

EXECUTIVE SUMMARY OF INITIAL ENVIRONMENTAL EXAMINATION OF SOLID WASTE MANAGEMENT TRANCHE-2 SUB PROJECT OF GANGTOK UNDER ADB ASSISTED NERCCDIP PROJECT

1. The North Eastern Region Capital Cities Development Investment Program (NERCCDIP) envisages achieving sustainable urban development in the Project Cities of Gangtok, Aizawl, Kohima, Gangtok and Shillong through investments in urban infrastructure sectors. NERCCDIP will be implemented over a six year period beginning in 2010, and will be funded by a loan via the Multi-tranche Financing Facility (MFF) of the Asian Development Bank (ADB).
2. The Executing Agency (EA) is the Urban Development and Housing Department (UDHD) of the Government of Sikkim (GoS); and the Implementing Agency (IA) is the Investment Program Coordination cell. The Project Management and Implementation Unit of the NERCCDIP is the State-level Investment Program Management and Implementation Unit (SIPMIU).
3. ADB requires the consideration of environmental issues in all aspects of the Bank's operations, and the requirements for Environmental Assessment are described in ADB's SPS (2009). This states that ADB requires environmental assessment of all project loans, program loans, sector loans, sector development program loans, loans involving financial intermediaries, and private sector loans.
4. This Initial Environmental Examination (IEE) has been prepared for the Gangtok Solid Waste Management Subproject, specifically for the (i) improvement of the waste collection and transportation system and (ii) construction of a new landfill and associated facilities. Rehabilitation and operation of the existing compost plant is not covered under the NERCCDIP.
5. An Environmental Management Plan (EMP) is proposed as part of this report which includes (i) mitigation measures for significant environmental impacts during implementation, (ii) environmental monitoring program, and the responsible entities for mitigation, monitoring, and reporting; (iii) public consultation and information disclosure; and grievance redress mechanism.
6. Detailed design has been prepared and the DPR was submitted to ADB in January 2011. Upon approval of DPR the bidding process will be initiated.. Construction work is likely to start in September 2011, and will take around 18 months. All civil works will be completed by February 2013.
7. The subproject location are located in the built-up area of Gangtok, the capital of Sikkim, a landlocked Indian state nestled in the Himalayas. Gangtok lies on one side of a hill. The city is flanked on east and west by two streams, namely Roro Chu and Ranikhola, respectively. These two rivers divide the natural drainage into two parts, the eastern and western parts. Both the streams meet at Ranipul and flow south as the main Ranikhola before it joins the Teesta River at Singtam. Terrain is hilly; most of the roads are steep, with the buildings built on compacted ground alongside them.
8. The subproject location is generally undulating but is not located in areas prone to

waterlogging, salinisation, and flash flood. There are no protected areas, wetlands, mangroves, or estuaries in or near the subproject location. Trees, vegetation (mostly shrubs and grasses), and animals are those commonly found in urban areas. The subproject location is not located in or near any historically-, culturally-, archaeologically- or architecturally-significant or tourists area.

9. Potential negative impacts were identified in relation to construction and operation of the infrastructure. A number of impacts and their significance have already been reduced by amending the designs thus no impacts were identified as being due to the project design or location. Mitigation measures have been developed to reduce all negative impacts to acceptable levels.

10. During the construction phase, impacts mainly arise due to dust generation and silt run off from landfill site, and traffic. These are common impacts of construction in urban areas, and there are well developed methods for their mitigation.

11. Once the system is operating, most facilities will operate with routine maintenance, which should not affect the environment. The area is isolated and hence direct impact to nearby environment is minimum. The main impacts of the operating solid waste management system will be beneficial to the citizens of Gangtok. They will be provided with proper collection; transportation and disposal of solid waste thus improve the quality of life of people as well as benefit individual and public health with improvements in hygiene. This will reduce the incidence of disease associated with poor sanitation.

12. There were limited opportunities to provide environmental enhancements, but certain measures were included. For example it is proposed that the project will employ in the workforce people who live in the vicinity of construction sites to provide them with a short-term economic gain; and ensure that people employed in the longer term to maintain and operate the new facilities are residents of nearby communities. Further, it is proposed to plant trees around the landfill site as green belt, to control pollution, improve the appearance and provide a small ecological gain.

13. Mitigation will be assured by a program of environmental monitoring conducted during construction and operation to ensure that all measures in the EMP are implemented and to determine whether the environment is protected as intended. This will include observations on and off-site, document checks, and interviews with workers and beneficiaries, and any requirements for remedial action will be reported to the SIPMIU. There will also be longer-term surveys to monitor the environmental quality of the sub project site and the health of the local people.

14. The stakeholders were involved in developing the IEE through face-to-face discussions on site and public meeting held in the city, after which views expressed were incorporated into the IEE and the planning and development of the project. The IEE will be made available at public locations in the city and will be disclosed to a wider audience via the ADB website. The consultation process will be continued and expanded during project implementation, when a nationally-recognised NGO will be appointed to handle this key element to ensure that stakeholders are fully engaged in the project and have the opportunity to

participate in its development and implementation.

15. Therefore the subproject is unlikely to cause significant adverse impacts. The potential adverse impacts that are associated with design, construction, and operation can be mitigated to standard levels without difficulty through proper engineering design and the incorporation or application of recommended mitigation measures and procedures. Based on the findings of the IEE, the classification of the Project as Category "B" is confirmed, and no further special study or detailed EIA needs to be undertaken to comply with ADB SPS (2009) or GoI EIA Notification (2006).