACHIEVEMENT	104
APPENDIX – 9: LIST OF CONTRACT PACKAGES	105
APPENDIX – 10: PROCEEINGS OF THE THIRD WORKSHOP.....	107

List of Tables

TABLE 1.1: SCOPE OF WORK FOR THE PROJECTS UNDER NERCCDIP AND NERUDP	13
TABLE 1.2: SUSTAINABILITY OF PROJECTS UNDER TRANCHE 1.....	22
TABLE 1.3: URBAN INFRASTRUCTURE AND SERVICE PROVIDERS.....	25
TABLE 1.4: STATUS OF ULBs.....	27
TABLE 1.5: MAINTENANCE OF URBAN INFRASTRUCTURE AND SERVICE DELIVERY	30
TABLE 1: PERSONNEL STRUCTURE: SIPMIU	49
TABLE 2: PERSONNEL REQUIREMENT OF SIPMIU AND JOB PROFILE.....	53
TABLE 2 1: PRESENT STATUS OF STAFF POSITION IN SIPMIU MEGHALAYA.....	56
TABLE 2.2: PRESENT STATUS OF STAFF POSITION IN SIPMIU MIZORAM	58
TABLE 2.3: PRESENT STATUS OF STAFF POSITION IN SIPMIU NAGALAND	60
TABLE 2.4: STATUS OF SIPMIU PRESENT STATUS OF STAFF POSITION IN SIPMIU SIKKIM.....	62
TABLE 2.5: STATUS OF SIPMIU PRESENT STATUS OF STAFF POSITION IN SIPMIU TRIPURA.....	64
TABLE 7.1: WATER SUPPLY AGARTALA – SUSTAINABILITY	74
TABLE 7.2: WATER SUPPLY AIZAWL - SUSTAINABILITY.....	78
TABLE 7.3: WATER SUPPLY GANGTOK - SUSTAINABILITY.....	82
TABLE 7.4: WATER SUPPLY KOHIMA - SUSTAINABILITY	86
TABLE 7.5: SOLID WASTE MANAGEMENT DIBRUGARH – SUSTAINABILITY.....	90
TABLE 7.6: SOLID WASTE MANAGEMENT KOHIMA – SUSTAINABILITY	93
TABLE 7.7: SOLID WASTE MANAGEMENT SHILLONG – SUSTAINABILITY	96
TABLE 7.8: IMPROVEMENT OF DTP DRAIN DIBRUGARH– SUSTAINABILITY	100

ACRONYMS

ADB	Asian Development Bank
AMC	Agartala Municipal Corporation
AusAID	Australian Agency for International Development
BOQ	Bill of Quantities
CBO	Community Based Organization
CEI	Cost Effective Indicator
CEO	Chief Executive Officer
CPCB	Central Pollution Control Board
CPDS	Community Participation/Development Specialist
CPHEEO	Central Public Health and Environmental Engineering Organisation
DMB	Dibrugarh Municipal Board
DSMC	Design and Supervisory Management Consultant
DPR	Detailed Project Report
DTP drain	Dibrugarh Town Protection drain
EA	Executing Agency
EIRR	Economic Internal Rate of Return
FIRR	Financial Rate of Return
FMS	Financial Management Specialist
GAPA	Greater Agartala Planning Area
GDD	Guwahati Development Department
GOAs	Government of Assam
GOI	Government of India
GOMe	Government of Meghalaya
GOMi	Government of Mizoram
GON	Government of Nagaland
GOS	Government of Sikkim
GOT	Government of Tripura
IEC	Information Education & Communication
IEE	Initial Environmental Examination
IND	India
INR	Indian Rupees
IPEC	Implementation Project Empowered Committee
IPMU	Investment Program Management Unit
IRC	Indian Road Congress

IWRM	Integrated Water Resource Management
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
KMC	Kohima Municipal Council
Km	Kilometer
LPCD	Liters Per Capita Per Day
M	Meter
MDR	Major District Roads
MIS	Management Information System
MLD	Million Liters a day
MOUD	Ministry of Urban Development
MOEF	Ministry of Environment and Forest
MDONER	Ministry for Development of North Eastern Region
MORTH	Ministry of Road Transport and Highways
MOU	Memorandum of Understanding
NEC	North Eastern Council
NER	North Eastern Region
NERCCDIP	North Eastern Region Capital City Development Investment Program
NERUDP	North Eastern Region Urban Development Plan
NES	North Eastern States
NGO	Non Government Organization
NH	National Highway
NPV	Net Present Value
NRW	Non Revenue Water
NSP	National Sewerage Programme
O&M	Operation and Maintenance
PA	Project Accounting
PAS	Project Accounting Specialist
PHED	Public Health Engineering Department
PIA	Project Implementing Agency
PIUMI	Project Implementation & Urban Management Improvement
PPC	Project Procurement Committee
PPP	Public Private Partnership
PPMS	Project Performance Monitoring System
PPTA	Project Preparatory Technical Assistance
PMC	Project Management Consultant
PMU	Project Management Unit
PWD(DWS)	Public Works Department(Drinking Water and Sanitation)

RFP	Request for Proposal
RTI ACT	Right to Information Act
SG	State Government
SIPMIU	State Investment Program and Project Implementation Unit
SLEA	State Level Executing Agency
SH	State Highway
SMB	Shillong Municipal Board
SND	State Nodal Department
SOE	Statement of Expenditure
SOR	Schedule of Rate
SWM	Solid Waste Management
TA	Technical Assistance
T & CP	Town & Country Planning
TPD	Town Planning Department
TOR	Terms of Reference
TL	Team Leader
UAD	Urban Affairs Department
UDD	Urban Development Department
UFW	Unaccounted for Water
ULB	Urban Local Bodies
VO	Voluntary Organization
WRD	Water Resource Department
WTP	Water Treatment Plant

EXECUTIVE SUMMARY

1.1. Project Objective

ADB decided to invest in the improvement of urban infrastructure for the capital cities Under NERCCDIP and NERUDP which also included an important town Dibrugarh for Technical assistance. The objective of the TA is to strengthen project management and institutional capabilities and improve overall readiness for project implementation of the states and the ULBs responsible for NERCCDIP and NERUDP-II. The TA will assist the Ministry for Urban Development (MOUD) and the Executing/Implementing Agencies in the 6 program cities.

1.2. Project Scope

Scope of the work and Achievements are as below

- a. Project Management and Implementation support for the States
- b. Training for Implementing/Executing Agencies to familiarize them with the ADB policies and procedures.
- c. Preparation of Detailed Project Reports, detailed engineering designs and associated drawings, and bidding documents.

All of the above are completed as per the revised scope of work

1.3. Project Deliverables

The consultants for TA 4779 will submit

- i. An inception report within 4 weeks of TA commencement.
- ii. Monthly progress report at the end of each month during the implementation period.
- iii. An Interim Report after 7 months.
- iv. Final Report on completion of the TA.

All the above project deliverables have been made.

1.4. Projects Included Under TA-4779

Projects proposed are for water supply, sewerage, sanitation, drainage, solid waste disposal, roads and transportation covering almost the entire range of urban infrastructure. Improvement of water supply for Agartala, Aizawl, Gangtok and Kohima, SWM for Dibrugarh, Kohima and Shillong and Improvement of the main drainage channel in Dibrugarh are proposed for ADB funding.

All SIPMIUs are in place except the one for Assam.

1.5. Project Output and Achievement

The outputs expected out of the project are:

a. Support for setting up management and implementation units.

Consultants prepared a Report on the Implementation Mechanism, the Managerial and Personnel Structure of the State Investment Programme Project Implementation Unit and detailed out the functions of the state level committees and that of SIPMIU as well as gave the personnel requirement. All the project states included in the Tranche 1 have set up the SIPMIU except Assam.

b. Preparation of detailed engineering designs and associated drawings

Consultants completed and submitted the DPR and associated documents

c. Preparation of bidding documents

Consultants completed and submitted 16 packages for the eight projects in six towns

d. Updating and preparation of any new resettlement plans and environmental assessment

Due Diligence Report prepared and submitted since no land acquisition is involved and there is no dislocation of any activity or people due the project.

e. Support to states in tendering and recruiting consultants

Bid Notice was prepared by the consultants and sent to the SIPMIUs based on which bids have been invited. Consultants did not assist the SIPMIUs in selection of the DSMC in view of the Variation No 3(377) approved by ADB. This was done to avoid any conflict of interest.

f. Preparation of Operational Manual.

Consultants completed and submitted the Operational Manual.

2. Sustainability of Urban Infrastructure Projects Tranche1

Sustainability of the eight projects is examined on economic, financial, social and environmental safeguards considerations besides the managerial structure for project implementation.

3. Workshops

The consultants organised three workshops, workshop 1 was held at Guwahati in September 2008 which deliberated upon the project methodology and the action plan for preparation of the DPR for the projects included in the Tranche 1 in accordance with ADB guidelines. Second, the two day workshop was held In September 2009 on capacity building of the voluntarily organizations from all the 9 project cities. The workshop focussed on the role of the NGOs and VOs in project preparation and implementation and familiarizing them with the details of projects which are included in the tranche1. Consultants also organized a Training programme for NRW reduction on 25th and 26th of November 2009. The final workshop was organised at Shillong on 27th November 2009.

4. Lessons Learned.

Changes in the scope of work should be avoided since it causes delay in project implementation.

Only such projects which do not require any land acquisition or do not result in dislocation of the people may be included in Tranche1.

A few state Governments wanted the presence and greater visibility of the project team at the project cities. This would need more resources both financial and manpower.

Absence of SEAC causes delay in necessary environmental clearance and approval of the DPR.

Absence of ULB or devolution of functions as per 12th schedule of the constitution may result in line departments continuing with the management of the assets created under the projects.

Absence of SIPMIU or under staffed SIPMIU has necessitated greater involvement of the consultants who had to prepare the DPR with detailed designs and bid documents and other associated documents. The opportunity of working together was lost and the relationship remained as that of the client and consultants.

Commitment to Maintenance is surest recipe for reliable service delivery. The reasons may vary from inadequate fund to ethos associated with the maintenance.

5. Future Considerations and Conclusions

The State Governments and the SIPMIU must ensure

- i. Immediate placement of the required staff for the tranche 1 projects. This would improve the readiness level and ultimately improve project implementation.
- ii. Capacity building of both technical and other staff of SIPMIU for project implementation.
- iii. Effective steps for improving the transparency in procurement
- iv. The technical wing of the ULBs needs to be strengthened with adequate trained manpower to ensure project sustainability and high level of service delivery
- v. Community engagement is a sure recipe for project sustainability and SIPMIU must ensure their continued engagement at all stages of project implementation.

1. INTRODUCTION

1.1. BACKGROUND

1. North Eastern Region of India with a population of 39.04 million and spread across 262,230-sq km is connected to rest of India by a narrow corridor is one the most enchanting part of the country. The region has 4.4% of India's Population. Over 8% of geographical area of the country the seven states Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura formed the NER and were known as seven sisters' states. All the seven states are the members of the North Eastern Council constituted by Government of India for socio economic development of NER. Sikkim became the Member of the NEC on reorganization of the NEC and Amendments to NEC Act and included as the eighth state within the NER. Most of the states were created as full fledged states /Union territories in seventies. It was only in eighties that the union territories within NER became full fledged states

2. The region is characterized by low level of connectivity with the rest of the country and the neighbouring countries having very little trade linkages. Low level of regional and urban infrastructure is a constraint for economic development. This is reflected in the Net State Domestic growth of 3.4% annually compared to 6.7% at the National level and the poverty level of 31.9% for the region as against 20.1% in the country as a whole.

3. Urbanization, the prime mover for economic growth is at a low level with only 15% of the population of the region living in 239 urban centers varying in size and forms but having a common denominator of poor urban infrastructure and services. Inadequate urban infrastructure is adversely affecting the diversification of Agriculture, processing of food particularly horticulture produce. Horticulture has large potential apart from growth of manufacturing and service sectors. Though Investment was made in providing urban infrastructure, the efforts have been piecemeal without taking a holistic view of the deficiencies in the urban areas. Urban areas and urban issues were not a priority, hence fund provided for development and upkeep of the infrastructure was always meager.

4. With the setting up of a separate Ministry for Development of North Eastern States (MDONER), Special fund is being made available for projects including infrastructure Urban Development. This was an improvement over the schemes funded by NEC which did not support any urban development projects

5. Though the region did receive fund for various development projects it was simply not adequate to meet the backlog of development, the growing demand for the development of infrastructure and the inspiration of the people. Despite its bountiful natural resources, a rich culture and hospitable people and enormous potential for development NER remained one of the most backward areas in terms of socio-economic indicators of development. It was ironical that the demand for the infrastructure development was huge but most of the International Agencies shied away from participating and becoming an active partner in the development process for one reason or the other.

6. Despite the huge deficit in urban infrastructure, there were not many International Agencies operating in the NER in urban development sector, except Australian Agency for International Development (AusAID) water and sanitation projects at Gangtok and Shillong and the Agency Franchise de Development in Imphal. These projects had limited scope and the funding was small.

7. ADB organised a workshop of the North Eastern States in February 2002 with a view to provide technical assistance in the social sector and for improving the quality of life of the people in the urban areas through development of infrastructure and improved urban management. This was followed by a study on urban profile of the NER in 2003 and fact-finding mission and subsequent TA.

8. ADB decided to provide technical and loan assistance in 2 phases, the NERUDP Phase I, which was subsequently known as North Eastern Region Capital City Development Investment Program (NERCCDIP) covering the five state capitals of Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. The TA 4348-IND Phase I report August 2006 dealt with the urban infrastructure requirement of the five cities Shillong, Aizwal, Kohima, Gangtok, and Agartala.

9. TA 4678-IND Phase II report March 2008 in Volumes II covers the remaining three states of Arunachal, Assam, and Manipur. There are proposals under Phase II of NERUDP for implementation of infrastructure projects in the four cities, at Itanagar in Arunachal Pradesh, two in Assam, Guwahati and Dibrugarh and Imphal in Manipur.

10. During the fact-finding mission in February 2004, Government of India requested ADB to provide TA for implementing the project and improving urban management for the cities. In response to the request of Indian Government, ADB has proposed the current TA.

1.2. OBJECTIVE

11. The objective of the TA is to strengthen project management and institutional capabilities and improve overall readiness for project implementation of the states and the ULBs responsible for NERCCDIP and NERUDP-II. The TA will assist the Ministry for Urban Development (MOUD) and the executing/Implementing Agencies in the 9 program cities as indicated above. TA is to enable the above cities to effectively manage, coordinate, implement and monitor the investment program.

12. It is through the Implementation of this project that the larger objective of sustainable urban development and poverty reduction in NER by upgrading the infrastructure in nine project cities in eight states is proposed to be achieved. It is only with improved Infrastructure that cities can work as engine of growth. Efficient and sustainable infrastructure can be put in place only through improved planning design and Implementation of projects as well as transparency and accountability in project management

1.3. SCOPE

13. The above TA consists of two packages A and B. This report is in respect of the package A with the following scope of work:

- i. Project Management and Implementation support for the States for the initial start-up activities of the investment program including full scale establishment of the investment program unit in MOUD and Investment Program Management and Implementation units in the eight states.
- ii. Training for Implementing/Executing Agencies to familiarize them with the ADB policies and procedures.

- iii. Assist State Governments in Consultant's Selection and Prequalification of Contractors.
- iv. Support for completion of detailed engineering designs and completion of complete set of standard bidding documents for civil works and equipment supplies for 1st Tranche sub projects.
- v. Identification/confirmation of required land and acquisition notification with disclosures to affected people issued by the Implementation Agencies and prepare resettlement guidelines.
- vi. Environmental Management and Resettlement Plan

1.4. IMPLEMENTATION ARRANGEMENTS

14. ADB and the State Governments. A central level steering committee and Project Management Unit/ Project Implementing Agency will be established in MOUD.

15. In each of the eight states State Level Steering committee (SLSC), an Investment programme empowered committee (IPEC), an Executing Agency (EA) and a State Investment Programme Management Unit (SIPMIU) headed by a Project Director (PD). The steering committee is a policy making and coordination committee and for according approvals to the Annual Plan. This is chaired by the Chief Secretary and Principal Secretaries of line departments as members. The IPEC is chaired by the Principal Secretary Urban Development Department with Principal Secretaries of Planning, Finance departments and Chief Engineers of the line departments as members with the mandate to accord financial and technical sanctions and all matters connected with the procurement of goods and services beyond the powers delegated to SIPMIU. The details of the Implementation arrangement as suggested for project Implementation and the one put in place by the six states are at Appendix 1.

16. MOUD and the States will provide full support to the consultants for the Implementation of the project. The TA will be implemented over a period of 14 months beginning from 1st of August to 30th September 2009 and later extended to 30 November 2009.

17. The consultants for TA 4779 will submit

- a) An inception report within 4 weeks of TA commencement.
- b) Monthly progress report at the end of each month during the implementation period.
- c) An Interim Report after 7 months.
- d) a final report on the completion of the project

1.5. PROJECTS INCLUDED UNDER TA-4779

18. ADB has committed financing under a Multitranches Financing Facility (MFF) under North Eastern Region Capital Cities Development Investment Project (NERCCDIP) for an amount of \$ 285.7 million, covering five capital cities: Aizawl, Agartala, Gangtok, Kohima and Shillong. The loan for this MFF will be provided in 3 tranches. The first tranche loan has been signed totaling to \$ 30 million. The

financing for other cities originally proposed under this TA, i.e. Guwahati, Dibrugarh, Itanagar and Imphal has been postponed.

19. The original scope of the TA include all nine cities, but the TA outputs cover only six cities; five of which have obtained ADB funding under the NERCCDIP, while the remaining one, Dibrugarh has not secured any funding from ADB. The reasons of dropping the other three cities are: unpreparedness of the states, unfavourable security situation, unavailability of land, no serious response from the states, and the time constraint that the TA cannot be further extended.

20. Detailed engineering design was conducted for water supply, solid waste management and drainage only in six cities, i.e. Agartala (Tripura), Aizawl (Mizoram), Gangtok (Sikkim), Kohima (Nagaland), Shillong (Meghalaya) and Dibrugarh (Assam). The projects for water supply and solid waste management for first five cities were included under Tranche 1 of NERCCDIP, while Dibrugarh will be considered under separate investment program in the future.

1.6. LIST OF PROJECTS

21. The list and detail Scope of the projects state and city wise given in the **Table 1.1**.

TABLE 1.1: SCOPE OF WORK FOR THE PROJECTS UNDER NERCCDIP AND NERUDP

Project	State	City	Scope of the Work
Water Supply	Mizoram	Aizawl	<ol style="list-style-type: none"> 1. Reconstruction of seven Zonal Reservoirs including fixing of inlet and outlet and other pipes, it's commissioning and testing. 2. Procurement of equipment and ancillary supplies, civil works, testing and commissioning pertaining to main Reservoir (1000 MAC¹) and Chandmari booster (500 MAC) including chlorinator rooms. 3. Providing and installing and giving satisfactory field testing of 13000 domestic water meter with ancillary supplies, civil works, testing, commissioning.
	Nagaland	Kohima	<ol style="list-style-type: none"> 1.Reconstruction of 19 RCC reservoirs including fixing of inlet, outlet and other pipes its commissioning and testing 2. Refurbishment of the 1.5 MLD water treatment plant including replacement of clarifiers, lining and

¹ The standard terms MAC – 500,MAC – 1000, MAC – 2000 etc. are indicative of chlorine generating capacity of electrochlorinators. MAC – 500 means the electrochlorinator has the capacity of producing 500 grams of free (active) chlorine every hour. Similarly MAC – 1000 means the free (active) chlorine producing capacity of electrochlorinator per hour is 1000 grams and so on.

			<p>structural assessments of receiving tanks, replacement of pumps and other machinery including sand filter media, electrical works and painting.</p> <p>3. Procurement and installation of chlorinators at main reservoir at the WTP along with pump and other accessories fittings, fixtures, civil works for chlorinator room</p>
	Sikkim	Gangtok	<p>1. Upgrading and unbunching of entire city distribution system. Hydrological modelling.</p> <p>2. Installations of chlorinators at four main reservoirs.</p> <p>3 Construction of four new reservoirs</p> <p>4. Laying of 31km approximately primary pipelines and 38km of secondary and tertiary pipelines</p> <p>5. Pumping system for upper zone</p>
	Tripura	Agartala	<p>1. Civilworks, electromechanical works and associated pumping machinery, testing and commissioning pertaining to the construction of 23 deep tube wells in south and central zones of Agartala</p> <p>2. Replacement of seven iron removal plants (IRPs) in central zone of Agartala</p> <p>3. Installations of Chlorinators in each of the seven IRPs.</p>
Solid Waste Management	Assam	Dibrugarh	<p>1. Provision of primary collection and storage including bins, provision of transportation vehicles, tipper trucks, compactors</p> <p>2. Procurement of equipment and ancillary supplies, civil, mechanical and electrical works, testing, commissioning of compost plant including land development, waste segregation facility, other infrastructure, plant and machinery, material handling automobiles</p>

			<p>3. Development of sanitary land fill site.</p> <p>4. Civil works and construction of complementary buildings and internal roads.</p> <p>5. Construction of Earthen Embankment for flood protection of the SWM site.</p> <p>6. Construction of approach road to the compost plant and land fill site.</p>
	Nagaland	Kohima	<p>1.Provision of primary collection and storage including bins, provision of transportation vehicles, tipper trucks, compactors</p> <p>2.Procurement of equipment and ancillary supplies, civil ,mechanical and electrical works, testing, commissioning of compost plant including land development, waste segregation facility, other infrastructure, plant and machinery, material handling automobiles</p> <p>3. Development of sanitary land fill site.</p> <p>4. Civil works and construction of complementary buildings and internal roads.</p> <p>5. Construction of approach road to the compost plant and land fill site.</p>
	Meghalaya	Shillong	<p>1. Provision of primary collection and storage including bins, provision of transportation vehicles, tipper trucks, compactors</p> <p>2. Procurement of equipment, waste segregation facility, primary and secondary vehicles.</p> <p>3. Development of sanitary land fill site.</p> <p>4. Procurement of bull dozer and compactor.</p>
Drainage and Land slip Protection	Assam	Dibrugarh	<p>1.Improvemeent and Lining of DTP drain</p> <p>2. Construction of 21 culverts</p> <p>3.Excavation of Laura Beel</p>

22. Refining the Managerial and Personnel structure of the state Governments and setting up of PMU is also included in Tranche 1 of ADB assistance. In view of the small size of the project only SIPMIU in all the five states (**Appendix-2**) are in place since there is no need for PIA.

1.7. PROJECT OUTPUTS

23. The outputs expected out of the project are:

- a) support for setting up management and implementation units
- b) preparation of detailed engineering designs and associated drawings (1st Tranche)
- c) preparation of bidding documents (1st Tranche)
- d) updating and preparation of any new resettlement plans and environmental assessment (1st Tranche)
- e) Support to states in tendering and recruiting consultants
- f) Preparation of operational manual

2. IMPLEMENTING AGENCIES

24. In all the state of Northeast as in the rest of the country there are multiplicity of Agencies involved in development of urban infrastructure such as Urban Development Department, Water Supply and Sanitation, PWD, Housing Department, Power Department or the Electricity Board, City Development Authority and the Urban Local Bodies. Each one has a mandate to develop and maintain the infrastructure and are responsible for service delivery. There is also overlapping of functions such as Roads are constructed and maintained by PWD, the Municipal Corporation/Board also has its own roads to be constructed and maintained like wise water supply is the responsibility of PHED and the ULBs, there are specialized Agencies like Water and sewerage and drainage boards. It is interesting to note that for the same sector there may even three agencies involved. For example the drainage system in Dibrugarh is looked after by Water Resource Department, Town and Country Planning and the Dibrugarh Municipal Board. In Guwahati PHED is responsible for water supply besides Assam water supply and Sewerage Board, Guwahati Municipal Corporation. Multiplicity of agencies, the infrastructure providers often try to pass the buck and coordination is the first casualty. It also creates confusion among the users and may not be the most efficient and economical way of doing things

25. In this confusing implementation scenario if multilateral agency intends to make investment for improving infrastructure it would give priority to the setting up of an Agency for implementation and not to burden any of the existing agencies with the investment programme. It is for this reason that the implementation arrangement as suggested in the states is for creation of separate State level Investment programme unit within the executing Agency which is Urban Development Department of the state.

26. While the approved implementation structure may be more effective in laying of infrastructure as well as service delivery, it may not be entirely in line with the 74th amendments since the ULBs will have very little say during the execution of the projects for the SPIMIU will be the Agency for the purpose. The reasons for not making the ULBS responsible for the implementation may be incapacity of the Municipal boards/ corporation to take over these responsibilities both in terms of their manpower and equipment and financial resources. The ULBs in the north east may have to wait for some more time to become the urban infrastructure implementer and service provider and to be made responsible and solely accountable to the consumers/rate payers.

3. URBAN GOVERNANCE AND MANAGEMENT

27. Urban Governance in the North eastern states are in place in a few cities like Guwahati, Shillong, Dibrugarh for the past many decades and were functioning since the British rule. In fact the concept of local self government was introduced by the British Government with the objective of city governance and keeping the natives engaged in the political process through democratic process of elections to the urban local bodies. In view of the small size of the urban centers in NER the municipal limits were naturally small and limited to a few sq km, Shillong for example has only 10.76 sq km. After independence the fifth and sixth schedule of constitution empowered the tribal areas of Assam/NER to administer and have their own system of urban governance in accordance with their tradition and customary laws. In view of the increased urbanization, demand for modern system of urban governance is growing which is in conflict with the traditional system.

28. Despite the fact that urban areas have grown beyond the Municipal limit and the growth rate is much higher in such areas, the state Governments have not been able to extend the municipal limit. This is the experience in most of the cities in the hill states. The best example is Shillong where there has been no change in the status of the municipal board in the past few decades. The last election was held in 1967. Since then the Board is administered by Government. The State government did make efforts in holding the elections but fail to have an elected board due to non participation of the voters and the social pressure of the traditional institutions. The local Dorbars apprehend that the powers now exercised by them in the civic affairs will be transferred to the elected representative. They vehemently oppose any move of the state government to either extend the municipal limit or to hold the elections. Coupled with the fear of traditional Institutions being relegated, the apprehension is that they would have to pay taxes to the Municipal Board. They will be governed by the Municipal laws in matters of civic affairs. This fear has kept them away from accepting the municipalisation of the fast urbanisable areas outside the municipal limit. It is true of Shillong and equally true of other hill towns like Kohima, Aizawl and Gangtok. Except for Kohima which has a tiny municipality in the name and form of Kohima Municipal Board (KMC) Aizawl and Gangtok are still struggling to have one in place despite the appropriate legislation on the subject. Itanagar is also contemplating to have a municipal board but not much is noticeable by way of affirmative action in this regard. Imphal municipal board also has limited jurisdiction in the context of large planning area covered by the master plan

29. It is only in Assam and Agartala that the 74th amendments are being enforced and implemented. Even in Assam the functions as enumerated in the 12th schedule have not been fully transferred to them. All the States of NER who have got the JNNURM projects sanctioned have signed a memo of understanding for initiating urban reforms which also includes devolution of resources to the ULBs and to hold elections and making them well governed Institutions. This has not yet happened It is expected that State governments in NER would implement the package of reforms and provide necessary and technical assistance to make them work as key institutions for providing urban infra -structure and service delivery. The status of the urban local bodies for the project cities are in the **Appendix 3**.

30. Though the implementation of urban infrastructure development projects funded by ADB in NER NERCCDIP and NERUDPII is the responsibility of the State Executing Agency /SIPMIU, ULBs will be responsible for O&M and service delivery. The state governments have to ensure that in all the project cities the ULBs are setup and strengthened by devolution of adequate resources and trained manpower. This is necessary for project sustainability.

4. IMPLEMENTATION ARRANGEMENTS FOR THE INVESTMENT PROJECT

31. As per the Final PPTA Report the fund required to provide urban infrastructure is estimated around 1 billion dollars including water supply, sewerage, and sanitation, solid waste management, drainage and land slip protection, transportation and slum upgradation. Nearly 21% of the above amount is required for the first ten years. Given the scarcity of resources and the level of preparedness of the states it may appear to be ambitious and only projects on priority are to be taken in the first ten years.

32. ULBs in NER have been largely dependent on the devolution of resources from the state Governments by way of grants -in -aid from the state government and from GOI. Finance commission have been providing for financial assistance to the states. The tax base of the ULBs being very narrow, fund available with them have always been meager which made it difficult for them to provide and sustain the infrastructure and ensure efficient services.

33. Urban infrastructure is funded by GOI and the State Governments and the Urban Local Bodies as well as by the donor Agencies. In the past few years a major initiative has been taken by Government of India by funding the selected 63 cities throughout the country where an investment of INR 650000 million is proposed for investment upto 2012. The capital cities of the eight project states are also included under the programme and the projects are under various stages of implementation.

34. Annexure 4 gives the details of the investment proposed for the six ADB project cities in NER. However the fund requirement for urban infrastructure being so huge that even this ambitious investment is inadequate and hence both the GOI and SG are required to seek the assistance of ADB. ADB has agreed for investment of 285.7 US dollars for the 5 project cities. The details of fund allocation for the tranche 1 projects are given at Appendix 4.

4.1. PROJECT MANAGEMENT AND ORGANIZATION

35. Effective Project Implementation Management is to be assured through the SLSC, IPEC, SLEA, SIPMIU, and DSMC as outlined above as well as having an efficient, transparent and responsive Financial Management in the EA. SIPMIU is the key Project organization which will have the support of the above Agencies and will be assisted by the DSMC and IDC as given in the of **Appendix 1**.

4.2. DISBURSEMENT ARRANGEMENTS

36. The loan disbursement will be in accordance with the ADB's Loan Disbursement Hand book as amended from time to time and detailed arrangement between the Government and ADB. The SIPMIU will prepare disbursement request and keep the bank informed about any changes in the contract. An Imprest Account (IA) will be opened in a current account in any commercial bank by SIPMIU subject to the state and SIPMIU agreeing to adhere to the ADB procedures for operating IA. The department of plan expenditure will pass on the rupee equivalent of IA advances to the state Government. The SIPMIU will warrant that the funds in IA shall be used only to fund eligible expenditure in accordance with the terms of loan agreement. The statement of expenditure procedure will be adopted for reimbursing and liquidating the IA for eligible expenditures not exceeding \$50000 per payment except as ADB may agree for increasing the threshold of expenditure.

4.3. PROJECT PERFORMANCE AND MONITORING

37. Each of the SIPMIU is required to furnish quarterly report to SLEA, MOUD and ADB on the progress of the project. Project supervision will mainly be the responsibility of the DSMC and the Engineer of SIPMIU and ensure that all works are executed strictly as per the approved specifications and in terms of the conditions laid in the works contract.

4.4. REPORTS

38. Monthly report submitted by the DSMC will be consolidated by the SIPMIU and submitted to the SLEA, MOUD and ADB. The report will indicate (i) progress made against the targets (ii) problems and issues encountered and remedial actions taken or proposed to resolve the issue. (iii) Any deviations made should be supported with adequate justification and must have the approval of SIPMIU. (iv) The reports will also include implementation schedule for various items of contract and the implementation arrangement (v) Implementation of loan proceeds (vi) Work to be taken up in the next quarter

4.5. PROJECT REVIEW ACCOUNTS AND AUDIT

39. Regular project reviews will be conducted by the ADB of the work progress and utilization of fund and respond to significant under fund utilization, approval of additional IA and the need for reallocation of fund if any. SIPMIU will maintain separate records and accounts adequate to identify financing resources received and expenditures made on the loan amount from ADB and from GOI/SG. The accounts as well as the SOE will be audited by the Auditor General and Chartered Accountants acceptable to ADB. SIPMIU shall submit the Audited Reports and related financial statements to SG, MOUD and ADB within six months after the end of the financial year.

4.6. PROJECT SUSTAINABILITY

40. Sustainable urban infrastructure is a term used to describe infrastructure that facilitates a city or city region progress towards the goal of sustainable living.

41. The emphasis on sustainable development is the result of the growing awareness of the links between mounting environmental problems, socio economic issues such as poverty and inequality and concerns about healthy future. In other words an infrastructure is sustainable when it responds to the environmental challenges of depletion of resources, addresses social and cultural needs, practices as well as generates economic empowerment.

42. A sustainable design can lead to development of sustainable infrastructure and would ensure that

- i. Development of infrastructure do not deplete the natural resources
- ii. Do not impair environment
- iii. Has adequate in built social safeguards in the project proposals
- iv. the urban infrastructure when provided may generate adequate resources for its maintenance and up keep.

- v. All the stake holders are involved and community engagement is a part of the design and implementation process of the urban infrastructure projects
- vi. Institutional mechanism put in place and the manpower deployed for operation and maintenance of urban infrastructure projects are tuned to the environmental, social and economic sustainability of the projects

43. The projects for urban infrastructure in the six states and eight projects, for which the detailed engineering design is prepared under this TA, are broadly under environmental sanitation since these are for water supply, sewerage, solid waste disposal. All the projects were designed keeping the above in mind. The projects are to be examined in view of the indicators for the sustainability of these projects or otherwise.

4.7. SUSTAINABILITY OF URBAN INFRASTRUCTURE PROJECTS TRANCHE 1

44. Four water supply projects are designed for the purpose of augmentation of water availability to ensure that the population within the service areas do get potable and dependable water supply at affordable cost. The agency responsible for O&M and service delivery are effective and sensitive to the needs of the common people and accountable to them for their actions. The system in place is transparent and responsive. Table 1.2 gives the safeguards provided and built into the project designs

TABLE 1.2: SUSTAINABILITY OF PROJECTS UNDER TRANCHE 1.

Sustainability Indicator	Considered and provided in the Design
Economic Sustainability	
1.Economic Benefits	1. Project impact on the National/ Regional Economy. 2. Evaluation of Inputs and Out puts. 3. Positive and Negative Impacts of the Projects. 4. Estimation of non tangible monetised impacts.
2. Financial Analysis	1.Estimation of project cost 2. Estimation of the O&M Cost 3. Estimation of Revenue Generation
3..Financial Viability	1. NPV value to be positive 2.EIRR to be equal or higher than the cost of capital estimated at 12 % 3. Sensitivity Analysis and switching Values with increase in the capital cost and O&M cost by 10%
4. Project viability and sustainability.	1.Financial and Operating Plan of the Agency/ULBs for O&M and sustainability of t he project 2. Estimation of Revenue and Expenditure based on the taxation measures of ULBs and user charges and other measures for revenue.
Social Sustainability	

<p>5. Community Engagement</p>	<p>1. Pre DPR preparation. Community involvement was ensured even during the preparation of PPTA Report when the community was engaged for the purpose of evolving the basic conceptual frame work of the projects</p> <p>2. During preparation of DPR. The inter action with the community, community leaders, CBOs and NGOs reaffirmed the desire of the community to get involved in the projects and sought clarity from the consultants on their exact role in Project preparation, implementation and O&M. Apart from the consultation with the community the consultants prepared a community assessment report for each of the project cities which reflected the desire of the community for getting involved with the urban infrastructure projects</p> <p>A two days workshop was organised in September 2009 for the NGOs from all the three states. The proceedings of the workshop are at Appendix 6.</p> <p>Training of the community leaders, NGOs and CBOs was imparted and Information Education & Communication (IEC) materials were given to the trainees with the request to carry forward the message of community engagement for urban infrastructure projects.</p> <p>3. Like in the above two stages of the project during the project implementation phase also community engagement can be sought for community monitoring of the project and seeking details of implementation from the executing Agency</p> <p>4. Post implementation project Community engagement on O&M is likely to be more effective subject to appropriate training in the matter</p>
<p>6. Social acceptance</p>	<p>Social acceptance of the project would mean</p> <p>1. Community favours the project and wants to be involved and understands the nuances of the project.</p> <p>2. Willing and ready to pay for the cost of O&M for improved urban infrastructure</p> <p>3. Ensuring sustainability through active awareness programme using the IEC materials for greater community engagement</p> <p>The workshop also dealt with the above issues and recommended for greater role of the VOs</p>
<p>7. Social Safe guards.</p>	<p>1. Status of Land. Land being the basic input to the project planning and implementation should be under the possession of the EA. If it is not so there should be commitment by the EA that it will be made available for the project.</p> <p>2. Involuntary Settlement of Indigenous Population. The project site should be such that it does not involve any</p>

	<p>involuntary settlement of the indigenous population and any action in this regard on the part of EA has to be in accordance with the ADB guidelines.</p> <p>3. Resettlement Plan. There is no project included in the Tranche 1 where any population or habitation is getting impacted due to project implementation. Hence No Resettlement Plan is required to be prepared.</p>
C. Environmental Sustainability	
8.Environmental Impact	<p>1. IEE for project sites. Environmental Assessment and Review Frame work provides for preparation of guidelines for environmental assessment.</p> <p>2. Likely Impact due to project intervention. Examination of the project impact which may impair or enhance environmental sensitivity of the project area and identify if project implementation likely to result in depletion of resources</p> <p>3. Environmental Management Plan. Each of the projects under Tranche 1. is backed by EMP to ensure that adequate mitigation measures have been included and separate and adequate financial outlays have been provided for the purpose.</p>
9. Legal frame work	<p>1. Environmental Laws</p> <p>2. Municipal laws</p> <p>3. Customary laws</p>
D. Sustainability of Institutions for Project Implementation	
10. Implementing Agency	<p>1. State Investment Project Management and Implementation unit</p> <p>2. Urban Local Bodies</p> <p>3. Urban Governance</p>
11. Manpower Availability	<p>1.Project Preparation</p> <p>2. Project Implementation</p> <p>3.Project Operation and Maintenance</p>

45. The DPR prepared for all the projects have been subjected to the examination and evaluation of sustainability on the basis of the above matrix and the details are at **Appendix 7**.

5. CHALLENGES

46. Despite the scrutiny of the projects on the touch stone of sustainability there are many challenges the EA implementing the projects may have to face in view of the existence of multiple Agencies responsible for provision of urban infrastructure and service delivery, urban management, asset management and private sector investment.

5.1. URBAN INFRASTRUCTURE

47. The six project cities have different level of infrastructure and managed by multiple Public Agencies and have different service providers which is now proposed to be examined in terms of its effectiveness or otherwise

TABLE 1.3: URBAN INFRASTRUCTURE AND SERVICE PROVIDERS

Project Cities	Urban Infrastructure	Executing Agency	Agencies responsible For O&M	Present Service Provider	Agency responsible as per 74 th Amendment
Agartala	Water Supply	SIPMIU, Tripura	PWD(DWS)	PWD(DWS)	AMC
Aizawl	Water Supply	SIPMIU, Mizoram	PHED	PHED	ULB
Gangtok	Water Supply	SIPMIU Sikkim	WSPHED	WSPHED	ULB
Kohima	Water Supply	SIPPMIU Nagaland	PHED	PHED	KMC
Dibrugarh	SWM	SIPMIU Dibrugarh	DMB	DMB	DMB
Kohima	SWM	SIPMIU Nagaland	KMC	KMC	KMC
Shillong	SWM	SIPMIU Meghalaya	SMB	SMB	SMB
Dibrugarh	Drainage	SIPMIU Dibrugarh	WRD	WRD	DMB

48. As apparent from the table 1.3 that the proposed EA and the service provider at present and the agency mandated for the purpose as per 74th amendment are different. For water supply projects in the four project cities as per the revised scope of work the PHED/Water supply and Sanitation Departments of the state Governments are till date responsible for water supply project implementation, O&M and for providing services. In such a situation the concerned department may feel

that they have been deprived of the projects which genuinely are theirs for historical reasons and they should execute the work since apart from history being on their side the expertise is also with them and any other executing agency created for the purpose has to draw experts only from PHED/Water and Sanitation Department. If it is so why not make PHED responsible for execution of ADB funded projects for each of the project cities in different tranches and investment programs over the period of several years? It needs to be appreciated that NERCCDIP/NERUDPII are not stand alone projects for water supply/ Solid Waste Management/ Drainage/sewerage projects but has components of all the urban infrastructure for each of the nine project cities in different tranches covering a period of 5 years. Making the line department responsible for each of the sub projects like water supply, sewerage, SWM, Drainage would mean monitoring these projects with multiple Agencies which may pose practical problems.

49. It is also important to note that the NERCCDIP/NERUDPII is multi tranche projects and there may be overlapping of sub projects in each of the cities. The multidisciplinary team that is proposed for the SIPMIU cannot be put in place in each of the line department executing the sub projects in view of the overlapping during the execution. The alternative is to bring all the expertise under one umbrella and that is what has been proposed in SIPMIU for each of the project cities. There may still be some difficulty in getting the assistance and necessary cooperation from the line departments but can be managed at the level of SLSC and IPEC where senior officials of all the line departments and the urban local bodies are members. SLSC is headed by the chief secretary who is the head of the Administrative machinery can ensure coordination among the line departments so that the project moves ahead as approved.

50. Instead of SIPMIU being a part of the state Urban Development department it could be located within the Urban Local bodies since 74th constitutional amendments and the 12th schedule provides for transfer of all the functions and activities relating to urban planning, development and management. This would have been appropriate and in line with the constitutional provision. This can be best appreciated by examining the following

- a. Is there a ULB in each of the project cities?
- b. Does the ULB have jurisdiction over the entire project area?

51. Project Director is expected to be senior official either from civil services or a technical hand with adequate seniority and experience in urban planning/development/management and capable of leading a multi-disciplinary team.

52. The status of the ULBs in the project cities is at Appendix 3 which makes it apparent that all the project cities do not have a Municipal body. **Table 1.4** illustrates the matter further

TABLE 1.4: STATUS OF ULBS

Project /City	Status of ULB	Jurisdiction of ULB
Water supply Agartala	AMC	Not in the entire project area since it extends beyond the Municipal limit and is within the Agartala Planning area. The municipal area is 58.84 sq.km while the GAPA is 92.0sq.km. If the responsibility of project execution is given over to the AMC it can do so only within its own limit and for the remaining areas some other Agency has to be made responsible. Having two EA for the same project would create more confusion and also involve heavy expenditure.
Water Supply Aizawl	There is no ULB in place at present. There is a proposal to have one. There has not been much progress on the matter during the past one year.	The project area is spread over the Aizawl Planning area 128.9sq.km.
Water Supply Gangtok	There is no ULB in place at present. There is a proposal to have one. There has not been much progress on the matter during the past one year.	The project area is spread over the Gangtok Planning Area is 19.00 sq.km.
Water Supply Kohima	KMC	A part of the project is outside the KMC. KMC can do so only within its own limit and for the remaining areas some other Agency has to be made responsible. Having two EA for the same project would create more confusion and also involve heavy expenditure.

SWM Dibrugarh	DMB	Project area extends to the entire Planning area of 66.14 sq.km while the Municipal area is 15.50 sq.km
SWM Kohima	KMC	Project area extends to the entire Planning area of 63.55sq.km while the Municipal area is 10.98 sq.km. Hence the need for a separate executing agency
SWM Shillong	SMB	Project area extends to the entire Planning area 174sq.km while the Municipal area is 10.36 sq.km
Drainage Dibrugarh	DMB	Project area extends to the entire Planning area of 66.14 sq.km while the Municipal area is 15.50 sq.km. The total length of the D.T.P drain proposed to be improved is 23 km beyond the Municipal area where its length is 5.5km and the Master plan area where the chainage 9.575 Km is. Hence the project execution has to be assigned to a separate Agency.

53. Out of the six project cities two do not have any ULB namely Aizawl and Gangtok. The other cities of Agartala, Dibrugarh, Kohima and Shillong have Municipal Boards headed by Chairperson and elected members (except Shillong) supported by CEO and his/her staff. The CEO of the Municipal Board/council is appointed from the state civil services and not necessarily a senior and experienced enough to take up multi tranche projects to be funded by ADB.

54. There are Development Authorities in all the project cities having jurisdiction over the entire master plan area and covering almost all the project spread except drainage project which extends beyond the master plan area. Can the ADB funded project be handled by the Development Authorities? Though in terms of jurisdiction of the Authority there may not be any difficulty since almost all the projects are located within their jurisdiction but it needs to be examined if it would be in a position to deliver the goods. Development Authorities have all been created with the main objective of Implementation of the recommendations contained in the master plan and to regulate the development of the city as per the Master plan, zoning bye-laws and building rules besides developing the urban infrastructure. Development Authorities have necessary mandate to be an Agency for Urban infrastructure and possibly may execute the NERCCDIP/NERUDP projects. The task assigned to the Development Authorities is stupendous that it may be difficult for them to take up the

additional burden and if they are assigned this job it will be at the cost of efficiency of the project execution. In view of the above facts a Project investment and implementation unit is proposed under the UDD of the project states.

5.2. SIPMIU STAFF

55. Though the project states except Assam have SIPMIU in place it does not have the multi disciplinary staff as recommended by the consultants. In most of the SIPMIUs the Project Director is appointed but the remaining positions remain still vacant despite the fact that the cost on overheads for SIPMIU is a part of the project cost and is reimbursable. Appendix 2 gives the details. If the positions are not filled up early it may adversely impact the project implementation. This is reflected in the Appendix 6 table 6.

5.3. OPERATION AND MAINTENANCE

56. The best designed and implemented infrastructure may not be able to provide the desirable urban services if not operated and maintained properly. Both the preventive and post break down maintenance is handicapped by the fact that none of the project state practice operation management. The goal of maintenance management is to care for assets to ensure maximum performance and longevity, obtaining the highest yield from investment in the asset. Maintenance management normally relies on inventory and condition functions. In absence of operational and maintenance manuals and asset register, maintenance in all the project states is at best a fire fighting exercise. The state utility operator and service providers are not in a position to maintain the assets in absence of the said manuals but also due to inadequacy of financial resources. Asset Management is not in practice in any of the states in the region and the officials of the line departments/ULBs and service providers are not very familiar with it as a result the funding needs are based on past practices and norms or availability of fund under the departmental budget head and the status of the urban infrastructure and service delivery is far from satisfactory. Maintenance of urban Infrastructure is neither given due importance nor is understood properly. Preventive maintenance has a low priority leading to break down of services and higher cost repairs and disruption of services.

5.4. SERVICE DELIVERY

57. The state operators and service providers for water supply, drainage and SWM are the line departments /urban local bodies or both. Table 1.3 gives the details. Preparation of manual for operation and maintenance of water supply project is outside the scope of the current TA but is the urgent need if the goal is to provide a reliable service delivery to the consumers. SIPMIU of the project state may take lead in this regard and may get the required manuals prepared at the earliest with the assistance of design supervisory management consultant and before the project gets commissioned.

58. As regards making adequate financial resources available the need for taking appropriate Legislative and Administrative measures need to be stressed for the SIPMIU and the state governments are to ensure generation of additional Revenue for proper maintenance by way of introducing user charge or enhancement of the taxes or both.

TABLE 1.5: MAINTENANCE OF URBAN INFRASTRUCTURE AND SERVICE DELIVERY

Urban Infrastructure	Revenue generation	Action Required
1, Water supply Agartala	1 Water charges 2. Enhanced taxation by the ULB.	1. In view of the willingness of the community to pay water charge PWD (DWS)/AMC may prepare suitable rules for collection of charges. AMC may make amendment in the Municipal rules to enhance the water and sanitation taxes as part of the property tax. Community engagement to precede these measures.
2. Water Supply Aizawl	Water charges	1. PHED to make appropriate rules for collection of water charge from the consumers 2. Community may be engaged for maintenance of water meters and collection of water charges. 3. Constitution of Municipal Council for Aizawl.
3. Water Supply Gangtok	Water charges	1. WSPHED to make appropriate rules for collection of water charge from the consumers. 2. Community engagement for collection of water charges. 3. Constitution of Municipal Council for Gangtok
4. Water Supply Kohima	1. Water charges 2. Enhancement of water and sanitation tax as part of property tax.	In view of the willingness of the community to pay water charge PWD (DWS)/AMC may prepare suitable rules for collection of charges. AMC may make amendment in the Municipal rules to enhance the water and sanitation taxes as part of the property tax. Community engagement to precede these measures.

5.SWM Dibrugarh	<ol style="list-style-type: none"> 1. User charge 2. Sale of compost and recyclable materials 	<ol style="list-style-type: none"> 1. DMB may prepare suitable rules for the purpose of collection of charges VO/NGO/CBO may be made responsible for the purpose. 2. Private parties/NGO may be engaged for revenue generation.
6.SWM Kohima	<ol style="list-style-type: none"> 1. User charge 2. Sale of compost and recyclable materials 	<ol style="list-style-type: none"> 1. DMB may prepare suitable rules for the purpose of collection of charges VO/NGO/CBO may be made responsible for the purpose. 2. Private parties/NGO may be engaged for revenue generation.
7.SWM Shillong	<ol style="list-style-type: none"> 1. User charge 2. Private party engaged for operating the compost plant. 	<ol style="list-style-type: none"> 1. SMB for the municipal areas and Tribal Institutions for non municipal area may prepare suitable rules for collection and fixation of user charge. 2. In consultation with the Tribal institutions and the VOs a civic body may be created for the non municipal areas.
8.Drainage Dibrugarh	<ol style="list-style-type: none"> 1. Savings due to control of flooding and consequent dislocation of the urban life a source of revenue generation. 2. Savings of fund meant for relief and rehabilitation. 3. Flood Reduction cess. 	<ol style="list-style-type: none"> 1. WRD is the Nodal department for improvement and maintenance of the D.T.P drain. 2. There should be specific budget provision for maintenance of the D.T.P drain. 3. Community engagement for ensuring that there is no more encroachment on the water ways of the D.T.P drain

59. Despite the 74th amendment and support for devolution of functions and resources to the ULBs, the State Governments in the North East have been very conservative in transferring the functions from the line departments. The line departments during the last 15 years have not made much effort to either strengthen the ULBs with required trained manpower or for devolution of financial resources. The process may be slow but eventually providing infrastructure in the urban areas

and extending services would be the responsibility for which they need both political and Administrative support which is weak at present and this may pose a big challenge to the project implementation and sustainability. The way out is to go for massive capacity building for the ULBs which is being supported by ADB through a separate TA. Implementation of JNNURM and MOUD's insistence on having elected ULBS and reforms are the most appropriate initiatives to overcome the challenge.

5.5. OPERATIONAL PROCESSES

60. The state Government line departments as well as the ULBs follow the outdated processes which are not able to ensure effective management or use of available funds or to ensure an efficient and sustainable urban infrastructure system. There is considerable indifference on the part of the Government Machinery to take initiative for updating the operational processes. The operational Plan prepared by the consultants should not remain merely a piece of pious statements but gets translated into actions.

5.6. URBAN INFRASTRUCTURE FUNDING

61. Urban Infrastructure development in the North eastern states depended largely on the state plan fund. Barring Assam the other smaller states due to their weak resource base had much smaller fund allocation for the purpose. Unlike the rest of the states in the country which benefited from funding of such projects from multilateral Funding Agency NER did not have any funding in the urban sector till AUS-Aid projects on water supply and at Gangtok and Shillong apart from that of Agence Francaise de Development in sanitation. There has been considerable improvement in fund flow from MDONER and under JNNURM, MOUD, and GOI. Despite the improved level of investment and the ADB's proposed assistance the investment gap will still be fairly wide due to huge backlog and present level of infrastructure. The answer lies in greater investment of the GOI, the State Governments, and the Multilateral Funding Agencies.

5.7. PROCUREMENT

62. The NER states have common characteristics in their procurement environments. With the exception of Assam, which in a way is the mother state of all but three, procurement environment is characterized by affirmative action towards the people of the state, especially the indigenous tribal populations. Vestiges of the old world license-raj system remain in the framing of contracts, especially for Works. Govt officers are tuned to this system of functioning, and so are the contractors. Political influence in the award of contracts cannot be ruled out, since political parties need funds, and in the absence of large scale industry and industrialists in the states, contribution from contractors is a viable option. Politicians may be a part of the contracting scene too, through dominant surrogate shareholdings in contractor's firms. With the exception of Assam, there is no sizable construction industry.

63. As in the rest of India, there is no Procurement Law in the states. A new bill on procurement in Mizoram, drafted from the Vigilance angle in 2008, purports to stem corruption of Govt officers. It insulates procurement decisions from law courts. Procurement processes in the states are covered by Govt directives issued from time to time and are of the nature of quasi- laws. There is no system of collection of historical procurement data and therefore these are not maintained in the states. There is no Whistle Blower Act in India and therefore the question of whistle blowing does not arise in the NER states. No specialized training is imparted to procurement

personnel; they are fitted into procurement vacancies as a part of routine rotation of posts of serving personnel.

64. All NER states follow a system of registered suppliers for Works and Goods, registration being reportedly biased in favour of locals. Tenders above INR 100,000 (\$2200) are published in newspapers, some progressive states like Assam advertising them through their website and even receiving offers online, though this is the sole exception rather than the rule. Even in Assam, tenders are also received in paper form. Adequate time of response is given for response to tenders (30 to 45 days), although no time limit is set for award of the tender by bureaucrats. Estimated cost of bids put to tender are mentioned and percentage above or below the Schedule of Rates (SOR) quotations are invited in case of Works. Some Govts consider offers of only percentage above, while others consider only percentage below for reasons best known to them. The schedule of rates is not routinely updated every year in most cases.

65. There is no practice in the NE states to make public disclosure of the winning bidder or to inform the losers of the reasons of their losing. The loser may invoke the RTI Act for finding out reasons as to why he lost. There are established procedures for blacklisting of suppliers and contractors, but generally by the Chief Engineer or the administrative head, which is not a fair procedure.

66. The institutional and legal framework for procurement in the NER should be attuned to the Constitution of India. Though there is no single law to cover procurement and though the public procurement process is decentralized, a fairer system can be devised for all eight states keeping in view the Contract Act, Sale of Goods Act, Arbitration Act, Limitations Act, Prevention of Corruption Act and the Right to Information (RTI) Act in vogue. A reasonable level of oversight on the SIPMIUs can be maintained through the state offices of the Comptroller and Auditor General of India who are charged with auditing Government accounts. Further, the State Vigilance Commissions should be strengthened by the creation and strengthening of the Chief Technical Examiner's organizations. These should be tasked to get the process audit of procurement done (as opposed to financial audit) both pre-tender and post-tender as is so effectively done by the Chief Technical Examiner's wing of CVC of the GOI. Many states do not even have a CTE's office.

67. Integrity Pacts are not in vogue in the NER, since tenders are small. A beginning has been made in the procurement of the Central Govt. in Delhi and by some Central Public Sector Units (PSUs). SIPMIUs entering into contracts may adopt this process for greater transparency in the larger value ADB projects.

5.8. WORK SUPERVISION

68. All construction works are supervised by the Engineers of the line departments/ULBs. Though there are adequate provisions made for proper supervision in practice these are not found very effective. The third party supervision is still not being favoured though it is creeping into the system with the Funding Ministries of Government of India and Multilateral Agencies.

5.9. QUALITY CONTROL

69. In view of not having a third party inspection and for supervision of works the quality of work suffers since the supervisory officers of the Government Executing Agencies have adequate opportunities for making compromises on quality. This further gets aggravated since there is no whistle blower Law under which the life and

interest of the whistle blowers may be protected. Work quality is questionable since there is no focus on Quality assurance. Quality Assurance is a set of activities designed to ensure that the development and/or maintenance process is adequate to ensure a system will meet its objectives. While Quality Control is a set of activities designed to evaluate a developed work product.

5.10. PRIVATE SECTOR INVESTMENT

70. To ensure more effective maintenance it may be desirable on the part of SIPMIU and the ULB to be pro active in inviting the private sector investment. Installation of Compost plant in Shillong is an example of private sector investment in urban infrastructure. The fact that this investment came in this sector more than six years ago is an indication that such investments may be forth coming at least in the SWM and may be water supply as well. There are three projects in SWM in the first tranche and there is scope for the private parties to make investment in compost plants and recycling of waste. The lesson learnt from the private investment in the compost plant has demonstrated that if nothing else the SMB has saved at least 7 years of maintenance cost. If private sector is involved even for operation and maintenance of the facilities under SWM proposed for the three project cities, by the going cost of O&M as per the DPR savings is estimated around INR 72 million per year.

6. ACHIEVEMENTS

71. Achievements made against the project output as per TOR are as below

6.1. SUPPORT FOR SETTING UP MANAGEMENT AND IMPLEMENTATION UNITS

72. Against the task of providing the support to the project states the consultants provided a detailed report giving the composition of the three tier decision making state level committees, their functions and pursued with them to constitute such committees outlining the functions of each such committees. It also spelled out the organizational structure and personnel requirement for SIPMIU staff as detailed out in Appendix1. Based on the consultant's recommendation all the project states barring Assam have SIPMIU in place. The staff position is at Appendix 2.

6.2. PREPARATION OF DETAILED ENGINEERING DESIGNS AND ASSOCIATED DRAWINGS (TRANCHE 1)

73. Consultants have carried out

- i. Topographical surveys and Geo technical investigations for all the project cities as per the design requirements prepared and submitted detailed report along with the DPR.
- ii. Prepared required Engineering drawings giving all necessary details.
- iii. Prepared Detailed Project Report for all the eight projects in six cities as per revised scope of work. The revised list of the project is at table 1.1. Details of the work completed by the consultants are at Appendix7

6.3. PREPARATION OF DETAILED PROJECT REPORT

74. The DPR for all the eight projects have been prepared and submitted to the states. There are variations in the scope of work and tasks given to the consultants at the beginning DPRs. Four projects got dropped due to various reasons such as the level of preparedness of the state for taking up the infrastructure works or the land for providing the required facilities was not under the possession of the State line department/ SIPMIU. In case of one project the security environment was not assessed to be favourable for long duration field work. The list of projects for which DPR is prepared is at Table 1.1 and is in accordance with the revised list of projects as approved by ADB.

6.4. BID DOCUMENTS

75. Bidding documents (Tranche 1) for all the eight projects have been prepared. In all there are 16 packages for the eight projects in six towns. The details of the packages are at Appendix 8. The packages were prepared in accordance with the ADB guidelines. SIPMIUs have invited the bids based on the documents prepared by the Consultants.

6.5. RESETTLEMENTS PLAN AND ENVIRONMENT ASSESSMENT PLAN

76. The projects, for which the detailed design has been prepared, did not involve any land acquisition and dislocation of any person hence there was no resettlements issues and only due diligence report were prepared for all the eight projects. IEE

reports were prepared since none of the projects except SWM Dibrugarh involved any environmental issues for which the consultants have proposed to the UDD Assam and DMB to obtain the approval on the TOR for EIA study from the State Environment Appraisal Committee if it is already in place if not from the MOEF. For the remaining seven projects IEE and EMP were prepared and submitted to SIPMIUs.

6.6. SUPPORT TO STATES IN TENDERING AND RECRUITING CONSULTANTS

77. Bid Notice was prepared by the consultants and sent to the SIPMIUs based on which bids have been invited but none of the states except one have reached recently the stage for scrutiny of the bids hence necessary assistance could not be provided in finalizing the bids.

78. Consultants did not assist the SIPMIUs in selection of the DSMC in view of the Variation No 3(377) approved by ADB. This was done to avoid any conflict of interest.

6.7. PREPARATION OF OPERATIONAL MANUAL

79. An Operational Manual is prepared which deals with matters like project designs, Implementation Mechanism and bidding processes besides, Social and Environmental Safe guards, Community engagement in project implementation, preparation of IEC guidelines and Financial Management and Project Accounting

6.8. WORKSHOPS

80. The consultants organised three workshops, workshop 1 was held at Guwahati in September 2008 which deliberated upon the project methodology and the action plan for preparation of the DPR for the projects included in the Tranche 1 in accordance with ADB guidelines. Second, the two day workshop was held In September 2009 on capacity building of the voluntarily organizations from all the 9 project cities. The workshop focused on the role of the NGOs and VOs in project preparation and implementation and familiarizing them with the kind of projects which are included in the tranche1. The third workshop was held on 27th November 2009. The proceeding of the workshop is at **Appendix-10**.

6.9. TRAINING

81. A training programme on NRW reduction has been organized on the 25th and 26th of September for the water supply specialists of SIPMIU from the states of Mizoram, Nagaland, Sikkim and Tripura where the water supply project is included in tranche 1. The purpose of the training programme is to familiarize the participants to the concept of NRW and the methodology to be adopted by the SIPMIU and the ULBs in reduction of the NRW to an acceptable level. The participants are to be exposed to the experience of the Water Supply Agencies in the country and outside and also how the shared experience can be applied in the context of the four project cities.

7. LESSONS LEARNED

82. The project got started in August 2008 and extended upto end of November 2009 covering a period of 16 months. During the course of project preparation the consultants got full support from the State Governments and SIPMIUs. The response was slow from states which did not have SIPMIUs and Implementation Mechanism was put in place much latter. Experience gained during the project preparation and lessons learned from the Project preparation are summarised below.

7.1. CHANGES MADE IN THE LIST OF PROJECTS UNDER TRANCHE 1

83. Changes were made in the list of projects in tranche 1 after three months from the start of the project for two project cities under NERCCDIP (the phase 1 five project cities). (i) In Gangtok DPR for rehabilitation for Gangtok Sewerage was to be prepared which was replaced by design for full upgrade and unbunching of entire city distribution system. (ii) In Shillong NRW reduction for water supply was replaced by Solid Waste Management. This resulted in loss of time and loss of preliminary works done for such projects, the personnel schedule of the sector specialists were redefined and necessary adjustments made. It may be desirable to finalize the projects before the consultants commence the project preparation. There was no Geotechnical Specialist included in the TOR. Induction of the specialist was done later. This necessitated changes in the personnel schedule of the specialists.

7.2. LAND REQUIRED FOR THE PROJECT NOT IN POSSESSION OF EA

84. In phase II cities under NERUDP land for providing facilities like treatment plant and pumping stations was not available with the EA for two projects. This caused exclusion of the project from Tranche1 and making the work done redundant. Greater clarity on the matter may facilitate work of the consultants and save precious manpower. Hence, only DPR and associate documents for Solid Waste Management and Improvement of DTP drain at Dibrugarh was completed.

7.3. GREATER VISIBILITY OF THE CONSULTANTS IN THE PROJECT CITIES

85. A few state Governments wanted the presence and greater visibility of the project team at the project cities. The sector specialists made such numbers of visits which was deemed necessary for the purpose of surveys, geo technical investigations, data collection and meetings with the state officials and that of the ULBs. Greater visibility of the consultants if desired can be ensured through separate project design office for each state. This would need more resources both financial and manpower.

7.4. ABSENCE OF STATE ENVIRONMENT APPRAISAL COMMITTEE

86. Most of the project states do not have the State Environment Appraisal Committee (SEAC) which necessitates obtaining approval from MOEF from GOI. This is likely to cause delay in the project implementation and approval of the DPR. Check list for readiness for the states may also include the existence or otherwise of the SEAC.

7.5. URBAN LOCAL BODIES NOT IN PLACE

87. Out of the six project cities only four have Urban Local bodies in place. Wherever it does exist it does not cover the entire project areas. The 74th Amendment is not applicable to all the project cities and where it is so all the functions as per 12th schedule is not transferred to the ULBs. This may result in line departments continuing with the asset management of the assets created under the projects. The states need to expedite the reform and ensure transfer of assets and its management to ULB as per the constitutional provisions.

7.6. ROLE OF THE CONSULTANTS

88. SIPMIU barring one state is understaffed with only skeleton staff in place despite the fact that there is fund earmarked for the purpose in the ADB's loan agreement. The fund constraints and initial funding by the state governments is often cited as the main reason for not having the adequate number of staff in position. This has affected the capacity building of the SIPMIU and may not have trained manpower available during the project preparation and implementation. The current TA is for the purpose of assisting the Project states in preparing of detailed designs and procurement packages of tranche 1 of NERRCIDP and NERUDPII projects. In view of the fact that either the project states did not have SIPMIUs or having only skeleton staff necessitated greater involvement of the consultants who had to prepare the DPR with detailed designs and bid documents and other associated documents. The opportunity of working together was lost and the relationship remained as that of the client and consultants.

7.7. OPERATION AND ASSET MAINTENANCE

89. Commitment to Maintenance is surest recipe for reliable service delivery. There appears to be a lack of commitment to maintenance of urban infrastructure. There are a number of reasons for this lack of commitment

- i. Alternative priorities such as the need to increase the population coverage and service area which is perceived to be more important use of fund than the maintenance of the existing infrastructure.
- ii. Inadequate funding is insufficient to meet the maintenance requirement.
- iii. Even fund allocated for maintenance is not fully made available to the maintenance Agencies on the plea of economy drive not realising that assets not maintained may become unserviceable and heavy expenditure may be needed in future to set things right again.
- iv. Ethos associated with maintenance
- v. Community acceptance of poor maintenance
- vi. Not viewing the infrastructure assets as investments for the community benefits
- vii. Lack of direct accountability
- viii. Lack of real appreciation of what the failure to maintain is costing the nation, the state and the community and the Agencies responsible for maintenance.

- ix. Without commitment to regular maintenance little can be achieved in terms of service delivery. A major change in the ethos of the Maintenance Agency combined with the support of the state government to maintaining the assets in acceptable condition is necessary. Community expectations are changing and GOI is insisting for maintenance through levy of user charges and reforms in the property taxation with a view to increase the Revenue of the ULBs who are normally saddled with the responsibility for asset management without adequate financial resources and manpower. The State Governments have signed MOU with MOUD for Municipal reforms and for collection of user charges. The states and ULBs are required to implement and take follow up action as per the MOU.
- x. Absence of Asset Management Manual
- xi. Absence of Asset Management Practices
- xii. Community engagement for O&M in water supply, SWM and drainage can be of much value in ensuring an acceptable level of maintenance of the assets. In regard to water supply the community can assist the Agency for maintenance in collection of meter charges in such cities where installation of water meters have been proposed. Community can play a very affective role in SWM for collection, transportation and waste disposal. In fact all the above four components of SWM has been tried out in many of the projects cities in the region with varying results. The experience gained by the community in SWM needs to be utilised with appropriate rate capacity building and incentive from the State Government and ULBs. Many of the activities of recyclable materials can be taken over by the community and made into commercial viable venture with the assistance of State Government/private sectors.
- xiii. Private sector has also been attempted for installation, operation and maintenance of compost plant. There are some issues of marketing which has made the private operator to operate the plant much below the installed capacity. In principle this may be extended to other project city where SWM is proposed and the consultants are recommended greater role for the private sector to reduce the burden of urban local bodies which are always short of fund.

8. FUTURE CONSIDERATIONS AND CONCLUSIONS

90. The State Governments and the SIPMIU must ensure
- i. Immediate placement of the required staff for the tranche 1 projects needs to be in place at the earliest. This would improve the readiness level and ultimately improve project implementation
 - ii. Capacity building of both technical and other staff
 - iii. Effective steps for improving the transparency in procurement
 - iv. The contract packages recommended in the bid documents should not be amended to make more number of contract packages to suit the local contractors. The practice of splitting a large project into smaller parcels to cater for full employment of the contracting industry is grossly inefficient and costly. The contracting industry will never move with modern times if this practice is not stopped and the bid document prepared by the design consultants is not strictly followed. Encouraging large sized contracts with use of modern equipments and machinery is highly preferable
 - v. The ownership of the project is crucial for the projects under tranche 1 there are multiple agencies/ line departments of the State Government responsible for providing urban infrastructure and for service delivery. Implementation Agency in the name and form of SIPMIU is required to coordinate with each of them particularly the ULBs as they are expected to be responsible for O&M and service delivery. The technical wing of the ULBs need to be strengthened with adequate trained manpower to ensure project sustainability and high level of service delivery
 - vi. Community engagement is a sure recipe for project sustainability and SIPMIU must ensure their continued involvement at all stages of project implementation.
 - vii. Expedite the formation of ULB/Municipal Council in Aizawl and Gangtok prior to the completion of construction of the urban infrastructure facilities.

APPENDIX

APPENDIX - 1: PROJECT MANAGEMENT STRUCTURE

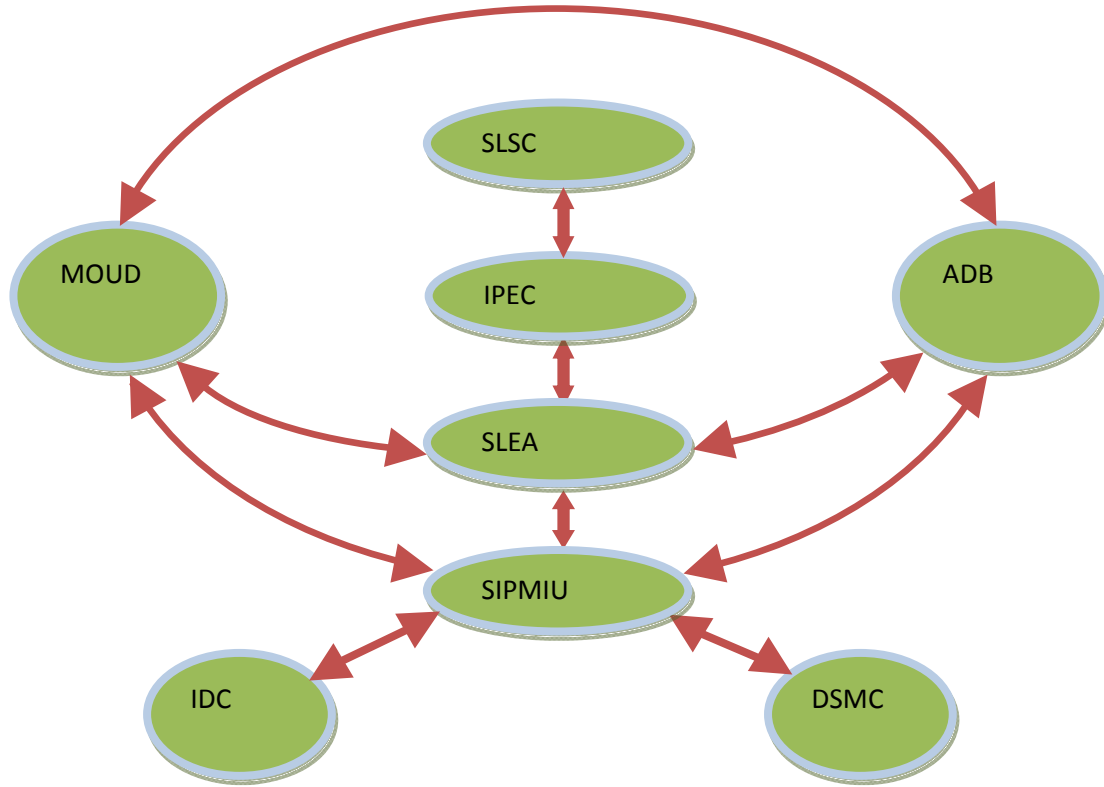


FIGURE 1: PROJECT MANAGEMENT STRUCTURE

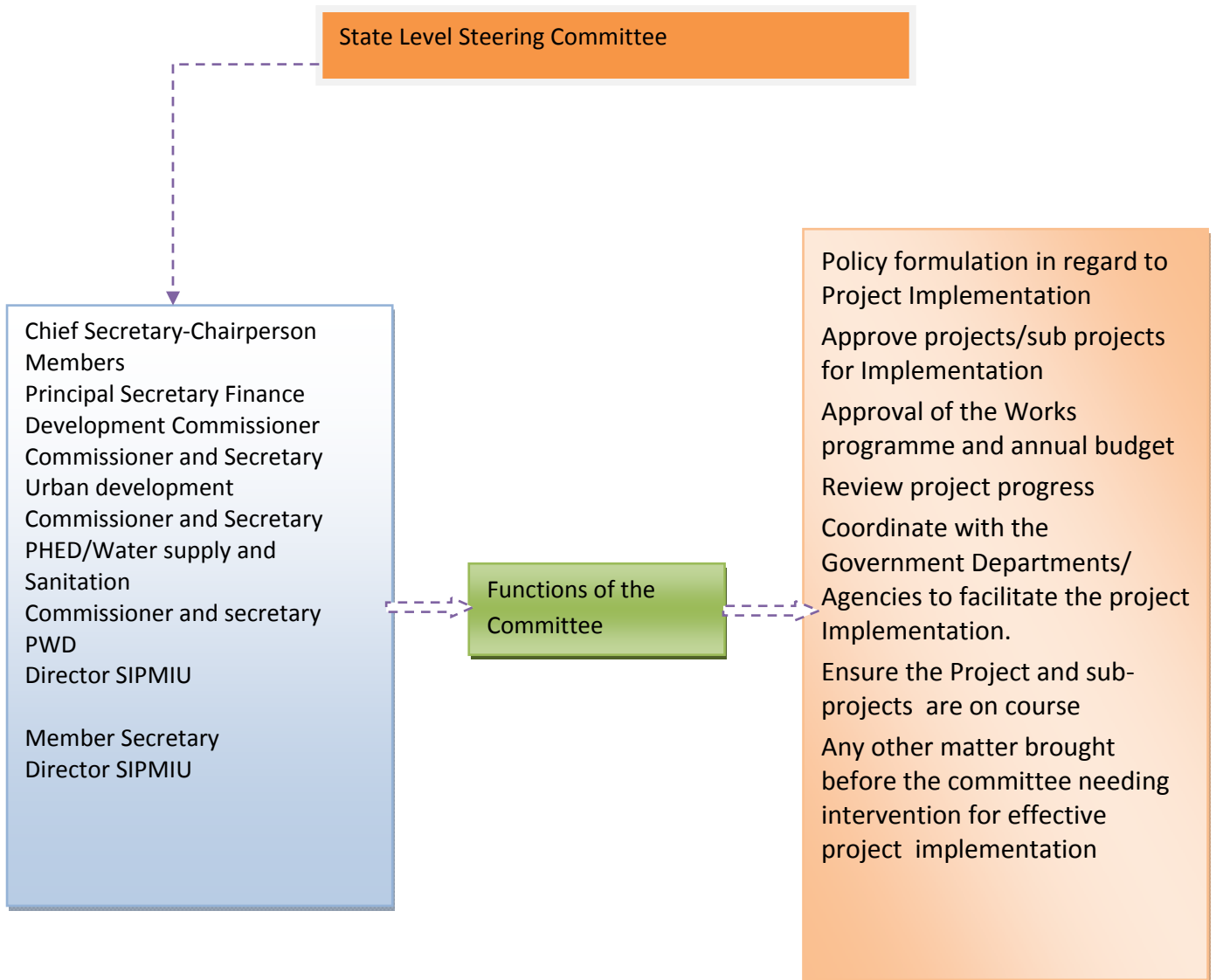


FIGURE 2: FUNCTIONS & MANAGERIAL STRUCTURE

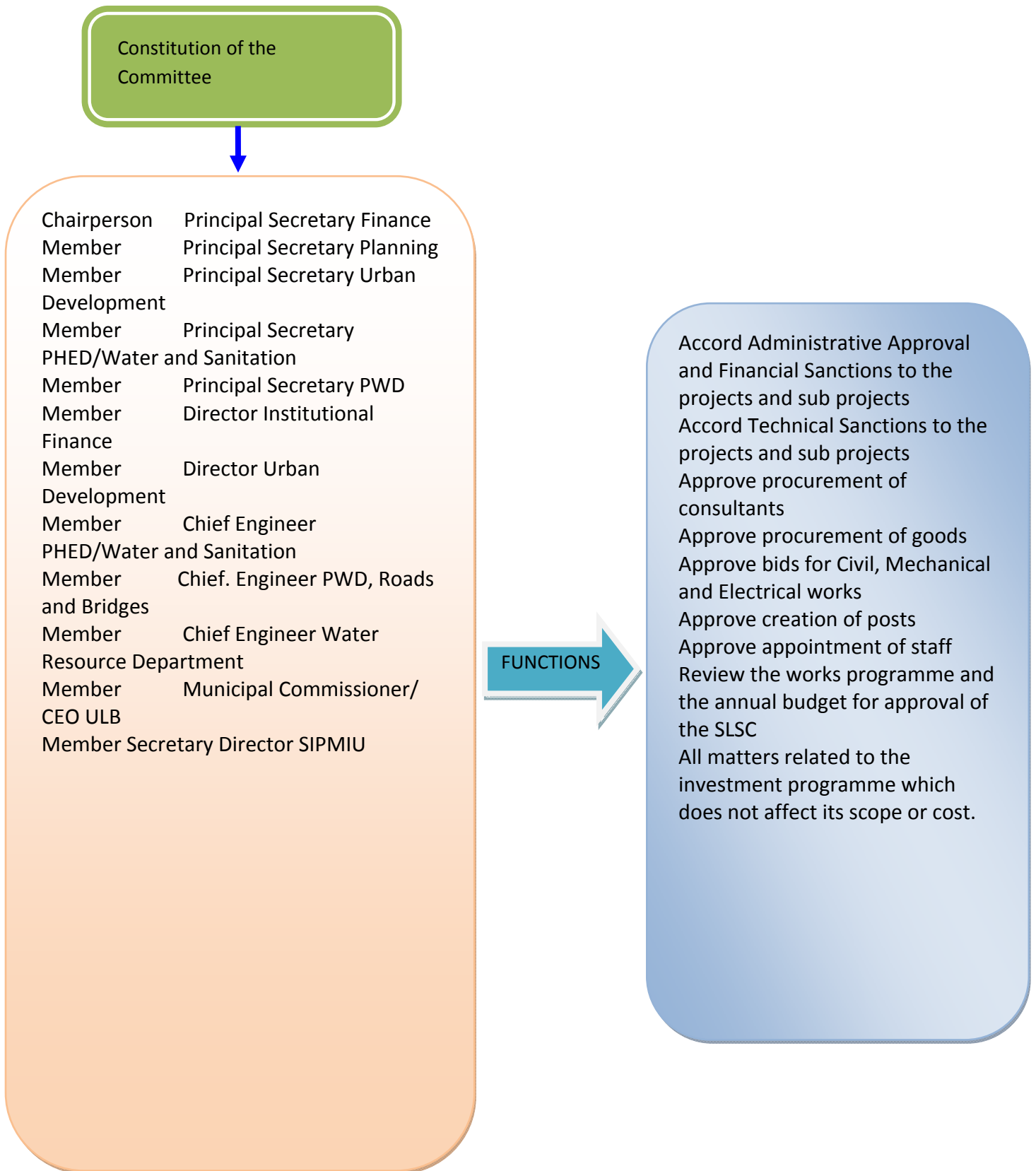


FIGURE 3: FUNCTIONS OF THE INVESTMENT PROJECT EMPOWERED COMMITTEE

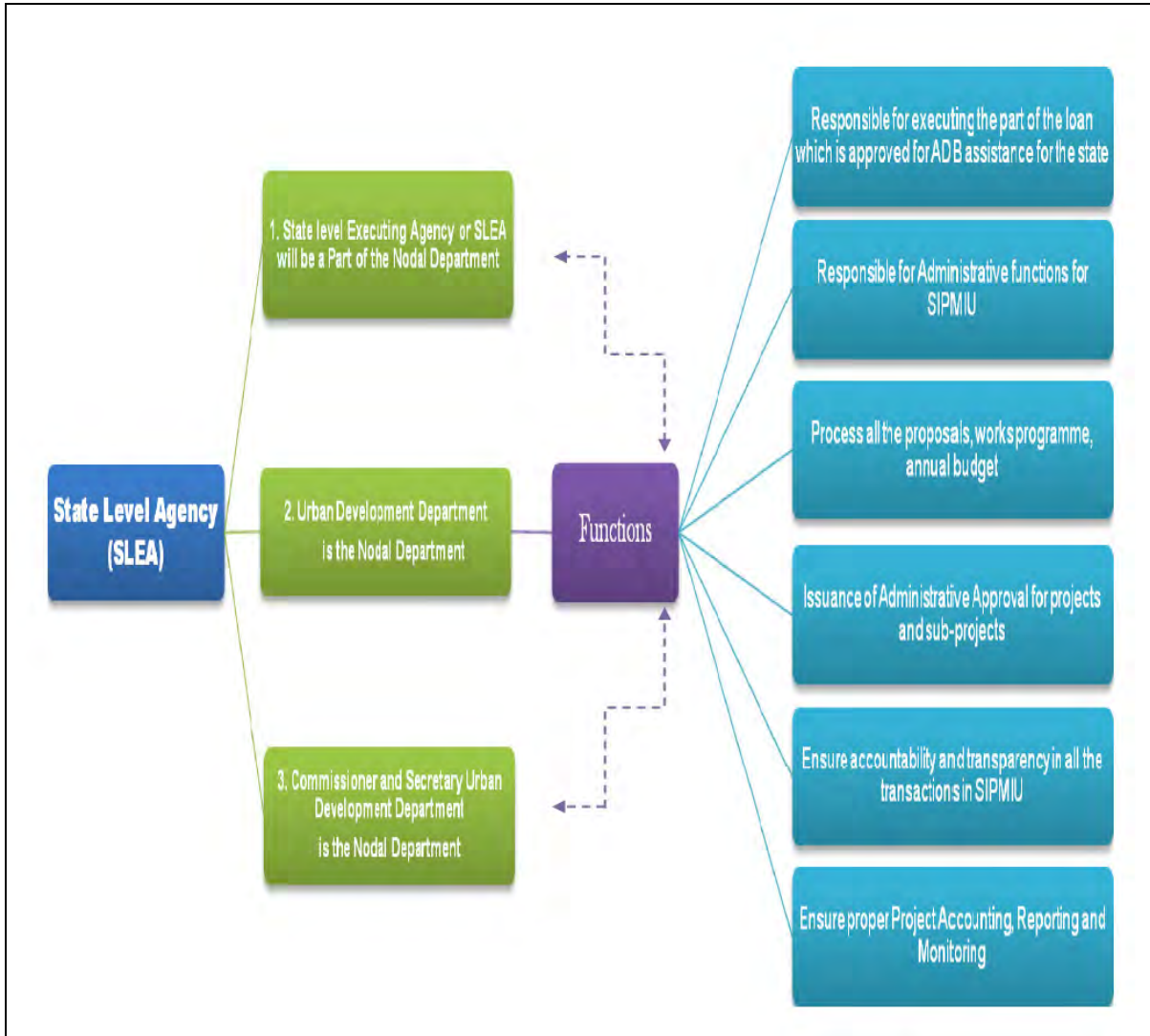


FIGURE 4: FUNCTIONS OF THE STATE LEVEL AGENCY

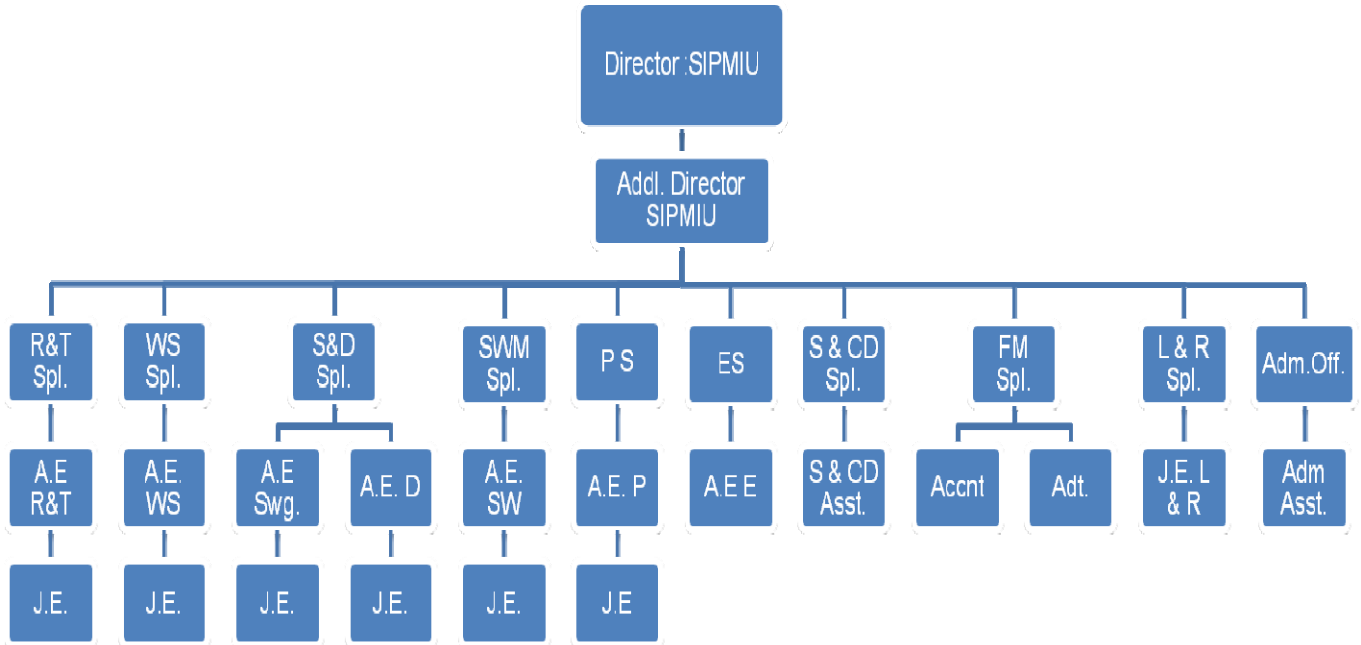


FIGURE 5: STATE INVESTMENT PROGRAMME MANAGEMENT AND IMPLEMENTATION UNIT

ABBREVIATIONS

R&T Spl	Road and Transportation specialist
P S	Procurement Specialist
A.E R&T	Asst Engineer Roads & Transportation
A.E. P	Asst Engineer Procurement
J.E	Junior Engineer
ES	Environment Specialist
WS Spl	Water supply Specialist
A.E E	Asst Engineer Environment
A.E. WS	Assistant Engineer Water Supply
S & CD Spl	Social & Community Development Specialist
S&D Spl	Sewerage and Drainage Specialist
S & CD Asst	Social & Community Development Assistant
A.E SWG	Assistant Engineer Sewerage
FM Spl	Financial Management Specialist
A.E. D	Asst Engineer Drainage
Accnt.	Accountant
SWM Spl	Solid Waste Management Specialist
I.A	Internal Auditor
A.E. SW	Asst Engineer Solid Waste
L & R Spl.	Land & Resettlement Specialist
J.E. L &	Junior Engineer Land & Resettlement
Adm. Off	Administrative Officer
Adm. Asst	Administrative Assistant

Functions Of SIPMIU

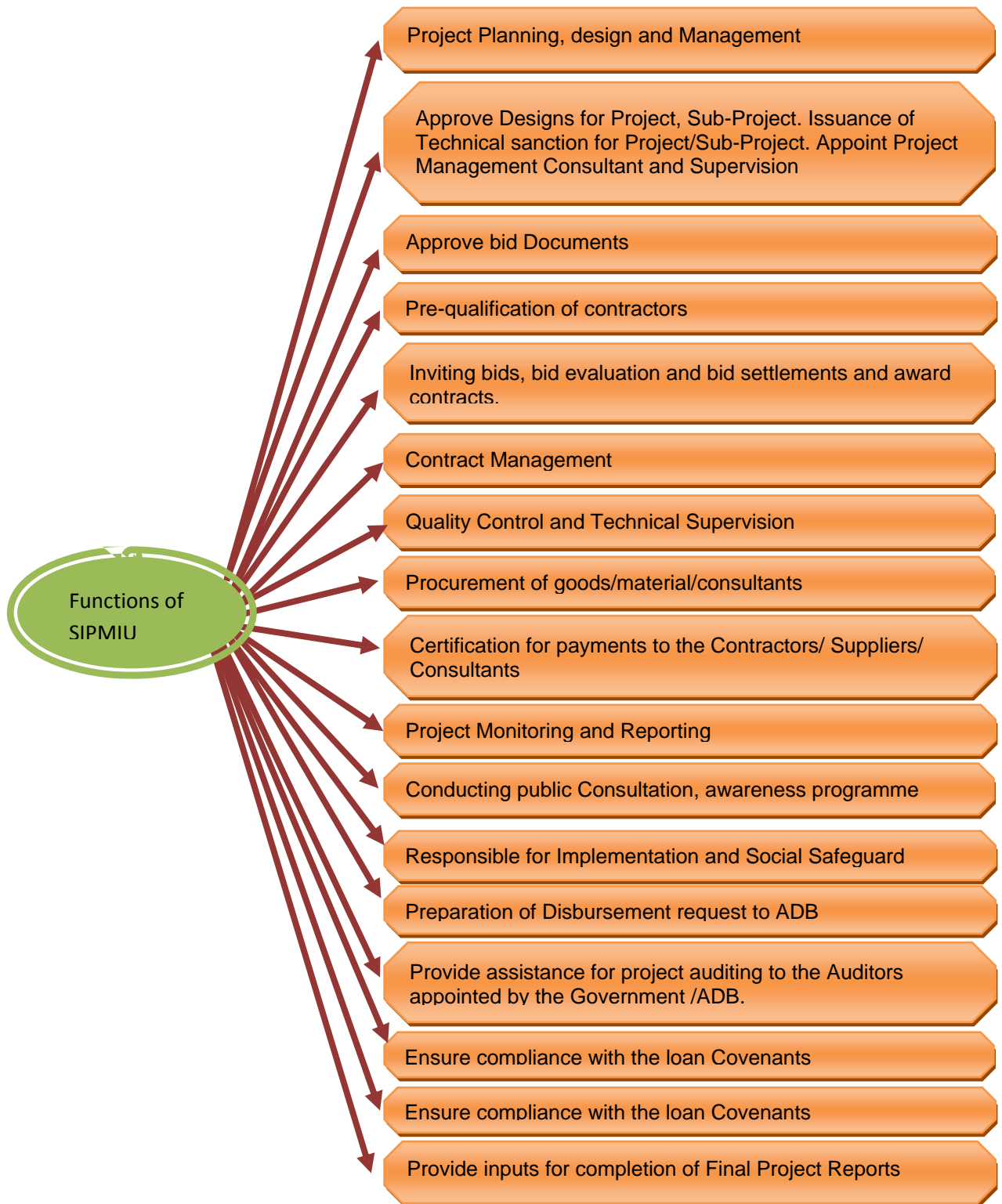


Figure 6:

The personnel requirement and the job profile of the SIPMIU staff is given below

TABLE 1: PERSONNEL STRUCTURE: SIPMIU

<p>1. Director SIPMIU</p> <ul style="list-style-type: none"> • Senior Civil Service Officer / Senior Civil Engineer. • At least 15 years of experience in Administration/ Project Management • At least 3 – 5 years of the above experience in project Management 	<p>2. Additional Director SIPMIU</p> <ul style="list-style-type: none"> • Senior Civil Engineer • At least 10 - 15 years of experience in Design/ Execution of Project/ project Management • At least 3 -5 years of the above experience should be in the rank of Addl. Chief Engineer of the State/Central Govt./public Undertaking/Private Sector
<p>3. Road & Transport Specialists</p> <ul style="list-style-type: none"> • Bachelors in Civil Engineering • Master in Road/ Highway Engineering or at least 5 - 8 years of experience in road & bridge designs and or constructions 	<p>4. Water Supply Specialists</p> <ul style="list-style-type: none"> • Bachelor in Civil Engineering • Master in water Engineering/ Public Health Engineering • At least 5 years of experience in Design/ Construction of water supply projects
<p>3.1. Assistant Engineer Road & Transportation</p> <ul style="list-style-type: none"> • Bachelors in Civil Engineering • At least 3 – 5 years of experience in Roads/ Bridges design and or construction. 	<p>4.1. Assistant Engineer Water Supply</p> <ul style="list-style-type: none"> • Bachelors in Civil Engineering • At least 3 – 5 years of experience in design / construction of Water Supply Projects.
<p>3.1.1. Junior Engineer Roads and Transport</p> <ul style="list-style-type: none"> • Diploma in Civil Engineering • At least 5 years of experience in Roads/Bridges/Highway construction 	<p>4.1.1. Junior Engineer Water Supply</p> <ul style="list-style-type: none"> • Diploma in Civil Engineering • At least 5 years of experience in Water supply Projects

<p>5. Sewerage & Drainage Specialists</p> <ul style="list-style-type: none"> • Bachelor's degree in Civil Engineering with 8 – 10 years of experience in Design/Execution of Sewage/Drainage projects • Master degree in waste water treatment/sewage & drainage with 5 – 8 yrs of experience in design/Execution of Sewerage/Drainage Projects. 	<p>6. Solid Waste Management Specialist</p> <ul style="list-style-type: none"> • Bachelor's degree in Environmental Engineering or, • Master in Environmental Sciences. • At least 5 – 8 yrs of experience in Design/Execution of Solid Waste Management Projects.
<p>5.1. Assistant Engineer Sewerage</p> <ul style="list-style-type: none"> • Bachelor's degree in Civil Engineering with 3 – 5 years of experience in design/Execution of Sewerage Projects 	<p>6.1. Sanitary Officer</p> <ul style="list-style-type: none"> • Bachelor's degree in Science. • 3 - 5 years of experience in Waste Management.
<p>5.2. Assistant Engineer Drainage</p> <ul style="list-style-type: none"> • Bachelor's degree in Civil Engineering with 3 – 5 years of experience in Design/Execution of Sewage Projects. 	<p>6.1.1. Sanitary Assistant</p> <ul style="list-style-type: none"> • Bachelor's degree in Science.
<p>5.1.1. Junior Engineer Sewerage</p> <ul style="list-style-type: none"> • Diploma in Civil Engineering • At least 5 years of experience in Execution of Sewerage/Drainage Projects 	
<p>5.2.1. Junior Engineer Drainage</p> <ul style="list-style-type: none"> • Diploma in Civil Engineering • At least 5 years of experience in Execution of Sewerage/Drainage Projects 	

<p>7. Procurement Specialist</p> <ul style="list-style-type: none"> • Bachelor's degree in Civil Engineering • At least 8 – 10 years of experience in procurement of Goods and Services/Project management/Contract Management. 	<p>8. Environment Specialist</p> <ul style="list-style-type: none"> • Bachelor's degree in Environmental Engineering or Master's degree in Environmental Sciences with 10 years of experience in preparation of Initial Environment Examination (IEE), Environmental Management Plan (EMP) and related matters.
<p>7.1. Assistant Engineer Procurement</p> <ul style="list-style-type: none"> • Bachelor's degree in Civil Engineering • At least 5 years of experience in procurement of Goods and Services/Project management/Contract Management. 	<p>8.1. Assistant Engineer Environment</p> <ul style="list-style-type: none"> • Bachelor's degree in Environmental Engineering or Master's degree in Environmental Sciences with at least 5 years of experience in preparation of Initial Environment Examination (IEE), Environmental Management Plan (EMP) and related matters.
<p>7.1.1. Junior Engineer Procurement</p> <ul style="list-style-type: none"> • Diploma in Civil Engineering • At least 5 years of experience in procurement of Goods /Material Management/Contract Management. 	<p>9. Social and Community Development Specialist</p> <ul style="list-style-type: none"> • Master in Sociology / Social Work. • At least 10 years of experience in Social / Community Development.
	<p>9.1. Social and Community Development Assistant.</p> <ul style="list-style-type: none"> • Master in Sociology / Social Work. • At least 3 years of field experience in Social work / Community Development.

<p>10. Financial Management Specialist</p> <ul style="list-style-type: none"> Chartered Accountant MBA in Finance At least 10 years of experience in financial management/project Auditing/Project Accounting/project budgeting. 	<p>11. Land Administration and Resettlement Specialist</p> <ul style="list-style-type: none"> Senior Officer of the State Civil Services having at least 10 years of experience in State Administration and at least 3 years in land acquisition, land management and Rehabilitation.
<p>10.1. Accounts Officer</p> <ul style="list-style-type: none"> Bachelor's degree in Commerce/Financial management. At least 10 years of experience in preparation of Financial Statements, Budget, Accounting Control System, Payment of invoices to service providers like Contractors, Suppliers. 	<p>11.1. Junior Engineer Land Resettlement</p> <ul style="list-style-type: none"> Diploma in Civil Engineering having at least 3 – 5 years of experience in land acquisition, resettlement, and rehabilitation matters.
<p>10.2. Internal Auditor</p> <ul style="list-style-type: none"> Master degree in Commerce/Financial management/ Intermediate CA/ICWA At least 10 years of experience in auditing the account of expenditure of Govt. Departments/Public undertaking/private sector. Experience in Project Auditing is desirable. 	<p>12. Administrative Officer</p> <ul style="list-style-type: none"> A State Civil Service Officer having at least 10 years of experience in Administration.
	<p>12.1. Administrative Assistant</p> <ul style="list-style-type: none"> Bachelor's degree in Arts/ Science/ Commerce. At least three years of experience in Govt. / Public undertaking/ Private Sector.

TABLE 2: PERSONNEL REQUIREMENT OF SIPMIU AND JOB PROFILE

SI No	Position	Recommendation
1	Director SIPMIU	On deputation from Administrative Engineering services
2	Additional Director	Do
3	Water Supply Specialist	On deputation from PHED subject to meeting the qualification and experience requirement as at serial 4 of table 1. Else may be recruited from outside
4	Sewage & Drainage Specialist	On deputation from PHED subject to meeting the qualification and experience requirement as at serial 5 of the table 1. Else may be recruited from outside.
s5	Solid Waste Management Specialist	May be recruited from outside meeting the requirement at serial 5 of table 1
6	Road & Transportation Specialist	On deputation from PWD subject to meeting qualification & experience requirement as at serial 3 of table 1
7	Procurement Specialists	On deputation from PWD/PHED/UAD subject to meeting qualification & experience requirement as at serial 7 of table 1
8	Financial Management Specialists	On Deputation from Finance Services subject to meeting the requirement as per serial 10 of the table 1
9	Environment Specialists	On deputation from Environment Department/State Pollution Control Board Subject to meeting the requirement as at serial 8 of table 1
10	Land Resettlement Specialists	On deputation from the State Administrative Service subject to meeting the qualification & experience requirement at serial 11 of table 1. Else recruitment to be made from outside
11	Social & Community Development Specialist	On deputation from State Environment Department subject to meeting qualification and experience at serial 11 of table 1
12	Administrative Officer	On deputation from State Civil Service subject to meeting the experience as at serial 12 of table 1
Supporting Staff SIPMIU		
13	Assistant Engineer Roads & Transport	Subject to meeting qualification and experience requirement as per serial 3.1

		of table 1. The position may be filled from amongst the Engineers of the PWD
14	Junior Engineer Roads & Transport	Subject to meeting qualification and experience requirement as per serial 3.1.1. The position may be filled from and amongst the Engineers of the PWD
15	Assistant Engineer Water Supply	Subject to meeting qualification and experience requirement as at serial 4.1 of table 1. The position may be filled from and amongst the Engineers of the PHED
16	Junior Engineer Water Supply	Subject to meeting qualification and experience requirement as at serial 4.1.1 of table 1. The position may be filled up from and amongst the Engineers of the PHED
17	Assistant Engineer Sewerage	Subject to meeting qualification and experience requirement as at serial 5.1 of table 1. The position may be filled up from and amongst the Engineers of the PHED
18	Assistant Engineer Drainage	Subject to meeting qualification and experience requirement as at serial 5.2. The position may be filled up from amongst the engineers of the PHED
19	Junior Engineer Sewerage	Subject to meeting qualification and experience requirement as at serial 5.1.1. The position may be filled up from and amongst the Engineers of the PHED
20	Junior Engineer Drainage	Subject to meeting qualification and experience requirement as at serial 5.2.1. The position may be filled up from and amongst the Engineers of the PHED
21	Sanitary Officer	On deputation from UD/ULB subject to meeting qualification and experience requirement as at serial 6.1.1
22	Sanitary Assistant	On deputation from UD/KMC subject to meeting qualification and experience requirement as at serial 6.1.1
23	Assistant Engineer Procurement	On deputation from PWD/PHED subject to meeting qualification and experience requirement as per serial 7.1 of table 1
24	Junior Engineer Procurement	On deputation from PWD/PHED subject to meeting qualification and experience requirement 7.1.1 of table 1
25	Accounts Officer	On deputation from State Finance

		service/AG subject to meeting qualification and experience requirement as at serial 10.1 of table 1
26	Internal Auditor	On deputation from AG/State Finance Services subject to meeting qualification and experience requirement as at serial 10.2 of table 1 Else recruitment may be made from outside
27	Assistant Engineer Environment	On deputation from State Environment Department subject to meeting qualification and experience requirement at serial 8.1 of table 1.Else recruitment may be made from outside
28	Junior Engineer Land Resettlement	On deputation from PWD subject to meeting qualification and experience requirement as at serial 11.1 of table 1
29	Social & Community Development Assistant	On deputation from Social Welfare Department subject to meeting qualification and experience requirement as at serial 9.1
30	Administrative Assistant	On deputation from State Government departments subject to meeting qualification and experience requirement as at serial 12.1 of table 1

APPENDIX – 2: PRESENT STATUS OF STAFF POSITION IN SIPMIU

TABLE 2 1: PRESENT STATUS OF STAFF POSITION IN SIPMIU MEGHALAYA

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
1.	Project Director	Y	
2.	Additional Director	Y	
3.	Road and Transport Specialist	N	Road and Transport sector not covered in the programme.
4.	Assistant Engineer Road and Transport		-do-
5.	Junior Engineer Road and Transport		-do-
6.	Water supply specialist	Y	
7.	Assistant Engineer Water supply	Y	
8.	Junior Engineer Water supply	Y	
9.	Sewerage and Drainage Specialist	Y	
10.	Assistant Engineer Sewerage	N	No such post. There is a post of Assistant Engineer-Sewerage and Drainage which is being filled up.
11.	Assistant Engineer Drainage	N	-do-
12.	Junior Engineer sewerage		No such post. There is a post of Junior Engineer-Sewerage and Drainage which is being filled up.
13.	Junior Engineer Drainage		-do-
14.	Solid Waste Management Specialist	Y	
15.	Saniyary officer	N	No such post.
16.	Sanitary Assistant	N	No such post.
17.	Procurement Specialist	N	Post is being filled up.
18.	Assistant Engineer Procurement	N	-do-
19.	Junior Engineer procurement	N	-do-
20.	Environment Specialist	N	-do-
21.	Assistant Engineer Environment	N	-do-

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
22.	Social and Community Development Specialist	N	-do-
23.	Social and Community Development Assistant	N	-do-
24.	Financial Management Specialist	Y	Post is being filled up.
25.	Accounts Officer	N	-do-
26.	Internal Auditor	N	-do-
27.	Land Administration and Resettlement Specialist	N	-do-
28.	Junior Engineer Land Resettlement	N	-do-
29.	Administrative Officer	N	-do-
30.	Administrative Assistant	N	-do-

TABLE 2.2: PRESENT STATUS OF STAFF POSITION IN SIPMIU MIZORAM

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
1.	Project Director	Y	
2.	Additional Director	N	Post found not required
3.	Road and Transport Specialist	N	Post was created but not filled because the component was dropped from 1 st Tranche
4.	Assistant Engineer Road and Transport	N	Post was created but not filled because the component was dropped from 1 st Tranche
5.	Junior Engineer Road and Transport	N	Post was created but not filled because the component was dropped from 1 st Tranche
6.	Water supply specialist (Designated as EE Water Supply)	Y	
7.	Assistant Engineer Water supply	N	Process of filling up is underway
8.	Junior Engineer Water supply	N	Post found not required
9.	Sewerage and Transport Specialist (Designated as EE Sewerage)	Y	
10.	Assistant Engineer Sewerage	N	Process of filling up is underway
11.	Assistant Engineer Drainage	N	Process of filling up is underway
12.	Junior Engineer sewerage	N	Post found not required
13.	Junior Engineer Drainage	N	Post found not required
14.	Solid Waste Management Specialist (Designated as EE Solid Waste Management)	Y	
15.	Sanitary Officer	N	Post found not required

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
16.	Sanitary Assistant	N	Post found not required
17.	Procurement Specialist (Designated as EE Procurement)	Y	
18.	Assistant Engineer Procurement	N	Process of filling up is underway
19.	Junior Engineer procurement	N	Post found not required
20.	Environment Specialist (Designated as EE Environment)	Y	
21.	Assistant Engineer Environment	N	Process of filling up is underway
22.	Social and Community Development Specialist (Designated as Social Development Officer)	Y	
23.	Internal Auditor	N	Post found not required
24.	Land Administration and Resettlement Specialist	N	SI No 23 will be entrusted with this responsibility
25.	Junior Engineer Land Resettlement	N	Post found not required
26.	Administrative Officer (Designated as Office Manager)	N	Post of Office Manager has been created for this, which is being filled up.
27.	Administrative Assistant	N	Process of filling up is underway

TABLE 2.3: PRESENT STATUS OF STAFF POSITION IN SIPMIU NAGALAND

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
1.	Project Director	Y	
2.	Additional Director	Y	
3.	Road and Transport Specialist		
4.	Assistant Engineer Road and Transport		
5.	Junior Engineer Road and Transport		
6.	Water supply specialist		
7.	Assistant Engineer Water supply	Y	
8.	Junior Engineer Water supply	Y	
9.	Sewerage and Transport Specialist		
10.	Assistant Engineer Sewerage		
11.	Assistant Engineer Drainage		
12.	Junior Engineer sewerage		
13.	Junior Engineer Drainage		
14.	Solid Waste Management Specialist	Y	
15.	Sanitary officer		
16.	Sanitary Assistant		
17.	Procurement Specialist		
18.	Assistant Engineer Procurement		
19.	Junior Engineer procurement		
20.	Environment Specialist	Y	
21.	Assistant Engineer Environment		
22.	Social and Community Development Specialist		
23.	Social and Community Development Assistant		

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
24.	Financial Management Specialist		
25.	Accounts Officer	Y	
26.	Internal Auditor		
27.	Land Administration and Resettlement Specialist		
28.	Junior Engineer Land Resettlement		
29.	Administrative Officer		
30.	Administrative Assistant	Y	

TABLE 2.4: STATUS OF SIPMIU PRESENT STATUS OF STAFF POSITION IN SIPMIU SIKKIM

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
1.	Project Director	Y	
2.	Additional Director/Dy Director	Y	
3.	Road and Transport Specialist		
4.	Assistant Engineer Road and Transport		
5.	Junior Engineer Road and Transport		
6.	Water supply specialist	Y	
7.	Assistant Engineer Water supply		
8.	Junior Engineer Water supply	Y	
9.	Sewerage and Transport Specialist		
10.	Assistant Engineer Sewerage		
11.	Assistant Engineer Drainage		
12.	Junior Engineer sewerage		
13.	Junior Engineer Drainage		
14.	Solid Waste Management Specialist		
15.	Sanitary officer		
16.	Sanitary Assistant		
17.	Procurement Specialist	Y	
18.	Assistant Engineer Procurement		
19.	Junior Engineer procurement	Y	
20.	Environment Specialist	Y	
21.	Assistant Engineer Environment		
22.	Social and Community Development Specialist		
23.	Social and Community Development Assistant		

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
24.	Financial Management Specialist		
25.	Accounts Officer	Y	
26.	Internal Auditor		
27.	Land Administration and Resettlement Specialist		
28.	Junior Engineer Land Resettlement		
29.	Administrative Officer	Y	
30.	Administrative Assistant	Y	

TABLE 2.5: STATUS OF SIPMIU PRESENT STATUS OF STAFF POSITION IN SIPMIU TRIPURA

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
1.	Project Director	Y	
2.	Additional Director	N	Proposed for appointment of an Engineer in the rank of Chief Engineer.
3.	Supervision Engineer/ Project Manager	Y	
4.	Assistant Supervision Manager	Y	
5.	Road and Transport Specialist	N	
6.	Assistant Engineer Road and Transport	N	
7.	Junior Engineer Road and Transport	N	
8.	Water supply specialist	N	Proposed on deputation from PWD
9.	Assistant Engineer Water supply	N	
10.	Junior Engineer Water supply	N	
11.	Sewerage and Drainage Specialist	N	
12.	Assistant Engineer Sewerage	N	
13.	Assistant Engineer Drainage	N	
14.	Junior Engineer sewerage	N	
15.	Junior Engineer Drainage	N	
16.	Solid Waste Management Specialist	Y	
17.	Sanitary officer	N	
18.	Sanitary Assistant	N	
19.	Procurement Specialist	N	Proposed on deputation from PWD
20.	Assistant Engineer Procurement	N	
21.	Junior Engineer procurement	N	
22.	Environment Specialist	Y	
23.	Assistant Engineer Environment	N	
24.	Social and Community Development Specialist	N	
25.	Social and Community Development Assistant	N	
26.	Financial Management Specialist	N	

Positions in SIPMIU		Positions filled up Y/N	Reasons for not filling up the positions
27.	Accounts Officer	N	Proposed on deputation from Finance Department/ Directorate of Audit
28.	Internal Auditor	N	
29.	Land Administration and Resettlement Specialist	Y	
30.	Junior Engineer Land Resettlement	N	
31.	Administrative Officer	Y	
32.	Administrative Assistant	N	
33.	Municipal Specialist	Y	

APPENDIX – 3: STATUS OF URBAN LOCAL BODIES IN THE PROJECT CITIES

Project City	Status	Elected body	Main functions	Functions yet to be transferred as per 12 schedule
Agartala	Agartala Municipal Council	Yes	1. Water supply only gives approval for water connection 2.SWM 3.Public Amenities	All the remaining functions under the 12 th schedule
Aizawl	No ULB in Place			
Dibrugarh	Dibrugarh Municipal Board	Yes	1.Sanitation & SWM 2.Public Amenities	All the remaining functions under the 12 th schedule
Gangtok	No ULB in Place			
Kohima	Kohima Municipal Board	Yes	1.Sanitation & SWM 2.Public Amenities	1.All the remaining functions under the 12 th schedule.
Shillong	Shillong Municipal Board	No	1.Public health, sanitation, conservancy and SWM (Partly transferred). 2. Public amenities etc (Partly transferred). 3. Water supply (Partly transferred).	1. All the remaining functions under the 12 th Schedule

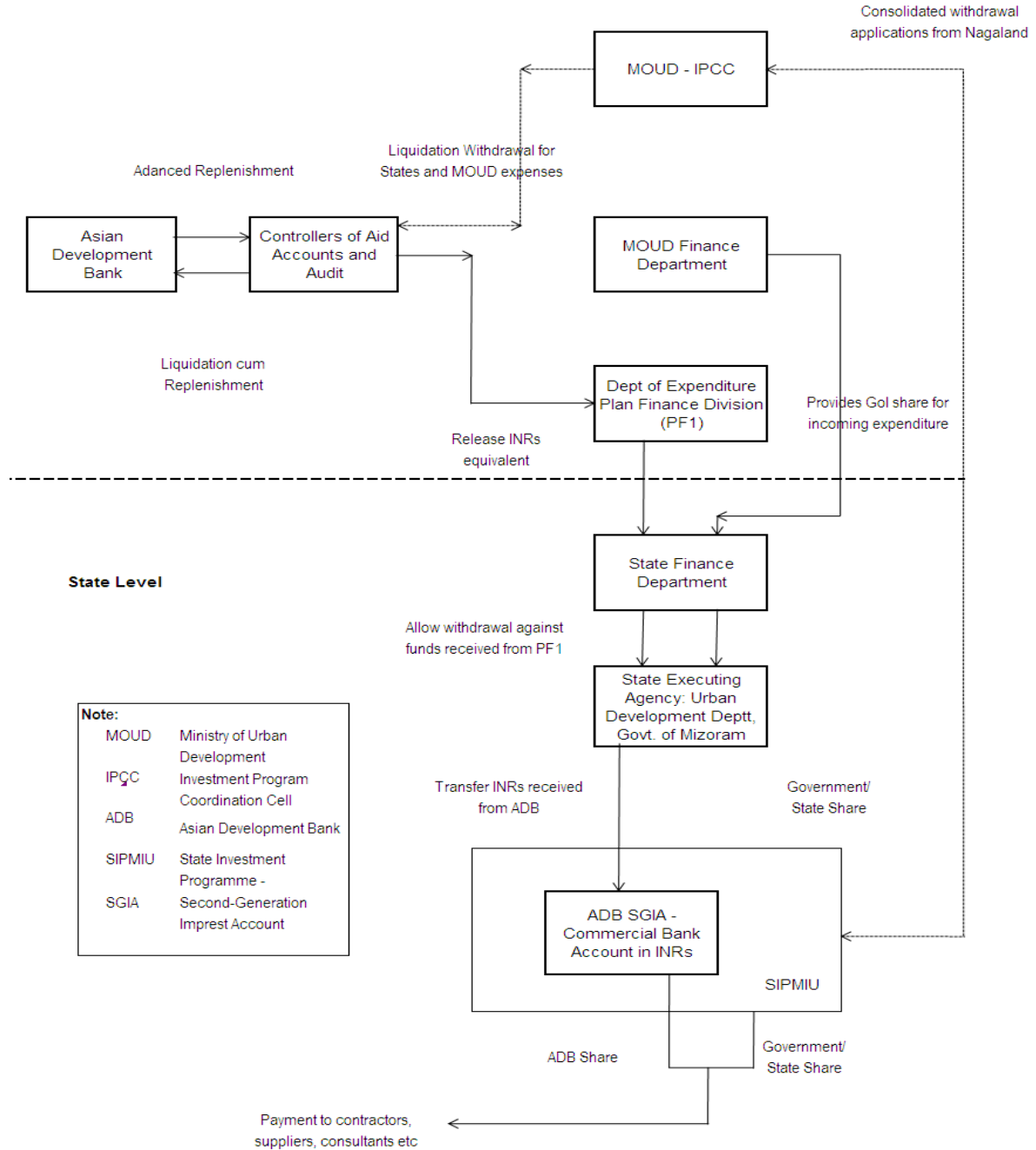
APPENDIX – 4: ALLOCATION AND WITHDRAWAL OF LOAN PROCEEDS

(North Eastern Capital Cities Development Investment Program – Project 1)			
CATEGORY			ADB FINANCING BASIS
Number	Item	Total Amount Allocated for ADB Financing \$ Category	Percentage of ADB Financing from the Loan Account
1	Civil Works		
1 a	State of Tripura	609,400	62 percent of total expenditure claimed
1 b	State of Mizoram	916,500	62 percent of total expenditure claimed
1 c	State of Sikkim	3,177,700	62 percent of total expenditure claimed
1 d	State of Nagaland	2,767,200	62 percent of total expenditure claimed
1 e	State of Meghalaya	214,200	62 percent of total expenditure claimed
2	Equipment		
2 a	State of Tripura	475,100	100 Percent of total expenditure claimed*
2 b	State of Mizoram	1,040,500	100 Percent of total expenditure claimed*
2 c	State of Sikkim	319,000	100 Percent of total expenditure claimed*
2 d	State of Nagaland	835,000	100 Percent of total expenditure claimed*
2 e	State of Meghalaya	122,600	100 Percent of total expenditure claimed*
3	Consulting Services		
3 a	State of Tripura	3,405,400	100 Percent of total expenditure claimed*
3 b	State of Mizoram	2,369,600	100 Percent of total expenditure claimed*
3 c	State of Sikkim	2,206,800	100 Percent of total expenditure claimed*
3 d	State of Nagaland	2,214,800	100 Percent of total expenditure

			claimed*
3 e	State of Meghalaya	3,373,000	100 Percent of total expenditure claimed*
3 f	Ministry of Urban Development	473,800	100 Percent of total expenditure claimed*
4	Project Implementation and Administration		
4 a	State of Tripura	572,500	62 percent of total expenditure claimed
4 b	State of Mizoram	572,500	62 percent of total expenditure claimed
4 c	State of Sikkim	572,500	62 percent of total expenditure claimed
4 d	State of Nagaland	572,500	62 percent of total expenditure claimed
4 e	State of Meghalaya	572,500	62 percent of total expenditure claimed
5	Unallocated	2,616,900	
	Total	30,000,000	

APPENDIX – 5: DISBURSEMENT ARRANGEMENT

DISBURSEMENT ARRANGEMENT



APPENDX – 6: PROCEEDINGS OF THE SECOND WORKSHOP

PROCEEDINGS OF THE SECOND WORKSHOP

WORKSHOP ON CAPACITY DEVELOPMENT OF VOLUNTARY ORGANIZATIONS FOR EFFECTIVE IMPLEMENTATION OF COMMUNITY AWARENESS PROGRAMME

1. A two day workshop was organised by SMEC India Pvt Ltd on the 9th and 10th of September 2009 as part of the effort to involve the stakeholders the community leaders, and Voluntary Organisation (VO) in planning and implementation of the North Eastern Region Urban Development Project (NERUDP). The eight states and nine project cities were fully represented by the NGOs, CBOs and other informal community groups. The list of the participants is attached.
2. The main objective of the workshop was twofold:
 - i. sensitize the VOs and community groups on the NERUDP the Urban Infrastructure Development Projects being funded by ADB for the nine project cities in NER and
 - ii. Capacity building of VOs and community groups for implementation of Community Awareness Program
3. In the context of development and service delivery there is a general agreement that the community participation is a necessity to achieve higher program delivery and its effectiveness. Therefore, a strong emphasis is placed on processes to strengthen community participation along with urban local bodies and other community based organisations. In view of this, the project has a significant emphasis on how to achieve greater community participation in project delivery and empower community in the overall framework of institutional capacity building.
4. It is now universally recognized that community participation is a key for the success of the projects. The experience however indicates that there has been a passive attitude towards the community participation in project management and implementation. Participation apart, more often than not stakeholders are not even informed about the project.
5. Communitisation therefore has become a key word which highlights that the community remains at a centre stage in projects during its entire course from design to implementation, monitoring and evaluation. This will ensure a sense of ownership and belonging for project and its activities leading to higher project outcomes.
6. Keeping the above the workshop dealt at length on the scope and the configuration of the project and informed the participants on the project locations, source of funding, implementation arrangement, the implementation mechanism, and status of the projects.
7. The projects under implementation are Water Supply, Sewerage, Drainage, and Solid Waste Management in tranche 1. Improvement of water supply is proposed in six cities namely Agartala, Aizawl, Gangtok, Guwahati, Imphal and, Kohima. The sewerage project is proposed for Guwahati, drainage for Dibrugarh and Solid Waste Management in Kohima, Shillong and Dibrugarh.

8. The two day workshop dealt on the need for greater engagement of the community and participation of the NGOs and CBOs and other community groups. Since now there is far more realization on the part of the donor agencies and the approach is.

- i. Now drifting from supply and donor driven to demand driven approach.
- ii. Building a sense of ownership among the community
- iii. To make public aware of the short-term inconveniences & long-term benefits of the project.
- iv. Convincing community for best utilization and correspondingly less wastage of urban infrastructure.
- v. Familiarizing community with issues like community affordability, including issues such as water rates, user charges and property tax reform.
- vi. Community reactions on development projects and providing feedback to the departments.
- vii. Involving community in monitoring the project activities.
- viii. Making communities feel responsible in obtaining information, technology, skills and technical support to exercise their new authority;
- ix. Familiarizing with IEC techniques - public meetings, Campaign and media Cover community awareness, participation, and education with respect to implementation and management of the project facilities, and to educate communities about environmental sanitation and health linkages.
- x. Inform the project beneficiaries about implications to the community in terms of benefits and responsibilities, including the need to pay for sustainable urban and civic amenities.
- xi. Stimulate civic concern about environmental quality and responsibility.

9. The participants appreciated, showed interest and expressed their desire to get involved in the planning and implementation of the NERUDP the NGOs and the CBOs desired to know the exact role and the way they can get involved. The community needs to be sensitized to get involved in the project at various stages and this can much better be done by the NGOs, CBOs.

10. The Consultants working on NERUDP Tranche 1 in their presentations detailed out the ways in which the community and the NGOs can be involved:

- i. Prior to Project Preparation
- ii. During Project preparation
- iii. During Project Implementation
- iv. Post Project Implementation

Prior to Project Preparation

11. The NGOs and CBOs are to be consulted along with the community to share with them the objective of the Project Impact on social and economic conditions of the people environmental Impact social safeguards and resettlement issues, contours of the project Way the project is proposed to be prepared and how the community being the ultimate beneficiary may get involved and have a say in the matter. The consultants have had these with the community with the NGOs during this project phase in all the project cities except Guwahati and Imphal where the project work is yet to begin. Based on the consultations community assessment reports were prepared which gives the community's perception of the project and how it can contribute to the project and how it can work in conjunction with the Executing Agency (EA).

During Project Preparation

12. The NGOs, CBOs and other stake holders were also consulted during the preparation phase of the project and shared with them the progress being made towards the preparation of the DPR and the studies that have so far been carried out to achieve the objective of the project .The consultants gave the details on all the projects that have been completed and explained in details the projects and showed the drawings and salient features of the project One of the objective of the workshop is precisely that the NGOs have complete knowledge of the project and their role in facilitating project planning and Implementation.

During Project Implementation

13. The EA is required to share all the important details of the project implementation with the Community and may involve the NGOs, CBOs and other stakeholders to do so with the community. NGOs may assist the EA in implementation of Due Diligence Report, Social Impact Assessment, Resettlement Plan (RAP), Land Acquisition Plan (LAP), Indigenous Peoples' Development Plan (IPDP), Legal and Policy Framework for Social Safeguards and Environmental Management Plan (EMP). The NGOs may also check if the above plans are prepared as per the plan and take up with the EA for any deviations. The NGOs may seek any information on any aspects of project and share with the community and other stake holders. The workshop dealt with the above matters and also informed the participants as to how they can be an important contributor to the project

14. CBOs can take over a few of the operations and management of the project such as O&M of Water meters including billing and community based water supply distribution and maintenance. Operation and maintenance of Compost plant and Land fill site solid waste segregation at source, collection and transportation of wastes from the source to the transfer points and then to the compost Plant and land fill site Recycling of non biodegradable waste, marketing of compost, maintenance of water way of the improved drainage channel(such as DTP drain Dibrugarh particularly areas outside the Dibrugarh Municipal Board). NGOs may assist the EA/O&M Agency in maintenance of Sewerage projects in convincing the householders to get the sewerage connection in place of the existing sanitation and its disadvantage. Encourage the use of sludge as manure and assist in its marketing and bring awareness among the farming community, the benefit of sewage farming in the peripheral areas of the city.

IEC Materials and VOs

15. The participants were introduced to the Information Education and Communication (IEC) as important tool to ensure community engagement which is vital for the sustainability of the projects and the consultants dealt with the following

- i. Guide lines for preparation of IEC.
- ii. An exercise was conducted where the participants made suggestions as to what should be included as IEC material and how it should be prepared. The exercise was carried out with the assistance of sector specialists/consultants
- iii. the options available in each of the nine project cities
- iv. Consultant would prepare the IEC material and share with all the stakeholders including the community leaders, the community, the NGOs, CBOs and informal community groups.
- v. Monitoring and Evaluation of awareness program and community involvement.

Assessing problems faced by NGOs

16. NGOs showed keen interest and are quite willing to assist the EA in implementation of the project but were not very sure about the support for funding the activities stated above. Since they do not have financial resources for funding even the community awareness program unless adequate fund is provided by EA/State Government it may not be successful. There is need for making a separate budgetary provision for awareness programme as part of the project.

17. In most of the states the NGOs are working in the rural sector and for them this may be the first experience to work in the urban areas for development of urban infrastructure. This workshop did enable them to understand the nuances of the project and the role of the NGOs, CBOs and community groups in different stages of project planning and implementation and in particular in taking up awareness programs.

APPENDIX -7: SUSTAINABILITY OF PROJECTS

TABLE 7.1: WATER SUPPLY AGARTALA – SUSTAINABILITY

Sustainability Considerations	Sustainability factors built into the Project Design			
Economic Benefits	1. Project impact on the National/ Regional Economy Improved health conditions leading to healthy work force improving labour productivity resulting in higher regional and national economic growth.	2. Impact of the Project. Estimated Annual savings in house hold expenditure on health due to improved water supply is INR42.89 million Annual savings due to additional working days due to reduced absenteeism to the extent of INR13.42 million. Net benefits INR 56.31 million.	3. Estimation of non tangible monetised impacts. a. overall wellness of the city population B. contentment with the service delivery. c. improvement of image of the service provider	
Economic Analysis	4. NPV @12% INR33.59 million	5.EIRR 15.53%	6.Sensitivity Analysis with 10% variation of capital cost, O&M cost and benefits, EIRR is 13.93%, 13.96% and 12.12 % and NPV is INR19.79,18.22 ,and INR1.05 million. Sensitivity Indicator (Range) 4.10 – 4.6.0.	
Financial benefits	1. Savings in production cost INR 18.51 million per year			
	2. Financial benefits to Service delivery Agency/ULB Increase in user charge/taxes and INR 12.42 &13.8 million.			
	3. Cost effectiveness of the Investment is arrived by taking the ratio of per capita cost and per capita income of the households. The derived value of the ratio is 0.05 which is 5% much lower than the hurdle rate of 10% indicating that of the proposed capital investment is not a financial burden to the residents of Agartala			
Financial Analysis	1.Capital Investment cost INR 160.44 million	2.O&M cost INR 26.60 million	3. Total cost INR 187.04 million	4. FIRR. 8.07%
	5.NPV @ 4.2% INR 64.38 million	Sensitivity Analysis with 10 % variation of capital cost , O&M cost and benefits, FIRR is 6.84 %,6.05% and 4.5% and NPV is INR40.89, INR25.57 and INR4.77 million		
Project sustainability	1.FOP FOP is prepared for Agartala for 2019-20 a. Operating	2.Revenue Generation INR 44.73million	3.Estimated Expenditure INR26.60 million	4.Surplus or deficit + INR18.13 million

	Ratio 1.96			
	Cost Effective Indicator (Max=10%). 5 %			
Social Sustainability				
Community Engagement	Pre Project Consultations made with 1. Women Group 2. youth organisations 3. House holders 4. Property owners 5. Ward Officials	During preparation of the project. Focused Group discussions and Transect walk 1 Voluntary Organisations	During Implementation of the Project. This is outside the scope of the present assignment and expected to be taken up by the DSMC	Post project This is outside the scope of the present assignment and expected to be taken up by the Executing Agency/ Service Provider
Social Acceptance	Community accepts the project. 1. Favours improvement of water supply 2. Desires protection of water sources and water storage facilities. 3. Community needs exposure to a wide range of IEC materials which need to be assessed intermittently.	Community's willingness to get involved in the project. 1. Community needs awareness on the right use of water and expressed willingness to getting involved in water supply project 2. Desires responsive attitude from service provider.	Community's willingness to pay for improved service delivery. 1. Willing to pay 2. Community is willing to take on responsibility for O&M of water supply system. For details refer to DPR Volume VII.	Capacity building. 1. Community desired training in technical aspects of rain water harvesting. 2. Capacity building and training programme for the voluntary organisation workshop organised by consultants on 9 th and 10 th of September 2009.
Social Safeguards	Land Availability There is no land acquisition involved since the deep tube wells and IRPs are to be installed at the existing facilities and no land is to be acquired for the purpose.	Involuntary settlement of indigenous population Does not arise in view of what has been stated. There is no dislocation to be caused by the proposed project.	Resettlement Plan. No Plan is prepared since there is no fresh land uptake that involves adverse impact on any private owner. For details refer DPR Volume-V	Legal frame work and policies. 1. Land Acquisition Act 1894 as amended. 2. National Rehabilitation and Resettlement Policy (NRRP) 2007. 3. State laws a. Tripura

				<p>Municipal Act, 1994</p> <p>b. The Tripura Municipal (Management of Municipal Areas) Rules, 2004</p> <p>c. The Tripura Commission for Women Act, 1993</p> <p>4. ADB's Involuntary Resettlement Policy</p>
<p>Environmental Sustainability</p>	<p>IEE</p> <p>1. Components of the project avoid encroachment/ direct impact to environmentally sensitive locations or protected area network within city.</p> <p>2. Components proposed are for replacing the 22 existing deep tube wells and 9 IRPs</p> <p>3. Regulatory compliance with the requirements of GOI, GOMI, and ADB guidelines. For details refer to DPR volume -VI</p>	<p>EIA</p> <p>Not prepared in view of the categorisation of the project</p>	<p>EMP</p> <p>1. Mitigation measures suggested during the construction phase and post construction Site.</p> <p>a. Management Plan addresses impacts during construction</p> <p>b. Waste Management Plan to address disposal of wastes generated during construction</p> <p>c. Occupational Safety Plan to address occupational hazard during construction and operation</p> <p>2. Budget provision for 0.32 million suggested ensuring environment is not adversely impacted.</p> <p>3. Responsibilities of the construction Agency, EA and</p>	<p>Legal framework.</p> <p>1. EMP to be integrated into all construction contract and monitoring by the DSMC, Environmental officer of SIPMIU.</p> <p>2. ADB's Environmental Assessment Guidelines.</p>

			the DSMC have been identified and included in the EMP. For details refer DPR Volume-VI	
Institutional Sustainability	GOT have put in place the 1,SLSC 2.IPEC 3.EA	SIPMIU is in place and only a few positions have been filled up	ULBs Agartala Municipal Council is in place and a few functions have been transferred.	Legal Frame work. 1.Tripura Municipal Act, 1994 2.The Tripura Municipal (Management of Municipal Areas) Rules, 2004 The Tripura Commission for Women Act, 1993

WATER SUPPLY AIZWAL – SUSTAINABILITY
TABLE 7.2: WATER SUPPLY AIZAWL - SUSTAINABILITY

Sustainability Considerations	Sustainability factors built into the Project Design			
Economic Benefits	1. Project impact on the National/ Regional Economy Improved health conditions leading to healthy work force improving labour productivity resulting in higher regional and national economic growth.	2 .Impact of the Project. Estimated Annual savings in house hold expenditure on health due to improved water supply is INR14.97 million Annual savings due to additional working days due to reduced absenteeism to the extent of INR6.56million.		3. Estimation of non tangible monetised impacts. a. overall wellness of the city population b. contentment with the service delivery. c. improvement of image of the service provider
Economic Analysis	4. NPV @12% INR 26.16 million	5.EIRR 17.84 %	6.Sensitivity Analysis with 10% variation of capital cost, O&M cost and benefits, EIRR is 15.99%,17.4% and 15.33% and NPV is INR19.2, INR24.04,and INR14.47 million.	
Financial benefits	1.Reduction in NRW from the new RCC tanks INR 3.81 million	2.Due to metering reduction of about 2% NRW	3.Financial benefits to Service delivery Agency/ULB Increase in user charge/taxes. INR 2.34 and 5.96 million	4.Savings in pumping cost INR 1.33 million per year
	5.Savings in production cost INR 3.81 million per year	6.Total Net benefits INR 13.46 million	7. Cost effectiveness of the Investment is arrived by taking the ratio of per capita cost and per capita income of the households. The derived value of the ratio is 0.05 which is 5% much lower than the hurdle rate of 10% indicating that the proposed capital investment is not a financial burden to the residents of Aizawl.	
Financial Analysis	1.Capital Investment cost INR 80.80million	2.O&M cost INR3.90 million	3. Total cost INR 84.70 million	4. FIRR. 7.42%
	5.NPV @4.2% INR 20.04 million	Sensitivity Analysis with 10 % variation of capital cost, O&M cost and benefits, FIRR is 6.06%,6.82% and 5.28% and NPV is INR12.39, INR16.10 andINR6.45 million		
Project sustainability	1.FOP No Analysis done in absence of ULB for Aizawl.	2.Revenue Generation INR 8.30 million	3.Estimated Expenditure INR 3.90 million	4.Surplus or deficit + INR4.40 million

	Cost Effective Indicator (Max 10 %). 5 %			
Social Sustainability				
Community Engagement	Pre Project Consultations made with 1. Women Group 2. youth organisations 3. Traditional Institutions 4. Voluntary Organisations	During preparation of the project. Focused Group discussions and Transect walk 1. Women Group. 2. Youth Group 3. Traditional Institutions 4. Voluntary Organisations	During Implementation of the Project. This is outside the scope of the present assignment and expected to be taken up by the DSMC	Post project This is outside the scope of the present assignment and expected to be taken up by the Executing Agency/ Service Provider
Social Acceptance	Community accepts the project. 1. Any measure to improve water supply is welcomed by the community. 2. The State Government should ensure that the new system provided does deliver. 3. Community needs exposure to a wide range of IEC materials which need to be assessed intermittently.	Community's willingness to get involved in the project. 1. Community needs awareness on the right use of water and expressed willingness to getting involved in water supply project 2. Desires responsive attitude from service provider.	Community's willingness to pay for improved service delivery. 1. Willing to pay 2. Community reluctant to take on responsibility for O&M of water supply system.	Capacity building. 1. Community desired training in technical aspects of rain water harvesting. 2. Capacity building and training programme for the voluntary organisation workshop organised by consultants on 9 th and 10 th of September 2009.
Social Safeguards	Land Availability There is no land acquisition involved since the existing tanks are to be replaced only and the water meters are to be installed in the premises and no land is to be acquired for the purpose.	Involuntary settlement of indigenous population Does not arise in view of what has been stated. There is no dislocation to be caused by the proposed project.	Resettlement Plan. No Resettlement Plan Prepared in view of no dislocation due to the proposed project.	Legal frame work and policies. 1. Land Acquisition Act 1894 as amended. 2. National Rehabilitation and Resettlement Policy (NRRP) 2007. 3. State laws a. Mizoram land

				<p>holding Act 2001.</p> <p>b. Aizawl Development Authority Act 2005.</p> <p>c. Mizoram Urban & Regional Act 1990.</p> <p>4. ADB's Involuntary Resettlement Policy</p>
<p>Environmental Sustainability</p>	<p>IEE</p> <p>1. Components of the project avoid encroachment/direct impact to environmentally sensitive locations or protected area network within Aizawl city.</p> <p>2. Components proposed are for replacing the existing steel tanks in very poor conditions.</p> <p>3. Regulatory compliance with the requirements of GOI, GOMI, and ADB guidelines.</p>	<p>EIA</p> <p>Not prepared in view of the categorisation of the project</p>	<p>EMP</p> <p>1. Mitigation measures suggested during the construction phase and post construction site</p> <p>a. Site Management Plan to address impacts during construction</p> <p>b. Waste Management Plan to address disposal of wastes generated during construction</p> <p>c. Occupational Safety Plan to address occupational hazard during construction and operation</p> <p>2. Budget provision for 0.694 million suggested ensuring environment is not adversely impacted.</p> <p>3. Responsibilities of the construction Agency, EA and the DSMC have been identified and included in the EMP</p>	<p>Legal framework.</p> <p>1. EMP to be integrated into all construction contract and monitoring by the DSMC, Environmental officer of SIPMIU.</p> <p>2. Environment Act 1986</p> <p>3. Water (prevention & control of pollution) Act 1974.</p> <p>2. ADB's Environmental Assessment Guidelines.</p>

<p>Institutional Sustainability</p>	<p>GOMI have put in place the 1,SLSC 2.IPEC 3.EA</p>	<p>SIPMIU is in place and the key positions have been filled up</p>	<p>ULBs There is no ULB Constituted as yet though the proposal to have one is under consideration of the state Government.</p>	<p>Legal Frame work. SIPMIU may have its own Rules for its own operation and execution of all the mandated functions. Till such time it may adopt Government rules for Administration and Financial Management</p>
--	--	---	--	--

WATER SUPPLY GANGTOK– SUSTAINABILITY
TABLE 7.3: WATER SUPPLY GANGTOK - SUSTAINABILITY

Sustainability Considerations	Sustainability factors built into the Project Design			
Economic Benefits	1. Project impact on the National/ Regional Economy Improved health conditions leading to healthy work force improving labour productivity resulting in higher regional and national economic growth.	2 .Impact of the Project. Estimated Annual savings in house hold expenditure on health due to improved water supply is INR 18.17million Annual savings due to additional working days due to reduced absenteeism to the extent of INR39.04million. Total benefits is INR 57.21 million	3. Estimation of non tangible monetised impacts. a. Overall wellness of the city population B. contentment with the service delivery. c. improvement of image of the service provider	
Economic Analysis	4. NPV @12% INR35.34million	5.EIRR 14.77%	5. Sensitivity Analysis with 10% variation of capital cost, O&M cost and benefits, EIRR is 13.08%,14.24 %, and 12.35% and NPV is INR 14.76,INR28.40,and INR4.28 million.	
Financial benefits	1. Due to reduction in NRW INR 23.39 million per year	2. Increase in user charge/taxes. INR 6.77 million		3.Water Tax revenue from property tax INR 8.87 million
	4.Total savings INR 39.03 million	5. Cost effectiveness of the Investment is arrived by taking the ratio of per capita cost and per capita income of the households. The derived value of the ratio is 0.05 which is 5% much lower than the hurdle rate of 10% indicating that the proposed capital investment is not a financial burden to the residents of Gangtok		
Financial Analysis	1.Capital Investment cost INR 239.08 million	2.O&M cost INR 12.79 million	3. Total cost INR 251.87 million	4. FIRR. 6.36%
	5.NPV@ 4.2 % INR 43.94 million	Sensitivity Analysis with 10 % variation of capital cost , O&M cost and benefits, FIRR is 5.30 % , 5.94,% and 4.43 % and NPV is INR 21.30, INR 31.02 and INR 3.99 million		
Project sustainability	1.FOP No FOP is prepared since there is no Municipal Board	2.Revenue Generation INR 15.64 million	3.Estimated Expenditure INR 12.79million	4.Surplus or deficit + INR 2.25 million
	Cost Effective Indicator (Max 10 %) 2.4 %			
Social Sustainability				

Community Engagement	<p>Pre Project Consultations made with</p> <ol style="list-style-type: none"> 1. Women Group 2. youth organisations 3. House holders 4. Property owners 	<p>During preparation of the project.</p> <p>Focused Group discussions and Transect walk</p> <ol style="list-style-type: none"> 1. Voluntary Organisations 	<p>During Implementation of the Project.</p> <p>This is outside the scope of the present assignment and expected to be taken up by the DSMC</p>	<p>Post project</p> <p>This is outside the scope of the present assignment and expected to be taken up by the Executing Agency/ Service Provider</p>
Social Acceptance	<p>Community accepts the project.</p> <ol style="list-style-type: none"> 1. Favours improvement of water supply 2. Desires protection of water sources and water storage facilities. 3. Community needs exposure to a wide range of IEC materials which need to be assessed intermittently. 	<p>Community's willingness to get involved in the project.</p> <ol style="list-style-type: none"> 1. Community needs awareness before getting involved in water supply project 2. Desires improvement in water quality. 	<p>Community's willingness to pay for improved service delivery.</p> <ol style="list-style-type: none"> 1. Willing to pay 2. Community is willing to take on responsibility for O&M of water supply system. <p>For details refer to DPR Volume VII.</p>	<p>Capacity building.</p> <ol style="list-style-type: none"> 1. Community desired training in technical aspects of rain water harvesting. 2. Capacity building and training programme for the voluntary organisation workshop organised by consultants on 9th and 10th of September 2009.
Social Safeguards	<p>Land Availability</p> <p>There is no land acquisition involved since the existing tanks are to be replaced only and the water meters are to be installed in the premises and no land is to be acquired for the purpose.</p>	<p>Involuntary settlement of indigenous population</p> <p>Does not arise in view of what has been stated.</p> <p>There is no dislocation to be caused by the proposed project.</p>	<p>Resettlement Plan. No Plan is prepared since there is no fresh land uptake that involves adverse impact on any private owner. For details refer DPR Volume-V</p>	<p>Legal frame work and policies.</p> <ol style="list-style-type: none"> 1. Land Acquisition Act 1894 as amended. 2. National Rehabilitation and Resettlement Policy (NRRP) 2007. 3. ADB's Involuntary Resettlement Policy
Environmental Sustainability	<p>IEE</p> <ol style="list-style-type: none"> 1. Components of the project avoid encroachment/ <p>Direct impact to environmentally sensitive locations or protected area network within</p>	<p>EIA</p> <p>Not prepared in view of the categorisation of the project</p>	<p>EMP</p> <ol style="list-style-type: none"> 1. Mitigation measures suggested during the construction phase and post construction Site a. Management Plan addresses impacts during 	<p>Legal frame work.</p> <ol style="list-style-type: none"> 1. EMP to be integrated into all construction contract and monitoring by the DSMC, Environmental officer of SIPMIU. 2. ADB's

	<p>city.</p> <p>2. Components proposed are for replacing the</p> <p>3. Regulatory compliance with the requirements of GOI, GOMI, and ADB guidelines. For details refer to DPR volume -VI</p>		<p>construction</p> <p>b. Waste Management Plan to address disposal of wastes generated during construction</p> <p>c. Occupational Safety Plan to address occupational hazard during construction and operation</p> <p>2. Budget provision for 0.814 million suggested ensuring environment is not adversely impacted.</p> <p>3. Responsibilities of the construction Agency, EA and the DSMC have been identified and included in the EMP. For details refer DPR Volume-VI</p>	<p>Environmental Assessment Guidelines.</p>
<p>Institutional Sustainability</p>	<p>GOS have put in place the 1,SLSC</p> <p>2.IPEC</p> <p>3.EA</p>	<p>SIPMIU is in place and only a few positions have been filled up</p>	<p>ULBs</p> <p>ULB not constituted.</p>	<p>Legal Frame work.</p> <p>1. Sikkim Municipalities Act, 1995.</p> <p>2. Sikkim Relief Undertaking Act, 1987.</p> <p>3. Sikkim Urban and Regional Planning and Development Act, 1998.</p> <p>4. Land Acquisition Act, 1988.</p> <p>5. Sikkim Forests, Water Courses and Road Reserve (Preservation and Protection) Amended Act, 2000.</p> <p>6. Sikkim Sewerage and Sewerage Disposal Act, 1987.</p>

				<p>7. The Sikkim Non Biodegradable Garbage (Control) Amended Act, 2001.</p> <p>8. The Sikkim Water Supply and Water Tax Act, 1986.</p>
--	--	--	--	--

WATER SUPPLY KOHIMA– SUSTAINABILITY

TABLE 7.4: WATER SUPPLY KOHIMA - SUSTAINABILITY

Sustainability Considerations	Sustainability factors built into the Project Design			
Economic Benefits	1. Project impact on the National/ Regional Economy Improved health conditions leading to healthy work force improving labour productivity resulting in higher regional and national economic growth.	2 .Impact of the Project. Estimated Annual savings in house hold expenditure on health due to improved water supply is INR60.85 million Annual savings due to additional working days and reduced absenteeism to the extent of INR6.56million.	3. Estimation of non tangible monetised impacts. a. overall wellness of the city population B. contentment with the service delivery. c. improvement of image of the service provider	
	4. NPV @12% INR 14.61 million	5.EIRR 16.61%	6.Sensitivity Analysis with 10% variation of capital cost, O&M cost and benefits, EIRR is 14.78%,16.12% and14.07 % and NPV is INR 9.47,12.96 and 6.36 million.	
Financial benefits	1.Financial benefits to Service delivery Agency/ULB Increase in user charge. INR 8.80 million		2.Financial benefits to Service delivery Agency/ULB due to water tax INR 1.43 million	
	3. Financial benefits to Service delivery Agency/ULB due to water charge and water tax INR 10.23 million		4. Cost effectiveness of the Investment is arrived by taking the ratio of per capita cost and per capita income of the households. The derived value of the ratio is 0.05 which is 5% much lower than the hurdle rate of 10% indicating that the proposed capital investment is not a financial burden to the residents of Kohima	
Financial Analysis	1.Capital Investment cost INR 60.85 million	2.O&M cost INR 3.04 million	3. Total cost INR63.89 million	4. FIRR. 7.58%
	5.NPV @ 4.2 % INR 15.37 million	Sensitivity Analysis with 10 % variation of capital cost , O&M cost and benefits, FIRR is 6.18%, 6.93,% and 5.36% and NPV is INR9.65, INR 6.93 and INR 5.36 million		
Project sustainability	1.FOP for 2019-20 a. Operating ratio 0.13	2.Revenue Generation INR 10.23 million	3.Estimated Expenditure INR 3.04 million	4.Surplus or deficit + INR4.7.19 million

	Cost Effective Indicator (Max 10 %) 1.0 %			
Social Sustainability				
Community Engagement	<p>Pre Project Consultations made with</p> <ol style="list-style-type: none"> 1. Women Group 2. youth organisations 3. House holders 4. Property owners 5. Ward Officials 	<p>During preparation of the project.</p> <p>Focused Group discussions and Transect walk</p> <ol style="list-style-type: none"> 1. Voluntary Organisations 	<p>During Implementation of the Project.</p> <p>This is outside the scope of the present assignment and expected to be taken up by the DSMC</p>	<p>Post project</p> <p>This is outside the scope of the present assignment and expected to be taken up by the Executing Agency/ Service Provider</p>
Social Acceptance	<p>Community accepts the project.</p> <ol style="list-style-type: none"> 1. Favours improvement of water supply 2. Desires protection of water sources and water storage facilities. 3. Community needs exposure to a wide range of IEC materials which need to be assessed intermittently. 	<p>Community's willingness to get involved in the project.</p> <ol style="list-style-type: none"> 1. Community needs awareness on the right use of water and expressed willingness to getting involved in water supply project 2. Desires responsive attitude from service provider. 	<p>Community's willingness to pay for improved service delivery.</p> <ol style="list-style-type: none"> 1. Willing to pay 2. Community is willing to take on responsibility for O&M of water supply system. <p>For details refer to DPR Volume VII.</p>	<p>Capacity building.</p> <ol style="list-style-type: none"> 1. Community desired training in technical aspects of rain water harvesting. 2. Capacity building and training programme for the voluntary organisation workshop organised by consultants on 9th and 10th of September 2009.
Social Safeguards	<p>Land Availability</p> <p>There is no land acquisition involved since existing Reservoirs are proposed to be reconstructed, existing WTP is to be improved and Chlorinators are to be installed on the Government land where water supply facilities exists at present and no land is to</p>	<p>Involuntary settlement of indigenous population</p> <p>Does not arise in view of what has been stated.</p> <p>There is no dislocation to be caused by the proposed project.</p>	<p>Resettlement Plan.</p> <p>No Plan is prepared since there is no fresh land uptake that involves adverse impact on any private owner. For details refer DPR Volume-V</p>	<p>Legal frame work and policies.</p> <ol style="list-style-type: none"> 1. Land Acquisition Act 1894 as amended. 2. National Rehabilitation and Resettlement Policy (NRRP) 2007. 3. State laws <ol style="list-style-type: none"> a. The communitization and public Institutions & Service Act 2002.

	be acquired for the purpose.			b. Guidelines for commoditizing programme 4. ADB's Involuntary Resettlement Policy
Environmental Sustainability	<p>IEE</p> <p>1. Components of the project avoid encroachment/ direct impact to environmentally sensitive locations or protected area network within city.</p> <p>2. Components proposed are to be installed on the Government land where water supply facilities exists at present.</p> <p>3. Regulatory compliance with the requirements of GOI, GOMI, and ADB guidelines. For details refer to DPR volume -VI</p>	<p>EIA</p> <p>Not prepared in view of the categorisation of the project</p>	<p>EMP</p> <p>1. Mitigation measures suggested during the construction phase and post construction Site</p> <p>a. Management Plan addresses impacts during construction</p> <p>b. Waste Management Plan to address disposal of wastes generated during construction</p> <p>c. Occupational Safety Plan to address occupational hazard during construction and operation</p> <p>2. Budget provision for 0.14 million suggested ensuring environment is not adversely impacted.</p> <p>3. Responsibilities of the construction Agency, EA and the DSMC have been identified and included in the EMP. For details refer DPR Volume-VI</p>	<p>Legal frame work.</p> <p>1.EMP to be integrated into all construction contract and monitoring by the DSMC, Environmental officer of SIPMIU.</p> <p>2. Environment Act 1986</p> <p>3. Water (prevention & control of pollution) Act 1974.</p> <p>3. ADB's Environmental Assessment Guidelines.</p>

<p>Institutional Sustainability</p>	<p>GoN have put in place the 1,SLSC 2.IPEC 3.EA</p>	<p>SIPMIU is in place and only a few positions have been filled up</p>	<p>ULBs KMC is in place. Only a few functions have been transferred</p>	<p>Legal Frame work. 1.Town and Country Planning Act 1966 As amended. 2 The Nagaland Municipal Act 2001 3.The communitization and public Institutions &Service Act 2002. 4. Guidelines for commoditizing programme</p>
--	---	--	---	--

SOLID WASTE MANAGEMENT DIBRUGARH

TABLE 7.5: SOLID WASTE MANAGEMENT DIBRUGARH – SUSTAINABILITY

Sustainability Considerations	Sustainability factors built into the Project Design			
Economic Benefits	1. Project impact on the National/ Regional Economy Improved health conditions leading to healthy work force improving labour productivity resulting in higher regional and national economic growth.	2 .Impact of the Project. Estimated Annual savings in house hold expenditure on health due to improved SWM is INR-42.88-million Annual income due to additional working days due to reduced absenteeism to the extent of INR9.88million.	3. Estimation of non tangible monetised impacts. a. overall wellness of the city population B. contentment with the service delivery. c. improvement of image of the service provider.	
Economic Analysis	4. NPV @12% INR 34.28 million	5.EIRR 15.46%	6.Sensitivity Analysis with 10% variation of capital cost, O&M cost and benefits, EIRR is 14.04%,14.21% and12.57 % and NPV is INR 21.67, 21.40 INR-,and INR5.37 million.	
Financial benefits	1. Revenue Generation a. from recyclable materials. INR 13.11 million b. Sale of compost INR11.64 million	2.Revenue from a. Conservancy Tax INR 5.56 million b. User charges INR 10.55 million	3. Financial benefits from all sources INR 40.86 million	
Cost effectiveness of the Investment is arrived by taking the ratio of per capita cost and per capita income of the households. The derived value of the ratio is 0.05 which is 5% much lower than the hurdle rate of 10% indicating that the proposed capital investment is not a financial burden to the residents of Dibrugarh.				
Financial Analysis	1.Capital Investment cost INR154.05 million	2.O&M cost INR 24.22million	3. Total cost INR178.2 Million	4. FIRR. 7.59 %
5.NPV @7.59% INR 53.27 million		Sensitivity Analysis with 10 % variation of capital cost , O&M cost and benefits, FIRR is 6.52 %,5.85% and 4.55% and NPV is INR 38.96, INR24.68 and INR 5.05million		
Project sustainability	1 .FOP for DMB. Fiscal Indicators at the end of 15 years after the completion of the project (2026-	2.Revenue Generation INR 40.86million	3.Estimated Expenditure INR24.22 million	4.Surplus or deficit + INR4.16.64 million

	27) a .adequate account balance b. Establishment cost declining to 18%.			
	Cost Effective Indicator (Max=10 %) 4.5 %			
Social Sustainability				
Community Engagement	Pre Project Consultations made with 1.Women Group 2. youth organisations 3. House holders 4. Property owners	During preparation of the project. Focused Group discussions and Transect walk 1.Voluntary Organisations	During Implementation of the Project. This is outside the scope of the present assignment and expected to be taken up by the DSMC	Post project This is outside the scope of the present assignment and expected to be taken up by the Executing Agency/ Service Provider
Social Acceptance	Community accepts the project. 1.Favours door to door waste collection 2. Desires segregation and recycling at a later stage. 3. Community needs exposure to a wide range of IEC materials which need to be assessed intermittently.	Community's willingness to get involved in the project. Community needs awareness on the ill effects of poor SWM.	Community's willingness to pay for improved service delivery. Willing to pay. Payment of user charge to be fixed depending on the paying capacity of the house holds.	Capacity building. 1. Community desired awareness programme on the new SWM proposed 2. Capacity building and training programme for the voluntary organisation workshop organised by consultants on 9 th and 10 th of September 2009.
Social Safeguards	Land Availability There is no land acquisition involved since the land required for the 1 st phase of the project is already under the possession of DMB.	Involuntary settlement of indigenous population Does not arise in view of what has been stated. There is no dislocation to be caused by the proposed project.	Resettlement Plan. No Plan is prepared since there is no fresh land uptake that involves adverse impact on any private owner. For details refer DPR Volume-V	Legal frame work and policies. 1. Land Acquisition Act 1894 as amended. 2. National Rehabilitation and Resettlement Policy (NRRP) 2007. 3.State laws a. Assam Municipal

				Act1919 b. Assam TCP Act 1972 4. ADB's Involuntary Resettlement Policy
Environmental Sustainability	IEE	EIA	EMP	Legal Frame work
	Not prepared	Will be prepared after the TOR is approved by the SEIAC	Will be prepared after EIA is completed	Environment Protection Act 1986. Guidelines issued from MOEF
Institutional Sustainability	GOAs have not put in place the 1,SLSC 2.IPEC 3.EA Nodal Officer, the Secretary GDD has jurisdiction over Guwahati Metropolitan Planning Area. There is no Nodal officer for the Projects at Dibrugarh	SIPMIU is not in place.	ULBs Dibrugarh Municipal Board has an elected ward councillors and the chair person	On constitution of SIPMIU, rules of the state Government shall be followed in respect of Administration and Financial Management till rules are amended to meet its requirement.

SOLID WASTE MANAGEMENT KOHIMA

TABLE 7.6: SOLID WASTE MANAGEMENT KOHIMA – SUSTAINABILITY

Sustainability Considerations	Sustainability factors built into the Project Design			
Economic Benefits	<p>1. Project impact on the National/ Regional Economy</p> <p>Improved health conditions leading to healthy work force improving labour productivity resulting in higher regional and national economic growth.</p>	<p>2 .Impact of the Project.</p> <p>Estimated Annual savings in house hold expenditure on health due to improved SWM is INR 37.72 million</p> <p>Annual increase in income due to additional working days due to reduced absenteeism to the extent of INR9.12.71 Million.</p>	<p>3 Savings due to cleaning of drains INR 7.82 million.</p>	<p>3. Estimation of non tangible monetised impacts.</p> <p>a. overall wellness of the city population</p> <p>B. contentment with the service delivery.</p> <p>c. improvement of image of the service provider.</p>
Economic Analysis	<p>4. NPV @12% INR 39.30 million</p>	<p>5.EIRR 15.13%</p>	<p>6.Sensitivity Analysis with 10% variation of capital cost, O&M cost and benefits, EIRR is 13.72%,13.71% and12.69 % and NPV is INR 23.22, INR19.48,and INR5.0.41 million.</p>	
Financial benefits	<p>1. Revenue Generation</p> <p>a. from recyclable materials. INR 21.86 million</p> <p>b. Sale of compost INR11.4 million</p>	<p>2.Revenue from</p> <p>a. Conservancy Tax INR 1.81 million</p> <p>b. User charges INR 7.14million</p>	<p>3. Financial benefits from all sources INR 42.21million</p>	
	<p>Cost effectiveness of the Investment is arrived by taking the ratio of per capita cost and per capita income of the households. The derived value of the ratio is 0.05 which is 6% much lower than the hurdle rate of 10% indicating that the proposed capital investment is not a financial burden to the residents of Kohima</p>			
Financial Analysis	<p>1.Capital Investment cost</p> <p>INR196.50 million</p>	<p>2.O&M cost</p> <p>INR 20.62 million</p>	<p>3. Total cost</p> <p>INR 217.12 Million</p>	<p>4. FIRR.</p> <p>7.79%</p>

	5.NPV @7.79% INR 72.25 million	Sensitivity Analysis with 10 % variation of capital cost , O&M cost and benefits, FIRR is 6.71 %,5.64% and 5.39% and NPV is INR54.00, INR24.21 and INR 5.39 million		
Project sustainability	1 .FOP for KMC. Fiscal Indicators during (2019-20) a .Revenue Account Balance INR 209.06million b. Capital Account Balance INR 0.048 million c. Operating ratio declining to 3.17 from 9.14 in (2009-10.)	2.Revenue Generation INR 42.21 million	3.Estimated Expenditure INR20.62 million	4.Surplus or deficit + INR4.21.59 million
	Cost Effective Indicator (Max 10 %) 6 %			
Social Sustainability				
Community Engagement	Pre Project Consultations made with 1.Women Group 2. youth organisations 3. House holders 4. Property owners	During preparation of the project. Focused Group discussions and Transect walk Voluntary Organisations	During Implementation of the Project. This is outside the scope of the present assignment and expected to be taken up by the DSMC	Post project This is outside the scope of the present assignment and expected to be taken up by the Executing Agency/ Service Provider
Social Acceptance	Community accepts the project. 1.Favours door to door waste collection 2. Desires segregation and recycling at a later stage. 3. Community needs exposure to a wide range of IEC materials which need to be assessed intermittently.	Community's willingness to get involved in the project. . Community needs awareness on the ill effects of poor SWM.	Community's willingness to pay for improved service delivery. 1. Willing to pay. Payment of user charge to be fixed depending on the paying capacity of the house holds.	Capacity building. 1. Community desired awareness programme on the new SWM proposed 2. Capacity building and training programme for the voluntary organisation workshop organised by consultants on 9 th and 10 th of September 2009.

<p>Social Safeguards</p>	<p>Land Availability There is no land acquisition involved since an area of 22.48 ha is already under the possession of KMC for the purpose.</p>	<p>Involuntary settlement of indigenous population Does not arise in view of what has been stated. There is no dislocation to be caused by the proposed project.</p>	<p>Resettlement Plan. No Plan is prepared since there is no fresh land uptake that involves adverse impact on any private owner. For details refer DPR Volume-V</p>	<p>Legal frame work and policies. 1. Land Acquisition Act 1894 as amended. 2. National Rehabilitation and Resettlement Policy (NRRP) 2007. 3.State laws A. Nagaland Town & country Planning Act 1966. b. Town & Country Planning Rules 1966. c. The Nagaland (Requisition and Acquisition) Act 1965. 4.ADB's Involuntary Resettlement Policy</p>
<p>Environmental Sustainability</p>	<p>IEE</p>	<p>EIA</p>	<p>EMP</p>	<p>Legal Frame work</p>
	<p>The project does not impact any environmentally sensitive eco system</p>			<p>Environment Protection Act 1986. Guidelines issued from MOEF</p>
<p>Institutional Sustainability</p>	<p>GON have put in place the 1.SLSC 2.IPEC 3.EA</p>	<p>SIPMIU is in place and only a few positions have been filled up</p>	<p>ULBs KMC is in place only a few functions to transferred to KMC.</p>	<p>Till such time rules are framed by SIPMIU rules of the state Government shall be followed in respect of Administration and Financial Management.</p>

SOLID WASTE MANAGEMENT SHILLONG

TABLE 7.7: SOLID WASTE MANAGEMENT SHILLONG – SUSTAINABILITY

Sustainability Considerations	Sustainability factors built into the Project Design			
Economic Benefits	1. Project impact on the National/ Regional Economy Improved health conditions leading to healthy work force improving labour productivity resulting in higher regional and national economic growth.	2. Impact of the Project. Estimated Annual savings in a) house hold expenditure on health due to improved SWM is INR 29.49million b) Annual income due to additional working days due to reduced absenteeism to the extent of INR8.41 million. c) Savings due to cleaning of drains	3. Estimation of non tangible monetised impacts. a). overall wellness of the city population b). contentment with the service delivery. c). improvement of image of the service provider.	
Economic Analysis	4. NPV @12% INR 23.91 million	5.EIRR 17.64 %	6.Sensitivity Analysis with 10% variation of capital cost, O&M cost and benefits, EIRR is 31.89%,14.25% and12.03 % and NPV is INR127.25, 9.12 INR-,and INR0.13 million.	
Financial benefits	1. Revenue Generation a). from recyclable materials. INR 23.89 million b). Sale of compost INR11.64 million c) Tipping charges INR 0.72 million	2.Revenue from a. Conservancy Tax INR 0.69 million b. User charges INR 13.30 million	3. Financial benefits from all sources INR 38.60 million	
	Cost effectiveness of the Investment is arrived by taking the ratio of per capita cost and per capita income of the households. The derived value of the ratio is 0.05 which is 0.63% much lower than the hurdle rate of 10% indicating that the proposed capital investment is not a financial burden to the residents of Shillong.			
Financial Analysis	1.Capital Investment cost INR76.60 million	2.O&M cost INR 27,25 million	3. Total cost INR 103.85 Million	4. FIRR. 10.88%

	5.NPV @10.88% INR 42.09 million	Sensitivity Analysis with 10 % variation of capital cost , O&M cost and benefits, FIRR is 22.31%, 6.71%,4.76 % and NPV is INR74.73, INR14.57 and INR 3.11million		
Project sustainability	1 .FOP for SMB. Fiscal Indicators at the end of 15 years after the completion of the project 2021-21 a .Revenue Account balance INR78.94 million and Capital Account balance - 54 million b. Establishment cost/ Revenue receipt decreasing from 1.19 million to 0.46 c. Operating ratio declining from 0.78 to 0.29	Total Revenue Generation INR 38.60 million	3.Estimated Expenditure INR27.25 million	4.Surplus or deficit + INR 11.35 million
	Cost Effective Indicator (Max 10 %) 0.69 %			
Social Sustainability				
Community Engagement	Pre Project Consultations made with 1.Women Group 2. Youth organisations 3. House holders 4. Property owners	During preparation of the project. Focused Group discussions and Transect walk voluntary Organisations	During Implementation of the Project. This is outside the scope of the present assignment and expected to be taken up by the DSMC	Post project This is outside the scope of the present assignment and expected to be taken up by the Executing Agency/ Service Provider
Social Acceptance	Community accepts the project. 1.Favours door to door waste collection 2. Desires segregation and recycling at a later stage. 3. Community needs exposure to a wide range of IEC materials which need to be assessed	Community's willingness to get involved in the project. Community needs awareness on SWM.	Community's willingness to pay for improved service delivery. 1. Willing to pay. Payment of user charge to be fixed depending on the paying capacity of the house holds.	Capacity building. 1. Community desired awareness programme on the new SWM proposed 2. Capacity building and training programme for the voluntary organisation

	intermittently.			workshop organised by consultants on 9 th and 10 th of September 2009.
Social Safeguards	<p>Land Availability</p> <p>There is no land acquisition involved since the land fill site is proposed on the land under possession of SMB.</p>	<p>Involuntary settlement of indigenous population</p> <p>Does not arise in view of what has been stated.</p> <p>There is no dislocation to be caused by the proposed project.</p>	<p>Resettlement Plan. No Plan is prepared since there is no fresh land uptake that involves adverse impact on any private owner. For details refer DPR Volume-V</p>	<p>Legal frame work and policies.</p> <ol style="list-style-type: none"> 1. Land Acquisition Act 1894 as amended. 2. National Rehabilitation and Resettlement Policy (NRRP) 2007. 3.State laws <ol style="list-style-type: none"> a. Meghalaya Municipal Act 1973 b. Meghalaya TCP Act 1973 4. ADB's Involuntary Resettlement Policy
Environmental Sustainability	<p>IEE</p> <ol style="list-style-type: none"> 1. No significant adverse impact on environment is anticipated due to implementation of the project which is irreversible or may lead to destruction/loss of environment. 2. During the construction phase adequate measures as suggested in IEE shall be taken. 3. An amount of INR 0.828 million is provided in the cost estimates for Environmental monitoring and mitigation measures 	<p>EIA</p> <p>Not prepared in view of the categorisation of the project.</p> <p>State level Environmental Appraisal committee approved the project and necessary clearance issued.</p>	<p>EMP</p> <ol style="list-style-type: none"> 1. EMP prepared and recommends monitoring of environmental parameters, the frequency of sampling and the size of samples. 2. Monitoring of mitigation measures 3. Capacity building of the stake holders 	<p>Legal Frame work</p> <p>Environment Protection Act 1986. Guidelines issued from MOEF</p>

Institutional Sustainability	GOM have put in place the 1.SLSC 2.IPEC 3.EA	SIPMIU is in place and only a few positions have been filled up	ULBs Shillong Municipal Board is not an elected body for the last more than four decades.	Till such time rules are framed by SIPMIU rules of the state Government shall be followed in respect of Administration and Financial Management.
-------------------------------------	---	---	--	--

	property tax to avoid strain on low income group population.			
Financial Analysis	1.Capital Investment cost INR 2037.50 million	2.O&M cost INR 2.70million	3. Total cost INR 2040.20 Million	4. FIRR. 4.22 %
	5.NPV @ 4.22 % INR 3.34 million	Sensitivity Analysis with 10 % variation of capital cost , O&M cost and benefits, FIRR is 4.21 %,0.43 % and 4.64% and NPV is INR 2.88, INR0.28 and INR 73.87million Sensitivity Indicator (Range) 1.40 -9.20		
Project sustainability	1 .FOP for DMB. FOP has not been prepared since the entire DTP drain is maintained by WRD and the same is proposed to be continued in future. This is proposed in view of the limited length of the drain falling within the jurisdiction of DMB	2.Revenue Generation INR 165.47 million	3.Estimated Expenditure INR 2.70 million	4.Surplus or deficit + INR 162.77 million
	5. Cost Effective Indicator (Max=10%). 20.5%			
Social Sustainability				
Community Engagement	Pre Project Consultations made with 1.Women Group 2. youth organisations 3. House holders 4. Property owners	During preparation of the project. Focused Group discussions and Transect walk 1voluntary Organisations	During Implementation of the Project. This is outside the scope of the present assignment and expected to be taken up by the DSMC	Post project This is outside the scope of the present assignment and expected to be taken up by the Executing Agency/ Service Provider
Social Acceptance	1Community accepts the project. Favours improvement of the DTP drain 2. Community expressed willingness to take the responsibility of maintenance once it is reconstructed and improved. 3. Community needs exposure to a wide	1Community's willingness to get involved in the project. 2.Community needs awareness on the ill effects of poor maintenance and poor sanitation due to direct discharge of	Community's willingness to pay for improved service delivery was not clearly indicated but the willingness to take over the responsibility for maintenance is an indication that they may not be averse to	Capacity building. 1. Community desired awareness programme 2. Capacity building and training programme for the voluntary organisation workshop organised by consultants on 9 th and 10 th of

	range of IEC materials which need to be assessed intermittently.	waste from the toilets to the drain	payment of a drain cess or a levy or maintenance charge.	September 2009.
Social Safeguards	<p>Land Availability</p> <p>There is no land acquisition involved since the existing drainage channel is only to be improved.</p>	<p>Involuntary settlement of indigenous population</p> <p>Does not arise in view of what has been stated.</p> <p>There is no dislocation to be caused by the proposed project.</p>	<p>Resettlement Plan. No Plan is prepared since there is no fresh land uptake that involves adverse impact on any private owner. For details refer DPR Volume-V</p>	<p>Legal frame work and policies.</p> <ol style="list-style-type: none"> 1. Land Acquisition Act 1894 as amended. 2. National Rehabilitation and Resettlement Policy (NRRP) 2007. 3.State laws <ol style="list-style-type: none"> a. Embankment Act 1953 b. Assam Municipal Act1959 as amended c. Assam TCP Act 1972 4. ADB's Involuntary Resettlement Policy
Environmental Sustainability	<p>IEE</p> <p>Thorough examination of environment of the sites where priority infrastructure sectors are proposed shows that there would be minimal adverse impact to the environment out of the developmental activities as it does not involve encroachment of environmentally sensitive locations. other than temporary insignificant impact during the construction period which would be taken good care through the adoption of proper modern design, engineering practices and mitigation measures, there will be no other impact</p>	<p>EIA</p> <p>Not required in view of the</p> <p>Categorization of the project</p>	<p>EMP</p> <p>Prepared</p>	<p>Environment Protection Act 1986. Guidelines issued from MOEF</p>

<p>Institutional Sustainability</p>	<p>GOAs have not put in place the 1,SLSC 2.IPEC 3.EA Nodal Officer, the Secretary GDD has jurisdiction over Guwahati Metropolitan Planning Area. There is no Nodal officer for the Projects at Dibrugarh</p>	<p>SIPMIU is not in place.</p>	<p>ULBs Dibrugarh Municipal Board has an elected ward councilors and the chair person.</p>	<p>On constitution of SIPMIU, rules of the state Government shall be followed in respect of Administration and Financial Management till rules are amended to meet its requirement.</p>
--	--	--------------------------------	--	---

APPENDIX – 8: PROJECT OUTPUT AS PER TOR AND ACHIEVEMENT

PROJECTS	Out Put as per TOR	Achievement
A. Water Supply Agartala	1. Preparation of DPR	1. Completed and Submitted
B. Water Supply Aizwal	2.Detailed Engineering Designs	2. Completed and Submitted
C. Water Supply Gangtok	3. Bid documents	3. Completed and Submitted
D. Water Supply Kohima	4.Resettlement Plans 5.Environmental Assessment Management Plan	4.Completed and submitted Due Diligence Report since there was no project where land acquisition is involved
E.SWM Dibrugarh		5. Submitted IEE Reports since the projects selected did not require EIA except for SWM Dibrugarh for which the UDD GOAS and DMB have been advised to fill in the form 1 and get the approval from the State Environmental Appraisal committee or with MOEF, GOI on the TOR for carrying out the detail EIA.
F.SWM Kohima		6. Community Assessment Report in respect of all the 7 states for which the DPRs have been prepared.
G.SWM Shillong		
H. Improvement of DTP Drainage channel Dibrugarh		
REPORTS		
I. Operational Manual	Preparation of Operational Manual	Prepared and Submitted Operational Manual
J .Procurement Environment Report	Not in the TOR	Completed and submitted. It was deemed necessary to make an assessment of the Procurement Environment for all the project States
K.IEC	Preparation of IEC materials	Prepared and Submitted IEC Plan.
L. Disclosure Plan	Preparation of Disclosure Plan	Completed and Submitted
M.NRW Training Manual	Preparation of the NRW Training Manual. Prepared and circulated to the trainees from the states having water supply projects in tranche1.	Completed and NRW reduction Training organised by the consultants at Guwahati on 25 th and 26 th of November 2009.

APPENDIX – 9: LIST OF CONTRACT PACKAGES

1. List of packages submitted under ADB TA 4779 IND against NERCCDIP & NERUDP projects.

PROJECT CITY	PACKAGE /CONTRACT NO.	PACKAGE DETAILS	PACKAGE VALUE
Agartala(Tripura) – NERCCDIP	TW&IRP/WS/AGT/T1/NCB	1.Civil Works, Electromechanical Works and Associated Pumping Machinery, Testing and Commissioning pertaining to the Construction of 12 (Replacement) Deep Tube Wells and 3 (Replacement) Iron Removal Plants at Agartala, Tripura.”	INR 62.84 Million
Aizwal (Mizoram) – NERCCDIP	WM1/WS/AIZ/T1/NCB	2.Procurement and Installation of Household Water Meters(Single jet – mechanical type) including Testing and Commissioning at Aizwal, Mizoram	INR 26.914Million
	CHL/WS/AIZ/T1/NCB	3. Procurement and Installation of Electro-Chlorinators including Testing and Commissioning at Aizwal, Mizoram. The electro-chlorinators shall be capable of generating 1 kg/hr and 0.5 kg/hr of available chlorine	INR 7.2313 Million
	OHT/WS/AIZ/T1/NCB	4.“7 RCC water reservoirs, 3 residential buildings, 1 site office building and 2 chlorinator rooms at Aizwal	INR 46.68 Million
Dibrugarh(Assam) – NERUDP)	5. Procurement of Compost Plant and Equipment, Civil Works for Sanitary Landfill and Internal Access for Solid Waste Management Plant at Malengia Gaon, Dibrugarh.”	INR 106.592 Million
		6. Improvement of Dibrugarh Town Protection Drain, Dibrugarh, Assam.	INR 1857.25 million
Gangtok (Sikkim) – NERCCDIP	CHL/WS/GTK/T1/NCB	7. Supply and Installation of Electro-Chlorinators including Testing and Commissioning at Gangtok, Sikkim. The electro-chlorinators shall be capable of generating 0.5 kg/hr of available chlorine	INR 7.39 Million

	(OHT1/WS /GTK/T1/N CB)	2. Construction of 4 new reservoirs	INR 6.13 million
	(P&S/WS /GTK//T1/N CB)	3. Construction of approx 25.12 kilometers of primary pipe lines and 48.32 km of secondary and tertiary pipeline network.	INR 212.64 million
	(EMZ5/WS /GTK/T1/N CB)	Pumping system for upper zone of the city (sump/pump house)	INR 5.17 million

APPENDIX – 10: PROCEEDINGS OF THE THIRD WORKSHOP

PROCEEDINGS OF THE WORKSHOP ON PROJECT IMPLEMENTATION AND URBAN MANAGEMENT IMPROVEMENT IN THE NORTH EASTERN REGION (PIUMNER)

HELD ON 27th NOVEMBER 2009 AT SHILLONG

1. List of participants attached
2. The third workshop on PIMUNER was held on 27th November at Shillong to share the experience gained during the implementation of the project and the lessons learned in the course of last 16 months.
3. The workshop was inaugurated by the Chief Secretary to Government of Meghalaya who highlighted the deficiencies in the urban areas in the North Eastern Region. While welcoming the assistance being provided by ADB he stressed the need for timely implementation and proper maintenance of the infrastructure created under the ADB funded project.
4. The consultants presented their achievements in relation to the Project deliverables which included preparation of the eight DPR in six project cities. There are 4 water supply projects in Agartala, Aizawl, Gangtok and Kohima, three SWM projects at Dibrugarh, Kohima, and Shillong and drainage improvement at Dibrugarh, besides preparation of Operational Manual and Final Report. All the above works have been completed and submitted to the SIPMIU. The consultants have prepared a training manual for reduction of Non Revenue Water and also conducted two day training for water supply engineers from the four cities where water supply project is included in the tranche1.
5. The consultants also shared with them the experience gained and lessons learned during the course of project implementation. A few projects were included in the tranche 1 where land for the facilities proposed under the project was not under the possession of the Executing Agency (EA) and had to be dropped necessitating avoidable deployment of man power and resources for the projects. Changes in the scope of works resulted in delays. Absence of SIPMIU or under staffed SIPMIU resulted in delays in collection of data and lukewarm response from the line departments. The opportunity for the consultants to work with the State sector specialist was lost in absence of SIPMIU and its specialist. A few states did not have the State Environment Impact Appraisal Committee (SEIA) which delayed the approval and calling for bids. Though Urban Local Bodies (ULBs) are expected to take over the operation and maintenance of the Projects after their completion almost all the four ULBs do not have the required trained manpower hence the urgent need for capacity building of the ULB staff. During the second workshop on capacity building it emerged that the community is willing to participate and get involved in the project implementation but wanted capacity building programme to be taken up by the EA so that they play meaningful role. They also expressed their disappointment that due importance is not given to the voluntary organisations, the NGOs and CBOs during the various phases of project implementation. They desired greater interaction with the executing agencies.
6. Based on the lessons learned the participants endorsed the recommendation of the consultants to ensure early placement of the staff in the SIPMIU, capacity building of the project implementation staff strengthening of the ULBs with trained manpower and community engagement for project sustainability

7. The sector specialist of the consultants presented the general and particular constraints in the project implementation such as remoteness of the area, non availability of the construction material in the required quantity, seismicity and the high cost of construction non availability of adequate land for the project facilities, non availability of topographical maps, the GIS layers, inadequacy of fund allocation for the project. Consultants ensured provision of all the facilities despite the land constraint particularly in Aizawl, Agartala for water supply and Dibrugarh for SWM by making two to three level structures. Seismicity response was improved by using base isolation technique by providing tar felt for base isolation which is cost effective.

8. In Agartala multi storied water treatment plant with spray Aerator flash mixer, clariffloculator, rapid sand filter is proposed.

9. Dibrugarh SWM site was too small with 1.95 ha under the possession of Dibrugarh Municipal Board and the possibility of transfer of adjacent plot of 3 ha totalling to 4.95 ha which is still much less than the minimum required for the purpose. However with proper planning, required facilities have been provided Consultants have suggested transfer points and not transfer stations as generally recommended for transportation of the waste after the primary collection to avoid accumulation of waste at the transfer stations and converting it to dumping ground.

10. Drainage improvement to reduce flooding is proposed by having an increased capacity of the drainage channel. At places where it is not possible to widen the channel cross section, bye pass channel below the existing road is proposed to ensure higher capacity.

11. Consultants have prepared community assessment report for all the six project cities besides furnishing materials for preparation of IEC material. Community is willing to participate and get involved in the project but needs awareness about the project and their role in different phases of project Implementation. Data base for the voluntary organisations for the six project cities have been prepared and will be shared with the SIPMIUs. Disclosure plan for the projects have been prepared to ensure transparency.

12. Consultants shared with the participants their experience on the prevalent practice of procurement procedures followed in the states and the process of selection of the contractors for goods, services and civil works. The present procedure lacks transparency and provides adequate opportunity for intervention in decision making by politicians and bureaucrats. The package of work is often split into many smaller packages which are generally not in the interest of the project implementation Works are being executed with decade old prevailing clauses in the bid documents, not being updated with respect to the changing working scenario as a result of which competent contractors are reluctant to participate. The state of Assam has adopted E- tendering system in procurement, thereby taking a step forward in exhibiting its commitment towards transparency in procurement.

13. Project sustainability is the key objective of any project. Consultants prepared eight DPRs for six project cities and ensured that the proposals contained in the DPR are sustainable for which detailed financial analysis was made to test the viability, feasibility and sustainability of the project besides assessing the credit worthiness, repayment capacity examining the financial burden and preparing the Financial Operating Plan(FOP) for the Union, states and ULBs. The union and project State Governments have the credit worthiness and repayment capacity of Principal and interest. The impact (before and after) and Financial burden of proposed loan from ADB on finances of union and state governments are insignificant and negligible.

14. Consultants have assessed the Finance Accounting and Auditing Requirement of the project and have detailed out the same in the Operational manual. The manual describes the flow of fund to the project and operating the bank account by SIPMIU as well as the manner in which the accounts shall be maintained by SIPMIU on double entry book keeping principles on cash basis of accounting. All income and expenditure is recognised on cash basis and project financial statements are accordingly prepared. The project financial statements that are required to prepared, maintenance of accounting records and financial procedures to be adopted and auditing requirement both internal and external to be conducted were shared with the participants.

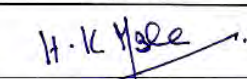
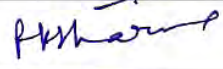
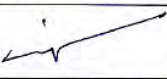
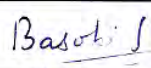

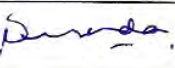

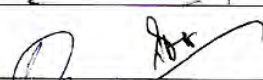
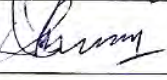
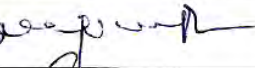
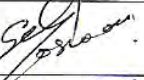
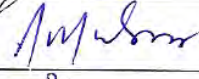


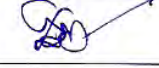
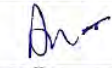

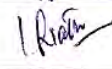

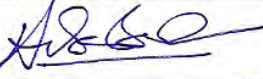
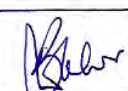
15. Participants from the six project states interacted with the sector specialist and sought clarification on the presentation made during the day, which is summarised below:


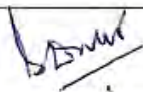
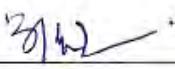

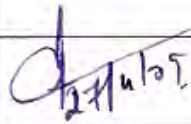

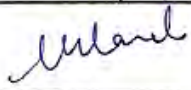

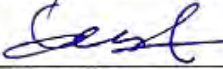


- i. The states sought clarification as to the assistance if any required on the project designs and bid documents after 30/11/09 when the term of the consultants is over. The consultants clarified that assistance if any can be had from the sector specialists even after November since they volunteered to give advice informally if any sought by the SIPMIUs. Assistance of Design Supervisory and Management (DSMC) may also be sought as and when they are in place.
- ii. The State representatives from Meghalaya, Nagaland, and Tripura stated that fund allocation was much less as compared to the works included in the tranche1. The consultants clarified that the bid documents were made according to fund allocation for tranche1 and there is a mismatch between the fund allocation and that required for the projects under tranche 1 for the above three states.
- iii. In regard to domestic waste collection it was explained that the cost of polythene bags have to either borne by the ULBs or the individual house holds and it can not be built into the project cost.
- iv. The participants reiterated the role of the community the NGOs the CBOs in project implementation and their willingness to participate and get involved. To facilitate their engagement it is necessary that an awareness programme may be launched in all the project states. The consultants while endorsing their views expressed the need to have a separate budget for community awareness on the lines of environmental protection budget in the project cost estimates in future projects.
- v. On the project viability and sustainability of the projects the consultants confirmed that this can be ensured only if the suggestions made to generate additional revenue is duly considered and implemented fully
- vi. A few state representatives were not sure if the AG audit would have necessary trained manpower to conduct audit on the double entry books of accounts as being suggested by the consultants since they only do government accounting. It was made clear that for auditing of the project, accounts will be conducted both by the Chartered Accountants and AG Audit. AG Audit have been conducting the Accounts of the state owned corporations and have experience in the commercial accounting. All the project states have a number of Government companies, where double entry book of Account is maintained and the same is audited by A.G.
- vii. The participants were unanimous in recommending a capacity building programme in the project cities for the local population particularly the youth who may be trained for different trades that will be required for execution of the projects like surveying, plumping, welding, fitting and other construction trades. This will ensure availability of trained manpower and open up employment opportunities to the local people.

- viii. The state representatives also recommended a separate budget on the lines of environment budget for community awareness to be built into the cost estimated of the projects.

**AGENDA FOR WORKSHOP ON
PROJECT IMPLEMENTATION ON URBAN MANAGEMENT IN NORTH EASTERN REGION**

WORKSHOP SCHEDULE	
<u>27th NOVEMBER 2009 AT RAITONG BUILDING, SHILLONG</u>	
27th November 2009 (Registration)	9.30 – 9.45
WELCOME ADDRESS Ms. Bhupali Goswami, SMEC India Office	9.45 – 10.00
Inauguration of the Workshop, Mr.W.M.S Pariat, I.A.S, Chief Secretary, Govt. Of Meghalaya,	10.00–10.20
Session I	
NERUDP Project Fund ing <i>Mr. K.S.Rathore, Staff Consultant, ADB</i>	10.20- 10.45
TEA	10.45 – 11.00 AM
Session II	
NERUDP Implementation <i>Mr. H.K. Mazhari, Team Leader</i>	11.00 – 11.15
Water Supply Projects <i>Dr. Rajeev Mishra, Water Supply Expert</i> <i>Dr. Nitish Das, Water Supply Expert</i>	11.15 – 11.45
Solid Waste Management in Project Cities <i>Dr. S.R.Shukla, Solid waste Management Specialist</i>	11.45 – 12.15
Improvement of Dibrugarh Town Protection Drainage <i>Mr. R.C. Borah, Drainage Development Specialist</i>	12.15 – 12.45
LUNCH	12.45 – 1.30 PM
Session III	
Community Participation & Development Dr. Basobi Sheel, Community Participation/ Dev. Specialist	1.30 – 1.45
Procurement Environment in North East Mr. S.C.Goswami, Procurement Specialist	1.45 – 2.15
Financial Management & Operation System in North East Dr. M.N.Rao, Financial Management Specialist Mr. Arindom Barua, Project Accounting Specialist	2.15 – 2.45
TEA	2.45 – 3.00 PM
Interaction with State representatives on Project Implementation	3.30 – 4.45

ADB TA 4779-IND WORKSHOP ON PROJECT IMPLEMENTATION ON URBAN MANAGEMENT IN NORTH EASTERN REGION			
AT RAITONG BUILDING, SHILLONG			
27TH NOVEMBER '09			
Sl.No	Name of Participants	Designation	Signature
17	Mr. H.K.Mazhari	Project Management Specialist/ Team Leader, SMEC	
18	Mr. Rajeev Sharma	General Manager, SMEC	
19	Mr. Dipon Ghosh	Regional Manager- East & NER, SMEC	
20	Dr. Basobi Sheel	Community Participation Development Specialist, SMEC	
21	Dr. Rajeev Misra	Water Supply Expert, SMEC	
22	Dr. Nitish Das	Water Supply Expert, SMEC	
23	Dr. S.R. Shukla	Solid Waste Management Expert, SMEC	
24	Mr. Ramesh Chandra Borah	Drainage Development Specialist, SMEC	
25	Mr. Sushanta Paul Choudhury	Mechanical Expert, SMEC	
26	Dr. M.N.Rao	Financial Management Specialist, SMEC	
27	Mr. Subhash Ch. Goswami	Procurement Specialist, SMEC	
28	Mr. Prashanta Talukdar	Social Scientist, SMEC	
29	Ms. Bhupali Goswami	Environmental Expert, SMEC	
30	Ms. Sararina Nongkhlaw	Office Manager cum Project Accountant, SMEC	
31	Mr. Dhruba Jyoti Bharali	CAD Operator, SMEC	
32	Mr. Aribam Surjit Sharma	Field Engineer, SMEC	
33	Mr. Kangkan Ch. Barman	Field Engineer, SMEC	
34	Mr. Utpal Nath	Field Engineer, SMEC	
35	Mr. Joysen Mallick	Office Assistant, SMEC	
36	MR CA. ARINDOM BARUAH	Project Accounting Specialist	
37	Miss Banashila Wankha	Office Assistant.	

ADB TA 4779-IND WORKSHOP ON PROJECT IMPLEMENTATION ON URBAN MANAGEMENT IN NORTH EASTERN REGION			
AT RAITONG BUILDING, SHILLONG			
27TH NOVEMBER '09			
Sl.No	Name of Participants	Designation	Signature
1	Mr. W.M.S Pariat	Chief Secretary, Govt. Of Meghalaya IAS	
2	Mr. K. S. Rathore	Staff Consultant, ADB	
3	Mr. Biswajit Dutta	Director, SIPMIU, Shillong	
4	Mr. H Prasad	Additional Chief Engineer, PHED, Shillong	
5	Mr. S.R Chanda	S.E, PHED, Shillong	
6	Mr. B.J Dhar	Jt. Director, Urban Affairs, Shillong	
7	Mr. M. Kharkongor	Asstt. Urban (Planner), Shillong	
8	Mr. P.S Dkhar	Chief Executive Officer, Shillong Municipal Board	
9	Mr. F.B Chyne	Executive Engineer, Shillong Municipal Board	
10	Mr. Rampatlal Verma	Vice Chairman, Dibrugarh Municipal Board	
11	Mr. K Haralu	Director, SIPMIU, Nagaland	
12	Mr. Khupi Natso	Additional Director, SIPMIU, Nagaland	
13	Mr. Valbuanga	Project Director, SIPMIU, Mizoram	
14	Mr. Andrew Lalhruaia	Executive Engineer, SIPMIU, Mizoram	
15	Mrs. Helen Rodingliani	Executive Engineer, SIPMIU, Mizoram	
16	Mr. Ashim Chakraborty	S.E, Urban Development Department, Tripura	