

DETAILS OF PROJECTS FOR SHILLONG

(Based on feasibility studies conducted under Project Preparatory Technical Assistance TA-4348-IND during 2006. The details of the project will be finalized after preparation of the Detailed Project Reports for the different sectors)

1. Water Supply

1. **Source and Treatment Works and Distribution System:** ADB is of the opinion that no improvements in the treatment works are required as present capacity would be adequate. Augmentation of source on long-term basis is being implemented by PHED as part of the JNNURM program. PHED has indicated that Government of India is to provide for water augmentation and distribution in Shillong and support from ADB, if any, would be minimal. Since no specific information has been submitted by PHED, an evaluation cannot be conducted. If the proposed allocation of \$14-15 million was to be required, ADB would exclusively focus on the conversion of the existing bunched connections to a conventional distribution system.

2. Sewerage and Sanitation

2. **Sewerage System:** Collection and Treatment: The proposed components are subject to demonstrating that sufficient water has been made available (project sanctioned) in project areas and include:

- a) Provision of 6536 nos. service connections to households; residing within Zone I, comprising the densely populated wards of the SMB;
- b) Laying of primary (33 km), secondary (60 km) networks. The sewerage network shall be laid along the existing roads along stretches where conveyance through gravity is possible. Along stretches where gravity conveyance is not possible, the sewers are routed along the natural streams and nullahs; and,
- c) Construction of an STP of 15 MLD capacity at western side of Mawlai village using aerated lagoon system followed by up flow settling tank.

3. **Low Cost Sanitation Facilities:** The proposed components include:

- d) Under the community-upgrading component of the project, proposals are made for construction of community latrines on a pilot scale for communities presently lacking sanitation facilities. Community toilet blocks with 6 water closets each have been proposed at 6 'slum' locations;
- e) In addition, towards improving sanitation in slum areas, a provision has been made on a pilot scale to cover about 1000 households by providing assistance for conversion of pit latrines and pour flush latrines to flush latrines including connection to sewers. Extensive awareness campaigns towards sensitizing the communities on improved sanitation facilities are proposed through involvement of NGOs and dorbars.

3. Solid Waste Management

4. The proposals include improvement of (i) primary and secondary collection efficiencies, (ii) existing system for transportation of wastes, and (iii) treatment and disposal of wastes in accordance with SWHR.

5. **Improvement of Collection System:** Improvement of the existing SW collection system from 45% to 60% by 2014, through improvements in primary and secondary collection facilities and through an intensive community awareness and consultation program, in consultation with communities, dorbars and NGOs. The proposed components include:

- a) Introduction of house-to-house waste collection through source segregation on a pilot basis, initially to about 2000 households within the SMB area.
- b) Provision of 1000, 30 litre dustbins to be placed in public places;
- c) Provision of 2000, 25-litre household dustbins and 2000 Nos. heavy duty PVC bags to be used for segregation of wastes at source (non biodegradable);
- d) Provision of 250 wheelbarrows to be used by sweepers in the central areas of the city; and,
- e) Provision of 35 nos, 4.5 cum community dustbins to be used in areas where bell ringing or house-to-house service is not provided.

6. **Transportation Facilities:** Operational improvements of the existing refuse vehicles through incorporation of more vehicles with proper tipping and hydraulic loading/unloading arrangements.

- f) Provision of 5, medium duty tipper trucks for collecting the wastes from house to house with introduction of bell ringing system in the periphery areas to households along the main road;
- g) Provision of 7 new dumper placers for secondary collection. The medium tippers and dumper placers shall be used for carrying waste from the waste generating sources to transfer station; and,
- h) Provision of 6 large tipper trucks with 8-10 cu.m waste carrying capacity per trip. The larger tipper shall be used for carrying waste from transfer station to sanitary landfill sites.

7. **Garage and Transfer Station:** The proposed components include:

- i) Development of a transfer station at the existing disposal site at Mawlai towards increase in vehicle trips and area of coverage. The transfer station shall also function as recovery centre for segregation of biodegradable portions from the recoverable/ recyclables;
- j) Construction of new parking/garage/workshop facility at Mawlai (the existing disposal site) for accommodation and maintenance of 24 refuse vehicles. The garage shall also be used for maintenance of wheelbarrows and mechanized containers.

8. **Treatment and Disposal:** The proposed components include:

- k) Development of a new sanitary landfill site, with adequate leachate collection facilities and environmental protection measures.
- l) Provision of 2 bulldozers, 2 tipper trucks and 1 JCBs for disposal site;
- m) Provision of environmental protection measures and short-term sanitary landfill facilities (approx. 6 acres) at the present disposal site at Mawlai, as intermediate protection measures till the new sanitary landfill site starts operation; and,
- n) Introduction of weighbridges at landfill sites to track waste supply to compost plant and fuel consumption.

4. **Project Management and Capacity Development**

9. This will consist of the following:

- a) Safeguards compliance studies;
- b) Community awareness programs,
- c) Compost marketing studies;
- d) Non-revenue reduction programs, power and water audits;
- e) Support for completing migration to a double entry accounting basis system in Shillong Municipal Board;
- f) Support upgrading and training of the already completed GIS based property tax system;
- g) Private sector participation opportunities studies
- h) Water utility reform program focusing on asset management improvement.

5. **Tranche 1 Subprojects**

10. This will include:

- a) Support the establishment of short term landfill site at Mawlai's current site (subject to (i) concurrence being provided by the Pollution Control Board and (ii) identification and initiation of land acquisition/transfer process for long term sanitary landfill site) ;
- b) Design, construction supervision and management consultancy;

- c) Community awareness programs;
- d) Compost marketing studies.