Public Disclosure Authorized

Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 29-Aug-2022 | Report No: PIDA33949

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Egypt, Arab Republic of	P177932	Cairo Alexandria Trade Logistics Development Project	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
MIDDLE EAST AND NORTH AFRICA	23-Aug-2022	28-Sep-2022	Transport
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Arab Republic of Egypt-Ministry of International Cooperation, Ministry of Finance, Egypt	Egyptian National Railways - Ministry of Transport, Ministry of Transport, Egypt	

Proposed Development Objective(s)

To improve the performance and support the decarbonization of the logistics and transport sectors in the Alexandria-6th October-Greater Cairo Area railway corridor.

Components

1. Railway Sector Reform, Project Delivery, Stakeholder Engagement, Women's Economic Empowerment, and Private Sector Participation
2. Track extension, railway signaling modernization, and selected track upgrades to create a railway bypass around the Greater Cairo Area

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	998.00
Total Financing	998.00
of which IBRD/IDA	400.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	400.00
Non-World Bank Group Financing	
Counterpart Funding	598.00
Borrowing Country's Fin. Intermediary/ies	598.00

Environmental and Social Risk Classification

Substantial

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **The economy has rebounded strongly, although the war in Europe impacted most countries, added economic stress, and delayed broader recovery from the pandemic.** Macroeconomic stabilization and energy sector reforms have helped build resilience in recent years. The effect of the COVID-19 shock on economic activity had started to unwind after real gross domestic product (GDP) growth declined to 3.6 percent and 3.3 percent in FY19/20 and FY20/21, respectively. Growth then surged to nine percent during the first half of FY21/22 (July–December 2021), compared to a modest 1.4 percent a year earlier. The resumption of international travel and trade, pent-up global demand, and favorable base effects allowed strong rebounds in the export-oriented sectors (although these sectors remained broadly below their prepandemic levels). The global economic consequences of the war in Ukraine that overlap with COVID-related disruptions are exacerbating long-standing challenges. These adverse global developments (including soaring prices and tightening financial conditions) fueled domestic inflation, causing a widening net exports deficit. Leading indicators (such as the Purchasing Managers' Index) through March 2022 suggest that nonoil private economic activity is negatively affected by the war in Ukraine because soaring international prices translate into higher input costs. Egypt introduced a coordinated set of fiscal, monetary, and exchange rate policy changes in response to these developments. The Central Bank of Egypt (CBE) policy adjustments, including allowing the currency to depreciate and raising policy rates, are helping to stem the widening external imbalances.

2. **Meanwhile, the government introduced a mitigation package worth LE 130 billion (1.6 percent of FY23 GDP).** Recent external shocks (including the soaring international prices and tightening financial conditions, recently aggravated by the war in Ukraine) adversely impact the short-term global economic outlook, Egypt included. The war in Europe will adversely affect the Egyptian economy. Forecasts indicate that fiscal consolidation will slow down. Government debt will rise temporarily by the end of FY21/22 (from an estimated 92 percent of GDP at the end of FY20/21) to cover the higher deficit and the impact

of currency depreciation before resuming its downward trajectory. In October 2021, the World Bank approved a US$ 360 million Development Policy Financing (DPF) loan under the "Egypt Inclusive Growth for Sustainable Recovery" program to support Egypt's postpandemic recovery. The objectives of this program are to enhance macrofiscal sustainability, enable private-sector development, and foster women's economic inclusion.

3. **Egypt has reformed its governance and regulatory frameworks.** Since 2017, this has encompassed investment attraction, trade promotion, and digitalization. Institutional aspects have included the establishment of: (a) the Export Development Authority in 2017; (b) the National Council for Artificial Intelligence in 2019; , and (c) the National Center for Telecommunication Services Quality Monitoring in 2020, as well as (d) the strengthening of its Industrial Development Authority in 2018.

4. **The country also modernized its legal framework.** The reforms include: (a) Industrial Licensing Law No. 15/2017; (b) Investment Law No. 72/2017; (c) Bankruptcy Law No. 11/2018; (d) e-Payments Law No. 18/2019; € Personal Data Protection Law No. 151/2020; (f) Micro, Small and Medium Enterprises Law No. 152/2020; and (g) Customs Law No. 207/2020. As part of the latter, the National Single Window (NSW), an online platform to speed up customs processes, was completed in 2021. The NSW simplifies customs procedures to allow Egypt to take advantage of the African Continental Free Trade Area (AfCFTA). As part of the law, the Ministry of Finance issued Decree No. 38/2020 on Advance Cargo Information (ACI) to speed up and simplify cargo clearance.

5. **Egypt seeks to attract international investors.** Egypt's structural reforms and fast-growing economy increasingly attract the attention of international investors. The country's annual foreign direct investment (FDI) inflows averaged 3.1 percent of GDP during FY16/17–19, nearly double the average for the Middle East and North Africa (MENA) and higher than for Sub-Saharan Africa (1.8 percent). However, FDI inflows to Egypt declined gradually to 1.3 percent of GDP by FY20/21, impacted by the pandemic shock. In addition to traditional partners—such as the European Union, the United States, and countries in MENA, such as the United Arab Emirates and Saudi Arabia—new investors have emerged as key partners for Egypt in the past decade. Recent high international prices can also help attract FDI inflows to Egypt's oil and gas extractives sector.

6. **Many firms choose Egypt as a trade or investment corridor for the African continent and the Middle East.** This choice occurs in multiple sectors, including medium- and high-tech, such as electronics (for example, Samsung and LG). During 2017–20, Egypt attracted the highest percentage of FDI in electronics and electrical (E&E) manufacturing in Africa (21 percent of the total number of projects) and the second highest in knowledge-intensive industry in general (14 percent). Egypt has also positioned itself on the global investment map as an attractive location for digital services in Africa, building on traditional business-process outsourcing (BPO) services. As a result, investments increased in emerging areas, such as the Ericsson Artificial Intelligence (AI) and Analytics Hub established in Cairo.

7. **The labor market is weak, and needs further development.** Informal employment in small and micro enterprises continues to grow, accounting for more than two-thirds of new entrants into the job market. The large number of informal businesses in the Small and Medium Enterprise (SME) sector distorts competition and inhibits the effectiveness of government policies.[1] The contribution of

[1] Business Climate Development Strategy and Policy Assessment of Egypt, The Authority of the Steering Groups of the MENA-OECD Initiative, June 2010, https://www.oecd.org/global-relations/46341307.pdf

manufacturing to employment creation in the private sector declined from 32 percent in 1996 to 21 percent in 2017.[2]

8. **Egypt needs better integration into global value chains.** Despite its already sizeable and growing domestic market, as well as proximity to international markets,[3] the country has yet to attract substantial FDI to harness that domestic market and link it to global value chain-based international trade.[4] Egypt has an opportunity to act as the trade hub of the Eastern Mediterranean region, providing the improved connectivity that is central to enhancing trade.[5]

9. **As Europe is reducing its gas supply from Russia, new opportunities are materializing for Egypt.** Offshore gas discoveries have come on stream at an unprecedented pace, especially since 2017. Egypt is attracting more investors to develop underexplored areas and boost oil and natural gas production. The Italian gas company ENI announced in April 2022 new oil and gas discoveries in the Western Desert of Egypt, adding approximately 8,500 barrels per day. Furthermore, Egypt has recently secured liquefied natural gas supply agreements with Europe, which boosts its fiscal revenues (given currently soaring prices for LNG). The gas extractives sector represented roughly 10 percent of GDP in FY19/20–21 and can stimulate activity and production. The sector had a growth rate of 6.7 percent in the second quarter of FY22, making a positive contribution to GDP growth (by 0.6 percent). During the first half of FY22, Egypt was a net gas exporter thanks to the surge in price and exported volumes.[6]

10. **The country can create new markets given the competitive advantage that low-cost natural gas may provide to the extensive range of domestic and regional power and industries** (such as cement, fertilizer, petrochemicals, cosmetics, medicine, synthetic fibers, or plastics). However, these opportunities require effective transport solutions to develop supply chains successfully.

11. **Transit through the Suez Canal has increased as the war in Ukraine diverts trade.** In April 2022, passing ships and oil tankers increased to 1,402 and 527 respectively, compared to 1,395 and 419 a year earlier. Similarly, cargo increased to 114.6 million tons, compared to 110.2 million in April 2021. Suez Canal revenues remained resilient at 0.4 percent of GDP on a quarterly basis, from the first quarter of FY21 until the second quarter of FY22. As a result, the Suez Canal continues to benefit the Egyptian

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The informal sector is defined as comprising household unincorporated enterprises with market production that are:
- Informal own account enterprises (optionally, all, or those that are not registered under specific forms of national legislation);
- Enterprises of informal employers (optionally, all those with less than a specified level of employment and/or not registered and/or employees not registered).
ILO Resolutions Concerning Statistics of Employment in the Informal Sector Adopted by the 15th International Conference of Labor Statisticians, January 1993.

[2] Economic Research Forum. 2019. *Job Creation in Egypt, A Sectoral and Geographical Analysis Focusing on Private Establishments 1996–2017*.

[3] IFC (International Finance Corporation). 2020. *Creating Markets in Egypt – A Country Private Sector Diagnostic*.

[4] World Bank Press Release. 2020. Global Value Chains Have Spurred Growth but Momentum Is Flagging, World Bank Press Release No. 2020/051/DEC.

[5] World Bank. 2015. *Egypt Connectivity Study, A Strategy to Improve Egypt's Trade Connectivity*. Report No. ACS12517.

[6] In parallel, Egypt intends to increase the supply of electricity generated from renewable sources to 20% by 2022 and 42% by 2035, with wind providing 14 percent, hydropower two percent, photovoltaic (PV) 22 percent, and concentrating solar power (CSP) three percent by 2035, according to Egypt's 2035 Integrated Sustainable Energy Strategy. The private sector is expected to deliver most of this capacity. Source: https://www.trade.gov/country-commercial-guides/egypt-renewable-energy, accessed August 3, 2022.

economy. The Suez Canal receipts can act as partial mitigation to ease the pressures on Egypt's external accounts.

Sectoral and Institutional Context

12. **Egypt needs to improve logistics and transport connectivity to expand trade competitiveness.** Within global value chains, Egypt needs to consolidate its multimodal freight transport supply chains—rail, road, and maritime— coupled with streamlining documentation using single waybills. Reducing transport time and cost is vital for improving logistics. MENA countries have achieved a 10 percent reduction in supply chain lead times, resulting in a 4.3 percent increase in exports.[7] On the domestic front, improved logistics will open new opportunities, attract new players into the sector, and help increase stakeholder income. Egypt needs to strengthen its logistics sector by focusing on creating intermodal corridors linking seaports with inland destinations. Egyptian National Railways (ENR) is initiating an advisory study funded by the European Bank for Reconstruction and Development (EBRD) for multimodal transport between logistics services to improve connectivity.

13. **Egypt's rank in the Logistics Performance Index (LPI) fell from 49 in 2016 to 67 in 2018.** This drop is due to dependence on trucks, limited capacity for freight trains on the rail network, and congestion at ports. Trucks move about 96 percent of total ton-km of freight, with railways at 1.9 percent and inland waterways at 1.7 percent in 2012.[8] In Europe in 2012, by contrast, rail accounted for 19.1 percent and inland waterways 7.4 percent (the rest transported by road).[9] In Egypt, the fraction of freight moved by rail dropped below the already low 2012 baseline. By 2020, rail by freight in Europe had also declined, but only to 16.8 percent. In Egypt, capacity constraints on rail, roads, and river transport hinder the links between ports—and logistic zones—and centers of consumption and production.[10] This inefficiency is costly for the country. Egyptian expenditure on logistics is about 18 percent of GDP[11] (about US$ 43 billion), compared to 8.5 percent in the United States (2018).[12] To understand the problems, what follows analyzes rail, ports, dry ports, and how the project addresses the issues raised.

Rail

14. **Egypt's rail system is one of the most extensive in Africa, but its focus is on passenger services—not freight logistics.** ENR operates passenger and freight services on a 9,570 km network with 705 stations.[13] ENR trains move roughly 1.4 million passengers per day.[14] ENR's operations rules on mixed-use tracks prioritize passenger trains, leading to delays for freight trains and scheduling uncertainty. This

[7] IFC (International Finance Corporation). 2021. *Taking Action on Trade, from Concern to Support*.

[8] JICA (Japan International Cooperation Agency). 2012. *Master Plan for Nationwide Transport System in the Arab Republic of Egypt*. Final report. More recent data is difficult to find.

[9] https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Freight_transport_statistics_-_modal_split, accessed April 26, 2022.

[10] World Bank. 2015. *A Strategy to Improve Egypt's Trade Connectivity*. Report No: ACS12517.

[11] World Bank. 2016. *Transport Sector in Egypt, The Next Steps*.

[12] State of Logistics – USA 2018.

[13] ENR total network length is 9,570 km because some segments have two and even four tracks.

[14] World Bank. 2021, *Achieving Green, Inclusive, Safe, and Effective Transport for Egypt. Final Report*. Version 2021.07.16.

priority for passenger trains is especially prevalent in major urban areas such as the Greater Cairo Area (GCA), resulting in a bottleneck for freight trains.

15. **Within the current transport landscape, rail freight cannot compete with trucks—which, moreover, have a higher carbon footprint than rail.** The competitiveness of ENR in providing freight transport services has decreased over the past decade. Freight transport generates about 21 percent of ENR's revenues, incurs about 15 percent of costs, and is responsible for about 10 percent of ENR's deficit.[15] The decrease in rail freight includes outdated and insufficient rollingstock and a lackluster commercial attitude toward freight transport. Furthermore, market distortions from the lack of a robust regulatory framework for road transport falsely depress transport costs and provide an unfair edge for freight by road over rail.

16. **The Ministry of Transport has plans to address this situation by focusing on freight as the lever of growth for the railway market.** ENR targets mining, agriculture, industrial and petroleum products, construction materials, and containers for transport by rail rather than by road. A vital function will be to support the wheat supply chain by transporting imported wheat to silos across the country by rail. ENR is acquiring 1,000 new passenger and freight cars and freight locomotives with more power than passenger locomotives. ENR also wants to involve the private sector in freight transport through a management and operation contract.

17. **Infrastructure bottlenecks, however, may prevent private-sector participation (PSP) in freight transport operations in the ENR network.** These bottlenecks emerge because only three freight trains per direction per day can travel between the Alexandria Port (AP) and the 6th of October Dry Port (DP6) and destinations in the GCA (see Figure 1). Also, as mentioned above, ENR privileges passenger railway services. The left panel in Figure 1 shows the only possible route for the freight trains connecting AP to DP6[16] and Upper Egypt (Southern Egypt), which must enter the GCA. Because of the heavy passenger traffic, the ENR network is saturated. The Cairo Alexandria Trade Logistics Development Project (CATLDP) will implement an operational bypass around the GCA, as shown in the right panel in Figure 1. The operational bypass will allow 15 container trains per day by 2030, and as demand increases, 50 trains by 2060 to DP6.[17] Additional freight trains will flow between the AP, the DP6, and Upper Egypt.

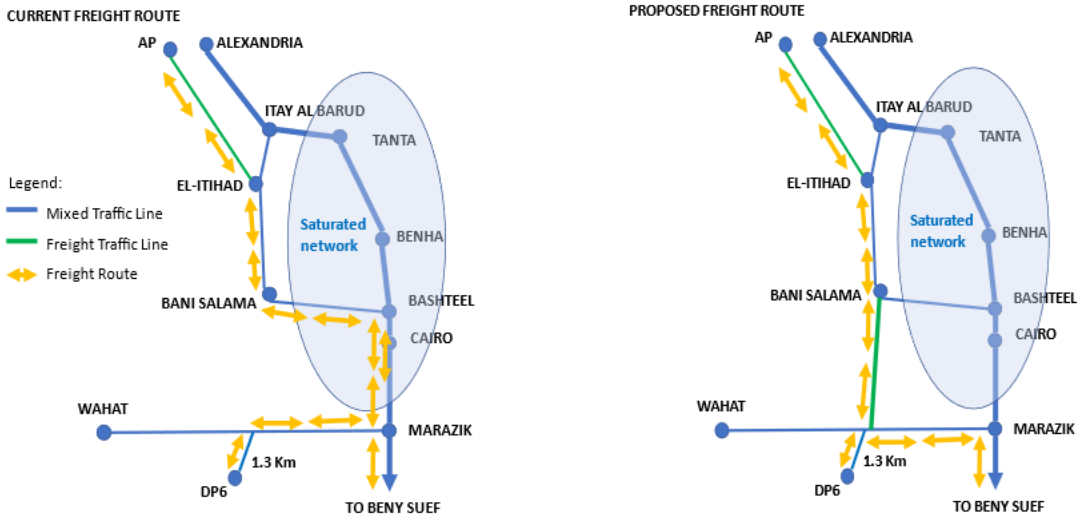
18. **The 2012 Transport Master Plan identified this same bottleneck and ranked implementing a freight corridor between AP, DP6, and the port of Sokhna in the Red Sea as the top priority**. The CATLDP will implement the AP–DP6–GCA segment of this freight corridor. The CATLDP will also design and establish the infrastructure access charging (IAC) regime. IAC allows private operators to pay a charge or toll to ENR for using ENR's tracks. This project also builds on the reforms started by the Railway Improvement and Safety for Egypt (RISE) Project. The CATLDP will, therefore, enable private capital mobilization, as explained below.

Figure 1. Current Routes for Freight Trains from Alexandria Port to 6th October Dry Port and Proposed Solutions for the Bottleneck in the Greater Cairo Area

[15] World Bank. 2019. *Egypt – Enabling Private Investment and Commercial Financing in Infrastructure*.

[16] The 1.3 km last-mile rail connection to DP6 is operational.

[17] PPIAF (Public–Private Infrastructure Advisory Facility), and World Bank. 2020. *High Level Business Case Report for Railway Freight Project*. Menarail Freight Consultants.



Current private-sector participation in Egyptian railways and critical barriers

19. **On April 2, 2018, the Government issued Law No. 20/2018, which updates the Sector-Specific Law No. 149/2006 for railways.** The new law allows ENR to seek direct participation by private investors in developing the railway system through concessions. The main amendments to the law: (i) ended the ENR monopoly on the establishment, management, operation, and maintenance of the railway networks; (ii) broadened the ENR concession-based system to allow engagement of the private sector on a much broader scale; and (iii) limited the concession period to 15 years. These were groundbreaking reforms, considering that since its inception in 1834 ENR had never allowed private-sector participation in the sector.[18]

20. **Despite this law, the private sector has yet to invest in the existing railways operated by ENR.**[19] **The Cascade analysis to prepare this project explains the situation.** The first question in the Cascade analysis asks whether the private sector can undertake the proposed project, and if so, how much of the project can it finance? First, the expected freight volume by rail does not meet what international experience suggests is the threshold for this type of PSP, about 10 million tons per year. Only if traffic exceeded roughly 10 million tons would it be possible to avoid the need for some government funding for railway infrastructure. For comparison, in 2020 ENR shifted no more than 4.4 million tons of freight in total over the entire network. In its first years, the project could move a maximum of 2.5 million tons per year in container traffic—by to implementing an operational bypass around the GCA.

[18] https://www.sharkawylaw.com/egypts-national-railway-is-now-open-for-business-with-the-private-sector/.

[19] For new lines, where ENR is not present, the private sector has signed contracts to invest and operate railway services. The National Authority for Tunnels (NAT) awarded a US$ 4.5 billion rail construction contract under a 15-year, Design, Finance, Build, Operate arrangement to a consortium of Germany's Siemens Mobility and Egyptian firms Orascom Construction S.A.E. and The Arab Contractors for the first phase of a high-speed railway line. This first line will be 660 km of rail, with at least 18 stations, linking the port city of Ain Sokhna on the Red Sea to Marsa Matrouh and Alexandria on the Mediterranean Sea. See https://www.enr.com/articles/52663-egypt-awards-45b-contract-for-first-phase-of-high-speed-rail and https://www.reuters.com/world/middle-east/egypt-signs-445-bln-contract-high-speed-rail-link-2021-09-01/

21. **If the answer to the first question in the Cascade analysis is no, then the second question is: what can the project do to promote PCM in the sector?** The CATLDP also includes reforms establishing an infrastructure access charging (IAC) regime. IAC would allow ENR and private operators to share tracks, breaking the ENR's monopoly. The project includes a Performance-Based Condition (PBC) to incentivize the GoE to adopt IAC. The project builds on and deepens the reform effort started by the RISE Project, explained below in detail. If the IAC regime is in place, the project could transport another 2.5 million tons annually, mobilized by the private providers of railway freight services.

22. **Without the IAC regime, private-sector participation is limited to infrastructure and station construction, manufacturing of rolling stock, and ancillary services such as catering (quite apart from the lack of capacity for freight trains caused by the current GCA bottleneck).** Nevertheless, the potential for PSP is far-reaching, as shown in Figure 2. Examples are private investments in railway wagons, passenger cars, locomotives, maintenance depots, equipment, stations, and other rail-related facilities, such as "last-mile" connectivity. The CATLDP will enable PSP in the railway sector by implementing IAC and the operational railway bypass for the GCA.

Ports

23. **Alexandria Port (AP), the primary node for Egypt's trade across the Mediterranean with Europe, is under pressure.** The port is one of the largest in the Mediterranean—and it is congested. Operated by a private firm, Hutchison,[20] AP handles almost 60 percent of Egypt's foreign trade.[21] The port covers 10.5 km^2, including 2 km^2 of land and 8.5 km^2 of water. The Alexandria container terminal's current throughput is 826,994 TEU containers (Twenty-Foot Equivalent Units).[22] Since its original design capacity was only 160,000 TEU, we now see multiple delays during clearance of goods, and increased transport costs.[23] The release of containers at AP takes 11 days on average.[24] Time losses are due to customs limitations, terminal handling, limited stacking and maneuvering areas, and congestion because of over 5,000 daily trucks entering the port. Limited connectivity to and from the AP clearly aggravates the situation. The AP is, in fact, a railway-oriented port, because it has 22 km of tracks.[25] Unfortunately, few railway lines currently connect to Egyptian ports, and the AP is no exception. ENR is solving this issue by constructing railway lines to improve railway connectivity to this port, including this project.

24. **The Alexandria Port has an LE 12 billion (approximately US$ 764 million) investment plan to improve its port services,** including 87 new platforms along a 24.9-km coastline.[26] AP's expansion efforts consider rail links to emerging inland dry ports, particularly the 6th of October Dry Port (DP6).

[20] https://hutchisonports.com/ports/world/hutchison-ports-alexandria/ accessed March 16, 2022.

[21] Alexandria Port Authority. https://apa.gov.eg/en/ accessed March 16, 2022.

[22] World Bank Group. 2018. *Maritime Networks, Port Efficiency, and Hinterland Connectivity in the Mediterranean*. TEU refers to a Twenty-Foot Equivalent Unit and is the minimum container size. Containers can also be Forty-Foot Equivalent Units.

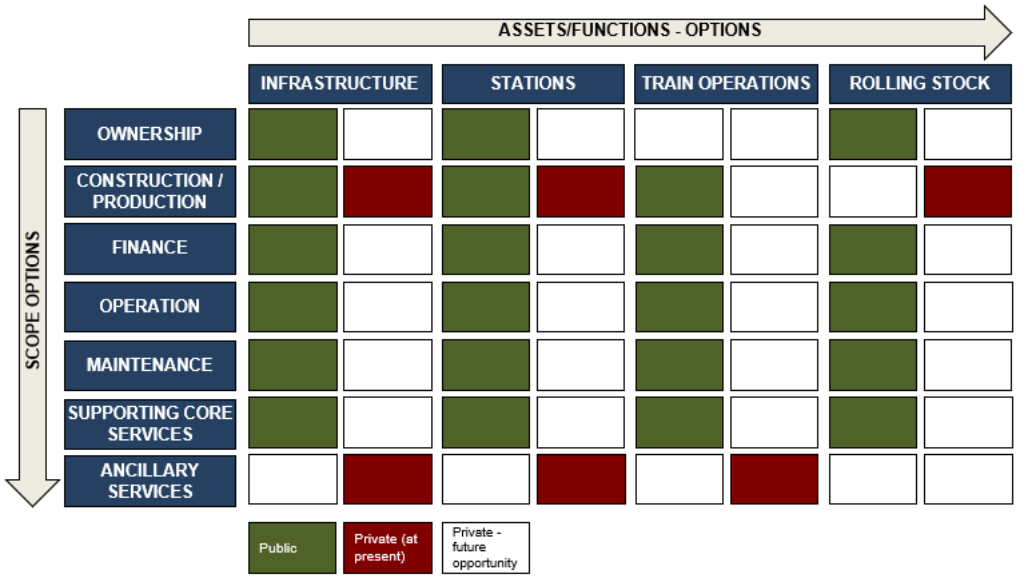
[23] Logistics Capacity Assessments (LCAs). https://dlca.logcluster.org/display/public/DLCA/LCA+Homepage. Accessed April 15, 2022.

[24] OECD Data, Container Transport. https://data.oecd.org/transport/container-transport.htm. Accessed April 15, 2022.

[25] https://apa.gov.eg/en

[26] Xinhua Net. 2021. "Upgrading Alexandria Port to Help Egypt Become International Trade, Logistics Hub." http://www.news.cn/english/2021-09/11/c_1310180919.htm; "Wazir: Egypt carries out all-out plan to upgrade all harbors,"

Figure 2 – Allocation of Public and Private Responsibilities in the Egyptian Railway System



Based on World Bank[27] and EBRD.[28]

Dry Ports

25. **Egypt's Logistics Master Plan recommends the development of several logistics centers and inland dry ports (DPs) to alleviate constraints at seaports and promote multimodal transport.**[29] DPs will perform as Inland Customs Clearance Depots (ICCD). An ICCD can perform all the customs-related functions whereby each dry port will have a port code that will allow waybills to set a DP as the destination—instead of a seaport. This Logistics Master Plan improves Egyptian capacity for multimodal transport. A ship can deliver a container to a port, then by train to a dry port, and then by truck, under one contract and a single waybill.[30] "Last-mile rail connectivity" is also part of this plan comprising infrastructure and services which connect the main transport arteries and hubs, such as DPs to origins (such as factories) or final destinations (for example, distribution centers, warehouses and so on).

26. **The dry ports strategy of the GoE promotes rail traffic growth via improved rail connectivity**. DPs will develop the logistics sector, strengthen supply chains, reduce freight travel time, and lower transport costs with enhanced rail freight transportation services. The strategy calls for building eight DPs

https://sis.gov.eg/Story/165396/Wazir-Egypt-carries-out-all-out-plan-to-upgrade-all-harbors?lang=en-us. These sources do not explain how the MoT will finance this port upgrade strategy. Accessed April 15, 2022.

[27] World Bank. 2018. *Egypt: Enabling Private Investment and Commercial Financing in Infrastructure*.

[28] EBRD: Private Sector Diagnostic, Egypt (2017); EBRD: Egypt Country Strategy 2022–2027

[29] JICA (Japan International Cooperation Agency). 2008. *Multimodal Transport and Logistics Systems of the Eastern Mediterranean Region and Master Plan in Egypt*.

[30] World Bank. 2021. Module 2 "Economic, Transport and Trade Corridors," of the Open Learning Campus (OLC) training "Transport Connectivity, Logistics and Regional Integration."

throughout Egypt by 2030. The environmental and traffic safety impacts of taking freight trucks off the road and onto rail will benefit the country.[31]

27. **A key dry port is the 6th of October Dry Port (DP6) under construction through a public–private partnership**. DP6 aims at alleviating pressures currently experienced by traditional seaports, especially at the AP. Egypt's first extended gateway to deep-sea ports, DP6 will assist in decongesting the AP, provide storage, and reduce customs clearance times as an ICCD. In January 2020, the Ministry of Transport (MoT) announced plans to build it through a public–private partnership (PPP). The resulting PPP is between the General Authority for Land and Dry Ports (GALDP) and a Special Purpose Vehicle (SPV) consisting of; (a) DB Schenker, a division of German rail operator Deutsche Bahn AG; (b) Elsewedy Electric Co S.A.E, an Egypt-based joint-stock company; and (c) 3A International, an Egyptian-based freight forwarding company. This US$ 176 million PPP reached financial closure in July 2021.[32] Construction started in late 2021, and operations in July 2022.[33] Covering 420,000 m^2, DP6 is the largest in Africa. DP6 has a maximum daily capacity of 720 TEUs, just over 260,000 TEUs per year. DP6 could create 3,500 direct and indirect jobs. Direct jobs include crane and stacking operators, supervisors, and so forth, at container yards, multipurpose storage warehouses, communication and control systems, and handling and inspection equipment. Indirect jobs relate to the positive economic impacts DP6 will have on existing factories and future ones in the October 6th Industrial Park planned for adjacent land.

28. **The European Bank for Reconstruction and Development (EBRD) is financing DP6.** The EBRD loan of US$ 29.6 million to the private sector, approved in July 2021, is part of a total investment package by the EBRD of US$ 60 million to finance the design, development, construction, and operation and maintenance of DP6. The EBRD sees this as a "trigger investment" under EBRD Green Cities Framework 2 Window 2 (GrCF2 W2), enabling the start of the development of the Green City Action Plan (GCAP) with the New Urban Communities Authority (NUCA) for the 6th of October City. The 6th of October City also has an important industrial area, which will benefit from DP6's role as an ICCD and container terminal. DP6 also follows EBRD safeguards.[34]

29. **The GoE is contractually committed to delivering a railway service to DP6.** This commitment comprises providing railway connectivity and railway traffic to the private operator of DP6. With a direct rail connection to AP, DP6 will function as an inland container port while also servicing the 6th of October City industrial area and the GCA. DP6 is about 300 km from AP, a distance that may give trucks an advantage.[35] However, DP6 is a railway-oriented port that counts on attracting a large volume of containers with transfers to trucks only for the short last-mile, final delivery journey. Demand projections by a study financed by the Public–Private Infrastructure Advisory Facility (PPIAF), completed in 2020,

[31] MiNTS – Misr National Transport Study: The Comprehensive Study on the Master Plan for Nationwide Transport System in the Arab Republic of Egypt, March 2012.

[32] "Financial Close – 6th October Dry Port PPP, Cairo," https://www.rendel-ltd.com/news/view/financial-close-6th-october-dry-port-ppp-cairo

[33] As part of project preparation, the task team visited DP6 to assess the construction progress and confirm service will start by July 2022. See also https://www.odpeg.com/facility

[34] https://www.ebrd.com/work-with-us/projects/psd/51830.html

[35] "World Bank. 2017. Railway Reform : Toolkit for Improving Rail Sector Performance. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/30734 License: CC BY 3.0 IGO."

indicate that DP6 could generate 15 container trains per day by 2030 and 50 by 2060.[36] These estimates assume the rail service will capture 20 percent of the demand. The remaining containers will travel by truck. With the development of railway services, this share could increase the number of trains carrying containers. The number of trains carrying bulk cargo will also increase, as shown by the PPIAF-financed study.

Gender aspects

30. **Many countries exhibit significant gender gaps in the labor market, especially in the transport sector, and Egypt is not an exception**. Only about 18.5 percent of females aged 15 and above participate in the labor force compared to a male rate of 71.2 percent.[37] In both absolute and relative terms, these figures indicate a disparity in economic opportunity for women compared to men and illustrate the magnitude of the economic potential that bridging this gap represents for the country. Interestingly, women constitute a very reasonable share (48 percent) of university graduates from Egypt's Science, Technology, Engineering, and Mathematics (STEM) faculties.[38, 39] However, this proportion does not translate into the labor market. Only about three percent of approximately 45,000 ENR employees are women, most of whom work in the human resource and finance departments.[40] The CATLDP provides an excellent opportunity to promote women's employment in rail by building on the gender commitments made in the RISE project that aim to improve women's employment, retention, and career advancement in ENR.

Railways and Climate Change Risks

31. **Given that it is located in an area subject to high climate change risks, the project will accelerate adaptation to climate-change-related impacts by improving the resiliency of railway service.** The project corridor stretches from Alexandria Port in the humid and fertile Delta region to DP6 and other dry ports in Greater Cairo, a desert area. The freight rail services will serve Upper Egypt and Red Sea destinations. The Task Team conducted a disaster risk screening. The analysis showed that the project area is subject to significant risks of extreme weather events.

32. **Further, the risks of these climate events will be higher in the future.** By 2050, the mean annual temperature could increase by 2°C to 3°C (more rapidly in the interior regions). Extreme storm events could increase with significant flooding and storm damage. The frequency of sandstorms will also increase. Egypt is classified as "highly vulnerable" to climate change effects according to the 2021 ND-Gain index, ranking Egypt 110 out of 182. Critical vulnerabilities include the following. First, the poor are vulnerable and often the most severely affected by the impacts of climate change while possessing fewer resources to cope with and respond to climate change risks. In 2019, about 30 percent of Egyptians were living in poverty, and another 30 percent had consumption levels only slightly above the poverty line, leaving them liable to fall into poverty if they experience income or expenditure shocks. Climate change will likely impact food prices and availability. Wheat, for example, an essential food staple representing

[36] PPIAF (Public–Private Infrastructure Advisory Facility), and World Bank. 2020. *High Level Business Case Report for Railway Freight Project*. Menarail Freight Consultants.

[37] World Bank. 2019. *Gender Data. Modelled ILO estimates* https://genderdata.worldbank.org/countries/egypt-arab-rep
[38] World Bank. 2018. *Egypt: Women Economic Empowerment Study.* https://www.worldbank.org/en/country/egypt/publication/egypt-women-economic-empowerment-study
[39] British Council. 2020. *Women in STEM in Egypt Case Study*. https://enterprise.press/wp-content/uploads/2021/06/505570207-Women-in-STEM-in-Egypt-British-Council-Booklet-2021.pdf
[40] Menarail. 2020. *Preliminary Gender Assessment.* Railway Freight Project. Cairo.

35–39 percent of per capita caloric consumption in Egypt, is 62 percent imported and is highly susceptible to variations in international markets. Second, climate change-induced water scarcity will significantly affect agriculture and agribusiness, which provide large shares of rural, women's, and informal employment. Overall, agriculture provides jobs to a third of Egyptians and accounts for 21 percent of exports. By 2050, every crop type will be vulnerable to the biophysical impacts of climate change (insufficient water, salinization, heat stress, and heat shocks). Projections show that a reduction in Nile River inflow to Aswan High Dam from 55 to 45 billion cubic meters will reduce irrigated land by 22 percent, productivity per irrigated hectare by 11 percent, and agricultural employment by nine percent. Third, vulnerability to pluvial (rain-related) flooding and coastal risks from sea level rises, subsidence, saltwater intrusion, coastal storms, and urban flooding will impact cities' livability and economic productivity. Greater Cairo and Alexandria are among the cities in Egypt with the highest risks to people's livelihoods and mobility of goods and people due to anticipated increases of these events.

How the project contributes to solving the problem

33. **The GoE seeks to cooperate with the World Bank Group to solve the infrastructure bottleneck by implementing the railway bypass around the GCA.** The GoE, following the 2012 Transport Master Plan,[41] wishes to create a rail freight corridor between AP, DP6, and beyond. The railway bypass includes constructing a greenfield link, associated track and signaling, and upgrading track and signaling in the other sections to achieve an operational bypass (figure 1 and map in Annex 2). The CATLDP also includes railway sector reform to introduce IAC, PSP for last-mile rail connectivity and freight terminals, and decarbonization of the railway sector. These objectives are pivotal to improved logistics in Egypt, allowing connections to other quadrants of the national railway network, including Sokhna Port, the Suez Canal Economic Zone, and other Egyptian ports on the Mediterranean such as Damietta and Port Said.

34. **In addition to the World Bank loan, the CATLDP requires significant contributions by the Government of Egypt or ENR.** A World Bank guarantee can help lower the financial cost of raising these funds. If the GoE submits the request for this guarantee, the Bank is ready to prepare it via a separate but linked operation.[42] The guarantee for US$ 100 million could leverage future ESG-linked[43] commercial financing for US$ 200 to 250 million with a lower interest rate and better maturity. For this separate but linked operation, trust funds, or GoE funds can hire a transaction advisor to assess various commercial financing options that an IBRD guarantee could support.[44] This assessment will help determine the optimal structuring (regarding the terms of the financing) for GoE and ENR. With its leading role in COP 27 in 2022, Egypt is attracting green financing for its economy and is keen to demonstrate its leadership in the green economy. However, the country currently has a low ESG rating (in the bottom 23 percent). The project could improve the ESG rating if the guarantee is processed and subsequently approved.

35. **Additional Private Capital Mobilization.** The GoE and the MoT are keen on increasing private-sector investment in the transport sector. Egyptian ports have terminals run by private-sector operators, and the dry ports will be privately-operated. For railways, Law No. 20/2018 allows ENR to seek direct

[41] JICA (Japan International Cooperation Agency). 2012. *Master Plan for Nationwide Transport System in the Arab Republic of Egypt*. Final report. March. This master plan identified a three-prong strategy: Hardware (development of logistics infrastructure such as the freight corridor); Software (development of regulatory and institutional measures); and Humanware (human resource development and training).

[42] The Bank will prepare this Guarantee under P178803, linked to the current project.
[43] Environmental, Social, and Governance.
[44] The task team is applying for trust funds to help finance this activity.

participation from private investors in developing the railway system through concessions. However, despite this law, the private sector has yet to invest in the existing railway operated by ENR. Infrastructure bottlenecks may affect PSP in the existing railways.[45] The project directly furthers the GoE's objective by removing barriers that prevent private-sector participation (PSP) in the railway sector. The project will build the railway bypass around the GCA and implement the Infrastructure Access Charge. The project will also prepare last-mile connectivity and other options that attract PSP. (Please see more detail in the Appraisal section and the Cascade analysis in Annex 3).

36. **The project will contribute to climate change adaptation by improving resilient railway services.** Freight and logistics in Egypt rely on road-based transport, mainly by trucks. The ENR network serves urban regions of Greater Cairo (population: 20 million), Alexandria (5 million), and Asyut (4 million), as well as rural regions thanks to over 9,000 km of tracks. The rural population in the 13 governorates along the ENR network is over 32 million (2016). The project will improve the resiliency of the railway infrastructure and services with technologies to ensure operational continuity and safety even during disruptions. The project will build a resilient railway network with last-mile connectivity provided by other modes. The project will lower the costs of transporting imported essential goods such as wheat (of which Egypt is the world's largest importer). If the highway network experiences climate-related disruptions, the railway will have capacity. The project will further alleviate the stress of freight services on the heavily used Cairo–Alexandria corridor, creating room for passenger railway services. The project will build resilience by improving access for vulnerable people to economic opportunities (jobs), educational opportunities (universities) and services (especially major hospitals) in large cities.

Relationship to Country Partnership Framework (CPF)

37. **The proposed project aligns with the Egypt Country Partnership Framework (CPF) (FY23-27, under preparation).** The proposed project will build a bypass to the bottleneck on the GCA and introduce the IAC regime. The project will create opportunities for freight trains along the AP–DP6 corridor and to Upper Egypt. The project will also develop opportunities for private-sector participation in constructing last-mile rail connectivity to the main ENR network. The project is part of the proposed AP–DP6–Aswan–Wadi Halfa economic corridor. This trade corridor will enhance trade competitiveness, support export diversification, and improve value chain linkages and access to logistics zones and commercial markets in Sudan and other Nile Basin countries. The project will also help leverage the rate of industrial development and link small and medium enterprises (SMEs) to large industries by moving freight from road to rail.

38. **The proposed project will contribute to the Twin Goals of the World Bank** through efficiency gains by reducing the costs of transporting goods and people. These effects will enhance the competitiveness of the Egyptian economy while improving the capacity of the ENR network for freight and passenger services that primarily serve the low-income population.

39. **The project supports the GoE implementing its 2012 Transport Master Plan, which prioritized building a freight corridor between AP, DP6, and the port of Sokhna in the Red Sea.** The project will implement the missing segment of the Bashteel–El Itihad section and improve the Marazeeq–Wahat section, improving tracks and signaling between AP, DP6, and the GCA. The project is part of ENR's

[45] See https://www.enr.com/articles/52663-egypt-awards-45b-contract-for-first-phase-of-high-speed-rail and https://www.reuters.com/world/middle-east/egypt-signs-445-bln-contract-high-speed-rail-link-2021-09-01/

comprehensive infrastructure upgrading plan, financed by several multilateral and bilateral agencies (see Table A.5, Annex 1).

40. **The World Bank has a rich engagement in transport in Egypt.** The World Bank supported the ENRRP (P101103) project when other multilateral development banks did not venture into signaling, critical for safe railway operations, because of the associated complexity. Most multilateral development banks prefer, for instance, to finance rolling stock (as the World Bank also did in projects in Brazil and India). The CATLDP incorporates best practices from World Bank-financed projects. The project emphasizes several dimensions such as new construction, railway infrastructure development, signaling modernization, institutional reforms, trade and logistics improvements, and a railway safe system approach. The project also includes health and safety elements targeting railway users and workers. The project will continue the reform path initiated by the RISE Project, also financed by a World Bank loan, as explained in the Appraisal section.

41. **More than a decade of analytical work by the World Bank and related transport engagement underpins the proposed project.** The report entitled "Egypt: Enabling Private Investment and Commercial Financing in Infrastructure" points out the urgent need to invest in infrastructure for sustainable economic development, calling for an institutional and regulatory environment that enables private-sector investment in the infrastructure sector.[46] With support from the UK-funded Strategic Partnership for Egypt's Inclusion Growth Trust Fund (SPIEG-TF), the World Bank developed the study "Achieving Green, Inclusive, Safe, and Effective Transport for Egypt." This study identified strategies for multimodal freight transport and logistics, including ports, airports, railways, and inland waterways, proposing a set of institutional, regulatory, and implementation recommendations. These strategies build on maximizing finance for development (MFD) to generate PSP.[47] The project develops these recommendations, including the railway reform and supporting plans by the MoT to seek PSP in freight railway operations.[48]

42. **The proposed project, therefore, builds on the World Bank's close engagement with the GoE on policy dialogue in the transport sector, including the institutional structure and governance arrangements, while enhancing safety and regulatory aspects and increasing connectivity to employment opportunities, markets, and services.** Strengthening the institutional capacity within the sector will positively impact trade logistics and help unlock opportunities for PSP and economic growth, as stated in Egypt's sustainable strategy under Egypt Vision 2030. The proposed project will continue the ENR reform effort started by the RISE Project, as explained in the Appraisal section.

Relationship to Regional Strategies

43. **The proposed project aligns with the World Bank MENA Regional Strategy, the MENA Strategy for Smart, Green, Inclusive, and Sustainable Infrastructure 2021, and the Egypt Systematic Country Diagnostic Update,[49] promoting PSP.** The proposed project will remove the two critical bottlenecks—one infrastructure-related, the other a regulatory one—to PSP as identified in the Cascade Analysis (appraisal

[46] World Bank. 2018. Egypt – Enabling Private Investment and Commercial Financing in Infrastructure (Vol. 2). http://documents.worldbank.org/curated/en/588971544207642729/Report

[47] World Bank. 2021. *Achieving Green, Inclusive, Safe, and Effective Transport for Egypt*. The Bank team carried out consultations on this study with transport-related government agencies in Egypt, which gave feedback. The report is not yet disclosed.

[48] See https://www.al-monitor.com/originals/2021/05/can-privatization-save-egypts-railways

[49] World Bank Group. 2021. *Egypt – Systematic Country Diagnostic Update : Unlocking Egypt's Potential for Poverty Reduction and Inclusive Growth*. https://openknowledge.worldbank.org/handle/10986/36437

section and Annex 3). The project will open opportunities for PCM and PSP in areas such as last-mile rail connectivity (LMC), hook-and-haul traction services, leasing or purchase of wagons, and operation of dedicated marshaling yards (shunting yards, serving as transfer points). The World Bank-IFC teams will continue supporting the objective of promoting private participation in railways.

44. **The project responds to the World Bank's Gender Strategy (2016–2023) and the MENA (FY18-23) Regional Gender Action Plan.** The project will remove constraints that impede women's access to more and better jobs by upgrading the ENR childcare facility and offering training opportunities to female final-year students and recent graduates from engineering faculties. The project is also well aligned with the World Bank's MENA (FY18–23) Regional Gender Action Plan, prioritizing empowering women economically.

45. **The proposed project will contribute to the World Bank Group's Climate Change Action Plan (CCAP) 2021–2025, the Green Resilient Inclusive Development (GRID), and the Approach for COVID-19 response.** Aligned with the CCAP, the project will implement interventions to decarbonize the transport sector using freight railways. This shift to low-carbon transport will improve connectivity and reduce emissions in a cost-efficient manner. The project will also promote resilient transport systems through multimodal freight transport, including railways with climate-resilient infrastructure. The proposed project aligns with adjustments made to the Egypt CPF in response to the COVID-19 pandemic (Egypt COVID-19 Response Strategy) to support the 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.

46. **The project will help the GoE meet its Intended Nationally Determined Contributions (INDCs) and is aligned with Egypt's National Climate Change Strategy 2050,[50] which supports Egypt's sustainable development goals and Vision 2030.**[51] At the same time, Egypt counts among the top five countries most vulnerable to climate change globally, mainly because of its dependence on water from the Nile.[52] The transport sector is the second largest contributor to Egypt's overall GHG emissions—contributing approximately 19 percent. The project supports low emission development by encouraging the shift of freight transport to low-carbon railways. The project will also build logistics and freight transport resilience by strengthening multimodality and the climate resilience of railway infrastructure, an essential aspect of the country's climate change adaptation effort. The emphasis on enabling private-sector participation and support to mobilize private investment in a sustainable railway sector accelerates Egypt's ambitious effort to promote innovative finance mechanisms, including green bonds. Finally, the project will pave the way for decarbonizing the railway sector in Egypt, contributing to the 2050 Climate Change Strategy's pillar of enhancing research technology transfer, and knowledge and awareness management to combat climate change.

47. **The project will continue the ongoing dialogue with the GoE on the national railway's role in climate-proofing the Egyptian economy.** Shifting freight from road to rail will lead to lower GHG emissions thanks to rail's lower carbon intensity per ton-km. Nevertheless, the long-term goal is to fully decarbonize the Egyptian economy, including its freight transport sector. The project will develop decarbonization scenarios for the national railway sector. These appear highly beneficial in two ways. First, the scenarios

[50] https://www.eeaa.gov.eg/en-us/mediacenter/newscenter.aspx?articleID=6876

[51] Global Carbon Atlas. CO_2 emissions in 2020.

[52] UNDP (United Nations Development Program). 2019. *INDC Project Actions and Plans: Egypt, NDC Support Program*.

will prepare Egypt for a global decarbonizing economy. For example, European Union countries are increasing carbon border adjustment mechanisms.[53] These adjustments will make carbon-intensive goods and services—including transport services—increasingly uncompetitive. Second, the decarbonization scenarios will identify potential green business opportunities where Egypt has the advantage due to extensive renewable energy resources to produce zero-carbon fuels such as green hydrogen.[54] Railway and trucking sectors and iron, steel, and chemical industries can use these zero-carbon fuels. Egypt could also export these fuels for international shipping, aviation, or industrial off-takers in Europe.[55]

48. **The Cascade analysis showed that the private sector could not implement railway projects because of: (i) the bottleneck in the railway network in the GCA, (ii) the lack of an IAC regime that allows private operators to share tracks with ENR, and (iii) the low volume of freight.** The proposed project will increase the capacity for freight trains by building a bypass around the GCA. The project will create a transparent railway IAC system for the Egyptian network to establish the specific charges railway operators will pay for using the tracks. The project is also linked to a possible future IBRD guarantee to support commercial financing to lower the costs of the Egyptian funds needed for the project. This future activity is contingent on receiving the request from the GoE for the guarantee.

49. **Private Capital Mobilization.** The project will enable private railway operators to run trains on ENR tracks by building the GCA's railway bypass and introducing the IAC regime. In addition, the project could enable an additional US$ 75 million by preparing last-mile connectivity and other options where the private sector can contribute. The additional capacity is also critical if more freight trains use ENR tracks.

50. **Donor coordination.** The GoE seeks to improve the railway network by partnering with other international finance institutions (IFIs). The proposed project is part of a comprehensive set of projects financed by multilateral and bilateral institutions, including the African Development Bank (AfDB), Arab Fund, European Bank for Reconstruction and Development (EBRD), Export Development Canada (EDC), EXIM (Hungary), and the Kuwait Fund. These projects include the acquisition of locomotives and wagons and the next step in railway signaling. The World Bank loan and Egyptian funds will finance the CATLDP, with no other multilateral contributing funds

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

51. To improve the performance and support the decarbonization of the logistics and transport sectors in the Alexandria–6th October–Greater Cairo Area railway corridor.

Key Results

[53] European Union, Carbon Border Adjustment Mechanism, July 14, 2021, https://ec.europa.eu/taxation_customs/green-taxation-0/carbon-border-adjustment-mechanism_en

[54] ESMAP. 2020. Green Hydrogen in Developing Countries. Washington, DC: World Bank.

http://documents.worldbank.org/curated/en/953571597951239276/Green-Hydrogen-in-Developing-Countries

[55] Englert, Dominik; Losos, Andrew; Raucci, Carlo; Smith, Tristan. 2021. The Potential of Zero-Carbon Bunker Fuels in Developing Countries. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/35435

52. Containers handled by rail between AP and DP6: This indicator measures the "improved performance of the logistics sector" aspect of the PDO. The unit is containers moved by rail. Baseline, zero; target: 184,000 containers (TEU) per year.

53. Freight traffic volumes between AP and the GCA and Upper Egypt: This indicator measures the "improve the performance of the railway sector" aspect of the PDO. The unit is million net ton-km. Baseline 500, target 1,110.

54. Greenhouse gas emissions: This indicator measures the decarbonization aspect of the PDO. The indicator will use standard methodologies for GHG accounting. The unit is metric tons per year of GHG CO_2 equivalent. The baseline is 0, and the target is a reduction of 1,119 metric tons per year of CO_2 equivalent.

D. Project Description

55. **Component 1. Railway Sector Reform, Project Delivery, Stakeholder Engagement, Women's Economic Empowerment, and Private Sector Participation** (Total cost: US$ 24 million; IBRD: US$ 20 million, GoE: US$ 4 million).

1.1 Railway sector reform (Total cost: US$ 1 million; IBRD: US$ 1 million): (a) Developing and adopting a transparent railway infrastructure access charging (IAC) scheme for the Egyptian railway network, determining the specific charges to be paid for access and use of infrastructure by public and private railway operators, and supporting ENR in drafting, negotiating and entering into IAC Contracts with private railway operators; (b) developing a regulatory framework for the railway network, identifying the detailed scope and responsibilities of a railway regulator and the associated governance framework; and (c) identifying and developing additional rail-friendly policies to increase traffic on the railway network.

1.2 Project-delivery activities (Total cost: US$ 19.0 million; IBRD: US$ 17.0 million, GoE: US$ 2 million): (a) Setting up an owner's Works Supervisor and Integrator to manage and integrate the design and construction of works financed by the Ministry of Transport (MoT) and works financed with Loan proceeds under Part 2; and (b) financing of a technical audit for the works under Part 2.

1.3 Promotion of Women's Employment and Stakeholder Engagement (Total cost: US$ 1 million; GoE: US$ 1 million). (a) Promoting women's employment in the ENR's workforce through upgrading its childcare facility, establishment of a female internship program and (b) implementing activities under the [Stakeholder Engagement Plan] to strengthen meaningful stakeholder engagement under the Project, including establishing and disseminating a citizen's charter.

1.4. Enabling private capital mobilization (PCM) for the railway sector (Total cost: US$ 2 million; IBRD: US$ 2 million). Transaction support to ENR in dealing with private parties concerning the private sector participation opportunities in the rail sector.

1.5 Decarbonization study (ENR financed) (Total cost: US$ 1 million; GoE: US$ 1 million): conducting a technical study for developing a decarbonization roadmap for ENR.

56. **Component 2: Track extension, railway signaling modernization, and selected track upgrades to create a railway bypass around the Greater Cairo Area** (Total cost: US$ 963 million; IBRD: US$ 379 million, GoE: US$ 584 million).

2.1 Greenfield Link (Total cost, including 2.2): US$ 379 million; IBRD: US$ 143 million, GoE: US$ 236 million). Construction of a greenfield link from the Bashteel–Itay El Baroud section to the Marazeeq-Wahat section, including (a) constructing structures (bridges, viaducts) and laying track foundation; and (b) installation of track and signaling.

2.2 **Marazeek–Wahat Section Upgrade** (Total cost: included in 2.1). Upgrading of existing track and signaling modernization from Maraziq to the junction point with the greenfield link.

2.3 **El Bashteel-Itay El Baroud Section** (Total cost: US$ 428 million; IBRD: US$ 144 million, GoE: US$ 284 million): (a) Upgrading of existing track, construction of a parallel track, and new signaling installation on both tracks on the El Bashteel- El Itihad segment; and (b) upgrading of the existing single track and signaling on the El Itihad-Itay El Baroud segment.

2.4 **El Itihad-Tafaroa Section** (Total cost: US$ 166 million; IBRD: US$ 92 million, GoE: US$ 74 million): Upgrading existing single track and signaling on the El Itihad-Tafaroa section.

57. **The project includes a PBC to incentivize introducing the Infrastructure Access Charge regime.** The PBC is described in the results framework. In short, the PBC is linked to the GoE achieving the intermediate indicator "Infrastructure Access Charging Regime (IAC) on ENR's railway network" in the Results Framework (Baseline: no, Target: yes). The MoT and ENR will develop IAC thanks to the technical study in Subcomponent 1.1.

Legal Operational Policies

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

Summary of Assessment of Environmental and Social Risks and Impacts

58 The project's overall environmental and social (E&S) outcomes are expected to be positive if appropriate E&S mitigation measures are well designed and implemented. The E&S benefits include (1) lower GHG emissions from freight and passenger transportation and support Egypt in meeting the Nationally Determined Contributions, (2) improvements in the overall safety performance of ENR, with resulting benefits for public safety, and (3) Shifting from road to tracks will contribute to fewer traffic accidents, air pollution, noise, traffic congestion and road damages, (4) Increase safe mobility of people. Environmental and Social Risk Classification (ESRC) for the project is Substantial for E&S risks. This classification is based on assessing E&S risks and impacts of the Project's planned interventions, nature and scale, and the institutional capacity of the PMU to manage the anticipated E&S risks and impacts. At this stage, the relevant Environment and Social Standards (ESSs) are determined to be: ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8 & ESS10.

59 The project interventions will cover 376.5 km of linear segments extending from Giza to Alexandria through Monufia and Behira governorates. The project will upgrade about 301 km, mainly within the same footprint of the existing railway infrastructure. The existing railway infrastructure is

primarily in rural areas and dense urban, peri-urban, and desert areas. For the greenfield segment, ENR analyzed five alternatives from E&S risk perspective to select the alignment that minimized and avoided impacts. The greenfield alignment is mainly located within the RoW of the existing regional ring road (RRR) and intersects with several highways and local roads; however, it will encounter privately owned cultivated lands and very few structures in some areas. None of the project sites are considered protected areas or areas of high biodiversity value. The project will not expect any impact on the closest protected area, located around 25 km from the project.

60 Before the appraisal stage and based on the developed scope of the Project, the ENR developed E&S instruments covering all the components of the project, including (1) a Draft Environmental and Social Impact Assessment (ESIA) for sub-components 2.1 and 2.2, (2) an Environmental and Social Management Framework (ESMF) for the project, (3) Resettlement Framework (RF), (4) Stakeholder Engagement Plan (SEP), (5) Labor Management Procedures (LMP) and (6) Environmental and Social commitment Plan (ESCP). The E&S instruments assessed the risks and impacts of the identified components and proposed a set of mitigation measures as per the ESF mitigation hierarchy. For interventions not identified at this stage, the ESMF sets out the principles, rules, guidelines, and procedures to assess the E&S risks and impacts of the activities under components 1 and 2. ENR will implement the E&S instruments to manage the project E&S risks throughout the project implementation.

61 The project E&S main risks identified in the E&S instruments include (1) OHS hazards during construction, maintenance, and operation. (2) Potential generation of wastes and hazardous wastes during construction and operation, with potential large quantities volumes of inert waste, metal and potentially hazardous waste including wooden ties which might be coated by benzopyrene, or ballast contaminated with oil and grease. (3) Cumulative impacts of sourcing quantities of borrow materials such as waste generation, increased dust, noise and vibrations, and increased truck traffic. (4) Traffic impacts, including disruption of vital highways in Giza. (5) Community health and safety impacts during construction and operation phases, including noise, vibration and dust emissions, accidents along the rail corridor and structural integrity as well as community interactions with work crews and resulting potential risks of inappropriate conduct or sexual abuse and exploitation / sexual harassment. (6) Typical construction-related impacts such as air and noise emissions, unloading/uploading of ballast and sand, soil, and adjacent water bodies' pollution in case of leakage of fuel and wastewater or wastes mismanagement. (7) Soil and water contamination and community risks associated with transporting of dangerous goods along the lines, in case of accidents. (8) Permanent and temporary acquisition of private, rented or encroached on land is anticipated for the new line and the construction of the parallel tracks, and therefore impacts on livelihood may also apply. (9) Noise and vibrations associated with trains movement, in areas with sensitive receptors. (10) Risk of unaddressed/unresolved community complaints and potential escalation and/or conflict. (11) Potential devaluation of the market price of land and structures. (12) Risks related to disturbance of farming activities during construction works, from the generated waste and dust. This should be a temporary risk impact that may lead to long-term implications if left unmitigated. (13) Given that the new alignment will be passing parallel to the RRR, it is anticipated that certain groups of landowners may encounter accumulated impacts if land under this project will be expropriated in addition to past expropriation for the RRR from the same owners. (14) Risks related to the integrity of infrastructure during construction or damaging utilities, especially underground. Construction and operation of the project, if improperly managed, will likely result in large adverse impacts on air, soil, communities, and workers. Most of these adverse impacts will be temporary, predictable and/or reversible and should be managed. Component 1 will support implementation of the SEP, capacity building activities, technical studies, supervision and management of the project. Therefore, the Terms of

References (TORs) for the technical studies will include E&S objectives as indicated in the project's ESMF and ESCP. For Component 1.3 which might entail small scale civil works to upgrade childcare facility, the impacts are expected to be typical small scale construction impacts that can be easily mitigated. Therefore, those activities will be subject to the screening process indicated in the project's ESMF to determine the adequate E&S instrument to assess the risks and propose proportionate mitigation measures.

62 MOT and the ENR will implement the project. The PMU for the RISE Project will implement the project. The project ESCP will substantially strengthen the current PMU to cover the new project's scope. ENR has an agreement with the GARB to implement the civil works and track foundations needed for subcomponents 2.1, and 2.3(a), among other projects. The ENR will collaborate with other entities, including the Egyptian Survey Authority (ESA), the national entity in charge of applying the country's public interest and eminent domain law. Adequate coordination between GARB, ESA, and ENR is crucial to ensure that the different activities follow ESF requirements.

63 The EAD's capacity to manage E&S risks has improved over the course of the WB's support, specifically in gaining additional staff and benefitting from ongoing support from WB E&S specialists and capacity building, including on ESF. However, recurring performance shortfalls are observed, particularly related to the implementation of the ESCP of RISE. Contributing causes include lack of coordination between the EAD, PMU and other departments, which each have different reporting lines, lack of enabling environment from ENR to manage E&S risk (insufficient resources including office spaces, desks, computers and transportation arrangements, inadequate staffing, and working arrangement). Despite the improvements in ENR capacity in dealing with E&S aspects, this project brings a whole spectrum of more sophisticated risks and institutional complexity that might be challenging for ENR to address.

64 The project's ESCP includes important measures to address capacity challenges through an appropriate institutional setup and allocation of adequate resources to the EAD to properly function including appointing 7 E&S specialists, who may not necessarily be new hires, allocating adequate resources and providing capacity building. Although ESF will apply to all activities under the project and relevant ESF instruments are being prepared, the risks related to the implementation and supervision of those activities and the associated possible fragmentation of responsibilities still apply, including for example possibility of land acquisition by ESA, in collaboration with GARB without ENR EAD's knowledge. To minimize the project risks, including E&S risks: (1) sub-component 1.2 a will finance setting up an owner's Works Supervisor and Integrator to manage and integrate to ensuring that all the E&S requirements in the project's instruments are well implemented on the ground and integrated into the contractual arrangements with the different contractors (2) ENR will hire an Owner's Representative firm to supervise component 2.1. and 2.3 (a), which will include experienced environmental specialists, social specialists and Health and Safety specialists to supervise the works and ensure integration of the E&S requirements in the bidding and contracts and Community Liaison Officers (CLO) (3) GARB will hire supervising firms and contractors to construct tracks under components 2.1. and 2.3 (a) infrastructure. At GARB level, there will be focal points for managing E&S aspects and an adequate number of competent environmental specialists, social specialists and Health and Safety specialists to supervise project preparation and construction phase at the supervising firms' level (4) All the project contractors will implement the project in accordance with the E&S requirements and will hire also an adequate number of competent environmental specialists, social specialists and Health and Safety specialists.

E. Implementation

Institutional and Implementation Arrangements

65 ENR will implement the project in seven years.

66 **Responsibilities and Executing Agency:** The overseeing power and associated responsibility lie with the MoT. ENR will act as the Project Implementation Entity (PIE) and manage the implementation of all components in close coordination with the MoT. ENR will carry out procurement, financial management (FM), and internal auditing for the project. ENR will oversee safeguards implementation and report on all ESF requirements.

67 **ENR (or PIE) will implement the CATLDP Project through the Project Management Unit (PMU) created initially for the implementation of the ENRRP (closed) and now implementing the RISE Project.** The PMU will coordinate with six ENR departments: signaling system, track renovation, telecommunication system, power supply system, centralized train control, and the environment department. As critical risk mitigation, ENR will reinforce the PMU with the necessary resources for the CATLDP Project and make arrangements to tap into a wider pool of ENR experts during implementation.

68 **The PMU will be responsible for fiduciary management and monitoring and evaluation (M&E) of project activities.** ENR will provide staff and equipment to the PMU to fulfil its obligations. The PMU must strengthen its fiduciary skills (financial management and procurement) and technical skills needed to manage the project, including monitoring the implementation of environmental and social requirements and gender activities. Training will increase the capacity of the PMU. The implementation of the RISE project outlines a positive pathway for the PMU for the CATLDP to follow.

69 **The PMU at ENR and the MoT will implement Component 1:**

a) The MoT will direct the implementation of Subcomponent 1.1, Railway Sector Reform. The MoT and ENR will design the ToR, coordinate day-to-day work, and approve the consultant's deliverables. ENR will carry out the procurement for Subcomponent 1.1. The Steering Committee (SC) the MoT created for the RISE project will also steer the reform effort in the CATLDP. The SC includes representatives from MoT, MoF, and ENR. The SC will: (i) provide strategic guidance for the strategic study of the reform to introduce the IAC regime, and (ii) recommend approving authorities to implement the reforms. The RISE Project Operations Manual details the functions of the SC. Because the project includes reforms with impacts on different stakeholders, a stakeholder working group will provide input on the regulatory framework under Subcomponent 1.1 by giving feedback to the SC. The stakeholder working group comprises representatives of the AP, DP6, Customs, Immigration, freight forwarders, logistics operators, and other stakeholders and authorities. The Results Framework and Monitoring (RFM) includes intermediate indicators to track SC performance, building on lessons from many World Bank-financed projects to achieve a functional SC and a smoothly performing stakeholder working group.
b) The PMU, with the relevant sectors of ENR, will carry out the procurement and supervision of all elements of Subcomponents 1.2, 1.3, 1.4, 1.5, and 1.6.

70 **The PMU at ENR will implement Component 2.** Egyptian government funds and the loan proceeds finance this component. Government funds will finance the civil works such as viaducts, "industrial structures," and track foundations needed for Subcomponents 2.1 and 2.3(a). To implement this part, ENR will sign a Subsidiary Agreement (SA) with GARB, an entity with ample experience procuring

and implementing major transport infrastructure projects in Egypt. As part of this SA, ENR will provide the funding for GARB to implement these works. The SA will also define how GARB will manage the implementation of the contracted scope and ensure GARB follows the safeguards instruments approved for the CATLDP.

71 For the loan-financed scope in Component 2, the PMU at ENR will select the track and signaling contractors following World Bank Procurement Framework for:

a) New track and signaling installation for Subcomponents 2.1 and 2.3(a); and
b) Select track upgrades and signaling modernization for Subcomponents 2.2, 2.3(b), and 2.4.

72 **ENR will prepare a Project Operations Manual (POM), due three months after effectiveness.** The POM will outline the internal procedures to be followed by the PMU to implement the project. The POM will include procurement, financial management, safeguards policy, Monitoring and Evaluation (M&E), and reporting mechanisms. ENR will build on the POM for the RISE Project, which contains similar procedures.

CONTACT POINT

World Bank

Arturo Ardila Gomez
Lead Transport Economist

Hisham Mahmoud Fouad
Senior Transport Specialist

Salma Hany Adly Abdelfattah Ibrahim
Transport Specialist

Borrower/Client/Recipient

Arab Republic of Egypt- Ministry of International Cooperation
Dr. Mohamed Abdel Gawad Allam
Minister Plenipotentiary (Commercial), Head of Sector
mgawad@moic.gov.eg

Ministry of Finance, Egypt

Implementing Agencies

Egyptian National Railways - Ministry of Transport
ENG. MOHAMED AMER
Chairman
chairmanoffice@enr.gov.eg

Ministry of Transport, Egypt
Enas Mostafa
Responsible for International Cooperation|
ons.kreaza.13@gmail.com

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects

APPROVAL

Task Team Leader(s):	Arturo Ardila Gomez Hisham Mahmoud Fouad Salma Hany Adly Abdelfattah Ibrahim

Approved By

Practice Manager/Manager:		
Country Director:	Janette Uhlmann	29-Aug-2022