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TÜRKİYE'NİN YAPICI GÜCÜ

EARTHQUAKE RECONSTRUCTION FRAMEWORK LOAN



ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

Kırıkhan Drinking Water Network Project of Hatay Metropolitan Municipality General Directorate of Water and Sewerage Administration (HATSU)

October, 2026

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HATSU
T.C. HATAY BÜYÜKŞEHİR BELEDİYESİ
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ABBREVIATIONS

C-ESMP	Contractor's Environmental and Social Management Plan
CHS	Community Health and Safety
CoC	Code of Conduct
DLP	Defect Liability Period
E&S	Environmental and Social
EHS	Environmental, Health and Safety
EHSGs	Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
EIB	European Investment Bank
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
GIIP	Good International Industry Practice
GM	Grievance Mechanism
HATSU	Hatay Water and Sewerage Administration
İLBANK	İller Bankası A.Ş.
ILO	International Labour Organization
OHS	Occupational Health and Safety
PIU	Project Implementation Unit
PMC	Project Management Consultant
PM10	Particulate Matter with an Aerodynamic Diameter of 10 µm or Less
PPE	Personal Protective Equipment
RCA	Root Cause Analysis
RF	Resettlement Framework
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
WWTP	Wastewater Treatment Plant

Contractor	A person or organization providing services to an employer at the client worksite in accordance with agreed specifications, terms and conditions.
Excavated material	Soil, rock and other materials generated during excavation and related construction activities
Legally protected area	Designated terrestrial, aquatic or marine ecosystems managed under the related legislation to protect and sustain the biodiversity features, natural and associated cultural resources. Legally protected areas of Türkiye include a diversity of natural ecosystems and associated features ranging from coastal zones to mountains, deltas, forests, plains, steppe, lakes, river systems, deep valleys, canyons, and glaciers.
Material borrow site	Sites, where loose material containing gravel, sand, silt, and clay, which is formed by the natural and geological processes of rock fracturing, fragmentation, alteration, transportation, and/or in-situ sedimentation, and which has the characteristics of slope debris, are extracted to be used as fill material.
Off-site accommodation	Accommodation of workers at hotels, rented housing, etc. available in the vicinity of Subproject area.
On-site accommodation	Accommodation of workers at temporary exploration camps, construction camps, dormitories, etc. established for the Subproject on site.
Risk	A combination of the likelihood of an occurrence of a hazardous event and the severity of injury or damage to the health of people caused by this event.
Topsoil	Part of soil that provides organic and inorganic materials, air and water required for vegetative growth, and is required to be stored separate from the subsoil.

EXECUTIVE SUMMARY

This Environmental and Social Management Plan (ESMP) has been prepared by the Hatay Water and Sewerage Administration General Directorate (HATSU) for the Kırıkhan Drinking Water Network Project in Kırıkhan District Centre, Hatay Province. HATSU is the Final Beneficiary under the European Investment Bank's Earthquake Reconstruction Framework Loan, with İLBANK acting as the Project Promoter. The Subproject aims to complete the remaining drinking water network works, improve supply reliability and reduce water losses following the February 2023 earthquakes.

The Subproject includes approximately 100.07 km of PE/HDPE pipelines, 1,250 household connections, valves, flowmeter and monitoring chambers, drainage and air release chambers, fire hydrants, bridge and road crossings, SCADA and electrical works, and road reinstatement. Construction is expected to take approximately 18 months, subject to the confirmed contract schedule. HATSU will operate and maintain the completed infrastructure.

The Subproject's national EIA screening status will be confirmed through project-specific documentation issued by the competent authority. An opinion from the relevant Directorate of Nature Conservation and National Parks will also be obtained. Applicable permitting requirements and any conditions specified by the authorities will be observed.

The main construction risks concern excavation and trench stability, confined-space entry, lifting and work at height, bridge crossings, horizontal drilling, electrical works, machinery, traffic, dust, noise, waste, pollution, potential disturbance of asbestos-containing materials and temporary water supply interruptions. Community access, labour conditions, vulnerable groups and chance finds also require attention. Operational risks concern drinking water contamination, leakage, service interruptions and maintenance safety. The ESMP matrix establishes mitigation measures, monitoring indicators, frequencies and responsibilities for these risks.

İLBANK PIU will oversee ESMP implementation, supported by the Project Management Consultant (PMC). The Supervision Consultant will monitor construction compliance, and the Contractor will prepare and implement the C-ESMP and supporting plans. HATSU will coordinate local activities and assume operational responsibilities. Training, stakeholder engagement and accessible community and workers' grievance mechanisms will support implementation.

Quarterly E&S monitoring reports will be submitted through the Supervision Consultant and PMC to İLBANK PIU. Monthly OHS forms will be reviewed by the Supervision Consultant, and İLBANK PIU will report to the EIB every six months. Significant incidents will be notified to İLBANK PIU within 24 hours, followed by a detailed investigation report within 15 days..

1. INTRODUCTION

1.1. Background

The **Earthquake Reconstruction Framework Loan** (hereinafter referred to as the "**Project**"), financed by the **European Investment Bank (EIB)**, supports the reconstruction and improvement of municipal infrastructure in provinces affected by the earthquakes of 6 February 2023 in Türkiye. The Project aims to restore essential municipal services and improve the resilience of infrastructure serving earthquake-affected communities.

The Project covers the rehabilitation, construction and extension of drinking water, sewerage and stormwater networks; drinking water and wastewater treatment plants; and the purchase and installation of water utilities' smart systems, machinery and equipment. It also includes technical assistance for project preparation, feasibility studies, design and supervision of works.

The Republic of Türkiye, acting through the Ministry of Treasury and Finance, is the Borrower under the EUR 400 million EIB Finance Contract. **İller Bankası A.Ş. (İLBANK)** acts as the Project Promoter and coordinates Project implementation. Under the financing arrangements, loan proceeds are made available to İLBANK as grants and subsequently transferred as grants to eligible municipalities and water and sewerage administrations, designated as Final Beneficiaries, through protocols signed with İLBANK.

The Hatay Water and Sewerage Administration General Directorate (HATSU) is the Final Beneficiary of the Kırıkhan Drinking Water Network Project (hereinafter referred to as the "Subproject"), located in Kırıkhan District Centre, Hatay Province. The Subproject aims to complete the remaining sections of the drinking water distribution network and related infrastructure, improve the reliability of drinking water supply and reduce water losses.

Environmental and social risks and impacts under the Project are managed in accordance with the Project-specific **Environmental and Social Management Framework (ESMF)**, **Stakeholder Engagement Plan (SEP)** and **Resettlement Framework (RF)**. These documents establish the principles, procedures and responsibilities for screening, assessment, stakeholder engagement, mitigation, monitoring and reporting, consistent with applicable national legislation, relevant EU requirements and the **EIB Environmental and Social Standards (2022)**.

This **Environmental and Social Management Plan (ESMP)** has been prepared by **HATSU** for the Subproject in accordance with the Project ESMF and the applicable environmental and social requirements described in Section 1.3. It identifies the potential environmental and social risks and impacts associated with the Subproject and specifies mitigation measures, monitoring requirements and implementation responsibilities for its construction and operation phases.

The ESMP will be implemented in conjunction with the Subproject-specific SEP. Relevant ESMP requirements will be incorporated into the bidding documents and construction contract. The Contractor will prepare and implement a **Contractor's Environmental and Social Management Plan (C-ESMP)** and associated management plans consistent with this ESMP before commencing construction activities.

1.2. Objective of the ESMP

This ESMP sets out the measures required during the construction and operation of the Subproject to avoid, minimise and mitigate adverse environmental and social risks and impacts and, where necessary, compensate for residual impacts. It also defines the implementation responsibilities, monitoring arrangements and reporting requirements needed to ensure that these measures are effectively implemented in accordance with the Project ESMF, applicable national legislation and the EIB Environmental and Social Standards.

1.3. Overview of E&S Requirements Applicable to the Subproject

The Subproject will be implemented in compliance with applicable national legislation and international agreements and conventions to which Türkiye is a party, together with the environmental and social requirements established under the EIB Finance Contract and the Project ESMF.

The applicable requirements include:

- **EIB Environmental and Social Standards (2022);**
- **Project Environmental and Social Management Framework (ESMF), Stakeholder Engagement Plan (SEP) and Resettlement Framework (RF);**
- **EU Environmental Impact Assessment Directive (2011/92/EU), as amended by Directive 2014/52/EU;**
- **EU Habitats Directive (92/43/EEC) and Birds Directive (2009/147/EC),** concerning the protection of habitats, biodiversity and species;
- **EU Water Framework Directive (2000/60/EC),** concerning the protection of surface water and groundwater;
- **EU Waste Framework Directive (2008/98/EC), as amended,** concerning waste prevention, management and the waste hierarchy;
- World Bank Group General EHS Guidelines (2007);
- World Bank Group EHS Guidelines for Water and Sanitation (2007).

The relevant provisions of these directives will be considered in the assessment, design, construction and operation of the Subproject, in accordance with its scope, potential impacts and the applicable EIB requirements.

Table 1 Relevance of the EIB Environmental and Social Standards to the Subproject

EIB Standard	Relevance to the Subproject
Standard 1 – Environmental and Social Impacts and Risks	**Relevant.** Construction and operation of the drinking water network and related infrastructure involve environmental and social risks requiring assessment, mitigation, monitoring and reporting. This ESMP addresses these requirements.
Standard 2 – Stakeholder Engagement	**Relevant.** Residents, businesses, public institutions and other stakeholders may be affected by construction activities and service disruptions. The Subproject-specific SEP sets out

EIB Standard	Relevance to the Subproject
	information disclosure, consultation and grievance management arrangements throughout implementation.
Standard 3 – Resource Efficiency and Pollution Prevention	**Relevant.** Construction activities will consume materials, water and energy and generate excavated material, waste, dust, noise and emissions. Measures are also required to prevent soil and water contamination and minimise water losses during operation and maintenance.
Standard 4 – Biodiversity and Ecosystems	**Relevant.** Excavation, vegetation clearance, material sourcing and potential releases to receiving waters require consideration of biodiversity and ecosystem impacts. Potential effects on protected areas, sensitive habitats and species will be assessed, including indirect and downstream impacts where relevant.
Standard 5 – Climate Change	**Relevant.** Climate-related risks, including flooding, extreme rainfall and drought, need to be considered in the design and operation of the drinking water infrastructure. Opportunities to minimise water losses, energy consumption and greenhouse gas emissions will also be considered.
Standard 6 – Involuntary Resettlement	**Relevant for screening and management of potential displacement impacts.** Available project information indicates that works will follow existing publicly owned roads and that additional land acquisition is not required. Nevertheless, temporary land use, access restrictions and potential livelihood impacts will be assessed. Any physical or economic displacement will be addressed in accordance with this standard and the Project RF.
Standard 7 – Vulnerable Groups, Indigenous Peoples and Gender	**Relevant.** The assessment and stakeholder engagement process will identify potentially vulnerable or disadvantaged persons and groups, including those affected by the earthquakes. Measures will address barriers to participation, disproportionate impacts and gender-related risks, including sexual exploitation and abuse and sexual harassment.
Standard 8 – Labour Rights	**Relevant.** Construction and operation will involve workers engaged by HATSU, contractors and subcontractors. Requirements include fair employment conditions, non-discrimination, prevention of child and forced labour, respect for workers' rights and access to a workers' grievance mechanism.
Standard 9 – Health, Safety and Security	**Relevant.** Excavation, trenching, lifting operations, machinery, traffic and work in confined spaces present occupational and community safety risks. Appropriate measures will address trench collapse, falls, hazardous atmospheres, potential exposure to asbestos-containing materials, drinking water contamination, emergency response and public access to work areas.

EIB Standard	Relevance to the Subproject
Standard 10 – Cultural Heritage	**Relevant.** Excavation and ground disturbance may encounter previously unidentified cultural heritage. Potential impacts on known heritage assets will be assessed, and a Chance Finds Procedure will be implemented during construction.
Standard 11 – Intermediated Finance	**Not relevant.** The Project ESMF identifies this standard as not applicable to the Project's financing arrangements. İLBANK acts as the Project Promoter, and HATSU is the Final Beneficiary.

The principal national legislation and international conventions relevant to the management of the Subproject's environmental, social, health and safety risks are summarised below. These requirements complement the EIB Environmental and Social Standards, relevant EU requirements and GIIP references identified above.

Table 2 Principal National Legislation Relevant to the Subproject

Legislation	Relevance to the Subproject
Environmental Law (No. 2872)	Establishes the framework for environmental protection, pollution prevention, environmental assessment, permitting, waste management and environmental monitoring. It applies to the construction, operation and maintenance of the drinking water network and related infrastructure.
Environmental Impact Assessment Regulation, as amended	Establishes national environmental screening and assessment procedures. The Subproject must comply with the applicable screening decision and any conditions specified by the competent authority.
Labour Law (No. 4857)	Regulates employment contracts, wages, working hours, overtime, rest periods, leave, equal treatment and restrictions on child labour. It applies to workers engaged in Subproject activities.
Occupational Health and Safety Law (No. 6331)	Establishes employer and worker responsibilities for risk assessment, prevention of occupational accidents and diseases, training, health surveillance, emergency preparedness and incident notification. It is particularly relevant to excavation, trenching, machinery operation and confined-space work.
Trade Unions and Collective Labour Agreements Law (No. 6356)	Protects workers' rights concerning freedom of association, trade union membership and collective bargaining.

Expropriation Law (No. 2942)	Governs land acquisition, compensation and the establishment of easement rights where required. Additional land acquisition is not currently anticipated; its provisions will be considered if changes to the Subproject require land acquisition or easements.
Zoning Law (No. 3194)	Provides the framework for planning and construction activities. Relevant planning, construction and authorisation requirements will be observed for Subproject components.
Law on the Protection of Cultural and Natural Assets (No. 2863)	Governs the protection of cultural and natural assets, including notification and protection requirements where previously unidentified assets are encountered during excavation. It provides the national legal basis for the Chance Finds Procedure.
Right to Information Law (No. 4982)	Establishes procedures for access to information held by public institutions and supports transparency and access to Subproject-related information.

Applicable implementing regulations will also be observed, including those governing drinking water quality, water and soil pollution, waste management, excavation and construction waste, air emissions, environmental noise, environmental permits, occupational risk assessment, construction safety, asbestos-related work, work equipment, personal protective equipment and workplace emergency arrangements. All legislation will be applied together with its amendments in force during Subproject implementation.

International Conventions and Agreements

In addition to the international standards identified above, the following conventions and agreements listed in the Project ESMF are relevant, according to the Subproject's activities and potential impacts:

- **Labour rights and occupational health and safety:** ILO fundamental conventions concerning forced labour (Nos. 29 and 105), freedom of association and collective bargaining (Nos. 87 and 98), equal remuneration and non-discrimination (Nos. 100 and 111), minimum working age and the worst forms of child labour (Nos. 138 and 182), and occupational safety and health (Nos. 155 and 187).
- **Climate change:** United Nations Framework Convention on Climate Change, Kyoto Protocol and Paris Agreement.
- **Biodiversity and ecosystems:** Convention on Biological Diversity, Bern Convention, Ramsar Convention and Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), where relevant to affected habitats, species and material sourcing.
- **Cultural heritage:** Convention Concerning the Protection of the World Cultural and Natural Heritage, European Convention on the Protection of the Archaeological Heritage, Convention for the Protection of the Architectural Heritage of Europe and Convention for the Safeguarding of the Intangible Cultural Heritage.
- **Hazardous substances and waste:** Basel Convention, Stockholm Convention, Rotterdam Convention and Minamata Convention, where their provisions are relevant to the substances, equipment or waste streams associated with the Subproject.

Where national requirements differ from the performance levels and measures set out in the applicable EHSGs, the more stringent requirements will apply to the Subproject.

1.4. Review and Update

This ESMP will be reviewed and updated by **HATSU**, as necessary, during Subproject implementation and operation to reflect changes in applicable national legislation, EIB environmental and social requirements, or Subproject conditions. Updates may be required following changes to the Subproject's scope, design, alignment, construction methods or implementation responsibilities; significant incidents or accidents; or findings from monitoring, inspections, stakeholder engagement and grievances that indicate the need for additional or revised mitigation measures.

HATSU will notify **İLBANK** of any proposed revisions and submit the updated ESMP for review and approval in accordance with the Project ESMF. Updates will maintain compliance with applicable national legislation, the EIB Environmental and Social Standards and the Project's environmental and social requirements. Relevant changes will be communicated to contractors, supervision consultants and affected stakeholders, as appropriate, in accordance with the Subproject SEP.

1.5. Implementation Arrangements

İLBANK will oversee ESMP implementation in coordination with HATSU. During construction, the Contractor will implement the required measures and ensure compliance by its subcontractors, under the supervision of the Supervision Consultant. Each party will provide adequate staff and resources for its responsibilities.

HATSU will be responsible for implementing the operational measures in this ESMP following completion and handover of the infrastructure.

Detailed roles and responsibilities are provided in Chapter 5.

2. SUBPROJECT DESCRIPTION

2.1. Subproject Information

The Kırıkhan Drinking Water Network Project involves the renewal and completion of the drinking water distribution network serving Kırıkhan District Centre, Hatay Province. It covers the remaining works following the partial construction of the network in 2022–2023. The Subproject includes drinking water pipelines, valves, flowmeter and monitoring chambers, fire hydrants, household connections, bridge and road crossings, SCADA and electrical works, and reinstatement of affected road surfaces. HATSU will operate and maintain the completed infrastructure.

Key technical information is summarised in the table below. Construction and operation activities are described in the following sections.

Table 3 Key Technical Information on the Subproject

Component	Features
Drinking water network	Approximately **100.07 km of PE/HDPE pipelines**, comprising **99,708 m of Ø110 mm**, **323 m of Ø140 mm**, and **10 m each of Ø160, Ø200, Ø225 and Ø355 mm pipes**.
Network fittings and auxiliary structures	Isolation valves, **two flowmeter chambers**, **six drainage chambers**, **five air release chambers** and **seven fire hydrants**.
Household connections and road reinstatement	Approximately **1,250 household connections**, using **Ø40 mm pipes**, together with reinstatement of road surfaces affected by construction.
Bridge and road crossings	**110 m of bridge crossing** using Ø110 mm HDPE pipe within a Ø200 mm steel casing, and **120 m of road crossing** using Ø200 mm HDPE pipe within a Ø400 mm steel casing installed by horizontal drilling.
SCADA and electrical works	Establishment of a central SCADA system and electrical works for **five residual chlorine measurement panels**.
Design water demand	Approximately **400 L/s** for the overall drinking water system in the approved design.
Design horizon	**2050** in the approved design. The PID adopts **2059** as the updated planning horizon and retains the original design population assumptions.

2.2. Subproject Location

The Subproject is located in **Kırıkhan District Centre, Hatay Province**. Drinking water network works are planned along existing roads and streets and include connections to the existing drinking water system, bridge and road crossings, and locations for network chambers and monitoring equipment.

Further information on land ownership and land acquisition status is provided in Section 3.4. The Subproject location is shown in the figures below.

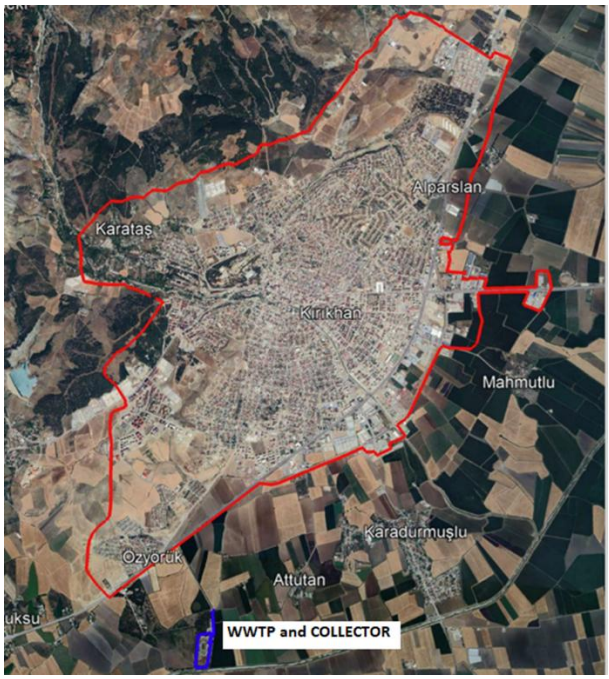
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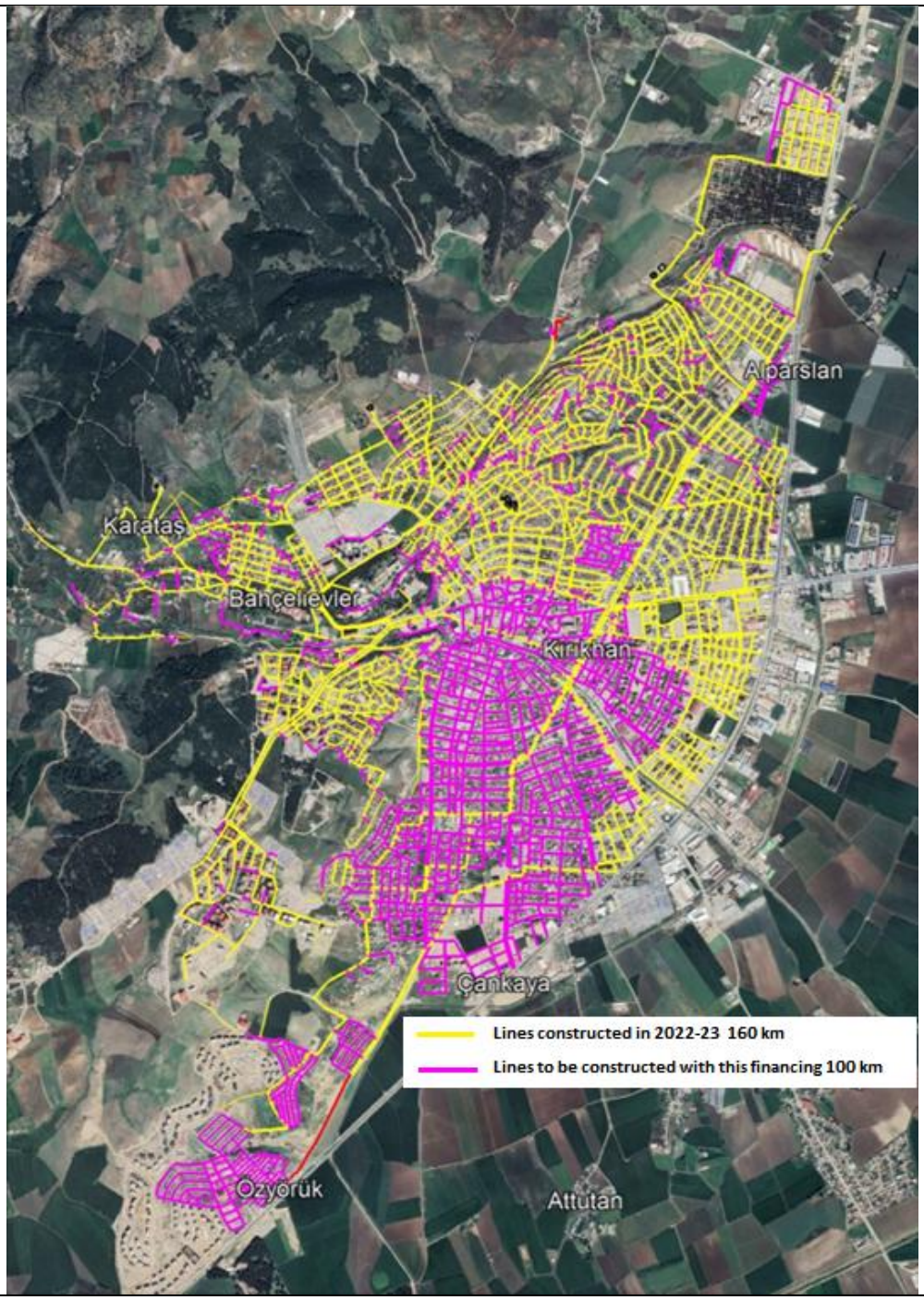


Table 1. Parcels Overlapping with the Subproject

District	Neighborhood/Village	Lot/ Parcel No.	Land Registry Type	Current Land Use
Facility A				
XX	XX1	….		
	XX2	….		
		….		

YY	YY1	….		
	YY2	….		
Facility B				
Facility C				
Linear Subproject Facilities (e.g. Water Supply Network, Sewarage, etc.)				
XX	XX1	Please refer to Annex … for the list of parcels overlapping with the route0		

2.3. Subproject Impact Area

The Subproject's impact area includes the drinking water pipeline routes, bridge and road crossings, network chambers, temporary work areas and nearby homes, businesses and public facilities that may be affected by construction noise, dust, traffic, access restrictions and temporary water supply interruptions.

It also includes areas potentially affected by material transport, waste handling and disposal, and construction-related runoff or discharges. Potential cumulative impacts from other construction works in the same area will be considered where relevant.

2.4. Environmental and Social Baseline

The environmental and social baseline has been characterised through a desk review of the Kırıkhan Drinking Water Network Project PID and supporting project information. Sources include population statistics, descriptions of existing infrastructure, topographic and climatic information, and geological and ground investigation findings summarised in the PID. These sources provide information on local conditions relevant to the assessment of the Subproject's environmental and social risks and impacts.

2.4.1. Physical Environment

The geotechnical information summarised in the PID for the project approved in 2016 describes Quaternary alluvium, Miocene limestone and Cretaceous ophiolite units in the study area. Alluvial materials include gravel, sand and silt, while limestone locally exhibits hard rock characteristics. No groundwater was detected in the investigation pits reported in the PID. This finding relates to those investigations and does not exclude local or seasonal groundwater during construction. These conditions are relevant to excavation methods, trench stability and dewatering arrangements where required.

The area has a Mediterranean climate, with hot, dry summers and mild, rainy winters. Hatay is highly seismically active and was severely affected by the February 2023 earthquakes. Seasonal rainfall, drought and seismic conditions require consideration in infrastructure design and construction planning.

Project-specific baseline air quality and noise measurements are not available in the reviewed documents. Further information on regional physical conditions and project geotechnical findings is provided in Sections 2.3 and 5.7 of the PID.

2.4.2. Biodiversity

The Subproject mainly follows existing roads within settled areas and includes bridge and road crossings. The reviewed documents do not include route-specific habitat mapping or species surveys. Information on invasive alien species and ecosystem services is also limited.

An official opinion will be obtained from the relevant Directorate of Nature Conservation and National Parks regarding potential impacts on protected areas, habitats and species. Any measures required by the authority will be incorporated into the ESMP, together with the applicable requirements of EIB Standard 4.

2.4.3. Socio-Economic Environment

The Subproject serves Kırıkhan District Centre, Hatay Province. The PID reports a district-centre population of 74,807 and a total district population of 121,028 for 2022. These figures represent pre-earthquake demographic information. The PID also considers Syrian refugees in the drinking water system's design population. The existing network is described as partly renewed, with the remaining older sections affected by frequent leaks, bursts and earthquake damage.

Construction may temporarily affect traffic, access to homes, businesses and public facilities, and continuity of water supply. Construction arrangements will maintain safe access and minimise disruption to essential services.

The PID reports no known important historical sites near the proposed works but does not provide a detailed cultural heritage inventory covering the pipeline routes. The Chance Finds Procedure based on ESMF Annex 3 will apply during excavation.

Potentially vulnerable groups may include earthquake-affected households, refugees, low-income households, older people and persons with disabilities. Stakeholder engagement and access arrangements will consider their needs, where relevant, in accordance with the Subproject SEP.

Further demographic, infrastructure and social information is provided in Sections 2.2, 3.1, 4.2 and 9.2 of the PID.

3. SUBPROJECT ACTIVITIES

3.1. Construction Phase

3.1.1. Construction Activities

Construction is expected to take approximately 18 months, subject to the confirmed contract schedule.

Works will include site mobilisation, identification of existing utilities, trench excavation and support, dewatering where necessary, and installation of drinking water pipelines and household connections. Installation of isolation valves, flowmeter and monitoring chambers, drainage and air release chambers, fire hydrants, bridge crossings and road crossings using horizontal drilling, together with SCADA and associated electrical works, are also included. Pipelines will undergo testing, flushing and disinfection before commissioning. Works will also include backfilling, connections to the existing system and road reinstatement.

Typical equipment will include excavators, loaders, trucks, compactors, lifting equipment, horizontal drilling equipment and dewatering pumps. Pipes, concrete, aggregates and other materials will be obtained from authorised suppliers. Suitable excavated material will be reused where appropriate.

Water required for construction will be supplied from HATSU-approved sources. Wastewater, construction waste, fuel and oils will be managed in accordance with the mitigation measures in this ESMP. The PID identifies asbestos-cement pipes in the existing network. Works affecting these pipes, and any other asbestos-containing materials encountered, will be managed in accordance with the applicable ESMP measures. Temporary facilities will be removed and disturbed areas reinstated after construction.

3.1.2. Construction Facilities

Temporary construction facilities may include site offices, material and equipment storage areas, and designated waste storage areas. Their locations, layout and any worker accommodation arrangements will be determined by the Contractor and included in the C-ESMP before site mobilisation.

Facilities will be provided with appropriate water supply, sanitation and waste management arrangements. Temporary facilities will be dismantled after construction, and the areas will be cleared and reinstated.

3.2. Operation Phase

3.2.1. Operation Activities

HATSU will operate and maintain the completed drinking water network and associated structures as part of the existing Kırıkhan drinking water supply system.

Routine activities will include leak detection and repair, monitoring of water quality, pressure and flow, inspection and maintenance of pipelines and crossings, and maintenance of valves, flowmeters, monitoring equipment, fire hydrants, household connections and associated electrical and SCADA equipment. Wastewater and waste generated during flushing, cleaning and maintenance will be managed in accordance with the applicable ESMP measures.

3.2.2. Operation Facilities

The operational facilities comprise:

- Drinking water distribution pipelines and household connections;
- Isolation valves and fire hydrants;
- Two flowmeter chambers, six drainage chambers and five air release chambers;
- Pipeline installations at bridge and road crossings;
- Five residual chlorine measurement panels;
- Central SCADA and associated electrical equipment

3.3.Labor Requirements

The number of workers required during construction and operation has not yet been confirmed. The Contractor will determine construction staffing and any accommodation needs in the C-ESMP. Local employment will be prioritised where feasible. HATSU will determine staffing requirements for operation and maintenance.

3.4. Land Acquisition Status

[Please describe any applicable decision related to land acquisition process of the Subproject, such as public benefit decision, accelerated expropriation ("*acele kamulastirma*") decisions].

Parcels to be acquired as part of the Project have been identified in Section 3.4. Land acquisition status of these parcels is summarized in Table 2, while related documentation, including title deeds of each parcel, is provided in **Hata! Başvuru kaynağı bulunamadı.**.

[Please describe the acquisition process and methods used (such as allocation, negotiated settlement as per Expropriation Law; willing-buyer willing seller method, transfer of public land, temporary land acquisition through lease agreement), if any of these parcels have already been acquired; please provide the expropriation, purchase or lease documentation in **Hata! Başvuru kaynağı bulunamadı.**].

[Please elaborate as needed according to Subproject specifics. Do not repeat any information presented in the ESMP matrices below or elsewhere in this report].

[Please describe E&S instruments that are being prepared such as RP, Ex-post, etc., if any]

Table 2. Land Acquisition Status for the Subproject

District	Neighborhood/Village	Lot/ Parcel No.	Current Land Ownership (e.g. Applicant Sub-borrower, Private Person, Legal Entity), Treasury, Non-registered, Other)	Type of Parcel (according to Title Deed) (e.g. Agricultural, Pasture, Raw Soil, etc.)	Title Deed Area of the Parcel (m^2)	Area to be Acquired and Used by the Subproject (m^2)	Properties before Acquisition (Structures, Houses, Trees, Crops etc.)	Land Acquisition Method (e.g. Purchase, Lease, Allocation, Easement Rights, etc.)	Status of Land Acquisition
Facility A									
XX	XX neighborhood	e.g. 1/108							
	XX …			….	….	….			
YY	YY neighborhood			….	….	….			
	YY ….			….	….	….			
Facility B									
XX									
Linear Subproject Facilities (e.g. Water Supply Network, Sewerage, etc.)									

XX									
Total					XX	XX			

3.5. Permitting Status

The available permitting information is summarised below:

- **EIA status:** The Subproject's national EIA screening status will be confirmed through project-specific documentation issued by the competent authority.
- **Project approval:** According to the PID, the drinking water designs were prepared by Canalp Engineering and approved by İLBANK Adana Regional Directorate and HATSU in 2016.
- **Nature conservation opinion:** An official opinion will be obtained from the relevant Directorate of Nature Conservation and National Parks regarding potential impacts on protected areas, habitats and species.
- **Other approvals:** Requirements for road excavation, traffic arrangements, bridge and utility crossings, horizontal drilling and associated installations will be confirmed with the relevant authorities. Necessary approvals will be obtained before the respective works begin.

HATSU will confirm any authorisations required for operation before commissioning.

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4. ESMP MATRIX: RISKS AND IMPACTS, MITIGATION AND MONITORING

The following matrix sets out the mitigation measures, monitoring requirements and responsibilities for managing the Subproject's environmental and social risks during construction and operation. It is based on the general ESMP provided in Annex 2 of the Project ESMF and adapted to the drinking water network, bridge and road crossings, SCADA and associated structures.

The Contractor will use the relevant construction-phase requirements to prepare and implement the C-ESMP. HATSU will implement the operational measures.

4.1.Construction and Operation ESMP Matrix

Environmental and Social Mitigation and Monitoring Matrix

İLBANK PIU will oversee implementation of the matrix, supported by the PMC. During construction, the Contractor will implement the measures, including through its subcontractors, under the supervision of the Supervision Consultant. HATSU will implement the operational measures.

Ref.	Potential Risks and Impacts	Proposed Mitigation Measures	Phase	Monitoring Indicators	Monitoring Frequency	Responsibility: Implementation / Monitoring
1	Environmental and social management	Prepare and obtain approval of the C-ESMP and relevant management plans before construction. Provide E&S and OHS training to workers and responsible staff. Record non-compliances and implement corrective actions. Notify HATSU immediately of significant incidents. HATSU will notify İLBANK PIU within 24 hours and submit the detailed investigation report, including root cause analysis and corrective actions, within 15 days. Submit quarterly E&S monitoring reports through the Supervision Consultant and PMC to İLBANK PIU. Submit monthly OHS forms for review by the Supervision	Planning and construction	Approved C-ESMP; training records; inspection reports; corrective action and incident records	Before construction; daily site checks; monthly review; immediately following significant incidents	Contractor; PMC for assigned training and support / Supervision Consultant and İLBANK PIU

		Consultant. İLBANK PIU will report to EIB every six months.				
2	Permitting and design compliance	Confirm the validity and coverage of existing approvals and obtain additional permits required for the works. Obtain the Nature Conservation and National Parks opinion and incorporate its requirements. Confirm road excavation, traffic, bridge crossing, horizontal drilling, utility crossing and electricity connection approvals where required. Apply relevant seismic design requirements.	Planning and construction	Permit register; approved designs; official opinions; approval conditions incorporated into work methods	Before the relevant activity; following design or scope changes; monthly register review	HATSU and Contractor, according to their responsibilities / Supervision Consultant and İLBANK PIU
3	Fuel, chemical spills and contaminated soil	Minimise hazardous material inventories. Store fuels and chemicals on impermeable surfaces with secondary containment. Tank containment will accommodate at least 110% of the largest tank or 25% of the combined volume, whichever is greater. Use drip trays during refuelling and maintenance. Provide spill kits, train workers and immediately contain spills. Transfer contaminated materials to authorised facilities.	Construction	Storage conditions; containment capacity; spill kits; spill records; contaminated material disposal records	Daily visual checks; immediately following spills; monthly review	Contractor / Supervision Consultant

4	Topsoil loss, soil disturbance and erosion	Strip and store topsoil separately where vegetated ground is affected. Limit the working footprint and protect stockpiles from erosion, contamination and dust. Provide drainage and sediment controls. Reuse suitable excavated material and reinstate disturbed areas promptly. Stabilise stockpiles retained for extended periods.	Construction	Condition of stockpiles; drainage and erosion controls; reinstatement records; evidence of sediment movement	Daily during earthworks; after heavy rainfall; monthly review	Contractor / Supervision Consultant
5	Surface water pollution	Protect local streams and drainage channels from sediment, waste, fuel and concrete washwater. Keep stockpiles and equipment away from watercourses. Provide drainage and sediment controls, collect and treat contaminated runoff where necessary, and prevent uncontrolled discharges. Prevent materials and debris from falling into watercourses during bridge crossing works. Contain and collect drilling fluids and cuttings, monitor for unintended releases during horizontal drilling and stop drilling to contain any release. Reinstate areas disturbed by construction.	Planning and construction	Condition of nearby watercourses and drainage channels; sediment controls; runoff management; drilling fluid containment and recovery; pollution incidents; water quality results where required	Before earthworks and crossing works; daily near watercourses and drainage channels; throughout drilling operations; after heavy rainfall; monthly review	Contractor, with HATSU coordination / Supervision Consultant

6	Groundwater pollution and excavation dewatering	Plan excavations using the available ground investigation findings and actual site conditions. Provide suitable trench support and dewatering where groundwater or accumulated water is encountered. Direct dewatering water through settlement or treatment where necessary and confirm an authorised discharge arrangement. Investigate suspected contamination before discharge.	Construction	Dewatering arrangements; discharge location and condition; treatment controls; water quality results where necessary; spill records	Daily during excavation and dewatering; following suspected contamination; monthly review	Contractor / Supervision Consultant
7	Material sourcing and resource consumption	Prioritise suitable local suppliers where feasible. Obtain aggregates, concrete, asphalt and other materials from facilities holding the required permits and licences. Verify supplier documentation and store materials safely. Avoid unnecessary material use and transport.	Planning and construction	Supplier permits and licences; delivery records; material storage conditions	Before supplier selection; when suppliers change; monthly review	Contractor / Supervision Consultant
8	Excavated material management	Separate topsoil, reusable excavation material and unsuitable material. Reuse suitable material for backfilling following technical approval. Keep roads, drains and property entrances clear. Transport surplus	Construction	Excavation and reuse quantities; storage conditions; approved disposal locations; transport and disposal records	Daily during earthworks; monthly records review	Contractor / Supervision Consultant

		material in covered vehicles to authorised reuse or disposal locations and maintain transfer records.				
9	Hazardous and non-hazardous waste	Implement a site-specific Waste Management Plan. Minimise, segregate, label and securely store waste. Provide covered containers and impermeable storage for hazardous waste. Use authorised transporters and receiving facilities and retain records. Locate dedicated waste storage at least 300 m from rivers, streams, lakes and wetlands. Locate designated refuelling areas at least 50 m from drainage structures and 100 m from important water bodies. Prohibit waste burning and dumping.	Construction	Waste storage conditions; quantities and waste codes; transporter and facility authorisations; transfer records; complaints	Daily visual checks; at each waste transfer; monthly review	Contractor / Supervision Consultant
10	Asbestos-containing pipes and materials	The PID identifies asbestos-cement pipes in the existing network. Identify sections that may be disturbed and prepare and obtain approval of an Asbestos Management Plan before works affecting these pipes. Avoid unnecessary disturbance and restrict access to affected work areas. Use	Planning and construction	Pre-work identification and assessment records; approved Asbestos Management Plan; worker qualifications and training; access controls; PPE and removal methods;	Before disturbing existing infrastructure; continuously during asbestos work; immediately upon unexpected discovery; monthly records review	Contractor / Supervision Consultant

		appropriately qualified and trained personnel, suitable respiratory protection and other PPE, controlled wet methods, sealed and labelled packaging and authorised transport and disposal. Avoid breaking, cutting or grinding asbestos-cement pipes. If additional suspected materials are encountered unexpectedly, stop work in the affected area and arrange competent assessment before disturbance. Do not reuse asbestos-containing material.		exposure monitoring where required; transport and disposal records		
11	Water consumption and domestic wastewater	Obtain water from HATSU-approved sources without affecting community supplies. Provide safe drinking water and adequate sanitation. Collect domestic wastewater in an authorised sewer connected to functioning treatment or in watertight holding tanks emptied by authorised services. Keep clean drainage separate from contaminated water and prohibit untreated wastewater discharge.	Construction	Water supply arrangements; sanitation conditions; wastewater collection and disposal records; complaints	Daily checks; at each tank emptying; monthly review	Contractor / Supervision Consultant
12	Sexual exploitation and abuse and	Require all workers to sign a Code of Conduct and receive SEA/SH training. Provide safe,	Planning and construction	Signed Codes of Conduct; training coverage; accessible	At recruitment and induction; regular refresher training;	Contractor and HATSU within their

	sexual harassment	confidential reporting channels through the community and workers' grievance mechanisms. Protect personal information and refer complaints to appropriate support services using a survivor-centred approach. Prepare a SEA/SH Prevention and Response Action Plan where indicated by the risk assessment.		confidential reporting channels; referral arrangements; action plan where required	monthly review without disclosing confidential case details	responsibilities / Supervision Consultant and İLBANK PIU
13	Dust emissions	Implement the air quality measures included in the C-ESMP. Spray exposed surfaces and haul routes as needed, cover dusty loads, protect stockpiles and clean affected roads. Apply site speed limits and suspend or adjust activities causing excessive dust. Prohibit open burning. Monitor PM10 at representative sensitive receptors during earthworks and respond promptly to exceedances and complaints.	Construction	Visible dust; condition of covers and roads; watering records; PM10 results; complaints and corrective actions	Daily visual checks; PM10 monthly during the first three months of earthworks, then quarterly if compliant; continue monthly following exceedances and increase monitoring where necessary	Contractor / Supervision Consultant
14	Exhaust emissions	Maintain vehicles and equipment in good condition, avoid unnecessary idling and plan deliveries efficiently. Inspect exhaust condition and repair poorly performing equipment. Implement the Traffic	Construction	Maintenance records; visible exhaust emissions; idling practices; complaints	Daily visual checks; maintenance according to equipment requirements; monthly review	Contractor / Supervision Consultant

		Management Plan to reduce unnecessary vehicle movements.				
15	Noise and vibration	Implement the noise and vibration measures included in the C-ESMP. Schedule noisy works during daytime and obtain required authorisations for evening or night work. Maintain equipment, use quieter methods and install movable barriers where needed. Notify nearby residents before particularly noisy works. Assess vibration risks near vulnerable structures and adjust methods where necessary. Investigate complaints promptly.	Construction	Noise measurements at sensitive receptors; equipment condition; notifications; vibration-related damage reports; complaints	Daily checks; noise measurements monthly for the first three months, then quarterly if compliant; continue monthly following exceedances and increase monitoring in response to complaints or changes in work	Contractor / Supervision Consultant
16	Construction traffic and access disruption	Prepare and implement a Traffic Management and Safety Plan in coordination with HATSU and relevant authorities. Phase works to maintain access to homes, businesses, schools and health services. Provide safe pedestrian routes, suitable temporary crossings, signs, lighting and flagpersons where needed. Establish traffic controls and secure working areas for bridge crossings and horizontal drilling beneath roads. Maintain	Planning and construction	Approved traffic arrangements; pedestrian access; signs and barriers; crossing work controls; traffic incidents; complaints; condition of affected roads	Before opening each work section and commencing crossing works; daily inspections; immediately after incidents; monthly review	Contractor, with HATSU coordination / Supervision Consultant

		emergency vehicle access, control vehicle speeds and inform communities of diversions.				
17	Biodiversity and ecosystem disturbance	Obtain and implement the Nature Conservation and National Parks opinion. Clearly mark work areas, minimise vegetation clearance and protect watercourses. Avoid unnecessary tree removal, wildlife disturbance and access to undisturbed areas. If sensitive species or active nests are encountered, suspend the affected activity and obtain specialist advice. Clean equipment to limit invasive species transfer and reinstate disturbed areas using suitable native vegetation where required. Prepare additional biodiversity measures where findings require them.	Planning and construction	Official opinion; marked work areas; vegetation clearance and reinstatement records; wildlife observations; protection measures	Before site clearance; daily checks near sensitive locations; during reinstatement; monthly review	HATSU for the official opinion; Contractor for site measures / Supervision Consultant and İLBANK PIU
18	Labour and working conditions	Implement labour management procedures covering written employment terms, wages, working hours, rest, equal treatment and freedom of association. Prohibit child and forced labour. Maintain an accessible workers' grievance	Planning and construction	Employment and age-verification records; payroll and working hours; worker grievances; accommodation inspections where applicable	At recruitment; monthly review; regular worker consultations and accommodation checks	Contractor / Supervision Consultant

		mechanism, including anonymous submissions without retaliation. Apply requirements to subcontractors. Where accommodation is provided, ensure safe housing, drinking water, sanitation and welfare facilities.				
19	General occupational health and safety	Implement an OHS Management Plan and task-specific risk assessments. Provide induction, daily toolbox talks, suitable PPE, health surveillance and competent supervision. Use trained and authorised operators and inspect equipment before use. Apply permit-to-work procedures for high-risk activities. Provide safe working platforms, fall protection and falling-object controls for bridge crossing works. Establish lifting and drilling exclusion zones and apply electrical isolation and lockout procedures during electrical and SCADA installation. Provide first aid, emergency arrangements and incident reporting.	Construction	Training and health records; PPE use; operator qualifications; equipment inspections; work permits; fall protection; lifting and drilling controls; electrical isolation records; incidents and corrective actions	Before work; daily inspections and briefings; continuous supervision during high-risk work; monthly performance review	Contractor / Supervision Consultant

20	Trench collapse, falls and underground utility strikes	Locate and verify existing utilities before excavation or horizontal drilling and coordinate with their operators. Confirm the drilling alignment, clearance from utilities and ground conditions before road crossing works. Design and install suitable shoring, shielding or safe slopes according to ground conditions and excavation depth. Provide secure barriers and safe access, including at drilling entry and exit pits. Keep spoil, vehicles and equipment at safe distances from excavation edges. Inspect excavations before each shift and after rain, ground movement or changes in conditions. Monitor road surfaces for settlement or heave during drilling and stop work if unsafe movement is observed.	Planning and construction	Utility checks; verified drilling alignment and clearances; excavation methods; support systems; barriers; safe access; excavation inspection records; road surface condition	Before excavation or drilling; before each shift; after rain or changed conditions; continuous supervision during high-risk work	Contractor / Supervision Consultant
21	Confined-space entry and hazardous atmospheres	Avoid entry into valve, flowmeter, drainage and air release chambers where work can be completed from outside. Where entry is necessary, use a confined-space permit, isolate electrical and mechanical equipment and control incoming	Construction and commissioning	Entry permits; isolation checks; gas detector calibration and readings; ventilation; trained personnel; rescue equipment and drills	Before every entry and throughout entry operations	Contractor / Supervision Consultant

		flows. Test the atmosphere, provide ventilation, continuous monitoring where required, an attendant, communications and suitable rescue arrangements. Prohibit unplanned rescue entry.				
22	Community health and safety and utility disruption	Implement community safety measures under the C-ESMP. Secure excavations and work areas, provide safe temporary crossings and inspect barriers and lighting. Prevent public access beneath lifting and overhead installation activities at bridge crossings and to drilling work areas. Coordinate planned utility interruptions and notify affected users in advance. Minimise the duration of water supply interruptions and arrange safe alternative drinking water supplies where necessary, particularly for vulnerable users and essential services.	Planning and construction	Barriers and crossings; exclusion zones; utility coordination records; advance notices; sensitive receptor checks; community incidents and grievances	Before each work section; daily inspections; immediately after incidents; monthly review	Contractor and HATSU within their responsibilities / Supervision Consultant
23	Fire and emergency risks	Implement an Emergency Preparedness and Response Plan covering fire, spills, serious injury, flooding and earthquakes. Provide suitable extinguishers, clear escape routes, assembly points and emergency contacts.	Planning and construction	Emergency plan; equipment inspections; emergency access; worker training; drill and incident records	Before mobilisation; daily housekeeping checks; periodic equipment checks and drills; monthly review	Contractor / Supervision Consultant

		Control hot work and flammable material storage. Include temporary offices and worker accommodation where provided, and conduct drills.				
24	Security-related impacts	Use trained security personnel and proportionate access controls. Apply the Code of Conduct and prohibit intimidation, harassment and excessive force. Keep community and worker grievance channels available for security-related concerns. Investigate complaints and implement corrective actions.	Construction	Security training; access arrangements; complaints and corrective actions	At appointment; ongoing supervision; monthly review and immediately following complaints	Contractor / Supervision Consultant
25	Land use restrictions, property damage and livelihood impacts	Keep works within approved boundaries and maintain access to properties and businesses. Confirm formal and informal users before works. Avoid damage to structures, crops and other assets. Address verified losses in accordance with the Project RF. If land acquisition or physical or economic displacement becomes unavoidable, İLBANK PIU will prepare the required plan and HATSU will implement the	Planning and construction	Land and user checks; access arrangements; damage and compensation records; grievances; approved plans where required	Before works at each section; daily access checks; immediately following damage or complaints; monthly review	HATSU and İLBANK PIU for land-related arrangements; Contractor for prevention and site controls / İLBANK PIU and Supervision Consultant

		relevant measures before displacement occurs.				
26	Cultural heritage and chance finds	Apply the Chance Finds Procedure in Annex 3 of the Project ESMF and train workers before excavation. If potential cultural heritage is found, stop work in the affected area, secure the location and immediately notify the resident engineer and the relevant museum directorate or competent local authority as specified in the procedure. Promptly inform HATSU, the Supervision Consultant, PMC and İLBANK PIU. Resume affected works only following the required clearance and instructions. Protect access to cultural and religious places.	Planning and construction	Training records; chance find notifications; stop-work and clearance records; complaints	Before excavation; throughout earthworks; immediately following a discovery	Contractor, with HATSU coordination / Supervision Consultant and competent authority
27	Stakeholder engagement and grievances	Implement the Subproject SEP and maintain accessible community grievance channels. Inform residents and businesses about work locations, schedules, interruptions and access arrangements. Assign a community liaison contact. Provide suitable communication and assistance for vulnerable groups. Review and update the	Planning and construction	Disclosure and consultation records; notices; liaison arrangements; grievance register; response times; SEP updates	Before works in each area; ongoing engagement; monthly review; annual SEP review and following significant changes	HATSU and Contractor within their responsibilities / İLBANK PIU, supported by the PMC and Supervision Consultant

		SEP annually and following significant changes.				
28	Water leakage, contamination and drinking water quality	Implement HATSU's inspection and preventive maintenance programme for the drinking water network, chambers and associated equipment. Detect and repair leaks, secure chamber covers and protect network access points against unauthorised access and contamination. Maintain water quality, pressure and flow monitoring equipment. Monitor drinking water quality in accordance with applicable requirements. Apply appropriate flushing, disinfection and water quality checks before commissioning and return to service following works that may affect water quality. Investigate suspected contamination and take corrective action promptly.	Operation	Inspection and maintenance records; leakage and repair records; chamber and fitting condition; monitoring equipment checks; drinking water quality results; flushing and disinfection records; complaints and corrective actions	According to the maintenance programme and applicable drinking water monitoring requirements; before commissioning and return to service following relevant works; immediately following suspected contamination; monthly records review	HATSU / HATSU's responsible E&S and operational staff, with İLBANK oversight under Project arrangements
29	Operational worker safety and confined-space entry	Apply OHS procedures for pipeline repairs and maintenance of valves, chambers, crossings and associated equipment. Use trained workers, suitable PPE, hygiene facilities and health surveillance. Isolate and	Operation	Risk assessments; entry permits; atmospheric testing, isolation and depressurisation records; training; health surveillance;	Before each maintenance task and every confined-space entry; throughout entry operations; monthly review	HATSU / HATSU's responsible OHS and operational staff

		depressurise equipment before maintenance. Require confined-space permits, atmospheric testing, ventilation, an attendant and rescue arrangements where entry is necessary. Apply electrical isolation and lockout procedures for electrical and SCADA maintenance, and fall protection for work at height. Apply asbestos controls where maintenance may disturb existing asbestos-cement pipes.		equipment checks; fall protection and asbestos controls where required; incidents		
30	Water supply interruption, equipment failure and emergencies	Maintain the drinking water network, SCADA, monitoring instruments and associated equipment. Prepare response arrangements for equipment failure, power loss, pipe bursts, contamination, flooding and earthquakes. Isolate affected sections promptly, notify users and minimise service interruptions. Arrange safe alternative drinking water supplies where necessary, prioritising vulnerable users and essential services. Review recurring failures and implement corrective actions.	Operation	Maintenance and equipment checks; emergency arrangements; service interruption and failure records; user notifications; alternative supply arrangements; corrective actions	Routine operational checks; scheduled maintenance; immediately following faults and severe events; monthly review	HATSU / HATSU's responsible operational and E&S staff

31	Operational waste, cleaning discharges and hazardous materials	Collect pipeline and chamber cleaning residues, waste oils, electrical components and other maintenance waste separately. Manage flushing and disinfection water through an authorised discharge arrangement, with treatment or dechlorination where necessary. Apply appropriate asbestos waste controls where maintenance affects existing asbestos-cement pipes. Prevent spills and public exposure. Use secure storage and authorised collection, transport and disposal arrangements. Maintain waste records and prohibit uncontrolled discharges to drains or watercourses.	Operation	Waste quantities and transfer records; storage conditions; cleaning and disinfection discharge arrangements; treatment records where required; asbestos waste records where applicable; spill records; receiving facility authorisations	During each cleaning or maintenance activity and waste transfer; before and during flushing or disinfection discharges; monthly review	HATSU / HATSU's responsible E&S and operational staff
32	Noise and community disturbance during operation	Maintain mechanical and electrical equipment to minimise noise. Investigate complaints and undertake measurements where necessary. During maintenance, secure work areas and maintain pedestrian, property and emergency access. Inform affected users before planned interruptions and implement corrective measures promptly.	Operation	Equipment condition; noise results where required; access arrangements; interruption notices; complaints and response records	Routine inspections; during maintenance; before planned interruptions; following complaints; monthly review	HATSU / HATSU's responsible E&S and operational staff

33	Operational stakeholder engagement and worker protection	Maintain community and workers' grievance mechanisms, fair working conditions and the Code of Conduct. Continue relevant OHS and SEA/SH training. Provide accessible information on service interruptions and emergency contacts. Consider vulnerable users when planning maintenance and responding to complaints. Notify İLBANK PIU of significant incidents within 24 hours and provide the detailed investigation report within 15 days.	Operation	Grievance and response records; employment and training records; notices; incident reports; corrective actions	Ongoing; before planned interruptions; monthly review; immediately following significant incidents	HATSU / İLBANK PIU under Project monitoring arrangements

4.2. List of Associated Plans and Procedures

The Contractor will prepare and implement the following plans before construction:

- Contractor's Environmental and Social Management Plan (C-ESMP);
- Occupational Health and Safety Management Plan;
- Emergency Preparedness and Response Plan;
- Traffic Management and Safety Plan;
- Waste Management Plan.

An Asbestos Management Plan will also be prepared and implemented before activities where asbestos-containing pipes or materials are expected to be disturbed.

Other measures and procedures required by the ESMP matrix will be incorporated into the relevant sections of these plans. The plans will also cover relevant works during the Defect Liability Period.

The plans will be reviewed at least every six months and updated following significant changes, incidents or monitoring findings.

5. CAPACITY DEVELOPMENT AND TRAINING

5.1. Organizational Capacity

İLBANK PIU, supported by the PMC, will oversee environmental and social management under the Project. HATSU will assign staff for local coordination, stakeholder engagement, grievance management and monitoring support, and will maintain adequate capacity for operation and maintenance.

The Contractor will provide qualified personnel and sufficient resources to implement the ESMP and C-ESMP, including environmental, social and occupational health and safety responsibilities. These arrangements will also cover subcontractors.

The Supervision Consultant will monitor the Contractor's compliance and follow up on corrective actions. Relevant organisations may obtain external specialist support where necessary. Staffing and resources will be maintained throughout their respective responsibilities under the Subproject.

5.2. Roles and Responsibilities

The key parties will implement their responsibilities in accordance with the Project ESMF and the protocol between İLBANK and HATSU.

İLBANK PIU: Holds overall responsibility for Project implementation and E&S oversight. It reviews and approves E&S documents, incorporates requirements into tender documents and contracts, monitors compliance and reports to the EIB.

Project Management Consultant (PMC): Supports the PIU with E&S document review, training, monitoring and reporting. It coordinates with the Supervision Consultant and follows up on corrective actions.

HATSU: Coordinates local implementation, ensures preparation of the Subproject E&S documents, supports permitting and stakeholder engagement, and implements the grievance mechanism. It carries out any required resettlement measures under plans prepared by the PIU and assumes responsibility for operation and maintenance after handover.

Supervision Consultant: Monitors construction and ESMP compliance daily, reviews the Contractor's plans and monitoring reports, identifies non-compliances and follows up on corrective actions. It reports its findings to İLBANK PIU through the PMC.

Contractor: Prepares and implements the C-ESMP and supporting plans, provides qualified staff and resources, trains workers and ensures subcontractor compliance. It maintains community and workers' grievance channels, submits monitoring reports and implements corrective actions.

During construction, the Contractor will submit quarterly E&S monitoring reports and monthly OHS forms to the Supervision Consultant. The Supervision Consultant will review the E&S reports, add its site inspection findings and forward them to the PMC. The PMC will consolidate the reports and submit them to İLBANK PIU quarterly. İLBANK PIU will submit consolidated E&S monitoring reports to the EIB every six months.

The Contractor will immediately report significant incidents to HATSU and the Supervision Consultant. HATSU will ensure that İLBANK PIU is notified within **24 hours of the incident**. The Contractor will prepare a detailed investigation report, including root cause analysis and corrective actions, for submission by HATSU to the PIU within **15 days of the incident**.

5.3. Capacity Building and Training

İLBANK PIU, supported by the PMC, will provide training and guidance to HATSU and the Supervision Consultant. The Supervision Consultant will train the Contractor, which will ensure that all workers, including subcontractor personnel, receive training relevant to their duties.

Training will cover:

- EIB requirements and implementation of the ESMP, C-ESMP and SEP;
- Dust, noise, waste, water pollution, spill prevention and asbestos awareness, including procedures for suspected asbestos-containing materials;
- Occupational and community safety, particularly excavation, bridge crossings, horizontal drilling for road crossings, confined-space entry, lifting operations, work at height, electrical and SCADA works, machinery and traffic;
- Emergency response, incident reporting and practical drills;
- Labour rights, the Code of Conduct, SEA/SH prevention and workers' grievances;
- Community relations, grievance handling and the Chance Finds Procedure.
- Protection of drinking water quality during pipeline connections, testing, flushing, disinfection and maintenance

Initial training will be provided before relevant works begin. Refresher training will be conducted at least every six months and when activities or risks change. The Contractor will retain training and attendance records. The Supervision Consultant will check training coverage and identify additional needs.

Annex A – EIA Out of Scope

Annex B – E&S Incident Notification Form Template

1) Incident Details		
Date of Incident: [*Please indicate*]	**Time of Incident:** [*Please indicate*]	
Location of the Incident:	[*Please indicate*]	
Full Name of Sub-borrower:	[*Please indicate*]	
Date Reported to İLBANK: [*Please indicate*]	Reported to İLBANK by: [*Please indicate]*	Notification Type: [*Please indicate; e-mail/phone call/media notice/other]*
Date Reported to EIB: [*Please indicate*]	Reported to EIB by: [*Please indicate]*	Notification Type: [*Please indicate; e-mail/phone call/media notice/other]*
Full Name of the Contractor of the Subproject:	[*Please indicate]*	
Full Name of the Sub-contractor involved in the incident:	[*Please indicate]*	

2) Type of incident (please check all that apply)[1]	
☐ Fatality	☐ Acts of violence/protest
☐ Lost time injury	☐ Unexpected impacts on heritage resources
☐ Displacement without due process	☐ Unexpected impacts on biodiversity resources
☐ Child labor	☐ Environmental pollution incident
☐ Forced labor	☐ Dam failure
☐ Disease outbreaks	☐ Other

3) Description/Narrative of Incident
For example: I. What is the incident? [*Please briefly describe*]

[1] See Appendix 2 for definitions.

II. What were the conditions or circumstances under which the incident occurred (if known)? [*Please briefly describe*]

III. Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions? [*Please briefly describe*]

IV. Is the incident still ongoing or is it contained? [*Please briefly describe*]

V. Have any relevant authorities been informed? [*Please briefly describe*]

4) Actions taken to contain the incident

Short Description of Action	Responsible Party	Expected Date	Status

For incidents involving a Contractor:

Name of Contractor:

Have the works been suspended? Yes ☐ No ☐
Note: Please attach a copy of the instruction suspending the works

5) What support has been provided to affected people

[*Please briefly describe*]

APPENDICES

Appendix 1: Supporting documents

[Note: Please mark the relevant documents available at this stage and submit them attached to the report]:

☐ Copy of the social security registration records of the victims and involved persons

☐ Copy of the instruction suspending the works

☐ Statement of victims

☐ Statement of witnesses

☐ Copies of notifications done to the relevant authorities

☐ Copies of legal investigation reports of relevant authorities

☐ Copies of E&S training records of the affected and involved persons

☐ Copies of OHS training records of the affected and involved persons

☐ Photographs related to the incident

☐ Others

Appendix 2: Incident Types

The following are incident types to be reported using the environmental and social (E&S) incident response process:

Fatality: Death of a person(s) that occurs within one year of an accident/incident, including from occupational disease/illness (e.g., from exposure to chemicals/toxins).

Lost Time Injury: Injury or occupational disease/illness (e.g., from exposure to chemicals/toxins) that results in a worker requiring 3 or more days off work, or an injury or release of substance (e.g., chemicals/toxins) that results in a member of the community needing medical treatment.

Acts of Violence/Protest: Any intentional use of physical force, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, deprivation to workers or project beneficiaries, or negatively affects the safe operation of a project worksite.

Disease Outbreaks: The occurrence of a disease in excess of normal expectancy of number of cases. Disease may be communicable or may be the result of unknown etiology.

Displacement Without Due Process: The permanent or temporary displacement against the will of individuals, families, and/or communities from the homes and/or land which they occupy without the provision of, and access to, appropriate forms of legal and other protection and/or in a manner that does not comply with an approved resettlement action plan.

Child Labor: An incident of child labor occurs: (i) when a child under the age of 14 (or a higher age for employment specified by national law) is employed or engaged in connection with a project, and/or (ii) when a child over the minimum age specified in (i) and under the age of 18 is employed or engaged in connection with a project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development.

Forced Labor: An incident of forced labor occurs when any work or service not voluntarily performed is exacted from an individual under threat of force or penalty in connection with a project, including any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. This also includes incidents when trafficked persons are employed in connection with a project.

Unexpected Impacts on heritage resources: An impact that occurs to a legally protected and/or internationally recognized area of cultural heritage or archaeological value, including world heritage sites or nationally protected areas not foreseen or predicted as part of project design or the environmental or social assessment.

Unexpected impacts on biodiversity resources: An impact that occurs to a legally protected and/or internationally recognized area of high biodiversity value, to a Critical Habitat, or to a Critically Endangered or Endangered species (as listed in IUCN Red List of threatened species or equivalent national approaches) that was not foreseen or predicted as part of the project design or the environmental and social assessment. This includes poaching or trafficking of Critically Endangered or Endangered species.

Environmental pollution incident: Exceedances of emission standards to land, water, or air (e.g., from chemicals/toxins) that have persisted for more than 24 hours or have resulted in harm to the environment.

Dam failure: A sudden, rapid, and uncontrolled release of impounded water or material through overtopping or breakthrough of dam structures.

Other: Any other incident or accident that may have a significant adverse effect on the environment, the affected communities, the public, or the workers, irrespective of whether harm had occurred on that occasion. Any repeated non-compliance or recurrent minor incidents which suggest systematic failures that the task team deems needing the attention of Bank management.

Annex C – E&S Incident Investigation Form Template

1) Investigation Findings
For example: I. where and when the incident took place, II. who was involved, and how many people/households were affected, III. what happened and what conditions and actions influenced the incident, IV. what were the expected working procedures and were they followed, V. did the organization or arrangement of the work influence the incident, VI. were there adequate training/competent persons for the job, and was necessary and suitable equipment available, VII. what were the underlying causes; where there any absent risk control measures or any system failures.

2) Corrective Actions from the investigation to be implemented (to be fully described in Corrective Action Plan)		
Action	Responsible Party	Expected Date

3a) Fatality/Lost Time Injury Information	
Fatality ☐	Lost time injury ☐
Immediate cause of fatality/injury for worker or member of the public (please check all that apply) [2]:	
☐ Caught in or between objects	☐ Medical Issue
☐ Struck by falling objects	☐ Suicide
☐ Stepping on, striking against, or struck by objects	☐ Project Vehicle Work Travel
☐ Drowning	☐ Non-project Vehicle Work Travel
☐ Chemical, biochemical, material exposure	☐ Project Vehicle Commuting
☐ Falls, trips, slips	☐ Non-project Vehicle Commuting
☐ Fire & explosion	☐ Vehicle Traffic Accident (Members of Public Only)
☐ Electrocution	☐ Other
☐ Homicide	

[2] See Appendix 1 for definitions

Name	Age/ Date of Birth	Nationality	Gender	Date of Fatality/ Injury	Cause of Fatality/ Injury	Affected Party (Employee/ Public)
			☐ Female ☐ Male			☐ Sub-borrower employee ☐ Contractor employee ☐ Sub-contractor employee ☐ Public

3b) Financial Support/Compensation Types (to be fully described in Corrective Action Plan template – template is given in Appendix 3)

☐ No Compensation Required

☐ Workman's Compensation/National Insurance

☐ Contractor Direct

☐ Contractor Insurance

☐ Other

☐ Court Determined Judicial Process

Name	Compensation Type	Compensation Amount (TRY)	Responsible Party

4) Supplementary Narrative

Appendix 1: Definition of fatality/injury immediate causes

1. **Caught in or between objects:** caught in an object; caught between a stationary object and moving object; caught between moving objects (except flying or falling objects).

2. Struck by falling objects: slides and cave-ins (earth, rocks, stones, snow, etc.); collapse (buildings, walls, scaffolds, ladders, etc.); struck by falling objects during handling; struck by falling objects.

3. Stepping on, striking against, or struck by objects: stepping on objects; striking against stationary objects (except impacts due to a previous fall); Striking against moving objects; Struck by moving objects (including flying fragments and particles) excluding falling objects.

4. Drowning: respiratory impartment from submersion/emersion in liquid.

5. Chemical, biochemical, material exposure: exposure to or contact with harmful substances or radiations.

6. Falls, trips, slips: falls of persons from heights (e.g., trees, buildings, scaffolds, ladders, etc.) and into depths (e.g., wells, ditches, excavations, holes, etc.) or falls of persons on the same level.

7. Fire & explosion: exposure to or contact with fires or explosions.

8. Electrocution: exposure to or contact with electric current.

9. Homicide: a killing of one human being by another.

10. Medical Issue: a bodily disorder or chronic disease.

11. Suicide: the act or an instance of taking, or attempting to take, one's own life voluntarily and intentionally.

12. Others: any other cause that resulted in a fatality or injury to workers or members of the public.

Vehicle Traffic

13. Project Vehicle Work Travel: traffic accidents in which project workers, using project vehicles, are involved during working hours and which occur in the course of paid work.

14. Non-project Vehicle Work Travel: traffic accidents in which project workers, using non-project vehicles, are involved during working hours and which occur in the course of paid work.

15. Project Vehicle Commuting: traffic accidents in which project workers, using project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.

16. Non-project Vehicle Commuting: traffic accidents in which project workers, using non-project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.

17. Vehicle Traffic Accident (Members of Public Only): traffic accidents in which non-project workers/members of the public are involved in an accident while travelling for any purpose.

Appendix 2: Supporting documents

[Note: Please mark the relevant documents available and submit them attached to the report]:

☐ Copy of the social security registration records of the victims and involved persons

☐ Copy of the instruction suspending the works

☐ Statement of victims

☐ Statement of witnesses

☐ Copies of notifications done to the relevant authorities

☐ Copies of legal investigation reports of relevant authorities

☐ Copies of E&S training records of the affected and involved persons

☐ Copies of OHS training records of the affected and involved persons (such as basic OHS training, induction training, visitors training, job-specific training, refreshment training, etc.)

☐ Photographs related to the incident

☐ Health examination records of the affected and involved employees

☐ Copies of Personal Protective Equipment delivery forms (signed copies)

☐ Root Cause Analysis completed for the incident

☐ Information/documentation related to any judicial process

☐ Others

Appendix 3: Corrective Action Plan template

Action No:	Brief Description of E&S non-compliance	Corrective Action	Financial and Human Resources Required	Responsible Party	Due Date for Completion of Corrective Action	Indicators for Successful Completion of Corrective Action	Status of Corrective Action

Annex D – Chance Finds Procedure[3]

Cultural heritage encompasses tangible and intangible heritage which may be recognized and valued at a local, regional, national or global level. Tangible cultural heritage, which includes movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Tangible cultural heritage may be located in urban or rural settings, and may be above or below land or under the water. Intangible cultural heritage, which includes practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artefacts and cultural spaces associated therewith—that communities and groups recognize as part of their cultural heritage, as transmitted from generation to generation and constantly recreated by them in response to their environment, their interaction with nature and their history.

In the event that during construction, sites, resources or artefacts of cultural value are found, the following procedures for identification, protection from theft, and treatment of discovered artefacts should be followed and included in standard bidding documents. These procedures consider requirements related to Chance Finding under national legislation including **Protection of Cultural and Natural Assets Law (Nº 2863)**.

- Stop the construction activities in the area of chance find temporarily.
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a guard shall be arranged until the responsible local authorities take over. These authorities are **nearest museum directorate** or **mukhtar in the village**, and **local authority i.e. governor or district governor in other places**.
- Notify the relevant **resident engineer** and the **nearest museum directorate** or the **mukhtar in the village**, and the **local authority in other places** immediately. **Resident engineer** will inform the **Project Manager** of the contractor. Subsequently, the **Project Manager** will inform the **PIU**, the **supervision consultant**, and **the project management consultant**, promptly.
- The **mukhtar in the village**, and the **local authority in other places** shall promptly carry out the necessities. The mukhtar shall report the situation to the nearest local

[3] This procedure is based on Annex 3 of the Environmental and Social Management Framework (ESMF) for the Earthquake Reconstruction Framework Loan. It will be applied if previously unknown cultural heritage is encountered during Subproject activities.

authority along with the measures taken on the same day. The local authority and other authorities notify the Ministry of Culture and Tourism (MoCT) and the nearest museum directorate in writing within ten days.

- The **MoCT** and the **nearest museum directorate** would be in charge of evaluation/inspection of the significance or importance of the chance finds and advise on appropriate subsequent procedures.
- If the **MoCT** and the **nearest museum directorate** determines that chance finds is a non-cultural heritage chance find, the construction process can resume.
- If the **MoCT** and the **nearest museum directorate** determines chance finds is an isolated chance finds, **MoCT** and the **nearest museum directorate** would provide technical supports/advice on chance finds treatment with related expenditure on the treatment provided by the entity report the chance finds.

Annex E – Change Notification Form

Change Notification Form	
Subproject Name	
Subproject Location	
Subproject Phase	☐ Pre-construction
	☐ Construction
	☐ Operation
Name of the Institution Notifying the Change	
Date	
Category of the Change (please select all that apply)	☐ Legislative Change
	☐ Design Change
	☐ Schedule Change due to E&S factors
	☐ Project Schedule Changes due to technical, financial, legal or administrative factors
	☐ Changes due to E&S issues encountered at Subproject implementation
	☐ Contractor or Construction Supervision Consultant Change
	☐ Other (please specify below)
Detailed Description of the Change(s)	

Change Notification Form	
Documents Submitted with Change Notification Form	
Name of the Staff Notifying the Change	
Position of the Staff Notifying the Change	
Signature	