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Environmental and Social Completion Sheet (ESCS)

Overview

Project Name:	LUCKNOW METRO RAIL PROJECT
Project Number:	2014-0329
Country:	India
Project Description:	Construction of a 23 km metro line and purchase of a fleet of about 80 metro cars in Lucknow, Uttar Pradesh, in northern India.

Summary of Environmental and Social Assessment at Completion

EIB notes the following Environmental and Social performance and key outcomes at Project Completion.

In India, based on national legislation, metro rail projects did not require an environmental procedure and related clearance from the Ministry of Environment and Forest (MOEF). Nevertheless, the Promoter had voluntarily carried out an Environmental and Social Impact Assessment (ESIA) in line with EIB standards and prepared an ESIA report consistent with the requirements of the Indian EIA Notification, 2006. The final ESIA report were disclosed locally and on the EIB website.

The EIB loan financed the North-South Metro Corridor of 22.9 km, which included a stretch of 3 km underground rail and the rest elevated. The alignment mainly follows the central median of major road arteries in the city whilst in the most densely populated central area the alignment is underground. Station locations had been selected to maximise ridership and ease intermodal connections. Though this rapid transport system has significant beneficial impact on people's mobility in the city, it also has some impact on different environmental components.

The residual negative environmental impacts are modest and localised and are more than offset by the project's positive environmental benefits. The Promoter implemented the project in line with the agreed Environmental Management Plan (EMP).

Based on the information from the Promoter, the main residual negative environmental impacts of the project included: (i) fallen of 1,030 trees and transplanting 507 trees; (ii) finite use of scarce, sometimes carbon intensive, materials, (e.g. about 150,000 tonnes of cement); (iii) noise, vibration and visual intrusion for properties adjacent to the alignment; (iv) generation of about 2.1 million m^3 of waste material excavated from the tunnel in the middle of the city. and (v) the noise impact along the elevated part of the corridor. All other negative impacts were temporary and localised.

The main mitigants were as follows: (i) compensatory reforestation with more than 8,000 trees; (ii) various energy saving measures such as regenerative braking and use of solar panels; (iii) noise reduction measures (i.e. rubber dampers on the rails and use of a U girder for the elevated part of the alignment which acts in part as a noise barrier); (iv) disposal of waste in a regulated manner; and (v) monitoring of potential impacts of vibration.

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The project entailed some limited involuntary resettlement, for which the Promoter prepared and implemented the Resettlement Policy Framework (RPF) and Resettlement Actions Plan (RAP) accordingly.

A complete assessment of land acquisition and resettlement were prepared once the design and census of affected households for all sections was completed. The project involved the acquisition of about 3.9ha of private land at 34 pots, the rest 23.9ha were in public ownership. Altogether 25 families were affected in the priority section of 8.5 km and 30 families in the remaining section of the North-South corridor. All attempts were made during the final execution of the project to minimize land acquisition, resettlement and adverse impacts on people in the project area through careful localised engineering design. To avoid any disproportionate negative environmental and/or livelihood impacts on vulnerable groups, 24 identified vulnerable households were monitored, but none of them required additional financial or in-kind assistance.

The main positive environmental impacts of the project, resulting from reduced private vehicle use include reduction in local polluting air emissions, road noise and vibration; road safety improvements; and a modest reduction in greenhouse gas emissions.

No significant residual negative impacts were identified. To the best of EIB's knowledge, mitigation measures were implemented as prescribed in the project design and in the permit and no significant environment or social issues were raised.

Summary opinion of Environmental and Social aspects at completion:

EIB is of the opinion, based on reports from the promoter, that the Project has been implemented in line with EIB Environmental and Social Standards, applicable at the time of appraisal.