

1 Executive summary

1.1 Introduction

The Egyptian National Railways (ENR) aims to modernize the railway line between Luxor and High Dam. The Export-Import Bank of Korea (Korea Exim bank) and Economic Development Cooperation Fund (EDCF) supports on the railway modernization of the 224km Luxor-High Dam section. This project is part of a wide-ranging strategic plan to upgrade the railway infrastructure in Egypt and its main objective is to replace the outdated mechanical signaling system by an electronic system. This is expected to provide more safety to the surrounding community through the replacement of manual-based mechanical interlocking with modernized EIS and railway communication systems to secure stable train operation control and supervision, increase train speed and facilitate communication between train operators and traffic control buildings.

This project consists of 53 stations and relevant infrastructure within the 224 km section between Luxor and High Dam. Through implementation of this project, 14 mechanical interlocking stations will be transformed to non-interlocking stations and 25 stations are planned to be upgraded to electronic interlocking stations.

1.2 Project description

(1) Location

The Luxor High Dam railway line starts at High Dam station in Aswan and passes through the following key stations: Aswan, Kom Ombo, Edfu, Esna and it ends at Luxor station. The following map shows the project area, as well as the governorate boundaries. The railway runs parallel to the Nile, but the distance to the Nile varies depending on the location. In Kom Ombo area for example, the distance from the railway track to the Nile can be as far as 8 km.

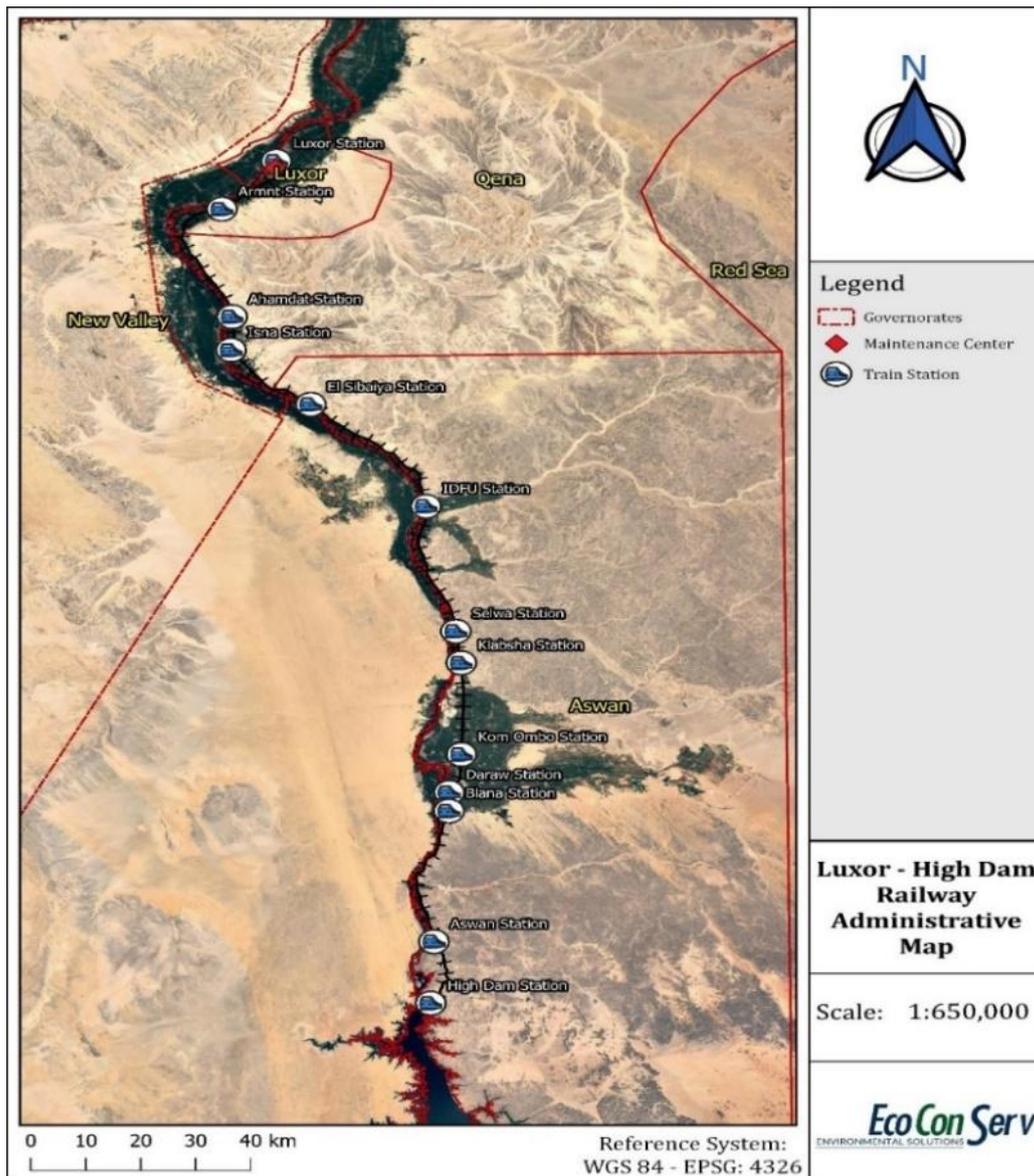


Figure 1: Luxor - High Dam Railway Line

(2) Main Project Components

The main works associated with upgrading the signaling system include:

(a) Railway System Modernization

- Railway Signaling Facilities
 - Field facilities (signals, electric point machines, track circuits, block system, equipment box, cables and cable route facilities, removal of existing facilities, etc)
 - Indoor facilities (Electronic Interlocking System (EIS), track circuits, power system, etc)
 - Level crossing facilities
 - Automatic train protection (ATP) wayside equipment: The ATP system is implemented by installing balises in the center of the track at the boundaries of the block sections
 - Centralized Traffic Control (CTC) at Luxor Station
- Railway Communication Facilities

- Transmission network facilities/equipment
- Train radio facilities
- Communication facilities for station
- A communication network consisting of conduits and cables that will be laid underground on each side of the railway and communication equipment
- Railway Electric Facilities
 - Electric facilities for supplying power to signaling system, communication system, control system, etc.
 - Building electric works for signaling/communication equipment room

(b) Railway Infrastructure Plan

The modernization activities will be implemented on the existing railway without route adjustment in order to avoid negative factors such as the purchase of additional land, excessive construction costs, and failure to secure safety due to construction during train operation.

As reported by ENR officials, all railway infrastructures will be constructed within ENR's property.

- Platform extension
 - The platform length at 17 stations has been found to be insufficient. Accordingly, and as part of the modernization activities, the platform at these 17 stations will be extended by 50 m on average. Associated activities include removing and installing turnouts.
- Slope reinforcement
 - In areas where the slope on the sides of the railway is not safe, slope reinforcement will take place by removing the soil from the top to achieve a slope that is less likely to collapse.
 - In addition, activities will also include reinforcing the stone embankments at some segments.
- Pipe-laying
 - The open-trench pipe-laying is planned on the left side of the track lower line and the right side of the track upper line. Since the pipeline depth is more than 1.4 m from formation level to the cable upper, the earth sections of embankment and cut are considered
 - The diameter of the conduit pipe will be more than 12.5 cm, and 4 pipes will be laid. Manholes will be constructed every 500 m.
- Track Rail
 - Rail replacement at a sharp curve area under 600 meters (belongs to an 18.5km section among total 224km) is adopted and reduce risk of train safety due to improvement of train speed. The rails will be further investigated during the construction phase and any rail found to exceed the maintenance limit will be replaced.
- Sleepers, rail fasteners, and turnouts
 - Sleepers at the high dam station will be replaced by concrete sleepers.
 - Turnouts that are not in good condition will be replaced.
- Appurtenant facilities

- Over bridges will be established for two major grade crossings that are expected to cause delays when passing vehicles
- The number of trains in operation per day will increase to 200 trips, and thus pedestrian bridges will be constructed in 17 locations where pedestrians cross the railway frequently and stations with relatively large numbers of pedestrian
- Safety fences shall be installed at 14 sections to restrict access to tracks, and illegal crossing by nearby residents. (The establishment of safety fences belongs to ENR funding project).

(c) Building Construction Plan

As reported by ENR officials, all buildings will be constructed within ENR's property.

- Centralized Traffic Control (CTC) Building

The CTC center will be operated to be integrated with front Nag Hammadi to Luxor section in order to establish a remote traffic control system. The CTC system will be composed of:

- Dispatcher room facilities
 - Operator console, which is a window-based Graphic User Interface (GUI) designed to allow operators or “dispatchers” to monitor and control the train operation status. Each console has its own control area.
 - Maintenance console, whose function is to monitor the data transmission/reception status of the CTC facilities.
 - Large display panel on which the following key information is displayed: track condition, route setting and releasing status, turnout switch and signal device status, etc.
- Equipment room facilities
 - Computer for train control, whose main functions are:
 - Automatic and manual controlling of train routes
 - Monitoring of delayed trains and suggesting actions or solutions
 - Train tracking and management of operation schedule
 - Supporting the GUI function
 - Computer for operation management, which compiles data and uses it to develop statistical data
 - Data transmission system
 - A programming computer to carry out simulations to test new functions
 - Power supply system

The CTC system will ensure complete management of train traffic and will allow for swift decision-making in the event of accident or deficiencies.

- Maintenance Centers (MC)

The maintenance center is a three-floor building consisting of a maintenance room, administrative offices, a training center and an educational center. Based on the designs available, the building is expected to have a footprint area of approximately 150 m².

- Electronic Interlocking System (EIS) buildings

The EIS buildings will be one of two types: type A or type B.

Type A is a two-floor building with a ground floor consisting of a diesel generator room, a local monitoring and control room, an 11-kV room, a transformer room, battery room, UPS and power supply room and public facilities. The first floor consists of an environmental control room, fire detection and extinguishing system, telecommunications room, signaling equipment room and public facilities.

Type B buildings are very similar to type A in their design, with very minor differences.

An EIS building is expected to have a total footprint area of approximately 408 m².

- Level crossings

Level crossings will be upgraded to an automatic type, which will consist of alarms, crossing gate (barrier), train approaching direction indicator and other elements. In addition, 70 level crossing shelters and 186 shelters will be constructed at each of the planned locations.

(d) Construction Stage

Construction activities will include, but will not be limited to:

- Removal of existing rails and buildings
- Removal of existing turnouts
- Installation of new rails and turnouts. This activity will be accompanied by welding operations and possibly replacing the ballast layer below the sleepers.
- Site clearing, excavation, backfilling and concreting activities for buildings construction. Buildings include the maintenance centers, EIS buildings and level crossing shelters.
- Trenching to lay the optical communication cables

1.3 Institutional and legal framework

The project will adhere to the national laws and to the Korea Eximbank EDCF Safeguard Policy.

National Laws and Regulations

- Law number 4/1994, and its amendments by Law number 9/2009 and 105/2015 about environmental protection;
- Decrees number 1095/2011, 710/2012, 964/2015, 544/2016, 75/2017, 618/2017 and 1963/2017 for the amendment of the executive regulations of the environmental Law number 4/1994.
- Law number 38 /1967 concerning the general cleanliness and its executive regulations.
- Solid Waste Management Regulation No. 202 /2020
- Labour Law number 12/2003
- Law number 48/1982 on the protection of the Nile River and the waterways from pollution and its executive regulations amended by Ministerial Decree No. 92/2013.
- Law 93/1962 regulating the discharge of liquid waste to the public sewage network. The executive regulations of this law were amended by Minister of Housing decree 44/2000.
- Nature Protection Law no. 102/1983
- Traffic law 66/1973 amended by law 121/2008 and updated in 2018
- Relevant conventions and agreements to which Egypt is a Signatory
- 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 577 of year 1954 for land acquisition
- Law 12/2003 on labor and workforce safety
- Law 137/1981
- Decree 458/2007 on drinking water quality standards
- Law 94/2003 on establishing the National Council for Human Rights (NCHR)

EDCF Safeguard Policy (2020)

Korea Eximbank, acting as the Economic Development Cooperation Fund (EDCF) operation agency, has prepared a Safeguard Policy in 2016, corresponding to the environmental and social sustainability.

As of July 1, 2020, Korea Eximbank updated the current EDCF Safeguard Policy for addressing environmental and social issues in project design, implementation and operation. With the 2016 EDCF Safeguard Policy continuing to apply to existing projects, the 2016 and 2020 safeguard policies will run in parallel for estimated ten years.

Korea Eximbank will take into account variables such as host country context, the scale and complexity of project impacts, and the associated cost-benefit considerations, as well as those of project performance beyond the level required in the EDCF Safeguard Policy.

In order to enhance transparency of environmental and social impact policies, the EDCF Safeguard Policy was revised in July 2020 and is being applied. The environmental and social risk categorizations were subdivided into four grades as Category A, B+, B, C, and differentiated from the submission of the environmental and social impact assessment report by each categorization, and for Category A (High Risk) projects, environmental and social risk could be reviewed in advance and reflected before project approval.

This Luxor-High Dam railway modernization project is a signal, control, and communication facility modernization project for 224km of the project area. It was classified as an environmental/social impact risk (Category B) when applying the EDCF Safeguard policy during F/S, however ESIA is carried out by applying Category B+ considering the impact due to the increase in train frequency and speed by the project.

1.4 Environmental and social impacts

(1) Potential positive impacts during the construction phase

(a) Creation of Job Opportunities

The project is expected to result in the creation of job opportunities, both directly and indirectly. Several variables influence the number and type of workers required during the construction process. The local community could provide a proportion of this temporary labor force depending on skills needed and the strategies of the individual contractors in sourcing their workforce.

As part of the construction process, due to the need for more support services to the workers and contractors who will work in different places, many indirect benefits are likely to be sensed in the targeted areas.

(2) Potential positive impacts during operation and maintenance phase

The project will result in several positive impacts during the operation and maintenance phase, such as:

- (a) Potential reduction in emissions as some car traffic will be diverted to rail due to the expected increase in train speed and frequency may potentially result in an overall reduction in air pollutants.
- (b) Potential time savings
- (c) Improved train operation safety and reduction of accidents caused by human error or failure of the existing outdated signalling system now in use on the line
- (d) Improved operation safety of the level crossings along the line
- (e) Improved railway service to the low-income public as well as freights
- (f) Potential economic growth as a result of increased freight transportation

(3) Negative Impacts during Construction and Operation Phases

The Egypt Luxor-High Dam railway modernization project is planned to utilize the existing railway without route adjustment in order to avoid negative factors such as the purchase of additional land, excessive construction costs, and failure to secure safety due to construction during train operation. Thus, the environmental and social impacts are anticipated less compared to other new and realignment railway projects.

The potential negative impacts assessed during all phases of the project are summarized in the following table:

Receptor/ EHS Aspect	Potential Impacts	Impact Significance
Impact During Construction/Modernization Phase		
Gaseous and Dust Emissions	<p>Air quality will be impacted by:</p> <ul style="list-style-type: none"> - Dust emissions from excavation, backfilling, site levelling, ballast loading and unloading at some sections which may require rehabilitation, transporting dispersible material and storage of raw material on site. - Exhaust emissions from heavy construction equipment, generators and rail welding operations. <p>These impacts tend to be limited to working hours</p>	Moderate
Noise and Vibration	<p>Noise and vibrations will be generated by all construction activities that rely on heavy equipment such as site clearance and preparation, excavation and removing & lifting old railway components.</p> <p>The impact is mainly on the construction crew, but can also extend to nearby communities depending on the location. Some potential construction sites are very close to residential and commercial areas. However, most of these areas already suffer from high traffic noise and may not be feel a significant change in noise levels during the construction stage.</p>	Moderate
Water Resources	<p>Surface Water: The main risk is on irrigation canals. The majority of the railway line is far away from the Nile, often by a few kilometers.</p>	Moderate
	<p>Ground Water: The groundwater table is high in some of the project areas, especially in Luxor. Thus, it is possible that groundwater may be contaminated by chemicals or by wastewater from the contractor's offices.</p>	Moderate
Soil	<p>Soil may be contaminated by leaks and spillages from equipment maintenance activities. Some sites are surrounded by agricultural soil whose fertility may be negatively affected if it comes in contact with oil.</p> <p>In addition, excavation and site clearing activities can result in removing fertile top soil layers in some areas.</p>	Moderate

<p>Hazardous and Non-Hazardous Waste</p>	<p><u>Non-Hazardous Solid Waste</u> The following are the types of solid non-hazardous waste expected to be generated on-site during the construction phase:</p> <ul style="list-style-type: none"> ▪ Excavated soil due to trenching activities; ▪ Old railway components such as rails, fasteners, uncontaminated ballast ▪ Construction waste such as scrap wood, steel, packaging material, etc. ▪ Domestic waste from workers' daily consumption <p><u>Hazardous Waste</u> Hazardous waste is expected to include empty chemical containers, spent lubricating oils and contaminated ballast. Improper handling and storage of hazardous liquid waste can cause soil contamination through direct contact or leaching</p> <p><u>Liquid Waste</u> Domestic wastewater will be generated by the contractor's caravans and offices and will be collected in holding tanks. Sites which are close to existing stations may not require any additional sanitary facilities.</p>	<p>Major</p>
<p>Biodiversity (Flora and Fauna)</p>	<p>No important ecological zones are found in close proximity of the project areas and the stations. In addition, since no new railway lines are planned, the modernization activities will not entail the physical destruction of any habitats.</p>	<p>Minor</p>
<p>Erosion and Sediments</p>	<p>Some vegetation may be removed as part of the construction activities. This will expose the top soil layer and make it prone to being eroded.</p> <p>Eroded soil, as well as particles coming from the construction material such as sand and cement, may be carried away from the construction area by wind action and can disturb nearby aquatic life.</p>	<p>Minor</p>
<p>Occupational Health and safety</p>	<p>Construction site hazards include excavation & trenching, falling from heights, scaffolding collapse, coming in contact with heavy equipment & machinery and electric shocks. In addition, COVID-19 remains a risk that will be considered in the management and monitoring plans.</p>	<p>Major</p>
<p>Community Health and safety</p>	<p>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.</p> <p>Community Health, Safety and Security impacts arising from the decommissioning of old rails and construction of the project are likely to be as follows:</p> <ul style="list-style-type: none"> • Increased risk of traffic hazards and incidents associated with the use of the highway for freight and local roads for communities and workers; • Probability of accidents due to reducing the speed of train as a result of rehabilitation activities; • Increased incidence of communicable disease e.g. COVID-19 and Hepatitis; • Risks associated with the presence of security personnel on site (within the Project area) and at offsite operations and activities (within the community); 	<p>Major</p>
<p>Cultural Heritage</p>	<p>The railway section from High Dam to Luxor runs parallel to diverse archaeological sites which are located to the East and West of the railway track.</p> <p>The area extending from Karnak to Luxor was considered as a significant area for the purpose of the cultural heritage assessment.</p>	<p>Insignificant</p>

<p>Labour influx and Gender Based Violence (GBV)</p>	<p>The project shall recruit a number of workers and technicians during the construction phase. If not managed properly, the recruited workers' interactions with the local community may result in inconvenient, inappropriate and unappreciated acts, negative impacts on privacy or may even result in serious misconducts (e.g., harassment) or inappropriate behaviors that could affect different groups, including women; although it is not that much expected in the project.</p> <p>In addition, recruiting workers might result in an influx of additional population and put increased pressure on local resources, prices of commodities, accommodation and rents.</p>	<p>Moderate</p>
<p>Child Labour</p>	<p>Child labor is a common practice in Egypt at large, and may be encountered in the project, considering constructions, primary supply; service provisions around stations. According to Egyptian Labour Law No.12/2003, child labour should be prohibited especially in dangerous works. Children below 18 are favourable labour as they receive low salaries and they are less demanding.</p>	<p>Moderate</p>
<p>Traffic and Transportation</p>	<ul style="list-style-type: none"> - Increased traffic flow on roads leading to and from the construction site - Traffic jams and increased exposure of travelers and road users to exhaust and associated noise and possible accidents. - Blocked roads as a result of the construction works, inadequate storage of excavated soil, trenching activities, etc... 	<p>Moderate</p>
<p>Labor and Working Conditions</p>	<p>Inconvenient working environment might affect the health and the productivity of workers.</p>	<p>Moderate</p>
<p>Reduced Accessibility to Various Facilities Around the Construction Sites</p>	<p>Level crossings represent high-risk accident locations for railways. Also, construction activities at level crossings will lead to complete or partial closure of the crossings to pedestrian and vehicles, causing increased traffic congestion, and reduced accessibility to various facilities around the construction sites.</p>	<p>Moderate</p>
<p>Involuntary land acquisition</p>	<p>Based on the site visits carried out, there was no informal land use along the route, with the exception of agriculture activities.</p> <p>The contractor will define the plots of lands needed for:</p> <ol style="list-style-type: none"> a) Establishing a Centralized control center (CTC). b) Establishing 3 maintenance centers in Aswan, Edfu and Luxor. c) Main and secondary EIS buildings d) Storage areas and caravan offices <p>It is worth mentioning that all temporary storage areas will be located within the stations. Accordingly, no land acquisition will be applied. With regard to on site facilities and using of some caravans, they always are established inside the stations. Alternatively, the contractor might lease lands to be used as storage facility or to install the day use camp.</p>	<p>Insignificant</p>
<p>Visual Impacts</p>	<p>Project activities will entail the piling up of sand and movement of vehicles in various construction sites. Moreover, temporary storage areas will be used to store construction materials, which will result in a significant visual impact. However, the duration of visual intrusion impacts will be limited.</p>	<p>Moderate</p>
<p style="text-align: center;">Impact During Operation Phase</p>		

Air Quality	The traffic on the modernized railway will be higher and thus more emissions will be produced by the trains' internal combustion engines. However, there will be considerable fuel savings because some traffic will be shifted from the road to the railway. Also, the overall air quality in the project areas may actually improve depending on the difference between the additional train emissions and the reduction in emissions associated with the decrease in road traffic.	Moderate
Noise and Vibration	The increase in train traffic and train speed will result in higher noise levels. However, mostly roads are located next the railway, therefore the train noise may not be significant compared to road noise. No vibration impacts are expected.	Moderate
Surface Water	The freight transported along the line and the wastewater generated by the train passengers can become a source of water contamination.	Moderate
Soil	Soil may be contaminated by leakages from passing wagons and other hazardous substances used in railway maintenance.	Minor
Hazardous and non-Hazardous Waste	The operation phase will generate: <ul style="list-style-type: none"> - Solid non-hazardous waste such as scrap wood and steel from maintenance workshops, passenger-generated waste (leftover food, paper, plastics & glass). - Liquid waste including wash water from washing train wagons and wastewater from train toilet facilities. - Hazardous waste such as electronic equipment, spent lubricating oil and empty chemical containers. 	Moderate
Occupational Health and safety	Possible impacts on health and safety during operations include accidental injury to workers who maintain the crossings and the railways. Health and safety issues also encompass working around energized equipment and possible contact with natural hazards. However, during the operation and maintenance phase, the impacts on workers tend to be of Medium Significance.	Major
Community Health and safety	<ul style="list-style-type: none"> • Following the completion of the upgrading project (signalling), it is expected that more trains will operate at increased travel speeds, which in turn is expected to increase the risk of accidents at level crossings. • Risk of accidents will particularly increase to pedestrians crossing at informal crossings, located in many places all along the lines. The line is also unprotected on most of the alignment, including in settlements and agricultural areas. It is likely that there are quite a few crossings by pedestrians and animals outside of level crossings currently; with increased traffic this could become a problem. • In these places, users of informal crossings, who have become accustomed to slow train speeds, would be subjected to a high risk from unexpectedly fast trains. An awareness-raising effort will be essential for reducing this risk. Due to increasing the speed of train, the community people, particularly old people and children, might face fatal accidents; • Emergency accidents and fires that might affect community members and the Train users. The history of fires and train accidents supports the high probability of accidents. • Site trespass and injury • Spread of communicable diseases other than COVID 19, TBC, Hepatitis C 	Major
Working conditions	Working conditions might affect the productivity of workers during operation phase.	Moderate

Cultural Heritage	There are no anticipated further cultural heritage impacts during the operation phase as there will be no excavation activities. However, access to cultural heritage sites might be affected due to the speed of train, particularly, in the mosques, graveyards and churches.	Minor
Visual landscape	<p>Visual intrusion and landscape impacts are by nature of negative impact. However, in this project and considering the current deteriorated and unfavorable situation of fences, stations and the train wagons, visual intrusions are expected to result in positive impacts during the operation phase.</p> <p>The alteration of landscape scenery will be affected by the presence of the new CTC building. However, the visual evidence of these facilities cannot be completely avoided, reduced, nor concealed.</p> <p>The impact should be considered of Low Significance and can be controlled by implementing the mitigation measures.</p>	Minor
Land use	There is no indication that the subsequent operation of the Aswan - Luxor train rehabilitation project will have any significant adverse impacts on land use in areas adjacent to the project area, as there will be no need for lands and the project will use the same lands used now.	Insignificant
Utilities (infrastructure)	The Project operation will not affect the existing utilities (infrastructure) and no significant impact concerning the existing infrastructure.	Insignificant
Labour influx and GBV	As the total number of workers during operation is limited and the majority of job opportunities will be locally recruited, the impacts related to temporary labour influx and GBV are insignificant.	Insignificant
Child Labour	Given the fact that the operator will recruit the taskforce in full compliance with national and international laws, the risk of child labor is insignificant.	Insignificant
Traffic	<p>There are significant positive impacts on traffic and transportation on local community:</p> <ul style="list-style-type: none"> • Fast, reliable means of transportation with limited cost. • Residents of the train's AoI will be encouraged to solely rely upon the train and use it for their all errands • Less traffic congestion in the project areas 	Insignificant
Economic impacts	<p>The platform extension at some of the stations will lead to an increase in economic activity, thus providing sources of income and job opportunities for shop owners and those who will work in these new shops. The economic activities will result in the following impacts:</p> <ul style="list-style-type: none"> • This economic model will generate income to ENR or the operator; • Increase in the taxes to be paid to the Government of Egypt; • Encourage young people to lease shops and start their own business 	Positive

1.5 Environmental, Social Management and Monitoring Plan

The objective of the Environmental and Social Management and Monitoring Plan (ESMMoP), is to outline actions for minimizing or eliminating potential negative impacts and for monitoring the application and performance of mitigation measures. The ESMMoP identifies roles and responsibilities

for implementation and monitoring of mitigation measures during the Construction and Operation phases of the project.

1.6 Stakeholder engagement and GRM

Stakeholder engagement is an integral part of ESIA good practice. For scoped B projects, stakeholder engagement is not a requirement of the national EIA legal framework in Egypt. However, it is within a good international practice, including EDCF safeguard policy, and WB requirements. The project owner is committed to a technically and culturally-appropriate approach to consultation and engagement with all stakeholders affected either directly or indirectly by the project.

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 February 2022.

Stakeholders are persons or groups who are directly or indirectly affected by a project, as well as those who may have interests in a project and/or the ability to influence its outcome, either positively or negatively.

In terms of methodology, the consultation activities were conducted through the following methods:

(1) Scoping Consultation Activities in February – March 2022.

The Consultant carried out stakeholder engagement activities through the community engagement plan that has been developed for different Stakeholders which is presented in the section of the report devoted to consultation activities. The consultation activities started in February 2022 and will be completed by July 2022

The Consultant conducted consultation activities with the local communities close to the project site:

- The residents in the surrounding project areas
- Railway users
- Informal Economic Activities
- Governmental Authorities including:
 - Local units in the Aswan and Luxor
 - Environmental departments Aswan and Luxor

The study team conducted multiple site visits to the project area. In addition, field observations were organized at relevant points, in particular informal crossing points, to define various stakeholders, and the potential impacts of the project. Stakeholder engagement activities were carried out through both Focus Group Discussions (FGDs) and Semi-Structured Interviews.

The aims of the consultation activities were:

- To conduct multiple site visits to the railway route. In addition, field observations were organized at informal crossing points to define various stakeholders, and the potential impacts of the project.
- To publish comprehensive information on the project, in order to enable the competent stakeholders to determine the concerns, requirements, and recommendations.
- To conduct interviews with railway users and local communities to receive feedback about the project as well as concerns, requirements, and recommendations.
- To carry out data collection from the Area of Influence.

(2) Public Consultation Session

The objective of the public consultation session is to:

- Introduce the project to stakeholders;
- Identify the key anticipated impacts;
- Present the methodology for the ESIA study;
- Present key outcomes and conclusions; and
- Allow interested stakeholders to comment on the scope of work undertaken, key issues identified, and any other issues of concern they might have; and
- Take note of those comments so they can be addressed as the project develops.

(3) Grievance Redressal Mechanism (GRM)

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

Both ENR 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 (GRM).

The current grievance mechanism in ENR is implemented through two levels:

(a) The project-level GRM at the local level

ENR has developed a mechanism for handling grievance to ensure that all complaints that may be related to project activities are addressed in a timely and transparent manner. The project GRM is designed to accept grievances and feedback from all project stakeholders. The project has a separate, additional, GRM that is for project workers, including any civil servants assigned to the project.

(b) Grievance Channels at the central level for all railway lines and sectors

The management and operation of the Grievance Mechanism is the responsibility of the Complaints and Customer Service Directorate, which is affiliated to the Presidential Affairs Central Directorate. Complaints can be submitted by multiple intake points, including submission by hand, telephone, or by email. The petitioner, through the use of the complaint tracking number, can follow up on his/her complaints through a range of methods including postal mail, e-mail, and phone or, by visiting the person in charge, as indicated below. The petitioner is free to submit his/her complaint to one or more tiers. A grievance form will be made available to complainants.

- The Governmental Complaint Portal - shakwa.eg or the hotline 16528
- ENR official complaint system:
 - 15047 hotline
 - Cell phone : ٠١٢٢٠٠٠٨٨٠٦٠ ٠١٢٢٠٠٠٨٨٠٧
 - Land line : ٠٢٢٠٧٦٩١٦٠
 - WhatsApp: ٠١٠٩٠٤٤٤٤٤٠٧