الهيئة القومية للأنفاق
NATIONAL AUTHORITY FOR TUNNELS
(NAT)
وزارة النقل

ARAB REPUBLIC OF EGYPT
MINISTRY OF TRANSPORT

99M – ALEXANDRIA REGIONAL METRO

ABOU QIR to MISR STATION

NON-TECHNICAL SUMMARY (NTS)

DRAFT REPORT

SYSTRA

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DRAFT REPORT

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A	07/07/2021	1st revision
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DEFINITION, ACRONYMS AND ABBREVIATIONS

Definitions / Acronyms

ACRONYM	DEFINITION
AAD	Alexandria Antiquities Directorate
AFD	Agence Française de Développement
AIIB	The Asian Infrastructure Investment Bank
APTA	Alexandria Passenger Transportation Authority
AW2	Added weight (simulating a load with some seated and some standing passengers)
CAA	Competent Administrative Authority
CBTC	continuous, automatic train control
CEMP	construction Environmental Management Plan
E&S	Environmental and Social
EBRD	The European Bank for Reconstruction and Development
EEAA	The Egyptian Environmental Affairs Agency
EIA	Environmental Impact Assessment
EIB	The European Investment Bank
ENR	the Egyptian National Railways
EPC	Engineering, Procurement and Construction
ESAP	Environmental and Social Action Plan
ESHS	Environmental, Social, Health and Security
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FGDs	Focus Group Discussions
GM	Grievance Mechanism
GRM	Grievance Redress Mechanism
IFI	International Finance Institutions
KIIs	Key Informant Interview
MOT	Ministry of Transport
NAT	The National Authority of Tunnels
NTS	A non-technical summary
OHS	Occupational, Health and Safety
PAP	Project Affected Person
PPHPD	Passengers per hour per direction
PR	Performance Requirement
PS	Performance Standards
RAP	Resettlement Action Plan
RF	Resettlement Framework
SEP	Stakeholder Engagement Plan
SEP	Stakeholder Engagement Plan
TOR	Terms of Reference

Abbreviations

ABBREVIATION	DEFINITION
CO	carbon monoxide
CO_2	carbon dioxide
km	Kilometre
km/h	Kilometre per hour
m	meter
mm/sec	millimeter per second
mn	minute
NO_X	Nitrogen oxides
p/m^2	Person per square meter
PM	particulate matter
SOx	sulphur Oxides
VOC	Volatile Organic Compounds

1. INTRODUCTION

1.1 Overview

The Abou Qir line suburban railway line, currently under the jurisdiction of the Egyptian National Railways ("ENR") will be transformed into a high capacity metro and The National Authority of Tunnels (NAT) will be responsible for the implementation and operation of the Project.

An Environmental and Social Impact Assessment (ESIA) study was carried out in line with the national Egyptian permitting requirements and to meet the lenders requirements, namely The European Bank for Reconstruction and Development (EBRD), The European Investment Bank (EIB), The Asian Infrastructure Investment Bank (AIIB)and Agence Française de Développement (AFD) who will finance the Project. This document aims at providing a Non- Technical Summary (NTS) of the main findings of the project.

Detailed information on the topics mentioned in this NTS are available in other ESIA documents, namely:

- Environmental and Social Impact Assessment Report (ESIA) including the Environmental and Social Management Plan (ESMP);
- Resettlement Framework (RF);
- Stakeholder Engagement Plan (SEP);
- Environmental and Social Action Plan (ESAP).

The Resettlement Action Plan (RAP) will be disclosed as per lenders requirements once completed. All the above documents in addition to this NTS can be accessed through NAT's website and on EBRD's disclosure website:

http://www.nat.org.eg/arabic/

1.2 Project Background and Justification

Alexandria is underway to start implementing two transportation projects; the first being development of the Al-Raml tram line, and the second to establish a 43-kilometer metro line from Abu Qir in east Alexandria to Burg al-Arab, in the west at a cost of US$2.5 billion[1]. According to the plan drawn up by the Ministry of Transport, the new Abu Qir metro aims to reduce traffic congestion in the coastal city streets.

The existing line suffers from the lack of daily maintenance and the operation condition is generally poor which influences the operating safety and efficiency. The infrastructure and rolling stock are also in a very poor state. The rolling stock fleet is small (6 trains used to operate the line), which also impacts the level of service of the line. At peak time, there is a train every 10mn and it takes about 50mn to go from Abou Qir to Misr. In the past few years, the number of services has dramatically

[1] https://egyptindependent.com/alexandria-to-launch-its-first-surface-metro-project-at-2-5-billion/

decreased, from about 200 services a day to a little over 100 services today, which has greatly impacted the ridership, estimated to 71,000 passengers a day.

The project will be implemented in three phases, the first of which includes relying on the current Abu Qir railway route which extends for 22 kilometers from Abu Qir to Misr station. The European Bank for Reconstruction and Development (the "EBRD"), together with the European Investment Bank ("EIB") and the Agence Française de Développement (AFD) and The Asian Infrastructure Investment Bank (AIIB) are considering providing finance to the Government of Egypt to finance first phase, namely, the upgrade and electrification of an existing rail line connecting downtown Alexandria and north-eastern Abou Qir into a high capacity metro system.[2]

Historically, the Abou Qir line was established as a suburban railway line under the jurisdiction of the ENR. Ownership will be transferred to NAT once the line is transformed into a high capacity metro and, NAT will be responsible for the implementation of the Project.

[2] EBRD Terms of Reference

2. PROJECT DESCRIPTION

Phase 1 of the Alexandria Regional Metro will not require the construction of a new corridor, rather the Abou Qir metro will utilize the existing train path between Misr Station to Abou Qir station and replace it with appropriate track to run the Metro.

2.1 Project Route and Alignment

The project's alignment can be split into three sections based on existing and proposed stations:

2.1.1 Section A- Abou Qir to Sidi Bishr

The first section starts at the Abou Qir metro station and includes a total of 3 level crossings and 1 car underpass. This section includes a total of 10 stations (Abou Qir, Toson, El Maamoura, El Islah, El Montazah, El Mandara, El Mandara, El Asafra, Miami, and Sidi Bishr) which will all be set on a viaduct except for Abou Qir station. All the stations in this section are existing and are currently operated by ENR for the Abou Qir train line, except for the Miami Station which is a new proposed station. The traffic circulation around the corridor within this Section is 2 lanes and due to the implementation of the metro as a viaduct, the maneuverability between lanes via crossings is expected to be enhanced once the metro project as the area beneath the viaduct becomes utilized for crossings and road expansions. The viaduct begins to pass through an urban congested area of Alexandria that will continue into Section B.

2.1.2 Section B- Sidi Bishr To Al Zahiria

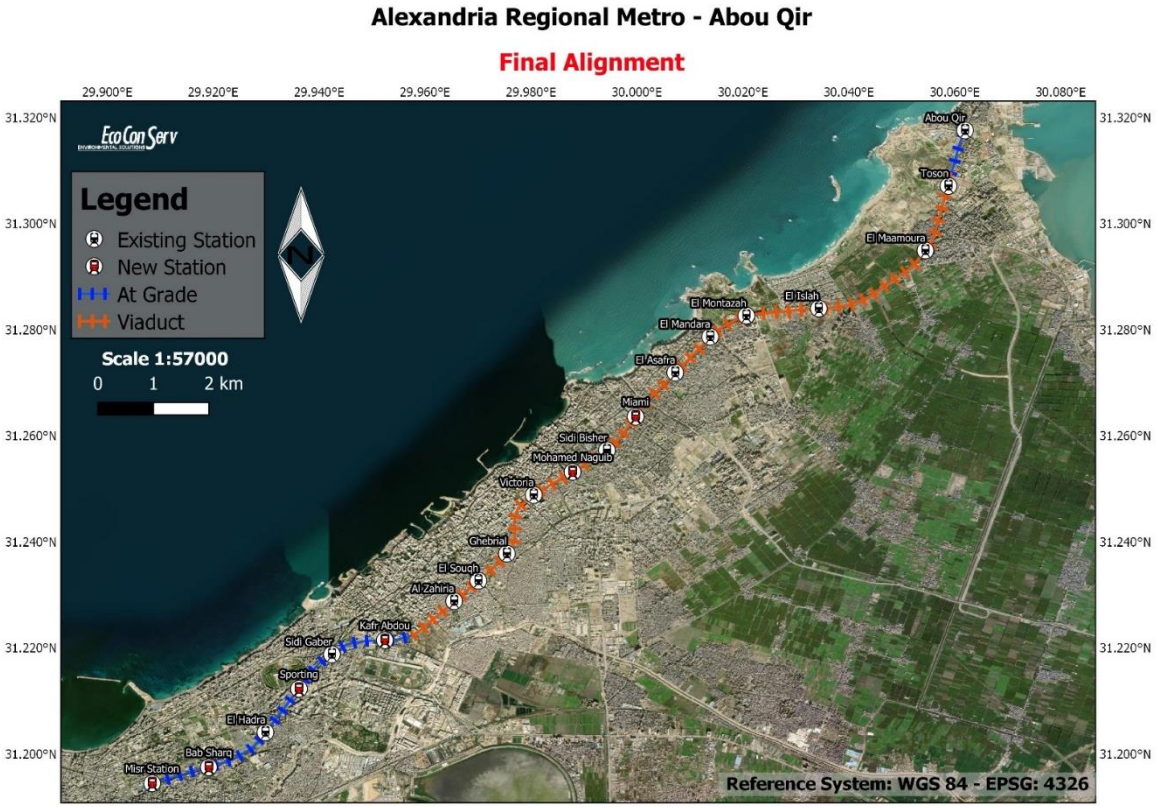
The second section starts at the Sidi Bishr elevated metro station and ends at Al Zahiria station. It includes six stations (Sidi Bishr, Mohamed Naguib, Victoria, Ghebrial, El Souqh, and Al Zahiria) and profile for this section is fully a viaduct. This viaduct passes through the most urban congested area of Alexandria. All the stations in this section exist and are currently operated by ENR for the Abou Qir train line, except Mohamed Naguib station which is a new proposed station (elevated).

2.1.3 Section C- Kafr Abdou to Alexandria Station

The final section starts at the transition between the viaduct from Section B to section C and ends at the newly constructed Alexandria Metro station that will be located near the Misr Train Station. It includes six stations (Kafr Abdou, Sidi Gaber, Sporting, El Hadra, Bab Sharq, and Alexandria Station) and profile for this section is fully at grade except for the initial transition between the viaduct to the at grade profile. This Section includes 4 newly constructed stations, with 1 being an additional station in the same zone as the Misr Train station (Alexandria Station). In this section, the metro line track will border the existing train track which diverts at Kafr Abdou Station.

This section includes the new Depot that will be constructed for Phase 1 of the Alexandria Regional Metro Project. The Depot will be located on an empty plot of land currently owned by El Nahass company and will be approximately 600m from the newly constructed Kafr Abdou Station (from the

center of the proposed Depot's location). There will be a separate track that can move the metro away from Kafr Abdou Station to the Depot. The map below shows the route from Abou Qir to Misr Station.



2.2 Project Staging and EPC Packages

For the Abou Qir Metro Construction and Reconstruction Activities, NAT has chosen the following Engineering, Procurement and Construction (EPC) packages:

- EPC 1
  - Signaling – Centralized Control – Telecommunications – Automated Fire Collection
  - Civil Works – Stations – Depot – Viaduct
  - Power Supply – Electrical and Mechanical – Workshop Equipment
  - Track Works
  - ENR Track Diversion
  - Public Utilities Diversion
  - Pedestrian Over/Under Passes at Stations
  - Fences
- EPC 1 – Lot 2: Rolling Stock
- EPC 2
  - Decommissioning of Existing ENR line between Misr Station and Abou Qir
  - Pedestrian Overpass and Underpasses between Stations
  - Traffic Over and Under Passes (bridge & tunnel for cars)
  - Public Utilities Diversion for Over /Under Passes
  - Temporary Fencing where appropriate

2.3 Construction Phase

The exact construction process and methods has not been finalized at this stage of the project, but the preliminary methods have been recommended and agreed. The construction process will be carried out in sections to avoid complete closure of the whole route. Construction Works

The decommissioning, construction, and reconstruction works include the following:

1. Decommissioning the train tracks and replacing them with metro tracks

The existing train tracks will be removed and replaced with the metro tracks. During this process, other electromechanical elements and power supply segments for the metro will be installed across the line. This will also include the enhancement and upgrading of the surrounding wall and fences. This contains the removal of all informal level crossings and closure of road crossings in accordance with the directorate for roads and bridges in Alexandria and the traffic management department of Alexandria. This will be done in Sections, to minimize the sudden impact on traffic in Alexandria's districts. Prior to the closure, some of the traffic enhancement projects that are directly associated with the project will be implemented to ensure a smooth transition from the train track to a metro track with no level crossings interrupting the corridor from Misr Station until Abou Qir station (level crossings to be migrated beneath the alignment once the construction the metro viaduct is completed). This segment of the construction process is not expected to have any utilities diversion since the train track already exists and is purely being replaced.

2. Decommissioning of Raml Train Station

As part of the phase 1 project, the decommissioning of al Raml train station will be conducted by stopping all operations of the train track and then closing the station's operations completely. After that, the station will either be demolished or reused for other purposes after reconstruction. However, this station will not be utilized for Abou Qir metro line.

3. Construction of New Proposed Stations

The project includes the construction of 5 new stations, with two of these new stations elevated on the proposed viaduct.

The process for construction the new stations will begin with closing the location off with a fence, decreasing soil permeability for excavation works and foundations works are initiated once excavation works and all the required surveys are conducted and analyzed.

Elevated stations will require thicker piles in comparison to the viaduct and larger pile caps for the foundation works.

4. Reconstruction for Existing Stations

The 15 other train stations that already exist, will either require the construction of additional sections or the reconstruction of the entire station to accommodate the metro track whether at grade or

elevated. Some stations might be slightly shifted within the alignment. All the existing stations in Section A and B will require reconstruction works to transform the train stations into metro stations,In addition, some of the at-grade stations will need to be elevated through the reconstruction process, with an example from Victoria station.

On the other hand, all existing stations in Section C will require additional construction of metro stations (El Hadra and Sidi Gaber), with adjustments made to the existing train stations.

5. Construction of the Viaduct

The Phase 1 for the Abou Qir metro includes the construction of one primary viaduct, as shown in Section A and in Section B. The construction approach adopted for the viaducts is to ensure that none of the surrounding shops and community are physically affected during the preconstruction, construction, and operation phase. It also ensures there is minimal disruption during the works. The Viaducts will have reinforced concrete piles that run repeatedly across a distance that is yet to be defined. Due to the soft soil characteristics in the project area, reinforced concrete pile caps will be constructed. The pile caps will support the crosshead beams which will be the primary load bearing elements for the viaduct's deck, which is expected to be primarily a steel slab spanning across the viaduct and accommodating the metro's track and electromechanical infrastructure.

During the construction of the Viaduct, the contractor will utilize the larger areas of the corridor where the ROW is larger than 15m to store materials and equipment, while in the narrower areas only construction works will be conducted with no active storage. The construction of the viaduct will include creating a temporary barrier between the surrounding community and the construction sites, that goes beyond the existing wall or fence.

6. Construction of the Depot and other Infrastructure

The Depot will be constructed near the Kafr Abdou station, where a special track will be constructed to allow the rolling stock to divert into the depot. The Depot exact layout and construction approach is yet to be decided as this will be part of the EPC contractor's role. However, the location of the Depot has been decided and the respective facilities as shown in Section C. The metro will also require the construction of other power and signaling construction works across the corridor, which will be during the track replacement. Other infrastructure includes power supply and control rooms, which will be in the same location as the Depot.

It is important to note that the proposed Misr Metro station of Alexandria will be a temporary station. Once phase 2 is implemented, the station will be decommissioned, and an underground station will be established under the name of El Shohada. The construction of the Misr station will accommodate this vision that is based on the initial 1997 study.

2.3.1 Equipment and Machinery

The construction equipment that will be utilized during the project vary from light and heavy equipment, with some specialized equipment considering that some elements will be constructed in very narrow locations of the corridor. Since this project is an EPC contract and the construction method has not decided, this sub section just provides basic equipment that would be utilized regardless the construction approach. The generic heavy equipment and machinery that will be used during construction include but are not limited to:

- Portable Cranes
- Tower Cranes
- Telescopic Cranes
- Jackhammer excavator
- Dump trucks
- Wheel Loaders
- Excavators
- Concrete Mixers and Concrete Pumps
- Bulldozers
- Pile Boring Machines
- Pile Driving Machines
- Boom Lifts and Forklifts
- Loaders

2.3.2 Specific Construction Activities

The specific construction activities identified include the following:

- Clearance of existing land including waste and vegetation removal
- Temporary sites used for construction works (material storage and equipment maintenance, etc..)
- Dewatering
- excavations
- Piling works and drilling fluid
- Material transport/haul
- Construction machinery
- Waste
- Wastewater
- Hazardous material/waste

2.4 Operation

NAT is expected to run a tendering process for the operation of the Abou Qir Metro, where one entity will be chosen to fully operate the Alexandria Regional Metro, with all Its facilities and maintenance procedures. This will be in an international tender and will follow the project implementation tender. The prospect contractual arrangements are yet to be finalized

2.4.1 Operational Characteristics

The Alexandria Regional Metro Phase 1 has a maximum inter-station traffic demand of 33,900 Passengers per hour per direction (PPHPD) and a commercial speed of 37.3 km/h.[3] All the phases of the Alexandria Regional Metro will have the same rolling stock capacity, with a total capacity of 2500 passengers and an Added weight (AW2) (7p/m^2 per NAT's standards). The metro is proposed to have an operational intermediate terminal station at El Mandara. The metro schedule is proposed to operate from 5am to 12am, providing a 5-hour gap between end and start of the operational day for the metro line.

The operational management of the Phase 1 Abou Qir metro will require an integrated operational management approach that include Safety, Regularity, Comfort and Safety.

2.4.2 Specific Operational Activities

The specific operational activities identified include the following:

- Movement of Metro
- People commuting by Metro
- Overhead power lines
- Maintenance activities railway track

[3] Operation and Maintenance Principles (Ref. 99M-SYS-T1-TPL-REP-GEN-0033-Rev.B1) – 19/01/2021

3. LEGAL AND INSTITUTIONAL REQUIREMENTS OF THE PROJECT

1) Applicable Egyptian Legislation

- Article 42 of Law 4/1994 amended by Law 9/2009 and 105/2015
- Annex 8 and Annex 9 of ERs (amended by Decree 1095/2011 amended by Decree 710/2012, 544/2016, 75/2017, 618/217 and 1963/2017)
- Law 202/2020 on Management of Solid Waste and Hazardous Waste generated from the project during generation, handling, transportation and disposal.
- Solid Waste Management Regulation 202/2020
- Ministerial Decree No. 44/2000 Decree of Law 93/1962 on wastewater
- Nature Protection Law 102/1983
- Traffic law 66/1973 amended by law 121/2008 and updated in 2018
- Law 144/ 2020 on the amendment of some provisions of Law No. 152 of 1980 establishing the Egyptian National Railways Authority ENR.
- Law 187/2020 on the amendment of some provisions of Law No. 10 of 1990 on the land acquisition for the public benefit
- Law 24/2018 on the amendment of some provisions of Law No. 10 of 1990 on the land acquisition
- Law 1/2015 on the amendment of some provisions of Law No. 10 of 1990 on the land acquisition
- Law 10/1990 on Property Expropriation for Public Benefit identifies
- Law 577of year 1954 and Law 27 of year 1956 for land acquisition
- Civil Code 131/1948: Article 802 – 805
- Law 117/1983 on the protection of monuments and antiquities
- Labor Law 12/2003
- Law 119/2008 on Unified Building Law and regulations related to archaeology
- Law 4/1994
- Law 84/1968 including its amendments on Law governing public roads
- Law 66/1973 amended by the Law 121/2008 and its Ministerial Decree 1613/2008 on Traffic management
- The new Egyptian Constitution

2) IFI Requirements

- EBRD Performance Requirements
  - PR1: Assessment and Management of Environmental and Social Impacts and Issues
  - PR2: Labour and Working Conditions
  - PR3: Resource Efficiency and Pollution Prevention and Control
  - PR4: Health & Safety
  - PR5: Land Acquisition, Involuntary Resettlement and Economic Displacement
  - PR6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
  - PR7: Cultural Heritage
  - PR10: Information Disclosure and Stakeholder Engagement

- EIB Standards
  - EIB Standard 1: Assessment and Management of Environmental and Social Impacts and Risks.
  - EIB Standard 3: Biodiversity and ecosystems.
  - EIB Standard 4: Climate-Related Standards
  - EIB Standard 5: Cultural heritage.
  - EIB Standard 6: Involuntary Resettlement.
  - EIB Standard 8: Labour standards.
  - EIB Standards 9: Occupational and Public Health, Safety and Security.
  - EIB Standard 10: Stakeholder engagement.
- AIIB Environmental and Social Standard (ESS)
  - ESS 1: Environmental and Social Assessment and Management
  - ESS 2: Involuntary Resettlement;
- IFC Performance Standards (PS)
  - PS 1: Social and Environmental Assessment and Management System
  - PS 2: Labour and Working conditions
  - PS 3: Resource Efficiency and Pollution Prevention
  - PS 4: Community Health, Safety and Security
  - PS 5: Land Acquisition
  - PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
  - PS 8 - Cultural Heritage

3) Permitting Requirements

Egyptian Permitting Requirements

The Competent Administrative Authority (CAA) is the licensing authority that is responsible for assessing the environmental impact of the establishment applying for a license in accordance with the elements, designs, specifications and conditions issued by the EEAA in agreement with the competent administrative body. The CAA for this project is NAT.

After completing the study in accordance with the General Principles and Guidelines by EEAA, the developer submits a copy to the competent administrative authority, along with a letter describing the nature and activity of the proposed project.

The CAA checks completeness and correctness of the documents and information contained within, against the relevant guidelines.

After reviewing the documents, the CAA will submit a formal application to the EEAA for review and evaluation. EEAA will submit the result of the evaluation within 30 days of receiving the study.

EEAA may request amendments to the study and additional mitigation measures, before issuing a final approval of the report.

The construction and operational management plans included within approved report is a legally binding obligation to the developer and need to be included in the contractor's scope of work within the tender documents.

IFI Authorization process

The subject Project falls under ***Category A***. Projects falling under this category are required to develop a full Environmental and Social Impact Assessment to evaluate any potential future environmental impacts associated with the proposed project, identify potential environmental improvement opportunities, and recommend any measures needed to prevent, minimize, and mitigate any adverse impacts.

Project owners are also required to make the ESIA publicly available for comment, in appropriate locations including at or near the project site. ESIA documents, including the executive summary and other tools used during disclosure, such as fact sheets on issues, prepared to increase understanding of issues in the ESIA.

4. ESIA AND PERMITTING PROGRESS

The ESIA package was reviewed by international lenders (EBRD, EIB, AIIB and AFD) to ensure that the documents are in line with requirements defined in Section 3 above. The documents have received clearance from the lenders side and are published on NAT's website and EBRD's disclosure websites listed in Section 1 of this NTS on July 10, 2021 for a duration of 120 calendar days prior to Board consideration in accordance with the most stringent lenders disclosure requirement.

The documents will in the coming phase be submitted to The Egyptian Environmental Affairs Agency (EEAA) who will review the ESIA according to the local legal requirements.

NAT is currently preparing for the public consultation event that will be carried out in Alexandria.

5. ESIA METHODOLOGY

In alignment with national and international environmental and social requirements, the consultant performed the following tasks to cover the scope of work of the assignment as follows:

- Task 1: Desk Review
- Task 2: Data acquisition activities
- Task 3: Analysis phase
- Task 4: Consultations
- Task 5: Impact Assessment
- Task 6: Identification of Mitigation Measures

An iterative process of information gathering and impact forecasting was conducted. The available reports were reviewed. In addition, consultations activities were undertaken to ensure the project is well consulted and disseminated. The relevant governmental agencies were contacted and informed of the project. Their cooperation and any other information including the potential issues deemed important and other concerns related to the project were obtained.

The available relevant documents and materials reviewed included the feasibility study that was prepared by Systra in 1998 and updated in 2020. Thereafter, site visits, field surveys, and interviews were carried out. This enabled the description of the existing baseline conditions of the project with a depiction of the project activities.

The study includes baseline assessment, prediction of the potential environmental, social and cultural resources impacts, proposing mitigation measures and the design of an ESMP.

6. ESIA FINDINGS

6.1 Project Benefits

6.1.1 Job Creation

The project will result in the creation of job opportunities approximately (1500 – 2000) jobs during the pre-construction and construction phases of the project depending on activities planned at each construction site.

The project activities will utilize engineers, skilled and unskilled labour, all expected to be residents of Alexandria Governorate. The majority of job opportunities to be created during pre-construction and construction phases will be temporary project-based jobs.

As part of the pre-construction and construction phases, many indirect benefits are expected to be sensed in the targeted areas due to the need for more supporting services to the workers and contractors who will be working in the various locations.

Increased economic activity in project area through the following supply chain:

- Implementation of works and provision of supplies related to construction, and closure of the site;
- Drivers and mini-bus owners will benefit from the transportation of workers;
- Provision of food supplies, catering, and cleaning services;
- Provision of building and auxiliary materials and accessories, engineering, installation and maintenance services;
- Provision of electronic appliances, communications and measurement equipment;
- Security personnel (trained and unarmed);
- Retail services; and
- Workers and engineers may need accommodation facilities.

The Abou Qir Metro Project is also expected to generate numerous job opportunities during the operation phase. While some of the jobs created will be under NAT, the majority of the opportunities will be operator-related. Given the absence of any information about the potential operator, it is not possible to estimate the number of job opportunities. Various job opportunities will be created, including drivers, conductors, maintenance workers and engineers etc. The created jobs will be of permanent nature.

6.1.2 Efficiency of the Transportation System (during operation)

The transportation system will be improved after the project is operational due to:

- Increased safety and reliability of the transportation service and,
- Reducing trip time as a result of increased travel speed and reducing operational delay.
- Train-related accident will be as low as reasonably practical on modern transport systems, which either involve derailments of the trains, and train to vehicle accidents will be prevented as there will be no level-crossings;
- Improvement of safety for rail transport will therefore benefit both women and men in terms of reduced injuries and fatalities;

- The daily commuting time will be reduced for users of these lines as a result of the modernized system. This may attract more commuters to using the metro rather than other modes of transportation, which will contribute to reducing car traffic congestion and air pollution resulting vehicular emission.
- The diversion from public transportation to the Metro leads to a decrease in mileage travelled by gas or diesel motor vehicles, the reduction of air pollution, and reduction of greenhouse gas impacts and a reduction in the number of accidents.

6.2 Main negative impacts and management measures

The ESIA study results showed that the Project will result in certain environmental and social impacts during both the construction and operation phases. These impacts however, will be mitigated by good engineering design and sound construction and operational practices. Mitigation measures have been suggested in the ESMP to avoid and/or minimize the adverse impacts.

6.2.1 Air Quality

Movement of construction equipment, trucks transferring pre-construction and construction material/waste and piling of friable matter on sites, results in *fugitive dust emissions.*

Excavation works on the construction site along the metro route is expected to expose the predominant subsurface sandy soil layer in the project area, which, could, generally generate large amounts of dust. In the specific case of the project area, however, dust emissions are only limited to the surface top-soil layer owing to the saturated conditions of the sandy soil layers (subsurface sandy soil layers).

Dust emissions are however, inevitable during construction, and can result in elevated particulate matter *(PM10, PM2.5)* in ambient air within adjacent areas. Such impacts are especially pronounced in dry conditions during summer months.

Other sources of air emissions during construction include exhaust emissions from construction equipment and power generators, namely NO_x , So_x, *CO, PM and VOCs.*

To deal with the air emissions during construction, suitable measures have been identified in the ESIA process and will be implemented by the management plan. These include the need to use certified machinery and vehicles that is regularly maintained and dust suppression techniques.

6.2.2 Noise and Vibration Impacts

Construction equipment are the main source of noise generated during pre-construction and construction activities. Noise generated differs according to the powering mechanism of the equipment, i.e. Diesel-powered equipment and pneumatic impact tools generally generate noise that is higher than electric and hydraulic tools.

Construction noise and vibration are inevitable during pre-construction and construction and can affect sensitive receptors. The significance of the impact depends on the noise level produced and the distance of sensitive receptor from the source of impact. The main groups expected to be affected by construction noise and vibration are Construction Workers who are the exposed to the highest levels

of noise due to their direct presence within the noise sources proximity and Close communities along Sidi Bishr to Zahiria.

Since more passengers are being served, the project is also expected to cause additional crowding of vehicles such as cars and buses around the stations, thus resulting in indirect noise impact. For operational noise, the exact resultant noise balance will be modelled by the EPC Contractor.

Construction vibrations can cause soil settlement and can hence affect buildings that are in poor structural conditions. While vibrations can be expected all through the pre-construction and construction phases as a result of heavy equipment, it is mostly expected to be significant during demolition, decommissioning and construction as a result of piling, the use of jackhammers and movement of heavy equipment. Vibration could potentially affect buildings in the vicinity of the viaduct locations and the stations' construction.

While a building's response to ground borne vibration is affected by numerous factors, including the type of foundation, underlying ground conditions, the building construction and the state of the building, the damage threshold criteria should not exceed 15mm/sec in the low frequency range and 20mm/sec at frequencies of 15Hz and to 50mm/sec at 40Hz and above to avoid cosmetic damage to buildings4.

It is also anticipated that noise emissions will be generated as a result of rolling noise, Aerodynamic noise, Traction noise, as a result of movement over a viaduct and maintenance operation. Other sources of noise expected can occur as a result of horns and noise generated from passing trains (shunting noise).

Mitigation measures have been identified in the ESIA process and will be implemented by the management plan.

For construction noise, these include measures such as the need to use construction equipment that is compliant with legal and IFC noise limit requirements, adherence to construction during day hours to avoid nuisance and ensuring the use of proper PPE by construction workers.

Before the start of construction, the Contractor will Assess the exact vibration risk on the close residential and cultural buildings and estimate all possible damage that could result during construction.

In addition, a noise and vibration management plan will be prepared within the construction Environmental Management Plan (CEMP) in agreement with Alexandria Governorate and NAT.

The plan will indicate in detail, according to best available noise measures, acoustic barriers or other measures that will be adhered to in addition to the noise and vibration monitoring plan that the awarded contractor will adopt.

To deal with operational noise, mitigation measures identified include the installation of noise controls for improved sound-proofing and other noise reducing features (e.g. engine enclosures and shielding of wheels with vehicle-mounted shrouds), considering the replacement of traditional jointed track

[4] According to British Standard 7385-2 Evaluation and Measurement for Vibration in Buildings. Guide to Damage Levels Arising from Groundborne Vibration (BS 7385-2). The damage threshold criteria presented in BS 7385-2 are based upon systematic studies using a carefully controlled vibration source in the vicinity of buildings.

with continuously welded rail, regular maintenance of wheels, periodic monitoring and adherence to appropriate Occupational, Health and Safety (OHS) measures.

6.2.3 Risk on Infrastructure and underground utilities

Construction at the crossings level will conflict with the water, wastewater and electricity networks.

To ensure the continuity of the service, it will be necessary to carry out a diversion of these utilities.

Therefore, during the pre-construction and construction phase, the risk of damage to such utilities is possible but minimal. This is applicable for stations, depot and viaduct junctions.

While interruptions to power and communication, disruption of water supply, discoloration of water from re-located pipes and sewer interruptions are expected during diversion activities, impacts of utility diversion on services will only cause a short-term concern to service recipients.

In case of lacking sufficient information on the available infrastructure, the contractor will perform exploratory drills to investigate the presence of underground utilities that may have been installed without accurate documentation and maps for its routes and depths.

To minimize inconvenience and risks on infrastructure, mitigation measures will include coordination between the contractor and the different authorities to determine the existing utilities (infrastructure) for sub- surface and overhead existing within the project's area to avoid any undue damage. All affected households / establishments will be advised well in advance of such a disruption in service and informed of the exact expected duration it is expected to last, as per the Stakeholder Engagement Plan. In addition, if any of the utilities breaking occurs, the site manager will quickly notify the nearest police department and the correspondent authority (according to the type of broken utility). The authority will repair the damaged parts as soon as possible.

6.2.4 Visual Impact in Montazah

During the construction phase, of the project structures and sections, visual impacts cannot be avoided as a result of dust, storage of wastes and airborne particulates .

During Construction, Large Machinery for the piles will bring about a significant impact to the relaxing visual landscape of the Montazah Garden. However, there are currently major renovation and enhancement works occurring in Montazah Park that are expected to be completed by 2022 or 2023. This means that the overall usage and impact would not be as significant since the metro viaduct construction and the park renovations are running in parallel.

During the operational phase, the AOI surrounding the alignment will be generally unaffected and in some zones, the visual impact during operation will be positive as the metro implementation will enhance the current poor visual condition along the alignment.

However, one location remains a main concern with regards to the expected change in scenic view, that being that of the Montazah Garden area. Considering that the area has a relatively calm and low congestion status, the introduction of the viaduct will cause major change to the visual landscape of the area.

Since the viaduct will be 4-5m higher than the Montazah Garden walls, the impact is expected to be largely contained in the initial zone of the garden and the buildings surrounding the garden. The impact on the buildings is low in terms of visual change and the impact on Montazah Garden will partially be mitigated by the tall Montazah trees and partially by the state of art design of the viaduct/station infrastructure to be in line with the cultural style of Montazah. The visual impact on the area is considered minimal.

To ensure that this area remains visually appealing, the operator and owner of the Abou Qir Metro Line will ensure that the viaduct and station are well maintained and clean, with the infrastructure exposed to regular maintenance to avoid deterioration and visually unappealing cracks or ageing of the superstructure.

6.2.5 Waste, ground water and soil contamination

Different types of waste are generated from construction activities including :

- **Non hazardous waste**, such as remains resulting from decommissioning of old train track gage, fasteners, crossties/sleeper, ballast, and drainage layer in the preconstruction phase, Construction demolition waste from old stations, Soil from excavation for stations foundations and municipal type waste
- **Hazardous Waste such as** empty containers of used oil/diesel, coating containers etc, different maintenance hazardous material, contaminated soil and asbestos inside building from the new Depot location and oil contaminated soils.
- **Human wastes** generated by construction labour collected from labour camps along the corridor locations. Disposal of sewage from construction labour, if not transported to adequate sites, will contribute, although to a relatively low extent, to the deterioration of water quality. It is therefore necessary that it is included in the contractor's waste management plan.
- **Water from** dewatering activities.

Accidental spills are also possible during maintenance and refueling activities.

Improperly managed waste causes aesthetic annoyance and hygiene situation deterioration on site. Waste and accidental spills can possibly cause temporary soil contamination and can possibly leach into groundwater causing its contamination.

Mitigation measures have been identified in the ESIA process and will be implemented by the management plan and include the preparation of waste management plan to ensure identification, quantification and proper management of waste.

6.2.6 Land related impact

Permanent land acquisition Impact

The route is an ENR property that will be handed over to NAT for the implementation of the Abu-Qir Metro Line. ENR has a large area of land properties along the project's railway line, and hence all construction works will take place on ENR properties. In some areas ENR land properties are insufficient for some project activities. As a result the project will require the acquisition of five sites, ownership which will be expropriated by a land acquisition ministerial decision for the public benefit in accordance with Law 10 /1990 and its amendments issued in 2020.

The five sites are the depot site, two plots in Bab Sharq station and two plots in Sporting station.

In addition to the above, (13) Mosques across the Abu Qir Metro line will need to be removed since they are built within the corridor and overlap with the planned project route . All mosques, however, are newly constructed, none of them is considered a cultural heritage asset.

Temporary land acquisition Impact

During construction the contractor will depend on ENR land available at the existing stations as a storage area for equipment and building materials as much as possible depending on the available area. In the case that it is not available, the contractor may need to rent a plot of land to allocate it for this purpose.

This will be done according to the principle of willing buyer willing seller (the contractor and the land owner), and through an official contract for a specific period, which will be renewed if needed.

Mitigation measures have been identified in the ESIA process and will be implemented by the management plan and include:

- *The* development of a Resettlement Plan (RAP) that will detail all activities related to land acquisition and livelihood restoration and propose an avoidance mechanism. In cases the land acquisition is un-avoidable, the RAP will propose corrective measures and discuss the corrective and remedial actions with the PAPs as well as local authorities and all relevant stakeholders, and share information about the compensation and economic restorations plan.
- A Grievance Redress Mechanism (GRM) will be made available to all Project Affected Persons PAPs, it will be part of the RAP.
- The number, status and eligibility of PAPs will be analyzed in the RAP once the footprint of the project (including new stations land) is further defined.
- Providing adequate assistance to the elderly, the disabled, and the illiterate, who are eligible for compensation

Temporary land acquisition outside ENR land will be allowed only as commercial transaction (lease or rental) – no expropriation will be implemented for temporary land acquisition.

With regard to mosques; The Ministry of Transport has coordinated with the Ministry of Endowments, which is the authority responsible for mosques in Egypt, and the Ministry of Endowments approved the removal of mosques in exchange for a compensation value (25,000,000 E.P.) allocated for the construction of other alternative mosques through the Ministry of Endowments;

Livelihood Impacts

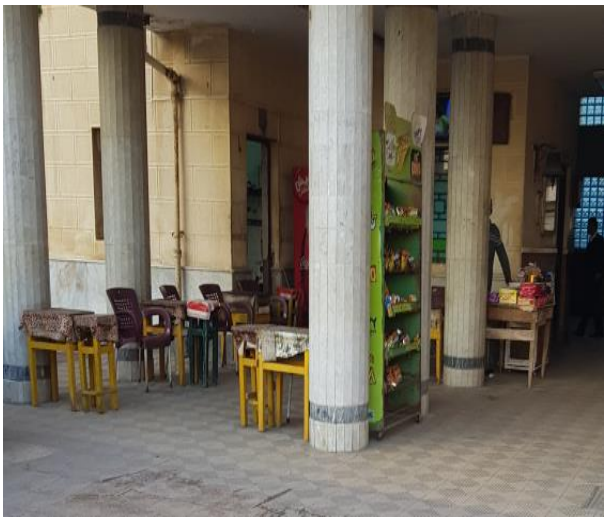
Permanent Livelihood Impact

The construction works of the project will affect the continuation of the tenants of the kiosks and cafeterias inside the stations. In addition to the informal economic activities inside the train corridor near the crossings and pedestrian openings.

The consultant made an initial inventory of the economic activities located inside the track, as well as identified the activities outside the track at the crossings level, it is as follows:

- Tenants of kiosks and cafeterias located inside the current stations, the number of kiosks (7) and (3) cafeterias, ENR rents them through the Ministry of Transport (MOT) Company for Investment and Development, which is responsible for the investment sector of the Ministry of Transport as well as ENR. NAT is currently carrying out official procedures to count all tenants for economic activities inside the stations.

Victoria Station



Abou Qir Station

Photos of the kiosks and cafeterias in the stations

- Stationary informal vendorss inside the railway track. Wooden kiosks used as stable (1), and smalls shop selling clothes / vegetables / food (11). They are found in the area between Asafra Miami stations, and Victoria Gabriel stations.
- Mobile informal vendors: Outside the railway track at the crossing levels, they are selling fruit / vegetables/ fish/ food …etc. The consultant was not able to count them, given that their number varies and they move from one place to another in the area, in addition that they are not on the regular presence every day.
- Shops outside the railway track, these shops are built on ENR property. ENR rents them through the MOT Company. NAT stated that the shops outside the railway track will not be affected by establishment of the project .

The construction activities may affect income loss / economic displacement (for about 22 PAPs according to the consultant's inventory). And according to the socio-economic survey, 12 of them have no legal right.

Temporary Livelihood Impact

Construction of the line will result in temporary livelihood impacts, where informal Mobile informal vendors are particularly active outside the railway track at the crossing levels and at the entrances of the stations, they are selling fruit / vegetables/ fish/ food …etc. The consultant was not able to count them, given that their number varies and they move from one place to another in the area, in addition that they are not on the regular presence every day. Mobile informal vendors are spread in the areas of Dhahriya, Sidi Bishr, Souq, Victoria, and Mamoura.

In cases of repossession of the leased lands ownership "ENR property" that is used or occupied by individuals for any economic activities;

- All PAPs (Legal / illegal) should be surveyed and included in the RAP study depending on the magnitude and severity of impact
- NAT should form a committee to estimate the magnitude of the impact on the PAPs as a result of income loss
- Consulting with PAPs who are tenants about their needs, giving them sufficient warning
- Providing adequate assistance to the elderly, the disabled, and the illiterate, who are eligible for compensation
- NAT should be offered alternative as much as possible
- NAT should be ensured that there are alternative sources of income for the tenants (trade, employment, etc.) other than the acquired shops.
- A GRM should be made available to all PAPs, it will be part of the RAP.
- Special attention should be given vulnerable groups related to impacts on livelihoods as a result of land acquisition; specially Stationary informal vendorss inside the railway track, the RAP study that will be developed for this project will give particular attention with respect to identifying and assisting vulnerable groups which include:
    - Identification of vulnerable people and identification of the cause and impacts of their vulnerability, either through direct interviews by the Project social worker or through the community; this step is critical because vulnerable people often do not participate in community meetings, and their disability/ vulnerability may remain unknown,
    - Identification of required assistance at the various stages of the process: negotiation, compensation, moving,
    - Implementation of the measures necessary to assist the vulnerable person,
    - Monitoring and evaluating continuation of assistance after resettlement and/or compensation took place.

6.2.7 Community Health and Safety

During construction, impacts on community health and safety are expected to result from emissions of gaseous pollutants and dust, increased background noise levels, and uncontrolled dumping of construction waste, in addition to:

- Safety risks to the public at or near the construction sites.
- Increased incidence of communicable disease e.g. COVID 19
- Personal safety and well-being impacts associated with increased traffic and worker influx.

Sporting to El Hadra – Section C

Zahiria to Kafr Abdou – Section C

El Souqh to Zahiria – Section B

Random market Near Al Mamoura station – Section A

Photos showing residential areas adjacent to the project sites

- Reduced accessibility to various facilities around the construction sites;
- Level crossings represent high-risk locations.
- Construction activities at level crossings will lead to complete or partial closure of the crossings to pedestrian and vehicles, causing increased traffic congestion, which will reduce accessibility to various facilities around the construction sites.
- Vulnerable groups most likely affected by construction activities at level crossings are the persons with disabilities, the elderly and children.

Crossing level Victoria to Ghebrial – Section C

Crossing level Mohamed Naguib to Victoria – Section C

Photos of some vital crossings located in Section C.

Mitigation measures have been identified and include preparing and implementing a Community Health and Safety Management Plan, carrying out a Job Hazard Analysis for all activities on site, preparing an OHS plan/Manual for risk management specific to the site and a Traffic Management Plan. In addition, the construction site will be fenced and guarded in order to prevent any unauthorized access to the site, Posting of clear and prominent warning signage at potential points of entry to track areas. A well communicated and accessible grievance mechanism for community members to address complaints needs to be available.

Negative impacts during operation will be limited to emergency accidents and fires that might affect the community people and the Metro users. There is also a risk on operations if there will be illegally dumped waste.

Mitigation measures identified include the use of modern metro signaling system based on continuous, automatic train control (CBTC) technology, preparing an Emergency Response Plan, carrying Awareness raising campaigns, Regular inspection and maintenance and developing a grievance mechanism.

6.2.8 Traffic Flow and transportation

The traffic impacts on the project are expected to occur during the construction phase of the project. Construction will disturb and delay the traffic flow that may affect the local communities and environmental conditions at the construction sites and may also directly or indirectly affect the surrounding areas.

The construction activities will result in the closure of the current Abu Qir train (Abu Qir metro). This will result in the closure of crossings, and the increased traffic burden on other urban streets. The traffic area of influence is expected to extend to traffic outside the area surrounding the project site; due to temporary traffic diversions.

The construction will cause the (Abou Qir) train to stop; this means that a vital and cost-effective means of transportation will be stopped for the residents of the surrounding areas, which will put load on the currently available transportation.

Management measures were identified and include the development of a traffic plan to provide the maximum safety to the population, project personnel and alternative roads.

Coordination with the concerned departments from Alexandria Governorate (Traffic, Alexandria Passenger Transportation Authority (APTA), Roads and Bridges) and NAT/ contractor, to achieve service continuity and traffic management to take mitigating actions before starting construction.

According to consultation activities with officials from Traffic, Roads and Bridges departments, traffic management plans and appropriate alternatives are currently being studied with NAT and the consultant SYSTRA, in order to avoid potential impacts on traffic flow in project areas and Alexandria Governorate in general.

6.2.9 Archaeological and cultural heritage

Alexandria is an ancient city, and it is a center for the convergence of different civilizations. The City therefore, houses numerous museums and monuments dating back to the different ages Pharaonic and Roman Greeks as well as the Coptic and Islamic monuments. This raises the chances of finding antiquities, especially in areas where excavation will be deep.

Many of the construction activities will be carried out on the railway track and on the old building sites. However, excavation works will be carried out for the stations, the depot and the viaducts construction. The maps and data from the Directorate of Antiquities showed the presence of some archaeological sites close to the project area in Sections A and Sections C. Accordingly, the following must be taken into account;

- The possibility of finding antiquities in the project area,
- Risk of damaging the undiscovered archaeological remains, specifically in the areas that will require deep digging (Viaduct) or in the areas designated for the construction of service facilities attached to the project, such as depot and stations.
- The impact of increased construction vehicle traffic on nearby cultural heritage sites
- The impact of vibrations on nearby areas or items of cultural heritage value.

The potential key impacts on archaeological and cultural heritage are mainly expected during the construction phase due to the possibility of finding antiquities in the excavation areas.

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 Alexandria Antiquities Directorate (AAD) before the construction (not less than two months, according to the interview results with the officials of the AAD).

7. CONTRACT MEASURES TO ENSURE EPC CONTRACTOR'S EHS PERFORMANCE

To ensure that the EPC contractor performs according to the requirements, contractual obligations will be added to the contracts, including the following:

1. **Environmental, Social, Health and Security (ESHS) Technical Specifications/Requirements**: NAT will set out the minimum expectations of ESHS performance as indicated in the management and monitoring plan. These will be included as contractual clauses in the works contracts to ensure that the performance of certain tasks (e.g. compliance with noise limits, air emissions, etc..)
2. **Particular Conditions of Contract to include provisions which** will be part of works contract as contractual clauses - An example would be "The Contractor shall provide NAT with a written **ESHS** Policy and a project-specific **ESHS** Plan before the commencement of work".
3. **ESHS Performance Security**

   The successful Bidder/Proposer will be required to provide, in addition to the standard Performance Security, an ESHS Performance Security (the sum of the two "demand" bank guarantees, normally not to exceed 10% of the contract price).

4. **Key ESHS Personnel**

   Bidders/Proposers will be required to demonstrate that they have suitably qualified ESHS specialists among their Key Personnel.

5. **ESHS Reporting**

Contracts will contain specific ESHS reporting requirements that require

- ESHS incidents requiring immediate notification
- ESHS metrics in monthly progress reports.

6. **Ability to withhold interim payment**
   Contract will contain provisions allowing interim payments to be withheld where there is a failure to perform an ESHS obligation/noncompliance with ESHS Specifications and take timely action to reach compliance with (Environmental and Social) E&S requirements. Payments that are withheld either temporarily or permanently will be all or part of the payment specified for a line item in the bill of quantities, which in turn will be the payment due for a discrete portion of the total works. Client E&S personnel will work with the project manager and others as needed to arrive at the amount to be withheld.

8. COMMUNICATIONS

Stakeholder engagement is an integral part of ESIA good practice and is a statutory requirement of the national Environmental Impact Assessment (EIA) legal framework in Egypt and within under good international practice IFIs requirements. The consultation program for the Project is based on informed consultation and participation in line with good international practice requirements with affected people, and is designed to be both fair and inclusive. Consultation activities have been an ongoing process since the commencement of the ESIA study in November 2020.

Stakeholder consultation is an inclusive process for sharing information that enables stakeholders to understand the risks, impacts, and opportunities of a development or project, allowing them to express their views and articulate their perceptions towards it.

The stakeholder engagement activities were conducted with reference to EBRD PR10, IFC PS1, EIB's Standard 10, WB ESS10 and AIIB Standard 1. Throughout the various consultation and engagement activities, the work teams recorded the different reactions of the community and the governmental stakeholders towards the proposed project.

In addition, consultation activities followed the IFIs Guidance note to Stakeholder engagement, briefing note, COVID-19[5].

8.1.1 Stakeholder Consultation and Engagement during the ESIA preparation

- Consultation Methodology and Activities
  In terms of methodology, the consultation activities were conducted through the following methods:

- Scoping Consultation Activities in November 2020 to January 2021,
- A public consultation session will be held at a later stage with concerned authorities and project stakeholder.

- Scoping Consultation Activities

The Consultant carried out stakeholder engagement activities through the community engagement plan that has been developed for different Stakeholders. The consultation activities started in November 2020 and ended in January 2021. The study team conducted multiple site visits to the project area. In addition, field observations were organized at project activities points to define various stakeholders, and the potential impacts of the project, and carried out stakeholder engagement activities through the following methods: Key Informant Interview (KIIs) (30), Focus Group Discussions (FGDs) (22), Meetings (5), and scoping sessions (2).

The Consultant conducted consultation activities with;

[5]EBRD:https://www.google.com/search?q=1264-Stakeholder-engagement-covid-19-briefing-note-22-April+(1).pdf&rlz=1C1GCEU_enEG822EG824&oq=1264-Stakeholder-engagement-covid-19-briefing-note-22-April+(1).pdf&aqs=chrome..69i57.4794j0j7&sourceid=chrome&ie=UTF-8
EIB:https://www.eib.org/attachments/covid19_guidance_note_to_promoters_annex4_stakeholders_engagement_en.pdf

- local communities close to the project site
  - The potential[6] PAPs, whether from the tenants of the kiosks inside the stations, or the informal economic activities inside the train corridor
  - Mobile informal vendors at the crossings and inside the train corridor
  - Railway users
  - Community members and shop owners surrounding the project areas.
  - Imams of mosques which will be removed and members of the surrounding community.
- Governmental Authorities including:
  - Governor of Alexandria
  - District heads: Al-Montazah Awal District, Al-Montazah Tany District, Waset District and Sharq District,
  - Health Directorate
  - Dean, Faculty of Engineering - Alexandria University
  - Telecommunications
  - Electricity Transmission Company
  - Housing Directorate / Urban Planning
  - Alexandria Environmental Office
  - Alexandria Endowments Directorate
  - Roads and Bridges Directorate
  - Traffic General Directorate

The study team conducted multiple site visits to the project areas. In addition, field observations were organized at project activities points to define various stakeholders, and the potential impacts of the project. The aim of the consultation activities was to give a background on the project and its potential impacts during the construction and operation phases and to receive feedback from PAPs and local communities about the project as well as concerns, requirements, and recommendations.

Information disclosed included:

- The purpose, nature and scale of the project,
- The duration of the proposed activities,
- Potential impacts and respective mitigation measures;

8.1.2 Grievance Mechanism (GM)

The objective of a grievance mechanism procedure is to ensure that all comments and complaints from any project stakeholder are considered and addressed in an appropriate and timely manner.

Both NAT and contractors must be committed to avoiding, reducing, limiting and, if necessary, remedying any adverse impacts caused by their activities on local populations and on their social and physical environment. One of the tools for identifying, preventing and managing unanticipated impacts is a Grievance Mechanism (GM).

[6] The consultant did not receive the final inventory of the shops that will be removed; therefore, they were considered as potential until receiving the final inventory that includes the economic activities in the stations and the lands required to be expropriated to establish the depot, Bab Sharq and Sporting stations; will be included in the RAP.

The grievance mechanism will deal with suggestions, concerns, and grievances related to any issues arising from Project specific activities. The grievance mechanism is not designed to obstruct access to other judicial or administrative processes that are available under Egyptian law.

NAT Current Grievance Mechanism

The Current grievance mechanism is a participatory tool for the internal and external stakeholders, while it is a mandatory process for NAT. The procedure described in this document is extended to communities, all workers onsite, including permanent workers, casual workers, service providers, consultants, suppliers, subcontractors and external stakeholders, accessible to all workers, and at no cost and without retribution.

Although there are grievance mechanism for workers at the construction site (related to the contractor and is supervised and monitored by NAT, NAT's complaints channels are available to all parties concerned with the project.

- Grievance Tiers

The proposed mechanism is built on two tiers of grievances:

- First tier of Grievances: project level (on Site)
- Second tier of Grievances: On the level of NAT headquarter

If the aggrieved person is not satisfied with the decision of the first tier, he can raise the complaint to the NAT headquarter.

- Grievance Channels

The following are the main channels through which grievances will be received:

- Engineering representative on-site: It has not been identified yet
- NAT Website: Contact Us
- Direct mail to the Chairman of NAT: chairman@nat.org.eg
- Planning Department: pld@nat.org.eg
- Telephone calls (Landline): +20225743070
- Hotline: (16528) There is no hotline except general for Government Complaints
- Address: Cairo, Ramses Square – NAT building - ZIP: 11794 p. B 466
- The Government Complaints/ Portal: www.shakwa.eg one of the new channels for complaints in all sectors of the state.

All grievances will be addressed to the focal point whose contact details are as follows:

- Ms. / Eng. :Magdy Madany
- Address: Cairo, Ramses Square – NAT building - ZIP: 11794 p. B 466
- Telephone: +20225742968
- Email: magdymadany@hotmail.com

8.1.3 Stakeholder Engagement Plan (SEP)

The Stakeholder Engagement Plan (SEP) describes the effective method for NAT to interact and consult with identified stakeholders for Abou Qir Metro project, Alexandria Governorate.

Stakeholder engagement is the basis for building strong, constructive, and responsive relationships that are essential for the successful management of a project's environmental and social impacts.

Stakeholder engagement is an ongoing process that may involve, in varying degrees, the following elements: stakeholder analysis and planning, disclosure and dissemination of information, consultation and participation, and grievance mechanism. The nature, frequency, and level of effort of stakeholder engagement may vary considerably and will be commensurate with the project's risks and adverse impacts, and the project's phase of development.

The SEP includes a strategy to provide timely, understandable (in the form and language) and appropriate information to stakeholders and ensure that these stakeholders have the opportunity to express their views and make comments, and obtain timely and adequate responses to their concerns and expectations.

The SEP is a "living document" and will continue be updated throughout the ESIA process as new stakeholders are identified and based on learnings and information received in previous phases of engagement. It will contain engagement meeting minutes so that engagement is well documented and its outcomes are recorded and acted upon by the Project in its decision-making.

End of Document