



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 23-Sep-2020 | Report No: PIDC30342

**BASIC INFORMATION****A. Basic Project Data**

Country Egypt, Arab Republic of	Project ID P175137	Parent Project ID (if any)	Project Name Railway Improvement and Safety for Egypt (P175137)
Region MIDDLE EAST AND NORTH AFRICA	Estimated Appraisal Date Dec 11, 2020	Estimated Board Date Jan 29, 2021	Practice Area (Lead) Transport
Financing Instrument Investment Project Financing	Borrower(s) Arab Republic of Egypt	Implementing Agency EGYPTIAN NATIONAL RAILWAYS, Ministry of Transport	

Proposed Development Objective(s)

The PDO is to improve the safety and the operational efficiency of the railway services along the Alexandria-Cairo-Nag Hammadi corridor.

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	680.63
Total Financing	490.63
of which IBRD/IDA	250.00
Financing Gap	190.00

DETAILS**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	250.00
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Non-World Bank Group Financing

Counterpart Funding	240.63
Borrower/Recipient	240.63



Environmental and Social Risk Classification

Substantial

Concept Review Decision

Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

- Economic activity has slowed down significantly due to the negative repercussions of the COVID-19 pandemic.** Prior to this crisis, Egypt's macroeconomic stabilization program has been largely successful in supporting growth, generating a solid primary budget surplus, reducing the debt-to-GDP ratio, and replenishing reserves. Real Gross Domestic Product (GDP) growth had reached 5.6 percent in fiscal year (FY) 2019, compared to an average of 4.6 percent over the previous three years. Yet, with the implementation of several containment measures, growth is estimated to have declined to 3.4 percent in FY 2020. Non-oil private sector activity slowed down significantly, as evidenced by the decline of the Purchasing Managers' Index (PMI) — to its lowest level on record (38.3 percent) during April to June 2020, indicating a large contraction. Job losses were around 2.7 million in Q4-FY2020, pushing unemployment to 9.6 percent (from 7.7 percent in the previous quarter). The job losses were mainly reported in the retail and wholesale trade, manufacturing, tourism, transport and construction sectors.
- External and fiscal balances have been adversely impacted, with a deterioration in the balance of payments position notably at the outset of the crisis.** Foreign reserves started depleting rapidly, affected by the large-scale capital outflows, in addition to the sharp drop in tourism receipts, Suez Canal revenues, and merchandise export proceeds. Reserves declined to US\$38.2 billion in end-FY2020 (7 months of merchandise imports), well below its pre-crisis peak of US\$45.5 billion in end-February 2020. The exchange rate depreciated marginally from LE15.7/US\$ in February 2020 to around LE16/US\$ in August 2020. Fiscal consolidation has also been disrupted, with a widened budget deficit estimated at 8.2 percent of the FY2020 projected GDP, up from 8.1 percent of GDP a year earlier. The deterioration in fiscal accounts was mainly caused by the decline in the tax-to-GDP ratio (even prior to the crisis), which was exacerbated by the economic contraction and the postponed tax payments during Q4-FY20.
- The Government of Egypt (GoE) has undertaken several measures to mitigate the impact of the crisis.** These include the allocation of an emergency response package worth LE100 billion (1.7 percent of GDP), in part to scale up health expenditures and augment social protection programs. Forbearance measures were introduced in the form of delayed tax filing and loan repayments, in addition to subsidized credit to targeted sectors to alleviate immediate financial pressures on individuals and businesses. The Central Bank of Egypt eased monetary policy by slashing key policy rates by 300pb. Meanwhile, Egypt has mobilized external financing, including a US\$2.8 billion stopgap loan under the IMF's Rapid Financing Instrument, a US\$5.2 billion Stand-by Arrangement (of which the first US\$2 billion tranche was disbursed), as well as a US\$5 billion sovereign Eurobond issuance.
- Like many other countries, the outlook for the Egyptian economy is highly uncertain, and the impact will depend on the duration and severity of the pandemic and the speed of global recovery.** Under the scenario that the pandemic persists through early-2021, growth is expected to further decline to 2.7 percent in FY2021. Private consumption is expected to remain constrained by falling households' incomes and job losses. Private investments will remain subdued, especially under the current circumstances of low demand, uncertainty, and disrupted production and international trade,



possibly counterbalanced by a rise in public investments. Ongoing pressures on the external accounts are expected to persist, as the current account deficit is projected to widen, and FDI is expected to further decline from 2.7 percent of GDP in FY2019 to below 1.5 percent during FY2020—FY2021, amidst the global slowdown.

5. **The multi-dimensional health and economic crisis caused by the pandemic will increase socio-economic hardship.** The erosion of real incomes (following the 2017 and 2018 inflation shocks) will intensify. In FY18, 32.5 percent of the population lived below the poverty line up from 27.8 percent in FY15. To mitigate the social impact on the vulnerable groups, the cash transfer programs Takaful and Karama were extended to another 160,000 families, and increased payments to women leaders in rural areas. An exceptional grant of EGP 500 was disbursed for three months to registered irregular workers and covered approximately 2 million individuals.

6. **Addressing development gaps among different population groups is high on the sustainability agenda of the GoE. The “Sustainable Development Strategy (SDS): Egypt Vision 2030”, enacted in 2016, targets economic inclusiveness and sustainability as it focuses on the three main dimensions: economic, social and environmental.** The main objective of the SDS is to “achieve a competitive, balanced, diversified and knowledge-based economy, characterized by justice, social integration and participation, with a balanced and diversified ecosystem, benefiting from its strategic location and human capital to achieve sustainable development for a better life to all Egyptians.” The SDS emphasizes principles of “inclusive sustainable development” and “balanced regional development,” as it considers equal opportunities for all, closing development gaps, and the efficient use of resources to ensure the rights of future generations¹.

7. **Transport is a critical sector of action for Egypt to achieve its SDS economic, social, and environmental targets, as the SDS outcome indicators will reflect progress in the sector.** First, transport facilitates an inclusive market economy: good transport systems provide efficient access to employment and economic opportunities to disadvantaged population while distributing goods at lower prices to a broader geography.² Sound governance of the transport sector can address gender and disability considerations through effective policy interventions and investment projects, expanding the labor force participation of these disadvantaged groups. Second, transport is one of the sectors with close relationships to environmental sustainability, especially in terms of its carbon footprint and air pollution. Transport has direct and indirect linkages to the three dimensions of the SDS as well as to such SDS pillars as Economic Development, Energy, Transparency and efficient government institutions, social justice, health, environment and urban development. Third, good transport also provides people with affordable and safe access to health, education and cultural opportunities, especially to the benefit of the poor. Fourth, transport is central to economic growth and development because its interventions have wide multiplier effects whereby the effect of inputs including labor needed for construction, operations, and maintenance activities can stretch multifold in the economy.

8. **In this context, the GoE requested an IBRD loan for the modernization of railway signaling and communication on the Giza – Beni Suef segment of the Egypt National Railway (ENR) network, through a proposed new Railway Improvement and Safety for Egypt project (RISE project).** In addition, some of the activities from the on-going Egypt National Railways Restructuring Project (ENRRP, P101103) that will not be completed by the project’s closing date are proposed to be transferred to the RISE project, with the undisbursed amount estimated at about USD 130 million (pars. 18-20).

Sectoral and Institutional Context

9. **Poor transport infrastructure and services hurt economic growth and disproportionately damage the bottom 40 percent.** Poor transport hinders Egypt’s pursuit of the objectives set in its SDS. Egypt is the largest Arab country with 101.1

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² Bertaud, Alain. 2018. “Cities as Labor Markets,” in Order Without Design: how Markets Shape Cities.



million inhabitants (2020)³, growing at 2 percent per year. Almost 50 percent of the population lives in urban areas, and the rest resides in compact rural settlements surrounded by the intensively cultivated and irrigated land in the Nile River basin. Thus, the transport network is concentrated around the River Nile with roads and railways following the course of the river, while the river itself is under-utilized.

10. **The ENR suffer from management challenges and lack of investment.** The network comprises about 5,000 km of lines, a third of which are double track and 60 percent of which are concentrated in the Nile Delta serving low-income Egyptians. The network is essentially for passengers. A total of 270 million passengers took train services in 2018/2019, up from 228 million in 2014/2015 and 247 million in 2009/2010. Passenger transport represents 90 percent of the overall physical activity. This network is one of the highest traffic density railways in the world, transporting 1.4 million passengers per weekday and logging in a total of more than 32 billion passenger-km per year in 2016/2017⁴. Freight is marginal at 3 million tons in 2016, equivalent to 4 percent of ENR's overall traffic and only 1 percent of all cargo moved nationwide after years of decline. The availability of locomotives is low due to poor maintenance; furthermore, inflexible operational policies result in delays of services.

11. **The aging and dilapidated railway infrastructure and the lack of a safety culture results in frequent accidents and delays.** The statistics available on fatalities or seriously injured are not robust and occurrences often remain underreported. According to a 2018 report⁵, there are approximately 1,000 train collision incidents taking place in Egypt each year. Other safety statistics show that Egypt has approximately 5 times as many serious accidents as European railways, about 7 times that of UK, and 20 times that of Japan⁶. People's behavior, poor supervision and safety enforcement on illegal crossings, robbery of assets, misallocation of maintenance funds, and poor training leading to human error/malpractice stand as the main culprits. There is also an inherited culture of misuse of public property such as stealing railway tracks, throwing garbage on the tracks and establishing markets on level crossings, as well as trespassing on the tracks. However, improvements are taking place, with the ENR revamping its outdated rolling stock and developing a robust plan to modernize its signaling system across major railway corridors across the country.

12. **ENR is poorly integrated with other public transport.** The low capacity of the rail network and its lack of connections to other public transport modes along has exacerbated the predominance of energy-intensive road-based transport, challenging Egypt's environmental sustainability. Multi-modal integration is virtually non-existent. The nine public transport systems in Greater Cairo – metro (a 78 km three line network with 65 stations moving 4 million passengers daily), ENR trains, tram, standard bus, executive bus, minibus, collective taxi, standard taxi, and ferries – lack proper fare, physical, and schedule integration. Intermodal transfers are expensive and inconvenient. This is problematic particularly for people who live in small settlements along the Nile River Delta as well as suburban New Urban Communities in Cairo. Poorly coordinated land use policies have resulted in new residential cities located far away from employment centers such as downtown Cairo. Construction of the New Urban Communities initially anticipated locally available activity centers to become economically independent⁷. In reality, the unintended result was the exact opposite: decentralized, dispersed,

³ Central Agency for Public Mobilization and Statistics (CAPMAS).

⁴ <https://enr.gov.eg/ticketing/public/about.jsf> and World Bank. 2018. Egypt – Enabling Private Investment and Commercial Financing in Infrastructure (Vol. 2) : Report (English). Washington, D.C. : World Bank Group. <http://documents.worldbank.org/curated/en/588971544207642729/Report>

⁵ Egypt Today. April 2018. <https://www.egypttoday.com/Article/1/48250/Railway-Authority-introduces-new-system-to-enhance-rail-safety>

⁶ Task team estimates using data from ENR and from https://www.era.europa.eu/sites/default/files/library/docs/safety_interoperability_progress_reports/report_on_railway_safety_and_interoperability_in_the_eu_2020_en.pdf

⁷ <https://www.codatu.org/actualites/greater-cairo-and-how-the-transport-system-is-coping-with-rapid-expansion/>



and disconnected urban development patterns with serious implications for environmental sustainability especially with their transport needs⁸.

13. **Urban transport and railway sectors suffer from chronic financial distress.** This is due to unguided pricing and subsidy regimes, the lack of transparency in subsidy allocation, and poor governance of institutions. The ENR, the CTA, and the Metro have significant yearly deficits of US\$500 million, US\$400 million and US\$500 million respectively (2016/17)⁹. These deficits are the result of several factors. First, fares are low to make public transport affordable to users. Minimum wage earners in the GCA spend in public transport the same fraction of their income as minimum wage earners in London –7.3 percent– and slightly more than in Mexico City at 5.7percent¹⁰. Second, the subsidies the GoE supplies to these entities are not framed with an incentive mechanism and subsidies cover the losses that occur. Subsidies can become unsustainably high, exacerbated by political pressure to avoid fare increases, which creates long-term funding instability, underinvestment, and unreliable low-quality services.

14. **The policy of the GoE to modernize the railway network through rail line upgrades and by replacing aging locomotives and passenger rolling stock heads in the right direction.** Rail is one of the lowest emitting modes of GHG. The GoE sees the development of its railways as key to meeting the travel needs of low-income population, accessing the country's abundance of natural resources and boosting the overall economy. Increasing freight transport is critical but a difficult objective set by the GoE. ENR has set a very ambitious target to carry around 25 million metric tons of freight annually by 2022, (equivalent to 5percent of total freight carried in Egypt) up from 4.6 million tons carried in 2017-18. For the time being, GoE intends to spend EGP 141 bn (US\$10 billion) in the country's railway system overhaul through 2022. However, investments will not reverse the decline of ENR unless forceful internal reforms are enacted and supported by an adequate legal framework.

15. **The GoE has taken steps to address the transport sector's institutional, regulatory and financial challenges.** However, the GoE needs support to institutionalize the reforms and build capacity of government agencies to become effective in achieving the objectives set forth in the SDS. On the railway side, the GoE launched an aggressive program to increase the safety of the traffic mainly by reducing the maintenance backlogs and modernizing the obsolete assets, especially with its track renewal and signaling modernization program. The ENR is supported by investments from the European Investment Bank (EIB), the African Development Bank (AfDB), and the French Development Agency (AFD). The World Bank's long-term engagement with the ENR supporting infrastructure, safeguards, technical and other aspects is critical for successful implementation of ENR's projects with all of their development partners.

16. **The World Bank's analytical work and transport-related engagement underpin the proposed RISE Project.** Egypt's InfraSAP "Egypt: Enabling Private Investment and Commercial Financing in Infrastructure" (World Bank, 2018)¹¹, points out on the urgent need to invest in infrastructure for sustainable economic development, and urges to facilitate institutional and regulatory environment that enables and encourages private sector investment in the infrastructure sector. The World Bank is finalizing the Transport Sector Strategy for Egypt by synthesizing transport analytical works and engagements the Bank has had over the last decade. The strategy identifies priorities for railways, urban mobility, roadways, maritime and ports, and inland water subsectors and proposes a set of institutional, regulatory and tactical recommendations towards achieving green, inclusive, safe and effective transport anchored in part on the maximization of Private Sector Participation within a five-year horizon. Moreover, a set of actions are being formulated targeted at tackling the severe impacts and challenges inflicted on the sector by the COVID-19 pandemic.

⁸ Transport for Cairo. 2019. "Multimodal network planning, identification of high capacity bus corridor and park and ride Facilities." Report commissioned by the World Bank.

⁹ World Bank. 2018. Opus Cit.

¹⁰ Transport for Cairo, 2019. Opus Cit.

¹¹ World Bank, 2018. Opus Cit.



17. High rates of sexual harassment and concerns around personal safety inhibit women's willingness to use public transport including railway and contribute to their poor labor market outcomes. According to the 2015 EBRD Study, many men did not allow their wives, daughters or sisters to take the train or go to the station unless accompanied by a male relative constraining women's mobility and ability to partake in education or economic activities¹². In this context, when only 22percent of females aged 15 and above participate in the labor force compared to 71 percent¹³ for their male counterparts in Egypt, addressing mobility challenges is critical to enhance female labor force participation and boost economic growth. It is also of note that only about 3 percent of the total ENR employees are women with most of them engaged in administration and few of them in technical roles¹⁴. As international experience shows, lack of gender-responsive transport services and lack of women in the sector reinforce each other. Lack of women contributes to women's safety concerns and their voices as transport users not being heard, with often little incentives for transport services to respond to particular needs of women service users. Employing more women in the transport sector in those roles that are traditionally male dominated can lead to more inclusive transport service development - in addition to obvious benefits of providing women with income-generating opportunities.

18. **The proposed RISE project builds on and incorporates lessons learned from the implementation of the ENRRP. In 2009, the Bank commenced financing for the ENRRP which sought to support the ENR by investing in rail infrastructure and signaling systems to improve efficiency, service levels and operational safety on some of the most heavily trafficked lines.** The ENRRP also introduced measures to strengthen ENR's management capacity and operational and financial restructuring to address the railway sector's responsiveness to economic and social needs. The RISE Project is designed to enable the MoT and ENR to improve safety, operational, and financial performance of the railway and drive ENR towards provision of a more efficient, competitive service to customers at an acceptable level of financial cost. The RISE project targets institutional and ENR corporate improvements in support of three key goals: predictable and transparent financing of the railway sector, improvements in safety performance, and effective planning and control of commercially viable railway operations. Two key outputs of the reform work under RISE are introduction of Public Sector Obligations (PSO) and Multi-Annual Infrastructure Contracts (MAIC). The project will accelerate reforms that are critical to enable the railway sector's role in transforming the economic development of Egypt and lead to a safer and more efficient operation and better customer services.

19. **The improvement of safety and operational efficiency on the entire line Alexandria – Cairo – Nag Hammadi necessitates: (i) the finalization of the signaling modernization works started by the ENRRP and rolled over to RISE, and (ii) the addition of the modernization of the missing section Cairo - Giza – Beni Suef.** The works started under ENRRP on the segments Cairo – Alexandria and Beni Suef – Asyut – Nag Hammadi will not be finalized by the closing date of this project on December 31, 2020. The implementation of ENRRP was delayed due to: (i) longer than expected preparation of the bidding documents and the procurement process; (ii) the delays brought about by the Arab Spring;(iii) safety procedures and the operating rules manuals at ENR date to 1903. Modern signaling offers enhanced operational possibilities that mean the safety and operating procedures needed a complete revamp, which demanded a lot of analysis and even cultural change within ENR; and (iv) early in 2019 the contractors realized significant track upgrades were necessary prior to installing the signaling in some stations. Signaling requires track, ballast and switches in good condition. Lack of a proper asset management system meant contractors did not have the information needed on the conditions of these elements when they prepared their proposals and as the project was implemented. One hundred and twenty km of track in total, mostly at stations, and 800 switches needed to be upgraded at a total cost of US\$200 million. The Ministry

12 EBRD. 2015. Egyptian National Rail: Gender and Transport Study. (unpublished)

13World Bank 2019. Gender Data (ILO estimates) <https://data.worldbank.org/topic/gender>

14 Preliminary Gender Assessment. Railway Freight Project, 2020. Prepared by Menarail Transport Consultants for the World Bank



of Finance provided these funds to ENR as counterpart financing. While the track upgrade is happening and is accelerated as of June 2020, the total scope is too large to complete by December 2020.

20. **Stopping the World Bank support at this time would leave ENR with a poorer safety standard than before the beginning of ENRRP because some of the existing signaling equipment has been decommissioned to install the new equipment, which is not complete yet.** The transfer to RISE of the unfinished signaling works developed under the ENRRP is vital for achieving the safety and efficiency targets.. Moreover, the African Development Bank is about to approve a project to install the European Train Control System Level 1 (ETC-1) on the same segments as the RISE Project will upgrade the railway signaling. Installing ETC-1 is possible only on segments that have upgraded signaling, which will be installed through the proposed RISE project. The AfDB-financed ETC-1 can be installed only after the installation of RISE-supported modern signaling which will be independent of ETC-1 related works. While the ENR and the MoT will implement and coordinate these two key investment activities, the Bank is also coordinating with the AfDB.

21. **ENR can benefit from the “latecomers’ advantage of recent advances in Big Data and Smart Mobility.** The idea of Big Data is to go beyond the needs of a particular sector. Big Data development provides the foundations for “smart” transport planning, management and monitoring, with the focus on data analytics and “smart” evidence-based decision making. Big Data can enhance transport network design and operational planning and management, as well as system performance monitoring by local and national governments, agencies such as ENR and by system users. Big Data measures aim to link different databases across sectors and agencies. In this way, new knowledge is possible and innovative ways of looking at problems and issues may emerge. Examples could include: linking the railway infrastructure asset register on a Geographical Information System (GIS) database to a safety database of accidents and crashes; linking infrastructure assets to passenger boarding/alighting database from ticketing systems in order to refine investment priorities; linking the asset management register to the crowding of people on tracks, at level crossings, at stations, obtained through mobile phone location data. Smart Mobility asks questions that improved analytics can answer. For example, sensors in different ENR assets can report to the safety and asset management system. This system will store data that analytical tools can better interpret to reduce the failure rate of train engines or identify patterns lead to track deterioration.

22. **The RISE project incorporates additional innovations for the Egyptian context based on the World Bank’s international experience.** First, the RISE Project will incorporate gender analysis and actions to help level the playing field for gender and make traveling safer for women. Second, the project will bring lessons on Smart Mobility and Big Data and machine learning from smart mobility projects such as the Wuhan Integrated Transport Development Project (P148294). Third, the project involves the part of the ENR network that operates like a commuter railway for the Greater Cairo Area. ENR is therefore a critical part of the GCA public transport network. Improved, reliable, and more frequent services can lead to passengers staying with public transport and not opting for cars. Some car users will switch to public transport. A modal shift to public transport and keeping the ridership levels can contribute to the reduction of the carbon footprint of transport. Fourth, and related, the project will incorporate Covid-19 safe practices ranging from frequent cleaning to increased frequency of services. Higher frequency reduces crowdedness inside rail cars which is a way to lower the spread of the virus. In addition, lower occupancy also has gender benefits. Fifth, the Project seeks to strengthen project implementation practices through an improved governance structure whereby a Project Management Consultant will be appointed to focus on forward-looking tasks such as the impact of project progress on cost and timescale targets in addition to backward-looking tasks such as progress review and monitoring. The Quito Metro Line One Project (P144489) and the Upgrading and Greening of the Rio de Janeiro Urban Rail System (P111996) show the value added of an independent Project Management Consultant (PMC) accompanying implementation. Quito metro works are costing what was estimated due to opportune and timely solutions to implementation problems by the PMC. Thanks to solid design and procurement in Rio, aided by the PMC, trains financed by the project cost 60 percent of the initial estimate. Finally, the project includes funds to advance the detailed preparation of projects prioritized by the MoT. Weak project preparation is one of the reasons projects in Egypt take a long time to mature and implement. Solid project preparation



will address these weaknesses. In addition, the private sector will find it more appealing to participate in complex transport projects because demand and costs will be known with higher certainty.

Relationship to CPF

23. **The Egypt Country Partnership Framework (CPF) for FY2015-19, was approved on November 2015 and extended for two additional years until 2021.** Enhanced capacity and safety of key transport infrastructure is one of the key Objectives under the CPF 2.3. Transport infrastructure bottlenecks and lack of safety currently serve as key constraints to trade, mobility, job creation, service delivery, and low rates of women’s participation in the labor force. The challenges posed by the COVID-19 crisis reconfirm these CPF pillars with a focus on structural reforms, while supporting the poor and highly impacted sectors through strengthening the social safety net and enabling private sector investment and job creation.

24. **The proposed project aligns with adjustments made to the Egypt CPF in response to COVID-19** (Egypt COVID-19 Response Strategy) to support the poor and highly impacted sectors by accelerating post pandemic economic recovery, as per the strategic direction of the GoE. The project will inject capital into the Egyptian economy and generate direct short-term employment, which will trigger a multiplier effect in the economy and adding to a V -shaped recovery that the country hopes to achieve. Tourism is an important sector of the Egyptian economy that has been hard-hit by the pandemic and prolonged lock-down: the project will significantly increase the capacity of ENR trains to destinations popular to international tourists and will accelerate economic recovery. The project will further improve access of population in rural regions to economic opportunities and services, increasing the productivity of the economy.

25. **The proposed project aligns with the World Bank MENA¹⁵ Strategy which aims at economic and social inclusion by focusing on renewing the social contract and building on regional cooperation including private sector participation.** The proposed project enables modernizing a service of critical importance to the Egyptian economy while strengthening ENR as an institution and accelerating reform initiatives to improve governance of the railway sector. As the MoT aggressively implements its investment program to address safety issues in the railway sector, ENR is working with a number of development partners in renewing rolling stock and introducing a state-of-the-art signaling system. The proposed project will modernize the signaling equipment for the main railway corridor in Egypt. This modern signaling will serve as the foundation for further investments. The proposed project will also advance ENR’s investment program by focusing on opportunities suitable for private capital mobilization. An IBRD-IFC joint team has been supporting the GoE with the objective of promoting private participation in railways and urban transport.

26. **The proposed project aligns with the twin goals of sustainable poverty reduction and improvement in the welfare of the bottom 40 percent of the population through the provision of adequate, reliable and gender-inclusive modes of transport.** The project is consistent with the UN Sustainable Development Goals (SDGs) 9, 10 and 11: To build resilient infrastructure, promote inclusive, sustainable industrialization and foster innovation; reduce inequalities within and among countries and make cities and human settlements inclusive, safe, resilient and sustainable. The project aligns closely with the World Bank and GoE emphasis on improving air quality and reducing green gas house emissions through facilitating the shift in moving more passengers and freight off the roads and investing in new technologies that promotes safety.

¹⁵ Middle East and North Africa region of the World Bank



C. Proposed Development Objective(s)

27. The PDO is to improve the safety and the operational efficiency of the railway services along the Alexandria-Cairo-Nag Hammadi corridor.

Key Results (From PCN)

- **Safety in ENR passenger and freight operations:** This indicator will capture the improvement in safety part of the PDO by measuring killed and severely injured people both from operational crashes and from health and safety incidents.
- **Precursors to Accidents:** This indicator is related to the improved safety part of the PDO.
- **User satisfaction with ENR passenger service:** This indicator measures the improvement in operational efficiency of the ENR service as felt by the user.
- **Greenhouse gases from transport:** This indicator will capture the reduction in GHG emissions thanks to improved operational efficiency in ENR passenger and freight services
- **Adoption of PSO and MAI Contracts (output based financing) for the railway sector:** This indicator is related to the improved operational efficiency at ENR.

D. Concept Description

Project Description

28. **Component 1: Safe System Signaling Modernization.** Modernizing the signaling system along the railway corridor Alexandria - Nag Hammadi consisting of: (a) an automatic block signaling system (on an open line); (b) electronic interlocking systems (in stations); (c) a level-crossing protection system, (d) installation of additional automatic train control wayside equipment as needed, and execution of track upgrades necessary for achieving the safe functionality of new signaling system. This component will have three sub-components: 1.1: Cairo - Giza – Beni Suef signaling system modernization; 1.2: ENRRP rollover of pending signaling upgrades; and 1.3: Rollover of ENRRP permanent way upgrade: financed by ENR funds.

29. **Component 2: Safe System Asset Management Improvement.** Implementation at the ENR of a Safety and Asset Management System builds upon the existing systems at ENR. The Safety Management System (SMS) aims to create a data collection and analysis system that will enable statistics and reports to inform management of areas that need attention. Deployment of an Asset Management System enables a strategic approach to managing the railway assets. The approach challenges railway managers to optimize output, by achieving the most appropriate trade-offs between competing factors such as performance, cost and safety. This system will build on systems already in place at ENR by adding modules and analytical features. Design and implementation of a robust Safety Management System at ENR will lead to a “zero harm/tolerance, safety first” culture. This component will also address some of the safety concerns of female rail users by adopting a range of measures related to infrastructure and service design at stations. Safety improvement works at stations, tracks, crossroads, and on locomotives will address a number of safety issues which can be readily identified. Safety issues will be addressed using a set of standard solutions under a safe systems approach.

30. **Component 3: Project Delivery, Institutional and Human Resource Development.** This component will finance (a) project management and supervision for the section Giza – Beni Suef, including an independent Project Management Consultant; (b) rollover of ENRRP-related Project supervision; (c) technical audit for the section Giza – Beni Suef that will cover periodic monitoring of the implementation of the signaling and civil works as part of the signaling upgrade including compliance with the Safeguard Documents; (d) human resources development, including human resources policies and practices that provide equal employment and career advancement opportunities to men and women; (e) institutional



development of the railway sector, including: introduction of PSO and MAI Contracts (through the development of an analytical study to help the MoT and ENR improve the operational and financial performance of the railway sector, further incentivize ENR’s actions towards the provision of a more efficient, competitive service to customers at an acceptable level of financial cost, and eventual introduction of an output-based financing of railway operations and corporate development of ENR) and introduction of Private Sector Participation (the MoT has a pipeline of projects which introduce private sector participation in transport that need detailed preparation, including feasibility studies, safeguards analyses, and detailed designs).

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

31. Environmental and Social risks are rated Substantial . Component 1 of the project takes place over a large geographically dispersed area and comprises on-going and planned works.

32. Anticipated environmental risks are: (1) occupational health and safety (OHS) risks for workers during construction and operation including physical and chemical hazards; (2) hazardous material management and hazardous waste disposal including potential use of pesticides to control vegetation along the cables; (3) traffic impacts associates with level crossing upgrades; and (4) waste and wastewater disposal from construction. Most of the identified impacts are site-specific, short term (i.e. limited to construction) and mechanisms are available to prevent and mitigate those impacts, however there is still medium to low probability of OHS risks due to accidents. Social risks include: (1) ENR ‘s track record for screening and managing land related risks to land tenants and informal users within ENR ‘s Right of Way, over a large project area; (2) labor and working conditions, particularly for contracted workers; (3) community health and safety risks for communities living adjacent to physical works, as well as contextual risks stemming from ENR’s operations and current safety performance and broad expected benefits from introducing safe systems under Component 2. The COVID-19 pandemic also introduces potential risks of community exposure through contagion pathways such as meetings, stakeholder engagement sessions and construction sites, and from train travel in general.

33. The ENR will be required to prepare and publicly disclose an updated Environmental and Social Assessment (ESA) for the project prior to appraisal. The Assessment will comprise: (i) an accurate description of the project and delineation of the project and associated facilities; (ii) a review and analysis of all completed ESIA studies and propose measures to bridge identified gaps vis a vis the ESF; (iii) confirmation of the availability of baseline data at an appropriate level of detail to inform characterization of risks and impacts and mitigation measures; (iv) proposed practical and feasible avoidance and mitigation measures to bridge identified gaps in managing environmental and social risks and impacts taking into consideration the lesson learnt from the ENRRP project; and (v) Environmental and Social Management Framework (ESMF) for Component 2 of the project. Additionally, prior to appraisal the ENR will also prepare and disclose an Environmental and Social commitment plan (ESCP); Labor Management Procedures (LMP); an Updated Resettlement Policy Framework (RPF) including corrective measures for any legacy issues in applying the current RPF for ENRRP; and a Stakeholder Engagement Plan (SEP).



34. Other project components comprise physical works and technical assistance activities related to railway infrastructure investments and operations that are not yet defined, and may have environmental and social implications. Appropriate environmental and social instruments will be required.

35. ENR's environmental and social capacity will need enhancements to ensure smooth carrying out of the key E&S functions in accordance with the ESSs. The proposed E&S instruments should further assess the capacity of the PMU and proposed clear measures to ensure smooth implementation of the project. The Project POM will include clear internal procedures for managing E&S risks to address previous coordination issues.

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