

Environmental and Social Data Sheet

Overview

Project Name:	CAIRO METRO LINE 1 UPGRADING AND RENOVATION
Project Number:	20160947
Country:	Egypt
Project Description:	The project consists of the rehabilitation of metro line 1 of the Cairo metro network. The rehabilitation includes the upgrading of the signalling system, the telecommunications system, the electromechanical system, the centralized control system and the power supply system. Parts of the tracks will also be renewed.
EIA required:	no
Project included in Carbon Footprint Exercise ¹ :	yes

Environmental and Social Assessment

Environmental Assessment

Compliance to local environmental legislation: The Egyptian Environmental Affairs Agency (EEAA), as the primary regulatory body responsible for environmental matters in Egypt, is in charge of coordinating environmental management in this country. It operates in accordance with the Law on Protection of the Environment (Law No. 4, 1994) and amendment by Law No. 5, 2009.

Law No. 4, 1994 categorises projects in accordance with the predicted environmental impacts that a potential project could have (white list – category A projects – for projects with minor environmental impacts; grey list – category B projects – for projects that may have substantial impacts; and black list – category C projects – for projects that may have potential severe impacts).

According to this law, an EIA needs to be carried out for both new projects and the expansion of existing infrastructure, i.e. for category B and category C projects. Since the project consists of the upgrading and renewal of an existing metro line, it falls under category A (renovation of a project) and therefore needs no EIA.

If the project was implemented in the EU, then it would fall under Annex II of the EIA Directive, which means that a screening would be required by the Competent Authority. The Bank therefore requested the promoter, i.e. the National Authority for Tunnels (NAT), to ask for a screening from the EEAA. EEAA issued a screening out decision in January 2018.

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

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On request of the lenders, a social and environmental audit of current line 1 operations has taken place, and on basis of this audit an Environmental and Social Action Plan (ESAP) has been drafted, to the satisfaction of the Bank. The promoter undertakes to implement this ESAP.

Environmental impacts during construction

Negative impacts and mitigation

Construction activities will result in some community disturbance and nuisance, mainly:

- Noise. Works will mainly take place at night and inside the railway corridor. The contractor will be required to keep noise nuisance to a minimum, and supply the ear protection material to its workers. Noise levels from ballast placement will be measured and monitored regularly.
- Dust will be minimised by transporting the excavation/construction materials with licensed and sufficiently equipped vehicles with a suitable special box or provided with a cover to prevent loose particles of waste and debris from escaping into the air or dropping on the road. The Contractor will be required to do air and noise emissions monitoring during the construction phase and implement project dust control procedures.
- Project-related traffic. Most construction traffic will take place during the night. In case works have to take place during day time hours, the operation of the line may have to be suspended in some weekends or holidays. Given the heavy use of line 1, the promoter aims to minimise such closures but if such closures are required then alternative means of transportation will be made available.
- Recycling of material, and storage of possibly contaminated ballast. Disposal of excavation/construction waste will be to locations licensed by the local authority, in line with art 28, 31 and 33 of the law 9/2009. Hazardous waste will be collected in specific locations with clear warning signs and oral or written instructions for safety conditions. A Waste Management Plan for hazardous and non-hazardous waste will be developed and implemented by the contractor and its workers will be trained on proper handling procedures.

Positive environmental and social impacts

The following positive impacts are expected from the project implementation:

- Increased line capacity as a result of reduced headways between trains, resulting in more people taking metro services instead of private car or buses, and thus resulting in less traffic congestion, noise, air pollution, GHG emissions and less traffic accidents.
- Energy savings and improved air temperature in the underground stations due to the upgraded ventilation system. The air from the station will be recycled and filtered through an ionisation system to reduce and improve the quality of air re-entering the station compared to the old system where the air was 100% taken from the street to the station through ducts.
- Improved metro's operation safety, as without the rehabilitation the safety of metro operations would increasingly become at risk.

Environmental and Social Management System

For this project, the promoter will require the contractor to prepare and implement an Environmental and Social Management Plan (ESMP). The ESMP will outline the management programme to be further developed for the project and will address issues such

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as community relations, community safety, traffic management, waste management and E&S performance monitoring.

The current Environmental and Social Management System (ESMS) of the promoter is weakly developed. There is no formal Environmental Social Health Safety Policy yet but the promoter complies with all local legislation and maintains environmental registers, in accordance with article no. 22 of law No. 4, 1994 and article No. 17 and its executive regulations.

The promoter recently established an environmental department consisting of one manager, two engineers and two environmental specialists. For the proper implementation of the ESAP, the promoter undertakes to assign the responsibility for the implementation of the ESAP to one of its environmental specialists. In addition, technical assistance will be provided to assist NAT with the implementation of the ESAP and establishment of a project specific ESMS.

EIB Carbon Footprint Exercise

The project is included on the following basis:

Estimated annual greenhouse gas emissions (production of electricity for the operation of the additional metro trains) from the use of the project in an average year of operation over a 20 year assessment period:

- Forecast absolute (gross) emissions are 46,000 tonnes of CO₂ equivalent; and
- Forecast emissions savings are 36,000 tonnes of CO₂ equivalent.

The project assessment boundaries are:

- In the absolute case:
 - the 44 km long metro line 1;
 - the electricity consumed by the additional metro vehicle kilometres required to reduce the headway from 3.5 to 2.5 minutes, equalling about 2.5 million metro kilometres (225 meter long trains).
- In the baseline case:
 - diesel bus services replaced by additional metro services, estimated to equal about 5 million bus kilometres per year;
 - private car and taxi kilometres replaced by the additional metro services, estimated to equal about 273 million car kilometres per year.

The forecasts in the baseline and absolute cases are based on Services' project specific assumptions about the workload of the additional metro services (40% capacity increase) and energy efficiency of metro operations. In the baseline case, emissions from private cars, taxis and buses is included using project specific emission factors, equivalent to those passenger trips expected to shift from road to metro in the "with project" case.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost. These forecasts may differ from those of the Promoter or other IFIs due to different assumptions, boundaries and baselines.

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Social Assessment

The project is not expected to have a significant social impact as it is implemented inside the current railway corridor of metro line 1 and no expansion or spatial modification of tracks is foreseen.

Labour and Occupational Health and Safety

NAT currently has no general Occupational Health and Safety Management Plan (OHSMP). Therefore, a project specific PHSMP will be developed, which will include H&S training programme for all workers. One of the key risks is safety for workers, as implementation will take place while metro operations are ongoing. A safety management plan will be developed to prevent accidents.

The works contracts will comply with the national law on labour and the ILO obligations which have been ratified by Egypt. The promoter will be expected to incorporate Environmental and Social standards of the Bank into contractual arrangements with future contractors for the project. A project worker grievance mechanism will be implemented. These provisions should apply to the main contractors and subcontractors and will be monitored during the construction works.

It should be noted that the working conditions at NAT and ECM (the metro operator) comply with Egypt's labour law and the promoter undertakes to ensure that the Project's human resource policy is aligned with the Bank's requirements of non-discrimination and equal opportunity.

Land acquisition

The project does not result in any land acquisition or resettlement activities. There are also no adverse impacts on the livelihoods foreseen, as operations of the metro line will be continuing during implementation of the project.

Public Consultation and Stakeholder Engagement

Since this project does not require an EIA in accordance to the local EIA legislation and all works take place within the existing railway corridor, no formal public consultation is required according to the Egyptian law.

In December 2017, a Stakeholder Engagement Plan (SEP) for Upgrading Cairo Metro Line 1 was carried out. The SEP describes the engagement process undertaken so far, and list future actions. In preparation of the SEP, representatives of affected groups were consulted in particular workers in metro stations, drivers and metro users. The main conclusions of this consultation was that there is strong support for the project, as the poor state of much of the current equipment creates safety problems and affects the working conditions of staff. The low number of trains per hour results in overcrowding of stations and trains and this further slows down trains, as some of the passengers do not allow the doors to close. Also the poor ventilation in the underground stations was mentioned as a key problem and the scope of the project therefore includes renewal of the ventilation systems.

In addition, the promoter and the metro operator participate in monthly meetings with various involved ministries and departments responsible for Grievance mechanism to disclose and

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discuss operations on line 1 and the progress of the rehabilitation project. Key information is also disclosed on the NAT website.

ECM, the operator, has an effective system for receiving grievances from the passengers of the metro, whether through hotline, what's-app or Facebook. Grievances can also be received by mail and e-mail at the NAT's address and official website. All grievances are registered and the policy is to acknowledge within 6 working days and respond within one month. A separate grievance mechanism is available in the same manner for workers, including employees of both the project-employed and contractor.

The ESAP and the SEP will be disclosed on the EIB's website.

Conclusions and Recommendations

The project is implemented inside the existing railway corridor of line 1 and the works do not include major civil structures; the environmental and social impacts are limited. The usual mitigation measures in terms of noise, dust, project related traffic and waste management will be applied.

The Promoter will establish an ESAP and SEP that is satisfactory to the Bank before the first disbursement of the loan, and will undertake to implement it. The ESAP will include provision of a project level E&S and OHS policy, require inclusion of ILO conventions in the contractual documents for works, provision and implementation of an ESMP, and implementation of the Stakeholder Engagement Plan.

A technical assistance project is planned to assist NAT to implement the ESAP and to provide training to NAT and ECM staff. NAT will undertake to assign the responsibility for the implementation of the ESAP to a qualified staff member and allocate sufficient resources to ensure timely implementation of the ESAP.

The promoter will update the Bank before each disbursement on the implementation of the ESAP and confirm compliance of contractors and subcontractors with the ESAP, to the satisfaction of the Bank.

With these contractual conditions in place, the project is acceptable for EIB financing in E&S terms.