Concept Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

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BASIC INFORMATION

A. Basic Project Data

Country	Region	Project ID	Parent Project ID (if any)
Turkiye	EUROPE AND CENTRAL ASIA	P179128	
Project Name	International Rail Logistics and Network Resilience Project		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Transport	Investment Project Financing	1/8/2024	2/28/2024
Borrower(s)	Implementing Agency(ies)		
Republic of Türkiye	Ministry of Transport and Infrastructure		

Proposed Development Objective

The Project Development Objective is to improve logistics efficiency along the Divriği-Kars-Georgia border railway corridor and to enhance the operational resilience of Türkiye's national railway network.

Financing (in USD Million)	Amount
Total Project Cost	1100.00

B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]

Türkiye ratified the Paris Agreement in October of 2021, adopted its first Nationally Determined Contributions (NDCs) in 2022, and committed to achieving a net-zero economy by 2053. This has placed climate change mitigation at the very top of Türkiye's economic development agenda. The EU Green Deal, and its potential economic implications for Türkiye, such as a need to reduce the carbon footprint of Turkish supply chains—including their transportation and logistics component—under the forthcoming Carbon Border Adjustment Mechanism (CBAM), further contributes to the urgency for Türkiye to reduce emissions across its main energy-consuming sectors. Türkiye's high vulnerability and exposure to climate and natural hazards generate risks, but also pose an opportunity to invest in resilient infrastructure. The World Bank's Country Climate and Development Report (CCDR) found that Türkiye's road network

is more vulnerable to disruption than that of European comparators across the income spectrum (such as upper-middle income Serbia and high-income Germany), and that its railway network is, in turn, significantly more vulnerable to disruption than its road network. The CCDR estimates that ensuring all new transport infrastructure assets are built to higher resilience standards would increase investment needs by nearly 11%, but it could also reduce average annual repair costs by a factor of 7.

In Türkiye transport sector decarbonization cannot be achieved without decarbonizing the transportation of freight. In 2019, half of Türkiye's transport-sector GHG emissions originated from freight transport. Decarbonizing Türkiye's freight transport means, above all, reducing emissions from the transportation of goods by trucks—particularly heavy-duty trucks. In 2019, 95% of Türkiye's GHG emissions from freight transport came from trucking-related emissions. More than two-thirds of this (68%) was generated by heavy-duty trucks, which are comparatively more difficult to decarbonize than light-duty commercial vehicles, with a technology trajectory that is likely to take longer to reach widespread market adoption than that of low- and zero-carbon small, short-haul trucks and vans. During the early period in the runup to the 2053 net zero target—e.g., over the next 10-15 years—facilitating the use of rail freight, and shifting long-haul truck freight to rail, are among the most effective ways to decarbonize freight transport, while also attaining key complementary goals like reducing transport costs; reducing road congestion, accidents, and fatalities; improving urban livability; and reducing road infrastructure wear and tear.

The proposed project will contribute to the World Bank Group's Country Partnership Framework (CPF) for Türkiye for the FY18-FY23 period (Report No. 11096-TR, July 28, 2017), by supporting its Growth and Sustainability Focus Areas. Specifically, the project is aligned with the Growth Focus Area objective of enhancing competitiveness and employment in selected industries, as it will contribute to improving the profitability, productivity, and access-to-market of firms—importers, exporters, and domestic producers—in sectors reliant on commodities economically compatible with the use of rail, both in the project's immediate area and nationally. The project will also contribute to the Sustainability Focus Area objective of increasing the sustainability of infrastructure assets and natural capital, by (a) boosting the energy efficiency and reducing the carbon footprint of freight along the target corridor, and (b) making the national railway network safer and more operationally resilient. The project is expected to champion preparation and execution of engineering design and construction approaches to develop infrastructure that can withstand more erratic weather patterns, severe weather events, and non-climate related natural disasters.

The project will rehabilitate, electrify, and modernize a 660km railway corridor in eastern Türkiye, linking Sivas Province (at Divriği) with the border with Georgia, via the city of Kars. This corridor ends at, and includes, the Turkish portion of the Baku-Tbilisi-Kars (BTK) railway, making the target corridor part of an intercontinental railway and multimodal route between East Asia, Central Asia, the South Caucasus, and Europe. In addition, the project will finance deployment of a Railway Information, Early Warning, and Digital Maintenance system to improve management of the national railway network and make it safer and more operationally resilient. The project will have three main components:

Component 1 - Rehabilitation of the Divriği – Erzincan – Erzurum – Kars – Georgia Border Railway Corridor (US$1,080 million). This component will consist of design, construction, and construction supervision of 143km of new standard gauge railway line to replace the existing line; installation of signaling, telecommunication, and electrification systems along the 660km total length of the corridor, as well as construction/rehabilitation of sidings, bridges, station buildings, and other facilities. Tentative technical works under this component are as follows:

- Construction of 143km of new standard gauge railway line;

- Installation of ERTMS/ETCS Level 1 signaling, telecommunication, and electrification systems along the entire corridor;
- Construction of 10 new sidings and extension of 30 existing sidings at existing railway stations;
- Establishment of electric power installation systems with 16 substations, 16 neutral zones, and 154kV power transmission lines;
- A 350km 4-zone distributed acoustic detention system;
- Tunnel clearance works for electrification;
- Construction of 120 controlled level crossings;
- Construction of 4 new bridges (144m),
- Renewal of 2 passenger platforms,
- Construction of retaining walls (1,050m),
- Renewal of 77 culverts,
- Construction of 7 new overpass and 10 km of snow barriers; and
- Construction of selected station buildings, facilities, and signaling, telecommunications, and electrification systems, including construction of 20.8km of signaling/telecommunication and 15.3 km of electrification systems at the Kars logistics center.

Component 2 - Railway Information Systems for Resilience and Digital Maintenance (US$19 million). Under this component, TCDD will deploy digital information systems connected to sensors network-wide at the national level. This set of integrated systems will help modernize TCDD's asset management practices and build climate and disaster resilience across the network through real-time monitoring, including early warning of potentially hazardous conditions and their location. This component is expected to include three major sub-components:

- Data collection systems (US$14 million);
- Smart sensor equipment (US$3 million); and,
- Deployment of a Railway Information System (RIS) (US$2 million).

Component 3 – Institutional Capacity Development (US$1 million). This component includes support for the Project Implementation Unit (PIU). This component may also include potential institutional capacity building activities for DGII or TCDD to enhance rail logistics and resilience in Türkiye, which may be proposed during project preparation.

D. Environmental and Social Overview

D.1. Detailed project location(s) and salient physical characteristics relevant to the E&S assessment [geographic, environmental, social]

The project will be implemented in the provinces of Sivas (Divriği), Erzincan, Erzurum, Kars, Ardahan up to the border with Georgia. The provinces that host the Divriği-Kars-Georgia border railway corridor are highly exposed to extreme weather events and natural hazards. Specifically, there is a high risk of urban floods, landslides, and wildfires in all four of these provinces, as well as a medium to high risk of earthquakes. Furthermore, the areas in the vicinity of the railway alignment are characterized by the presence of four habitats qualified as critical during the preparation of the Trans-Anatolian Natural Gas Pipeline Project (TANAP) and partially intersecting with the proposed project area. These critical habitats are:

- Segments of Karasu and Süngütaşı Rivers in Erzurum, where critical species of Montivipera wagneri, Salvia huberi, Cephalaria sparsipilosa, Eryngium wanaturi, Polyommatus merhaba, Cousinia bicolor have been observed;
- An area near Handere where critical species of Lathyrus karsianus, Eulasia chrysopyga, Phengaris nausithous, Zonitis nigriventris, and Hieracium sarykamyschense have been observed; and
- An unkonwn creek in Kars, accommodating critical species of Eulasia chrysopyga and Hieracium sarykamyschense.

In addition, the existing railway route passes nearby some important protected areas such as Çıldır Lake, Sarıkamış Forests, several rivers such as Karasu stream, Euphrate, Kuyucuk Lake wetland recognized as a Ramsar site, a number of natural and national parks in each of the project provinces, and some cultural heritage sites including the historical station buildings.

The Divriği-Kars-Georgia border railway corridor runs through an economically lagging region of Türkiye; upgrading the corridor would facilitate local economic activity, create jobs in its immediate catchment, and help alleviate Türkiye's spatial economic disparities. In addition, the Divriği-Kars-Georgia border international corridor on the eastern end of the network links Türkiye with the South Caucasus via the Baku-Tbilisi-Kars (BTK) railway line and, via the Caspian Sea, with Central and East Asia, thus, upgrading of the corridor will significantly increase international accessibility of the region. The corridor spans mainly 4 provinces of eastern Türkiye—Sivas, Erzincan, Erzurum, and Kars. Like eastern Türkiye as a whole, these provinces lag the rest of the country across several indicators of economic well-being. In 2021 all 4 provinces had a GDP per capita below the national average, at levels of difference ranging from mild (98% of the national average for Erzincan) to staggering (48% of the national average for Kars). With regards to multidimensional measures of well-being, with the corridor provinces of Erzurum and Kars ranking only 55th and 70th, respectively, out of 81 provinces in the 'well-being index', a metric used by the Government of Türkiye (GoT) that considers aspects like housing, income, health, education, environment, safety, life satisfaction, and civic engagement. Based on these provincial data, it is highly likely that there is a significant number of poor and vulnerable population in these provinces. The economies of all 4 provinces are intense in primary sector activity. Kars has the third-highest share of agriculture in provincial GDP among all Turkish provinces. Industrial production is also common, particularly in Erzincan, where industry accounts for 39% of its GDP.

D. 2. Borrower's Institutional Capacity

The project will be implemented by two agencies. Component 1 will be implemented by MoTI's DGII. This is the same implementing agency of the ongoing Bank-financed Rail Logistics Improvement Project (RLIP) (P170532) that is being governed by the ESF ESSs. Moreover, while DGII does not have a long history of implementation of World Bank projects (RLIP is its first), it has significant experience with the planning, execution, and handover of large infrastructure projects in railways and other transport subsectors. The PIU set up for RLIP has got over two and a half years of experience of the implementation of the Environmental and Social (E&S) tasks, and will also be utilized for this proposed project The PIU has onboard full-time Social Development, OHS, Stakeholder Engagement and Permit Specialists as well as Expropriation Section Manager and Environmental Engineers. The PIU's Environmental Specialist, who joined at the onset of RLIP implemenation, has recently left the project and the PIU is in the process of replacing this critical staffing resource on a competitive basis. The PIU is expected to re-establish the Environmental Specialist position, to be able to effectively manage the environmental and social risks under both the ongoing and the proposed projects. The position has been advertised and shall be filled well before appraisal of the proposed project.

Component 2 will be implemented by TCDD. While TCDD has experience implementing Bank lending projects, the last project it was responsible for, the Railway Restructuring project (P077328) closed in 2013. The project was governed

by the World Bank's safeguard policies (Category B Partial Assessment), meaning TCDD has no prior exposure to the World Bank's ESF. Nonetheless, while overall performance of the PIU was assessed as Moderately Satisfactory, the safeguard performance was found satisfactory, with the Environmental Management Plan (EMP) and Resettlement Action Plan (RAP) duly prepared and implemented. Enhanced collaboration between TCDD and the Bank will be required, particularly to help TCDD familiarize itself with the ESF and implement E&S management plans and measures related to Citizen Engagement, Gender, and Paris Alignment, and establish adequate in-house capacity to manage environmental and social risks of the proposed project.

II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC) Substantial

Environmental Risk Rating Substantial

Environment risk is rated as Substantial. The project will support large-scale, though exclusively brownfield, civil works for the rehabilitation and reconstruction of an existing railway corridor with a total length of 660 km, along with the rehabilitation/modernization of supporting infrastructure and the installation of state-of-the-art equipment, including signaling systems, a tunnel for electrification, 4 bridges, and improvement of selected railway stations. While the scope of the anticipated civil works is significant, these are expected to be conducted within the footprint of the existing railway corridor, where the disturbance has been observed since it started operation around the 1930s of the last century. The key environmental risks anticipated in relation to the project activities include (i) air pollution and noise from construction machinery and quarries and operation phase noise and vibration impacts, (ii) soil disturbance and loss during earth-moving, (iii) loss of vegetation, (iv) impacts related to improper waste management, (v) impacts related to improper construction camp management, (vi) risks to community health and safety (traffic safety, earthquakes, avalanches etc., (vii) risks associated with improper occupational health and safety (OHS), and (viii) potential impacts on culturally and naturally protected areas (such as habitat loss/fragmentation and/or displacement, invasive alien species, damage to registered cultural/archaeological sites and/or assets), the latter related to the presence of several KBAs, national parks, lakes, rivers/streams, and critical habitats in the vicinity of the railway alignment as detailed in Section D1. These critical habitats have been previously identified and duly protected and managed during the preparation and implementation of the Trans-Anatolian Natural Gas Pipeline Project (TANAP), a major infrastructural intervention in the region, and partially intersect with the proposed project area. There is a risk of adverse impact on these critical habitats, which should be further analyzed. The details of the environmentally sensitive and ecologically valuable areas and aspects, as well as the approach to determining adequate mitigation, will be further analyzed and developed. The E&S management experience of the implementing agency has been strengthened over the course of preparation and implementation of the ongoing RLIP; however, due to the recent departure of the PIU's environmental specialist, it remains necessary to ensure the PIU has sufficient environmental management capacity to implement RLIP and prepare and eventually implement the proposed project. The Project environmental risk is confirmed as Substantial at the concept stage to be revisited at appraisal stage and, if necessary, will be revised up to High (should the impacts on critical habitats and other sensitive receptors be found significant and irreversible, and/or should the magnitude and nature of civil works result in cumulative irreversible and significant impacts) or down to Moderate (should such impacts be less significant or subject to more effective mitigation measures than currently assessed).

Social Risk Rating Substantial

Social risk is classified as Substantial at concept stage. During construction, social risks and impacts are associated with land acquisition, physical relocation, livelihood impacts, labor conditions and labor influx, community health and safety, and cultural heritage. While the project's land impacts are under assessment and will be more definitively determined by appraisal, it is likely that they will be moderate given the project's brownfield nature and the fact that the government already own surrounding land as part of the corridors' right-of-way and likely to accommodate most of the project's land needs. Still, given that the project will replace143km of railway lines; establish electric power installation systems with 16 substations, 16 neutral zones, and 154kV power transmission lines; rehabilitate 4 bridges (144m); renew 77 culverts; build 7 new overpass and 10 km of snow barriers; and improve selected station buildings, facilities, and signaling, telecommunications, and electrification systems, including construction of 20.8km of signaling/telecommunication and 15.3 km of electrification systems at the Kars logistics center, land acquisition beyond the existing right-of-way may be needed and the expected scale and scope of same at concept (to be determined by Appraisal) is reflected, in part, in the chosen Social risk rating at this stage. Furthermore, the rehabilitation of infrastructure may cause moderate physical displacement and relocation of houses and other fixed assets, and loss of land and non-land assets and temporary access restrictions to land use in the right-of-way (ROW) of the railroads. Land-induced livelihood impacts such as restrictions of access to pasture land and agricultural lands including on vulnerable communities in some parts of project areas are likely, but their extent, currently under assessment, is not expected to be of significant scale. Such potential impacts will be identified and mitigation measures developed as part of the preparation of an ESIA and RAP, during project preparation. During the operation phase of the project, in some parts of the alignment (where station buildings and facilities will be rehabilitated or expanded), increased rail traffic and use of these facilities may cause some impacts that are expected to be mitigated, such as through elevated noise levels. However, the greater use of rail to be facilitated by the project is also expected to reduce local community's exposure to health risks like local pollutants from trucking activity, and the project-financed signaling and early warning systems are expected to significantly reduce local communities' exposure to railway accidents and unsafe crossings. During the construction phase significant labor influx is not expected. Project workers who will be on-site will be mostly skilled technical workers and expected to be limited in number – to be confirmed by appraisal. Unskilled labor will be hired from local settlements. Other community health and safety risks may include temporary dust, noise, traffic congestion and localized exposure to construction site accidents, and potential damage of crops. These risks are expected to be mitigated through good construction and engineering practices. MoTI has extensive experience with large-scale government-financed civil works that apply these practices. In addition, MoTI has gained considerable experience with World Bank operational policies and the new ESF through its ongoing implementation of the Rail Logistic Improvement Project. Thus, it is expected that these social impacts will be managed in a satisfactory manner.

B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered

B.1. General Assessment

ESS1 Assessment and Management of Environmental and Social Risks and Impacts

Overview of the relevance of the Standard for the Project:

Both environmental and social risks are currently rated as Substantial, and linked to the impacts associated with rehabilitation of existing railway infrastructure. Most of these impacts will be caused by activities under component 1 that include major civil works that are brownfield in nature. During the construction phase, the key risks include: (i)

air pollution and noise from construction machinery and quarries, (ii) soil disturbance and loss during earthmoving, (iii) tree-cutting and loss of vegetation (iv) waste generation and management (including hazardous waste), and (v) construction camp's improper management, (vi) impacts to community health and safety (traffic safety,), (vii) labor and working conditions (including occupational health and safety), (viii) land acquisition induced physical and economic displacement for individuals and businesses, (ix) potential impacts on culturally and naturally protected areas, key biodiversity areas and four critical habitat areas, where endangered species have been identified. In addition, component 2 may cause generation of e-waste as the activities under this component include establishment of data collection systems and smart sensor equipment and, deployment of a Railway Information System (RIS). The ESIA will assess such impacts in details and mitigation measures will be developed for the Project to implement.

During the operation phase, key risks will be caused by increased railway traffic and may include (i) noise and vibration impacts, and (ii) impacts on community health and safety, although the project overall is expected to significantly improve community safety through modernization of obsolete, non-signalized railway infrastructure assets, as well as to contribute to improved local pollution outcomes by promoting the use of electrified railway transport as an alternative to internal combustion engine vehilce transport. The ESIA will assess impacts for pre-construction, construction and operation phases including impacts on cultural heritage.

The WBG's General Environmental Health and Safety (EHS) Guidelines as well as EHS Guidelines for Railways, Toll Roads and Electric Power Transmission and Distribution will be carefully reviewed and used particularly to address issues related to project environmental and social risks. An Environmental and Social Impact Assessment and Management Plan (ESIA/ESMP) will be carried out for the entire project covering all activities under the three components, in line with national and World Bank requirements, which will identify and assess all potential risks and suggest adequate mitigation measures. Since the proposed project area partially intersects with four critical habitats previously identified and managed under the TANAP, the ESIA/ESMP will also assess whether the mitigation and protection measures determined and applied in the course of the preparation and implementation of TANAP, will remain applicable and sufficient for avoiding or addressing risks to the critical habitats in the vicinity of the railway route. The ESIA findings, especially with respect to potential risks to critical habitats as well as on the cumulative impacts caused by the construction works on the railway and related infrastructure, will inform the decision on potential upgrade of the project overall E&S risk from Substantial to High. The ESIA will also identify if any additional studies (e.g. biodiversity study, etc.) might be required once the details of the draft engineering design are available.

To address all potential risks, the Borrower will prepare prior to appraisal the following instruments: (i) Project-wide Environmental and Social Impact Assessment (ESIA), including a project-wide Environemntal and Social Management Plan (ESMP); (ii) Stakeholder Engagement Plan (SEP); (iii) Resettlement Framework (RF) for the project andResettlement Action Plan (RAP) ; (iv) Labor Management Procedures (LMP); (v) Community Health and Safety Management Plan (CHSMP); and (vi) Biodiversity Management Plan. Should associated facilities be identified during preparation, their environmental and social compliance will be assessed by appraisal, within the scope of the ESIA.. .

For the activities under Component 2 within the scope of the project (Railway Information Systems for Resilience and Digital Maintenance), the requirements of the Environmental and Social Framework (ESF) will be integrated into the bidding documents and contract(s). The site specific environmental and social assessment instruments including the RPs for sub-projects (if required) will be prepared during implementation stage.

Areas where "Use of Borrower Framework" is being considered:

Borrower's E&S Framework will not be used. The project will be prepared and implemented consistent with the ESF and in full compliance with the national environmental and social legislation, other regulations and standards.

ESS10 Stakeholder Engagement and Information Disclosure

The Borrower will prepare an SEP for the entire project to follow in compliance of ESS10 and relevant national legislations. Directly affected people will include residents and business owners residing or operating in the communities in the sub-project areas. Vulnerable and disadvantaged groups will be identified under the ESIA. Additionally, local NGOs/CSOs, academics and environmental experts, community leaders, and local government representatives residing or working in the project areas will also be considered as stakeholders. The Ministry of Environment, Urbanization and Climate Change, Ministry of Agriculture and Forestry are significant project stakeholders as well. During the preparation of the ESIA and RAPs, rounds of public consultation meetings will be organized to receive feedback from project stakeholders. Additional stakeholders will be identified and mapped during the project preparation phase. Modalities for their engagement will be captured in the SEP.

The SEP will promote two-way communication between the PIU and different stakeholders continuously. Information regarding the project, environmental and social risks and impacts, proposed mitigation measures, resettlement plans, grievance mechanism, will be shared with project stakeholders on a regular basis. The PIU will communicate with the stakeholders, specifically with communities around the RoW during project preparation to manage risks and impacts, ensure benefits to local communities that will be impacted and also manage labor influx induced impacts and GRM arrangements. As part of the ESIAs, the PIU will maintain and disclose a documented record of stakeholder engagement, including a description of the stakeholders consulted, a summary of the feedback received and a brief explanation of how the feedback has been taken into account (or reasons if it is not). The SEP may be updated based on the final project design during the implementation phase so that all relevant stakeholders are identified consulted on a regular basis.

Grievance Mechanism: The borrower currently utilizes the national GM system which is the Presidential Communication Center (CIMER) along with its own project and site level GM through regional offices and site managers. The main channels for submitting grievances of borrower's existing GM are official letters, phone calls and verbal communication through site personnel. During project preparation, the functionality and accessibility of the GM will be assessed and project level adjustments will be made as needed. Within its current practice the borrower takes into consideration the grievances logged by the stakeholders during project design and implementation and thus, modifies the design accordingly.

B.2. Specific Risks and Impacts

A brief description of the potential environmental and social risks and impacts relevant to the Project.

ESS2 Labor and Working Conditions

The project will not be labor intensive as the railway tracks are constructed through mechanized/automated approaches. Project workers include direct workers, contracted workers, and primary supply workers. The Project is not expected to have community workers. The PIU employees are civil servants. Primary supply workers will be

evaluated under E&S studies. It is foreseen that direct and contracted workers will be mostly technical and skilled staff who will be utilizing the accommodation facilities on site. The labor influx risks and details, including camp management, will be assessed within the scope of E&S studies. The requirement of local unskilled laborers will most likely be limited. It will be important for the PIU to mention this aspect of the project in its stakeholder engagement and communication activities during project preparation to manage expectations.

Labor Management Procedures: Turkiye is party to a multitude of ILO conventions, which is in line with Environmental and Social Standard (ESS) 2 requirements. National Labor Law includes provisions on non-discrimination, freedom of association, minimum employment age, child and forced labor, occupational health and safety and dispute resolution. Risks related to child/forced labor are not foreseen as most workers will require to have technical skills. Potential risks related to child and forced labor of the primary suppliers (i.e. Supply of stone for the rails, steel manufacturers) will be evaluated in the E&S studies. The borrower will develop an LMP to address gaps between the national legislation and ESS2, both for its own staff and for employees of civil works contractor and consultants. A Code of Conduct (CoC) will be prepared by the Project for all workers to follow. The CoC will also include measures to prevent SEA/SH. Finally, an workers' GRM will be set up to address their grievances. The LMP will also include procedures, terms and conditions for primary supply workers following the ESS2 that will be reflected in procurement documents for the primary suppliers to follow.

Occupational Health and Safety (OHS): In recent years, Turkiye has undergone a reform to improve its national OHS system by adapting a set of international and regional standards into its national level requirements for the prevention of occupational risks. In addition to ILO ratification, Turkiye has also passed a law specific to OHS (i.e. Law No. 6331 on Occupational Health and Safety) in 2012. The OHS Law governs workplace environments and industries (both public and private) as well as virtually all classes of employees including part-time workers, interns, and apprentices. The legislation is comprehensive and is generally applicable across all sectors and many industries. The Ministry of Labor and Social Security has a Labor Inspectorate that enforces the law and conduct regular OHS and labor audits. The construction contractors shall be subject to national OHS legislation. Additionally, OHS management system, that may be required by the borrower will be analyzed during the preparation stage. The potential OHS issues which should be managed under the project will mostly relate to the construction phase and will include the impacts on workers, including impacts of noise, vibration, fumes, dust; risks associated with the use of construction machinery, moving equipment; risk of undertaking electrical works; failure to fence the construction sites, risks of slides during the excavation works; risks to workers of carrying out works at height without proper PPE and improperly assembled scaffolding; impacts of improper sanitary and hygienic conditions at the construction sites, including the risks of spread of diseases/air-born diseases, etc. For the operation phase OHS issues, MoTI has a separate regulation on railway safety which defines risk management including measures to minimize the risks in railway operation as well as regulates significant accidents. The borrower will develop and include in the ESMP and bidding documents a Health, Safety and Environmental (HSE) plan in line with World Bank Group Environment, Health and Safety (EHS) Guidelines. It will be ensured that the more stringent standards are used throughout the project. The borrower will also ensure that the contractor develops an Occupational Health and Safety Implementation Plan which will include risk assessment, procedures on safety, training, monitoring, incident investigation and reporting. Contractors will be contractually required to to implement OHS plans.

ESS3 Resource Efficiency and Pollution Prevention and Management

The railway route will run in the vicinity and cross rivers and streams at several locations. The construction activities will require temporary consumption of water, both drinking to be supplied to workers and non-drinking to be used in construction processes and for dust suppression. Electricity will be used at the project sites during both construction and operation phases. Construction materials, such as sand, gravel, and stones, will be provided during the construction. The project ESIA and ESMP will identify measures to ensure efficient use of resources. In particular, volumes and sources of water will be identified so that to ensure the sustainability of use and avoid competition with any local water users. The use of construction materials will also be considered under the project ESIA/ESMP and may envisage purchase from duly licensed operators and/or extraction by contractors, in which case specific management plans will be in place to govern the use and transportation of materials, and reinstatement of borrow pits/quarries as appropriate.

The major pollution related risks of the project are improper waste and soil management, adverse impacts of on nearby water bodies, deterioration of air quality and noise quality during construction. In addition, transport of hazardous wastes during operation phase will require adequate management and mitigation. These anticipated impacts will be analyzed and assessed in detail by the project ESIA/ESMP. Water, air quality (including noise and vibration) and soil mitigation and monitoring plans will be incorporated into the ESMP, which will also indicate the overall responsibility of the client and specific responsibilities of contractors. During the project's operational phase, use of pesticides may be required for railway vegetation clearing in the scope of maintenance works. Wastes (non-hazardous and hazardous) to be generated at the construction and operation phases of the railway will be managed with respect to national regulations and international best practices. Pollution prevention and waste management plans will be prepared within the scope of the ESIA/ESMP and further detailed by the construction contractor with consideration of site-specific information. Within the scope of the project, appropriate storage areas will be determined for the excavation surplus material storage and necessary expropriation procedures will be carried.

ESS4 Community Health and Safety

Community-related impacts of railways and other infrastructure are associated with noise and air emissions, traffic management and temporary blockades, labor influx and labor camps causing disturbance to local communities. The E&S documents (including stakeholder engagement documents) will identify groups that are likely to be impacted and the likely impacts of construction and operational phase community health and safety issues, mitigation measures, monitoring and reporting requirements. The site-specific E&S assessments will also assess the potential scale and risk due to natural hazards associated with floods, earthquakes, landslides, and avalanches. The railway facilities will need to be designed with adequate structural safety measures (against earthquakes, landslides and avalanches) and climate change adaptation measures (for floods). In addition, emergency preparedness and response plans (EPRPs) will need to be prepared for both construction and operation phases. Further, as appropriate, a CHSMP will also be prepared to address impacts/risks related to community health and safety including impacts on public health. For the public access places such as railway station platforms, the aspects of universal access and life and fire safety will be addressed under the CHSMP and integrated into the engineering design. The ESIA will sufficiently cover elements of health impacts assessment relevant to the Project. The site-specific Traffic Management Plan(s) (TMP) to be prepared will cover management of traffic safety risks, accident prevention, training programs, relevant stakeholder engagement activities and site safety awareness and access restrictions.

Labor influx: Although not determined yet, it is foreseen that a moderate number of workers will be employed and will use the camp site accommodation. It is anticipated that technical and skilled staff will be utilizing the accommodation facilities on site and local people will be preferred to the extent possible as unskilled workers. The labor influx risks and details will be assessed within the scope of E&S studies. The Contractor will be required to appoint designated community liaison persons as part of the CHSMP who will keep local communities informed of project implementation schedule, expected impacts and other issues of interest for them, and receive grievances or feedback from them. Stakeholder engagement will be a key part of preparation and implementation of the CHSMP and emergency preparedness plans. No utilization of designated security personnel is foreseen for bridge, culvert and railway construction and operation phases.

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

The railway routes under Component 1 are all existing routes that will be rehabilitated. However, additional land may be required for rehabilitation/expansion work and other smaller sub-projects. The project will make efforts to avoid environmentally sensitive locations, agriculturally significant and residential areas as much as possible while planning these sub-projects. Moreover, even with limited land acquisition, physical and economic displacement is likely caused by planned activities under Component 1. State forest land, pasture land, treasury land and private lands are the types of lands likely to be impacted under the project. The severity of land related impacts are expected to be confined primarily to the right of way and sub-project sites. Permanent land acquisition will involve - i) a piecemeal approach along the route; and ii) one time acquisition for fixed structures mainly on pasture and private lands. Permanent land acquisition may also be required for sub-projects like bridge, culverts, sub-stations etc (which are small, fixed structures). Animal husbandry, agricultural and apiculture are among the main economic activities of the communities that may result in livelihood impacts. The project will prepare a Resettlement Framework (RF) and RP and Livelihood Restoration Plans (LRP) for the known sub-projects by appraisal and subsequent ones as required during the implementation phase. The RF will include information on the regulatory framework on resettlement and provide means and actions to bridge the gaps between national law and Bank standards. An entitlement matrix which covers physical displacement actions and compensation measure will be included in the RF along with a corresponding budget.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

According to the initial studies undertaken by the client, the areas in the vicinity of the railway route are characterized by the presence of a number of biologically and ecologically valuable and sensitive hotspots, including national and natural parks, natural monuments, lakes, river, streams and four critical habitat areas. The construction will envisage considerable scope of excavation works which will disturb the landscape. The biodiversity and landscape impacts as well as adverse impacts on water and soil resources will be analyzed, and mitigation measures suggested by the project ESIA and ESMP. A Biodiversity Management Plan (BMP) will be developed as an annex to the ESIA. The four critical habitats were identified in the vicinity to the railway alignment and qualified so during the preparation of TANAP, due to the presence of endangered species. Respective protection and mitigation measures have been duly implemented in line with the site-specific BMP. The ESIA/ESMP will consider whether these measures are applicable and sufficient in the context of this proposed project. If found necessary, additional measures will be suggested and reflected in the BMP, which may also indicate the changes in the design of the alignment or offset. The principle of

'no net loss-net gain' will be applied to critical habitats, and explicitly stipulated in the Terms of Reference for the preparation of the ESIA and ESMP.

ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

This standard is not relevant as there are no Indigenous Peoples, who meet the definition of this standard, located in Turkiye.

ESS8 Cultural Heritage

The project may affect sites with cultural heritage and thus a cultural heritage management plan will be prepared before appraisal, either within the scope of the project ESIA/ESMP, or as separate site-specific documents. It is important to consider that cultural heritage takes many forms. Some of it may be visible, and many others may not be identifiable without consultations. The assessment will consider both tangible and intangible heritage including cultural spaces of importance to the communities that will be impacted. As part of the assessment, communities will be informed through engagement with them, including women and girls, to identify spaces of cultural value and significance to them. The assessments will also consider any restriction of access to cultural spaces. In this context, Turkish laws and practices are similar to the WB requirements. Since the national regulations on the conservation of cultural properties are strict, it is not anticipated that any additional requirements would arise under WB ESS8 requirements. Nevertheless, a chance finds procedure including responsibilities for managing accidently discovered or chance find cultural artifacts will be prepared as part of the CHMP. The chance finds procedure will be developed in participation with key stakeholders, including consideration and views of affected communities including women and girls. Additionally, all relevant official letters will be annexed to the site-specific E&S documents to be prepared. MoTI is responsible for avoiding or mitigating impacts on physical or cultural resources of the financed projects. Therefore, MoTI will not proceed with project funding until all requirements of the Turkish legislation are met.

ESS9 Financial Intermediaries

Project does not involve any financial intermediaries.

B.3 Other Relevant Project Risks

All relevant risks that have been identified are summarized against each of the standards.

C. Legal Operational Policies that Apply

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

III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

A. Is a common approach being considered? No

Financing Partners

No financial partners are involved at this stage.

B. Proposed Measures, Actions and Timing (Borrower's commitments)

Actions to be completed prior to Bank Board Approval:

Preparation and disclosure of:
Project wise ESIA, SEP, LMP, and RF
RP for sub-projects with identified footprint
Biodiversity Management Plan
Community Health and Safety Management Plan for the entire Project
Traffic Management Plans
Emergency Preparedness and Response Plans
Cultural Heritage Management Plan for the entire Project
ESCP

Possible issues to be addressed in the Borrower Environmental and Social Commitment Plan (ESCP):

Preparation of Project-wide environmental and social assessments (ESIAs/ESMPs, SEPs, BMPs, etc.) and land acquisition documents (RPs/LRP/Ex-post Social Audits). WB's prior review and clearance will be required for all E&S documents.

Consultation and disclosures of E&S documents and RPs/LRPs

Recruiting and retaining environmental and social specialists within the PIU during project preparation and implementation phases.

Inclusion of E&S instruments and ESMPs (as a part of ESIAs) in the bidding documents of all construction work

C. Timing

Tentative target date for preparing the Appraisal Stage ESRS 15-Dec-2023

IV. CONTACT POINTS

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Borrower/Client/Recipient

Borrower: Republic of Türkiye

Implementing Agency(ies)

Implementing Agency: Ministry of Transport and Infrastructure

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VI. APPROVAL	
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