European Investment Bank

Luxembourg, 20/09/2023

Environmental and Social Data Sheet

Overview

Project Name:	ALEXANDRIA ABU QIR URBAN RAIL PROJECT
Project Number:	*2018-0765*
Country:	*Egypt*
Project Description: in Alexandria, Egypt.	Construction of the 21.7 km long, mostly elevated Abu Qir metro line
EIA required:	yes
Project included in Carbon Footprint Exercise[1]:	yes

(details for projects included are provided in section: “EIB Carbon Footprint Exercise”)

Environmental and Social Assessment

The project will turn the existing Abu Qir suburban railway line into a modern and efficient metro service with much higher transport capacity, speeds and comfort. The project scope includes construction of a new 21.7-kilometer, 100km/hr design speed, double-track, electrified metro line and the required systems, power supply, and related utility diversion, as well as purchase of 22 nine-car long metro rolling stock units. About 16 km of the metro is elevated, the remainder at grade. The metro will have 20 new metro stations, some located at the location of existing train stations, others on new locations. The project Promoter is Egypt’s National Authority For Tunnels (NAT).

Environmental Assessment

Compliance to local environmental legislation: The Egyptian Environmental Affairs Agency (EEAA) is the primary regulatory body responsible for environmental matters in Egypt. It operates in accordance with the Law on Protection of the Environment (Law No. 4, 1994) and amendment by Law No. 5, 2009. According to the EEAA the project falls under Category C, a project for which it is compulsory to submit the full Environmental and Social Impact Assessment study (ESIA). Accordingly, an ESIA was drafted in 2020. Consultation meetings took place in the beginning of 2021, after which the ESIA was finalised in July 2021 and approved by the EEAA in January 2022. The ESIA includes an Environmental and Social Management Plan (ESMP) and the Promoter undertakes to implement this ESMP, among others by including it in the tender documents for the work and supply contracts.

Assessment of alternatives: The project will use the existing right of way of a railway line. The Promoter examined alternative vertical alignments, to achieve the required travel speed, reliability and safety. The proposed design includes elevation of about two third of the line, the only part not elevated is at the eastern end where the railway corridor is already well fenced off from the city and with few road crossings. Also for each station, the best location and building was assessed, and the new stations are therefore not always on the same locations as the existing railway stations. The project includes a new depot, and various alternative sites were

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

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assessed. The final location near Kafr Abdou station was chosen mainly due to land availability and distance to the metro line.

Environmental impacts and mitigation: Overall the project should have positive environmental impacts once in operation, as the metro line is expected to provide a clean and competitive urban mobility alternative, allowing people to shift from diesel rail, car or minibus to electrified metro transport. This will reduce traffic congestion and reduce the emission of noise and pollutants from traffic in dense urban neighbourhoods and the risk of traffic accidents.

The project is Paris aligned and contributes to climate action objectives, given its potential to reduce GHG emissions of the transport sector through modal shift towards electrified collective transport.

Given that the project is constructed inside an existing and operational railway corridor, environmental impacts are expected to be minor. Nevertheless, the ESIA notes that construction activities and also metro operations may result in some community disturbance and nuisance, and for these mitigation measures have been included in the ESMP.

- Noise and vibration during construction: a noise and vibration management plan will be prepared as part of the Construction Environmental Management Plan (CEMP), and in agreement with Alexandria Governorate and the project Promoter. The plan will outline the noise measures, acoustic barriers or other measures that will be adhered to. It will also outline what noise and vibration monitoring will be done during the construction. It is expected that construction will be limited to day time hours only. Before the start of construction, the exact vibration risk on nearby residential and cultural buildings will be assessed.
- Cultural heritage: Alexandria is an ancient city, and therefore there is a risk of damaging undiscovered archaeological remains, specifically in the areas that will require deep digging, such as needed for the viaducts. A chance find procedure would be drawn-up prior to construction start that addresses and protects cultural heritage finds made during the construction phase. Coordination will take place with the competent authority, ie Alexandria Antiquities Directorate.
- Visual impact during operation: During construction but in particular during operation, the project may impact upon the relaxing visual landscape of the Montazah Garden in Alexandria, as the elevated viaduct will be 4-5m higher than the Montazah Garden walls and thus visible from parts of the garden. To mitigate impacts, the design specifications require the final design of the viaduct and the station at this location to be in line with the cultural style of Montazah.
- Natural disaster risks: Although the city normally does not experience annual rainfall greater than 200mm, flooding does sometimes occur due to the lack of compatible infrastructure, the sinking ground-levels, and rising wave levels given the proximity of the coast. The risk of flooding in this case is limited as a large part of the new metro will be elevated, and the remaining at grade part will be on an embankment. Risks remain at the access to stations and at the depot, but this risk is mitigated by the drainage requirements in the design. Part of the project also runs through a high-seismic activity. A climate vulnerability assessment was made and the contractor is required to use earthquake-resistant construction techniques and implement climate adaptation measures. The project will be designed with an appropriate drainage system to protect the site against potential flooding from a one-in-100 year storm event.
- Protected natural areas: the project zone consists primarily out of artificial or man-made areas, and there were no observations of endemic or endangered species or rare species observed passing by or living in the vicinity of the project area. With regards to flora, the majority if not all the flora in the area surrounding the Abou Qir metro line are introduced species of trees and weeds. The only exception are the Montazah Palace and Gardens which contain a special habitat that attracts a list of different birds, either in their migration or as their primary habitat location. The project does however not cross the gardens and impacts are expected to mainly visual.

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EIB Carbon Footprint Exercise

With the project, the annual emissions in a standard year of operation were estimated at 27 kT CO2 equivalent per year (absolute emissions). Without the project, namely with the current mode split between private vehicles (including collective taxis) and public transport modes (buses, diesel Abu Qir train and tram), the annual emissions were estimated at 46 kT equivalent per year (baseline emissions). Therefore, the emissions savings for the project in a standard year of operation were estimated to be approximately (-) 19 kT of CO2 equivalent per year. These calculations are based on the assumption that energy for metro operations is sourced from Egypt's electrical grid.

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.

Social Assessment

The project is expected to generate important social benefits during operations by enhancing mobility and accessibility in Alexandria, and by reducing travel time and improving comfort and overall service quality for users. Access to a safe, reliable, and affordable public transport system has been shown to alleviate poverty, especially for women and serves as a catalyst for women's economic empowerment. Also, during construction and operation the project will contribute to local employment generation for both skilled and unskilled labour.

The design and planning phases have aimed to minimise as much as possible the acquisition and expropriation of lands and the related negative impacts on local communities. Some very limited non-residential private land purchase is foreseen at this stage (approximately 2 ha of vacant land), though most affected land identified is located within an existing and operational railway corridor, owned by Egyptian National Railways (ENR). Shops (8) and religious structures (13 small mosques) at the current train stations will be permanently affected and renters and their employees will be compensated. A small number of informal users (15 stationary informal vendors and 6 informal vendors) have also been identified at key locations in the railway corridor. During the construction, some livelihood activities may temporarily be impacted, as fences around construction sites may limit access and, as such, local business and street vendors may experience temporary loss of income due to reduced customer presence.

A Resettlement Action Plan (RAP) was completed in December 2022 and approved by the Promoter and lenders. The RAP identifies affected public properties and people, the relevant policy framework and compensation mechanism for both temporary and permanent impacts. The Bank's lending will be subject to compliance with the RAP and compliance with relevant EIB Social Standards.

Other potential risks related to the project are: labour policies resulting in poor working conditions during the construction; partial compliance with occupational health and safety standards; community health and safety risks; and risks of gender and sexual based violence. Compliance with these aspects is managed through a robust ESMP, which includes dedicated plans such as an Occupational Health and Safety Plan and an Emergency Management plan and requirements for contractors to comply with highest safety and security standards. Monitoring will be carried out by the Promoter and the supervision consultant.

The construction of the Abu Qir railway is expected to coincide in time with the rehabilitation of the Raml tram. Cumulative impacts of these infrastructure developments are expected to result in increased traffic congestion and disruption which has been identified as a source of concern

for both the Promoter and the Alexandria authorities. Additional bus services are planned to compensate for the temporary reduction of public transport services.

Public Consultation and Stakeholder Engagement

EEAA guidance recommends that public consultation should be held prior to the approval of Projects which need an ESIA study. Consultation was done in Mid 2021 during preparation of the ESIA, and again during the second half of 2021 when the ESIA was disclosed. Further consultation was conducted in April and May 2022, in the context of the RAP.

A stakeholder engagement plan (SEP) has been drafted and was approved by the Promoter in July 2021. During project preparation and drafting of the resettlement action plan, there have been consultations with government ministries and agencies, NGOs as well as with local community members through focus group meetings at the stations and in adjacent areas with tenants of shops, vulnerable groups and women.

NAT has an existing Grievances Mechanism established to provide a formal avenue for displaced persons and other affected groups or stakeholders to engage with the Promoter on issues of concern. Various channels of communication will be established to allow people to contact the Promoter and construction companies, including through NAT's office in Alexandria, the contractor's office, the Ministry of Transport, and representatives at the community level.

Other Environmental and Social Aspects

The environmental and social capacity of the Promoter is developing but remains weak, considering the high workload of the Promoter. However, the Promoter procured the support from an experienced Supervisor Engineer who's responsibility includes beside work supervision also support with project management, environmental and social tasks. The Engineer will prepare a management system for the monitoring and control of environmental and social impacts during the execution of the works and carry out regular audits of the contractors performance.

Conclusions and Recommendations

The project was subject to an ESIA which was completed in 2021 and approved by the competent authority. The ESIA includes an ESMP that has been made part of all tender documentation and the Promoter will submit to the Bank the Environmental and Social Construction Management Plan of the main works contactor as soon as available. The Promoter approved a RAP that is acceptable to the Bank, and that includes commitments to monitor and audit its implementation and follow Bank standards. Implementation of the ESMP and the RAP are supported by experienced consultants.

The Promoter undertakes to assign the responsibility for the implementation of the ESMP, the RAP and the SEP to a staff member with adequate environmental respectively social expertise and Bank finance will be subject to continuous mobilisation of the Supervisor Engineer, with a terms of reference acceptable to the Bank. Prior to each disbursement to the Project the Bank will require proof that project implementation is in compliance with the ESMP and the RAP and that the grievance mechanism is operational.

The project will improve urban transport operations in Alexandria and is expected to reduce the emission of pollutants by the transport sector, as well as improve road safety. Considering the above, the project is acceptable to the Bank.