REPUBLIC OF TURKIYE

ISTANBUL PROJECT COORDINATION UNIT (IPCU)

Istanbul Resilience Project (IRP)

P508170

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

January 2025

Contents

List of Tables

List of Figures

Abbreviations and Acronyms

ACM	Asbestos Containing Materials
AMP	Asbestos Management Plan
CBD	Convention on Biological Diversity
CERC	Contingent Emergency Response Component
CHS	Community Health and Safety
C-ESMP	Contractor Environmental and Social Management Plan
CoC	Code of Conduct
E&S	Environmental and Social
EIA	Environmental Impact Assessment
ERP	Emergency Response Plan
ESA	Environmental and Social Assessment
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESHS	Environment, Social and Health and Safety
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESSs	Environmental and Social Standards
EU	European Union
EWS	Early Warning System
GBV	Gender-based violence
GHG	Greenhouse Gas
GM	Grievance Mechanism
IBRD	International Bank for Reconstruction and Development
IPCU	Istanbul Project Coordination Unit
IRP	Istanbul Resilience Project
LMP	Labor Management Procedures
LM Plan	Labor Management Plan
MoEUCC	Ministry of Environment, Urbanization and Climate Change

MSDS	Material Safety Data Sheet
OECD	The Organization for Economic Co-operation and Development
OHS	Occupational Health and Safety
OIZ	Organized Industrial Zones
PDoEUCC	Provincial Directorate of Environment, Urbanization and Climate Change
PDR	Project Description Report
PPE	Personal Protection Equipment
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
WB	World Bank
WBG	World Bank Group

Executive Summary

The World Bank will finance and provide support for the implementation of the Istanbul Resilience Project (IRP). The objective of the IRP is to enhance disaster and climate resilience in Istanbul province by improving emergency preparedness, reducing disaster risks, and increasing community resilience to climate impacts.

The project is structured into four components:

Component 1: Strengthening the Emergency Preparedness and Response System

This component aims to enhance Istanbul's emergency preparedness and response systems through investments in training first responders, emergency response buildings and equipment, early warning systems improvements, and sustainability, operations, and maintenance investments. The component will finance feasibility, design, and supervision consultancies, civil works, goods, and other services. Activities include ensuring emergency response buildings are resilient and fully functional by constructing, reconstructing, or retrofitting emergency response buildings to the highest seismic and climate resistance standards. These buildings will include emergency response control and coordination centers, logistics and storage facilities, paramedic stations, search and rescue operations, training centers, and fire stations. The component also supports training and equipping first responders by acquiring vehicles and equipment for search and rescue, emergency communication, and disaster response, with a focus on vulnerable groups such as persons with disabilities and the elderly. Community-level emergency preparedness efforts include improving Early Warning Systems (EWS) through new fire detection and mobile towers, piloting a mobile phone alerting system, and expanding fixed sirens. Training programs will be provided for emergency preparedness and response, first aid, and evacuation drills. The specific locations for subproject activities will be determined based on ongoing technical assessments, risk prioritization studies, and stakeholder consultations, with finalization expected by June 2025.

Component 2: Enhancing the Resilience of Critical Buildings and Facilities

This component focuses on ensuring the resilience of critical public buildings to natural hazards, enabling them to serve as temporary shelters during emergencies and minimize disruption in public services. It includes investing in resilient, green, and self-sufficient buildings and public facilities through the construction, reconstruction, or retrofitting of schools, dormitories, elderly care facilities, sports halls, community centers, and other public buildings to meet seismic and climate resistance standards. These buildings will incorporate self-sufficiency measures for water, energy, and communication systems. Public spaces adjacent to buildings will be adapted to reduce extreme heat and flood risks. Additionally, the component aims to build Istanbul's long-term disaster and climate resilience by conducting gap assessments and investment needs in sectors such as Organized Industrial Zones (OIZ), tourism, housing, or insurance, and undertaking pre-feasibility and feasibility assessments. The specific locations for subproject activities will be determined based on ongoing technical assessments, risk prioritization studies, and stakeholder consultations, with finalization expected by June 2025.

Component 3: Project Management

This component finances operational costs, consulting services, training, and project team operations at the IPCU for efficient project implementation. It covers procurement, financial management, environmental and social management, monitoring and evaluation, communication, awareness-raising, and outreach activities, along with capacity building for IPCU staff and stakeholders.

Component 4: Contingent Emergency Response Component (CERC)

This zero-dollar contingency component will support emergency recovery and reconstruction efforts through the rapid reallocation of uncommitted IBRD financing from other components. It includes rapid procurement and disbursement procedures to cover emergency response costs such as contracting emergency works and procuring goods and services. The component will be triggered by an official declaration of an emergency or disaster in accordance with Turkish laws and policies, with detailed procedures outlined in a standalone CERC Manual included in the Environmental and Social Management Framework (ESMF).

The project activities will be implemented in Istanbul, targeting areas with high seismic and climate risk. The specific locations of subproject activities have not yet been determined, as they depend on the outcomes of ongoing technical assessments, risk prioritization studies, and stakeholder consultations. These processes are being conducted in accordance with international best practices to ensure inclusivity and transparency. It is anticipated that the subproject locations will be finalized by June 2025, upon the completion of these studies.

This Environmental and Social Management Framework (ESMF) has been developed to identify the potential environmental and social risks and impacts associated with the proposed Project activities and recommend appropriate mitigation measures for managing these risks and impacts. It outlines the relevant laws and regulations of Türkiye, as well as the World Bank policies. Additionally, the ESMF details the principles, approaches, implementation arrangements, and environmental and social mitigation measures that will guide the Project's implementation.

The potential environmental and social risks and impacts associated with the project activities are as follows:

- **Construction-related risks.** These include dust, noise, waste management, and traffic disruptions during construction and retrofitting activities.
- **Asbestos-containing materials (ACM).** Retrofitting older public buildings may involve handling ACM, which poses health risks to workers and surrounding communities if not properly managed.
- **Community health and safety risks.** These include potential accidents, disruptions to local services, and increased vulnerabilities for nearby communities during construction phases.
- **Labor and working conditions.** Ensuring fair treatment, safe working environments, and compliance with labor laws for construction workers.
- **Stakeholder engagement and inclusion risks.** Particular attention is needed to include and address the needs of vulnerable groups, such as women, the elderly, persons with disabilities, and marginalized communities.
- **Environmental risks**. Effective management of construction waste and minimization of emissions are key to mitigating environmental impacts during retrofitting and construction activities.

To avoid and minimize these impacts, measures such as **Exclusion Lists** will be used during subproject planning and design to ensure high-risk activities are avoided and that all activities comply with relevant environmental and social standards.

These risks will be managed and mitigated through the application of, but not limited to, the following plans and procedures:

- **Environmental and Social Management Plans (ESMPs):**
    - Site-specific environmental and social (E&S) plans that will be prepared during the design phase to address the unique risks and impacts of each subproject. The specific locations

for subproject activities will be finalized by June 2025 in alignment with ESMF requirements, ensuring compliance with national and World Bank environmental and social standards.

- **Grievance Mechanism (GM):**
    - Provides a structured process for addressing and resolving complaints from project-affected people and stakeholders.
- **Occupational Health and Safety Plan (OHS Plan)**
- **Community Health and Safety Plan (including Traffic Management Plan)**
- **Chance Finds Procedures**
- **Emergency Response Plan (ERP):**
    - Ensures preparedness for unexpected emergencies, such as environmental spills, natural disasters, or critical accidents, by outlining rapid response strategies.
- **Asbestos Management Plans (AMPs) (if relevant):**

  Specific procedures for safely handling and disposing of asbestos-containing materials during retrofitting or demolition activities.

These plans will be developed and approved (see Table 6 for details of roles and responsibilities) *prior to the commencement of any civil works* based on technical assessments and stakeholder consultations.

The implementation arrangements will involve:

- **Istanbul Project Coordination Unit (IPCU)** will oversee the overall implementation and coordination of the ESMF, ensuring alignment with project objectives and adherence to environmental and social standards.
- **Consultants (Design/Supervision) and Contractors** will be responsible for adhering to ESMF requirements, supported by supervisors who will monitor compliance.

During implementation, the IPCU will conduct regular monitoring visits. The Supervision Consultant will be on-site on a daily basis and will be responsible for monitoring, supervising, reporting, and coordinating with the IPCU regarding sub-project's E&S implementations. The Supervision Consultant will monitor the implementation of E&S risk management mitigation plans on-site and will provide monthly reports on the environmental, social, health, and safety (ESHS) performance of the sub-projects.

The IPCU will also monitor the sites on a monthly basis during the construction period, depending on the sub-project scope. More frequent monitoring may be conducted depending on the scope and scale of the subproject, if needed, to ensure compliance with the mitigation measures and resolution of any identified issues. The IPCU will report to the World Bank on quarterly basis on the ESHS performance of the project.

The Contractors will be responsible for implementing the mitigation measures in the E&S risk management documents under the control of the Supervision Consultant, with IPCU oversight, and will submit monthly monitoring reports on ESHS performance to the IPCU through the supervision consultant, in accordance with the metrics specified in the respective bidding documents (including the subproject specific ESMP) and contracts.

The IPCU will ensure that monitoring practices include the environmental and social risks and impacts identified in this ESMF and subproject specific ESMPs to be prepared. Additionally, it will ensure that E&S risk management mitigation plans are implemented as required, as part of regular project monitoring. Details on the reporting requirements are provided in Section 5.1.c of this document. In addition, a separate Stakeholder Engagement Plan (SEP) has been prepared for the Project that provides a framework to support the establishment of a continuous engagement process between the management and users of the beneficiary buildings those who potentially would be impacted or have any kind of interest in the Project (stakeholders) and the IPCU.

The SEP, LMP and ESCP are available in both Turkish and English at the following links:

https://www.ipkb.gov.tr/e-kutuphane-kategorisi/cevre-ve-sosyal-yonetim/wb/
https://www.ipkb.gov.tr/en/e-library-category/environmental-and-social-management/wb-en/

This ESMF should be read together with other plans prepared for the project, including the **Stakeholder Engagement Plan (SEP)**, and the **Labor Management Procedures (LMP)**.

1. Introduction

This Environmental and Social Management Framework (ESMF) is developed to support the environmental and social due diligence provisions for activities financed by the World Bank in the **Istanbul Resilience Project (IRP)**.

The project will support **improvements in disaster preparedness, reduction of disaster and climate risks, and strengthening of community resilience** in **Istanbul Province, focusing on high-risk districts for seismic and climate-related impacts**. The **IPCU** will be implementing the Project activities.

This ESMF follows the World Bank Environmental and Social Framework (ESF) as well as the national laws and regulations of **Türkiye**, including relevant state and local laws. The objective of the ESMF is to assess and mitigate potential negative environmental and social risks and impacts of the Project consistent with the Environmental and Social Standards (ESSs) of the World Bank ESF and national requirements. More specifically, the ESMF aims to:

a. Assess the potential environmental and social risks and impacts of the proposed Project and propose mitigation measures;

b. Establish procedures for the environmental and social screening, review, approval, and implementation of activities;

c. Specify appropriate roles and responsibilities, and outline the necessary reporting procedures for managing and monitoring environmental and social issues related to the activities;

d. Identify staffing requirements, as well as the training and capacity building needed to successfully implement the provisions of the ESMF;

e. Address mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances; and

f. Establish budget requirements for the implementation of the ESMF.

This ESMF should be read together with other plans prepared for the project, including the **Stakeholder Engagement Plan (SEP)**, and the **Labor Management Procedures (LMP)**.

2. Project Description

The **Istanbul Resilience Project (IRP)** is a strategic initiative designed to address Istanbul's high seismic and climate risks by strengthening disaster preparedness, reducing disaster and climate risks, and enhancing community and infrastructure resilience. The project focuses on implementing high-priority interventions to mitigate risks, improve emergency response capacity, and promote sustainable and environmentally friendly solutions. The initiative also aligns with Türkiye's national climate commitments, emphasizing the integration of green infrastructure and renewable energy technologies to achieve long-term sustainability goals. Additionally, IRP aims to enhance community engagement and build technical capacities for effective disaster risk management, ensuring that interventions address the needs of the most vulnerable populations.

Component 1: Strengthening the Emergency Preparedness and Response System

This component aims to expand and enhance Istanbul's emergency preparedness and response systems and capacity through investments in training of first responders and communities, emergency response buildings and equipment, early warning systems improvements, and sustainability measures for operations and maintenance. The component will finance feasibility, design and supervision consultancies, civil works, goods, other services, and consultancies.

Key activities include:

a. **Ensuring Emergency Response Buildings are Resilient and Fully Functional:**
   - Construction of new or reconstruction/retrofitting of existing critical emergency response buildings to the highest seismic and climate resistance standards against extreme heat, floods, and wildfires.
   - Ensuring that these buildings are fully operational after disasters with independent and resilient water, energy, and communication systems.
   - Buildings will include: (i) emergency response control and coordination centers, logistics, and storage facilities; (ii) paramedic stations; (iii) search and rescue operations and training centers; and (iv) fire stations critical to Istanbul's emergency response system and wildfire management.
   - Resources will also be allocated to develop procedures, plans, and guidelines to ensure the continuous functionality of the facilities.

b. **Training and Equipping First Responders:**
   - Acquisition of vehicles and equipment for search and rescue, emergency and disaster response, and emergency communication.
   - Expanded training for search and rescue and mass-casualty management.
   - Development and roll-out of new training focused on interacting with vulnerable groups, including persons with disabilities, the elderly, displaced people, and women at risk of domestic violence.

c. **Community-Level Emergency Preparedness:**
   - Improving Early Warning Systems (EWS) in Istanbul Province to ensure more rapid and reliable disaster detection and communication.
   - Activities include: (i) new fire detection and mobile towers; (ii) piloting mobile phone alerting systems; (iii) expansion of fixed sirens; (iv) conducting evacuation drills and first aid training.
   - Communities will also receive emergency preparedness training for climate change-induced wildfires and floods, and packages of critical emergency response supplies will be deployed.

- High priority for training and equipment will be given to vulnerable groups such as women, disabled persons, and the elderly.
- Project will finance planting fire-resistant species at wildland-urban interfaces, creating jobs with priority for unemployed youth and women.

Component 2: Strengthening Emergency Preparedness and Response Systems

This component focuses on ensuring the resilience of critical public buildings to natural hazards such as extreme heat events, floods, wildfires, and large-scale earthquakes by strengthening their structural integrity and self-sufficiency. These buildings will also serve as temporary shelters during emergencies, providing uninterrupted access to water, energy, and communication. The component aims to minimize disruptions in public services, including education and emergency health services, while simultaneously creating climate benefits such as reducing carbon emissions, conserving water, and mitigating extreme heat. Key activities include:

a. Investing in Resilient, Green, and Self-Sufficient Buildings and Public Facilities:

- Construction of new or retrofitting of existing schools, dormitories, elderly care facilities, sports halls, community centers, administrative health services, and other eligible public buildings to the highest seismic and climate resistance standards.
- Ensuring these buildings have independent and resilient water, energy, and communication systems to remain fully operational during disasters and serve as temporary shelters.
- Retrofitting and reconstruction will prioritize public buildings assessed as vulnerable to earthquakes, particularly those built before 2000, using resilient, green, and inclusive designs.
- Designing multi-purpose buildings to enable rapid transformation into temporary shelters with scalable sanitary spaces during disasters.
- Conducting gap assessments in emergency shelter provision, including gender-based violence risks and mitigation measures.
- Financing self-sufficiency and green measures for structurally resilient buildings to ensure uninterrupted access to critical services during disasters.
- Enhancing public spaces adjacent to selected buildings with permeable green spaces to reduce extreme heat and flood risks and support emergency evacuation efforts.

b. Building Istanbul's Long-Term Disaster and Climate Resilience:

- Addressing critical gaps in preparedness, response, and resilience by engaging the private sector to protect Istanbul's economy and infrastructure.
- Financing gap assessments and identifying investment needs in private sectors such as Organized Industrial Zones (OIZ), tourism, housing, or insurance.
- Conducting pre-feasibility and feasibility studies to prepare for private sector investments.
- Supporting business continuity measures in OIZs, including renewable energy systems, rainwater harvesting, emergency response, and fire management.
- Undertaking disaster and climate assessments for critical infrastructure and preparing engineering and feasibility studies to enable future investments.

Component 3: Project Management

This component will finance the operational costs, consulting services, non-consulting services, goods, and training, including the Project team at the IPCU to carry out project management functions. These functions aim to ensure efficient project implementation and close cooperation between the line ministries, other implementing agencies, and Project stakeholders. Key responsibilities include:

- Overseeing procurement, financial management, environmental and social management and monitoring and evaluation activities.
- Conducting capacity-building programs for IPCU staff and other Project stakeholders, aligned with Project objectives.
- Promoting communication, awareness-raising and outreach activities to engage stakeholders effectively.

Component 4: Contingent Emergency Response Component (CERC)

This component provides flexibility to respond to unforeseen emergencies, such as natural disasters or health crises or technological disasters by reallocating uncommitted project funds from other Components. It is designed as a mechanism to implement the government's response to an emergency through rapid procurement and disbursement procedures. Activities under this component include:

- Supporting emergency recovery and reconstruction efforts in Istanbul under an agreed action plan.
- Rapid procurement of goods and services to address immediate needs, including contracting emergency works.

The contingent emergency component would be triggered by an official declaration of an emergency or disaster, in accordance with Türkiye's laws and policies. The procedure for declaring the emergency, types of adverse events covered, and eligible investments will be described in a standalone CERC Manual and included in the Environmental and Social Management Framework (ESMF).

Project Locations

The project will target **Istanbul Province**, prioritizing areas that are highly vulnerable to seismic and climate risks. The selection of project locations will be guided by principles of green, resilient, inclusive, and self-sufficient investments, ensuring long-term disaster resilience and climate adaptation. These principles emphasize energy efficiency, renewable energy use, water conservation, multi-hazard resistance, universal access, and off-grid functionality to ensure that all investments contribute to Istanbul's preparedness and sustainable urban development.

While specific project locations will be finalized during implementation, they will reflect these principles to maximize resilience and climate adaptation outcomes. This approach ensures that all selected sites are equipped to serve as community hubs during emergencies and support Istanbul's broader disaster preparedness objectives.

Planned Design and Procurement

Design principles and procurement strategies will work in tandem to embed resilience, inclusivity, and environmental sustainability into all aspects of the project implementation. Key aspects of these processes are outlined below, highlighting the principles and strategies that will guide implementation to ensure alignment with project goals and sustainability objectives.

- **Design Principles**
  Incorporating climate-resilient and sustainable features, such as renewable energy installations, energy-efficient systems, and nature-based solutions (e.g., green roofs and permeable surfaces), while ensuring universal access and self-sufficiency for critical infrastructure.
- **Procurement Strategies**
  Employing transparent and competitive bidding processes that adhere to environmental and social standards, while ensuring all contracts include provisions for compliance with the ESMF.

- **Feasibility Studies**
  Detailed assessments will guide the prioritization, design, and implementation of subprojects, ensuring alignment with project objectives.

3. Environmental and Social Policies, Regulations, and Laws

3.1 Legal Framework of Türkiye

The national legal framework of Türkiye provides comprehensive guidance for managing environmental and social risks and impacts associated with subproject activities under the **IRP**. Relevant laws, policies, and regulations are summarized in Annex 1. Türkiye's national approach to environmental protection, cultural heritage conservation, and biological resource management has been shaped by both domestic legislation and international agreements ratified by Türkiye. Relevant environmental, occupational health and safety (OHS), and international labor agreements and conventions ratified by Türkiye are listed in Annex 1.

Turkish environmental legislation is closely aligned with international standards and the European Union (EU) Directives, reflecting Türkiye's pre-accession efforts. These laws are robust, and no significant challenges are anticipated during project implementation. However, in the event of unforeseen issues, responsible authorities will provide oversight, and the IPCU will ensure compliance with relevant regulations through centralized and field-level monitoring.

Türkiye has ratified several international conventions relevant to environmental protection, labor rights, and non-discrimination. Key agreements include:

- **ILO Conventions on Labor Rights**: Türkiye has ratified core conventions addressing child labor, forced labor, and workplace discrimination.
- **Convention on Biological Diversity (CBD)**: Ensures conservation of biodiversity, relevant to subprojects affecting natural habitats.
- **UNESCO World Heritage Convention**: Protects cultural and natural heritage sites, ensuring compliance for subprojects near such locations.
- **The United Nations' (UN) 17 Sustainable Development Goals**: adopted in 2015, represent a global action plan aiming to end poverty, protect the planet, and ensure prosperity for all by 2030.

3.2 National Environmental and Social Assessment and Permitting

In Türkiye, the **Ministry of Environment, Urbanization, and Climate Change (MoEUCC)** is the primary authority responsible for managing environmental assessments and permitting processes. These processes are governed by the **Environmental Impact Assessment (EIA) Regulation (Official Gazette No. 29186)**, which provides a comprehensive framework for screening, assessing, and managing the environmental and social risks associated with project activities.

Environmental Impact Assessment (EIA) Process in Türkiye

1. **Screening and Categorization:**
    - Subprojects are categorized based on their potential environmental impacts as listed in Annex 1 and Annex 2 of the EIA Regulation:
        - **Annex 1:** Projects with significant potential environmental impacts (EIA required). These projects must undergo a full Environmental Impact Assessment (EIA Report).

- **Annex 2:** Projects with moderate environmental impacts (screening required). These projects are subject to an initial review, and a decision is made whether a full EIA is required or not).
- **Exempt Projects:** Projects with negligible risks or impacts are not subject to the EIA process but may require basic environmental assessments depending on site-specific conditions.

2. **Preparation and Submission:**
    - For Annex 1 projects, a detailed EIA report must be prepared, including baseline studies, environmental and social impact analyses, and mitigation measures.
    - For Annex 2 projects, a Project Description Report (PDR) must be submitted, summarizing project details, potential risks, and proposed mitigation measures.
3. **Public Consultation and Approval:**
    - Public consultation is a mandatory requirement for Annex 1 projects under the EIA framework. This process ensures that stakeholder feedback is actively sought, documented, and incorporated into the decision-making process to address environmental and social concerns associated with the project. Following the review of EIA reports or screening documents, the MoEUCC or the relevant **Provincial Directorate of Environment, Urbanization, and Climate Change (PDoEUCC)** issues a decision as:
        - **EIA Positive,**
        - **EIA Negative, or**
        - **No EIA Required.**
4. **Monitoring and Compliance:**
    - Approved projects are monitored by Provincial Directorate of Environment, Urbanization, and Climate Change (PDoEUCC) to ensure compliance with the environmental standards outlined in the EIA decision.
    - Contractors and the IPCU will coordinate closely to address any identified non-compliance issues.

The IRP project is described in depth in the Table 1 given below based on the EIA's scope.

Table 1: EIA Requirements for IRP Subprojects

EIA Category	Definition	Relevance to IRP Subprojects
Annex 1	High-risk projects requiring a full EIA.	Projects managed by the IPCU do not include high-risk activities and therefore fall outside Annex 1 and 2 of Türkiye's EIA Regulation. If there will be a need for an EIA in accordance with the abovementioned regulation, IPCU will have the responsibility of preparation.
Annex 2	Moderate-risk projects requiring screening.	Projects managed by the IPCU do not include high-risk activities and therefore fall outside Annex 1 and 2 of Türkiye's EIA Regulation. If there will be a need for an EIA in accordance with the abovementioned regulation, IPCU will have the responsibility of preparation.

EIA Category	Definition	Relevance to IRP Subprojects
Exempt Projects	Projects with negligible risks or impacts.	Training programs and capacity-building activities are exempt from EIA but may require basic environmental assessments.

The IPCU will ensure all subprojects comply with Türkiye's environmental law and environmental regulations. Close coordination will be maintained with the MoEUCC and PDoEUCC to address any regulatory or implementation challenges. In addition:

- Consultants will be responsible for preparing EIA or PRD documents as required if needed.
- IPCU will oversee compliance and provide support for stakeholder consultations and mitigation planning.

3.3 World Bank Standards and Key Gaps with the National Framework

The project will adhere to the World Bank Environmental and Social Standards (ESSs) and the World Bank Group Environmental, Health, and Safety (EHS) Guidelines. Based on these policies, the environmental and social risk of the project has been categorized as "Moderate"[1]. This classification reflects that the identified risks are manageable through appropriate mitigation measures and compliance with both national regulations and World Bank standards.

The World Bank's Environmental and Social Standards applicable to the project activities are summarized Table 2 given below.

Table 2: Relevant World Bank ESSs, Key Gaps with the National Framework and Gap Filling Measures

E&S Standard	Key Gaps and Gap Filling Measures
1. Assessment and Management of Environmental and Social Risks and Impacts (ESS1)	**Relevance:** ESS1 is directly relevant to the project because the activities involve **low to moderate environmental and social risks**, especially during construction. These include: • Emission of dust and vehicle exhaust. • Noise and vibration disturbances. • Waste generation. • Occupational Health and Safety (OHS) risks. • Traffic and road-related hazards. • Community health and safety (CHS) risks. • Livelihood impacts. • Exclusion risks for vulnerable groups. The project mitigates these risks by: • Preparing and implementing Environmental and Social Management Framework (ESMF), Environmental and Social Management Plans (ESMPs), Stakeholder Engagement Plan (SEP) and Labor Management Procedures (LMP). • Excluding **substantial and high-risk** subprojects from the project scope. **Key Gaps:**The national Environmental Impact Assessment (EIA) framework lacks integration of **social impact assessments**, leading to:

[1] For details on E&S risk rating please visit: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099111824061019089/p508170148fe4501b1afc01cae5db58cefa

	• Inadequate social baselines. • Limited assessment of impacts on vulnerable groups and gender-related issues. • Limited cumulative impact assessments. • Absence of detailed management plans such as Water Quality and Air Quality. • Inadequate grievance mechanism implementation for stakeholders and workers. **Gap Filling Measures:** • Preparation, implementation, monitoring and reporting of ESMF,, site specific ESMPs, SEP, LMP and other relevant sub-management plans to ensure social and environmental risks are identified and mitigated. • Strengthening the existing grievance mechanisms to align it with the project standards and ensuring its maintenance and monitoring throughout the project lifecycle. • Conducting training programs to improve capacity for environmental, social and OHS risk management.
2. Labor and Working Conditions (ESS2)	**Relevance:** ESS2 is relevant due to potential labor-related risks in construction, retrofitting, and demolition activities. These risks include: 1. **Occupational Health and Safety Risks:** • Exposure to hazardous materials such as asbestos during demolition and retrofitting. • Risks of accidents, injuries, or falls at construction sites due to inadequate safety measures. 2. **Terms and Conditions of Employment:** • Potential for non-compliance with labor laws, such as inadequate wages or working hours. • Risk of unfair treatment or discrimination, particularly for vulnerable workers. • Potential risk of child labor or forced labor in the workforce. 3. **Worker Grievances:** • Lack of accessible grievance mechanisms for project workers to report workplace concerns. • Exploitation risks arising from unequal power dynamics, particularly in labor-intensive activities or when hiring from local communities. 4. **Gender-based violence (GBV):** • Risks of sexual harassment or exploitation by workers toward local community members or vulnerable populations, such as women and children. • Exploitation risks arising from unequal power dynamics, particularly in labor-intensive activities or when hiring from local communities. 5. **Traffic and Road Safety Issues:** • Risks associated with transportation of materials and equipment, which may endanger workers and local communities. **Key Gaps:** The national framework for labor management includes robust laws (e.g., Labor Law No. 4857, OHS Law No. 6331 and Türkiye's ratification of relevant ILO Conventions); however, the following gaps exist:

	• Limited enforcement and monitoring of OHS compliance in smaller-scale construction activities. • Absence of detailed worker-specific grievance mechanisms in some projects. • Lack of thorough vetting processes for subcontractors and suppliers may lead to unintentional involvement of child or forced labor in procurement or service contracts. Inadequate capacity among contractors to fully implement and monitor OHS plans and procedures. • Workers and contractors may lack awareness of international labor standards, increasing the risk of non-compliance. **Gap Filling Measures:** By addressing these risks and gaps, the project will ensure compliance with World Bank ESS2 standards and strengthen labor management systems through measures such as the preparation and implementation of LMP, robust OHS training programs, and establish an accessible grievance mechanism for all workers to report concerns effectively.
3. Resource Efficiency and Pollution Prevention and Management (ESS3)	**Relevance:** ESS3 is critical to address risks related to resource consumption and pollution from construction and demolition. Key risks include waste generation, air and noise pollution, and inefficient resource use and the project emphasizes resource efficiency, pollution control, and climate adaptation through various measures: 1. **Energy Efficiency and Renewable Energy:** • All retrofitted/reconstructed buildings will meet Retrofitted buildings will achieve at least Turkish Class C Energy Performance Certification standards (TS825) and new constructed buildings will achieve at least **Class B** • Renewable energy systems, such as solar panels, will be integrated to ensure operational continuity during disasters and reduce energy consumption. 2. **Water Efficiency:** • Water-saving systems, including low-flow toilets, efficient taps and showerheads, rainwater harvesting, and greywater ruse where available, will be implemented to reduce water demand during droughts or disruptions in water transmission systems. 3. **Nature-Based Solutions:** • Parks, green spaces, and green roofs will be included to manage stormwater, mitigate flooding risks, and reduce heat during extreme climate events. These solutions also contribute to biodiversity conservation. 4. **Recycling and Waste Management:** • Demolition materials, including debris, will be reused as filling material, and 100% of the iron will be recycled to minimize waste generation. • Construction waste management plans (Annex 5) will ensure the safe disposal of hazardous materials, including asbestos. 5. **Pollution Prevention:** • Dust and vehicle emissions during construction will be controlled through site-specific measures such as water spraying and traffic management plans. • Runoff management systems will prevent contamination of local water resources.

	• The use of green cement will be prioritized in alignment with the regulation effective from 2025, which mandates the reduction of clinker content in cement production to lower carbon emissions and promote sustainable construction practices. **Key Gaps:** While Türkiye's regulatory framework provides robust standards for resource efficiency and pollution prevention, the following gaps have been identified: • Limited enforcement of renewable energy and energy efficiency measures in public infrastructure projects. • Inadequate planning for the integration of water efficiency systems in retrofitted or reconstructed buildings. • Lack of detailed guidelines for the recycling and reuse of construction and demolition waste. **Gap Filling Measures:** Develop and enforce site-specific Environmental and Social Management Plans (ESMPs) and waste management plans, asbestos management plan (AMP), where relevant. • Promote renewable energy and water efficiency systems as mandatory components of retrofitting and new construction activities. • The overall energy consumption will be decreased by integrating where possible energy-efficient and green infrastructure design principles. • Establish monitoring protocols to evaluate the effectiveness of green infrastructure and waste management systems. By focusing on resource efficiency, pollution prevention, and sustainable design, the project aligns with ESS3 objectives, contributing to climate mitigation and long-term environmental resilience.
4. Community Health and Safety (ESS4)	**Relevance:** ESS4 is highly relevant to the project due to potential risks to local communities during construction, retrofitting, and operational phases. These risks include environmental hazards, increased traffic, exposure to hazardous materials, and **construction site safety concerns**. **Key considerations include:** 1. **Community safety during civil works and operations** • Increased traffic congestion and the risk of road accidents due to the transportation of construction materials and heavy equipment. • Noise, dust, and vibrations from demolition and retrofitting activities, impacting community well-being. • The use of untrained and uncertified security personnel. 2. **Hazardous Materials Management:** • The presence of asbestos in older buildings poses significant health risks to nearby communities if not handled and disposed of properly. 3. **Construction Site Safety:** • Unauthorized access to construction areas poses serious safety risks, particularly to children and other vulnerable groups. • Inadequate site barriers or warning signs can lead to accidents or injuries for community members near project areas. 4. **Disaster Preparedness:**

	• Public buildings retrofitted under the project will serve as community hubs during emergencies, requiring robust safety measures and accessibility. 5. **Emergency Communication:** • Effective communication systems are needed to inform communities about project activities, potential risks, and emergency procedures. 6. **Traffic Safety:** • Heavy vehicle movement near urban or residential areas increases the likelihood of road accidents, requiring careful management of transport routes and timing. **Key Gaps:** While Türkiye has a strong regulatory framework for community health and safety, the following gaps have been identified: 1. Limited enforcement of construction site safety measures in urban areas, particularly in high-traffic zones. 2. Insufficient public awareness campaigns regarding the risks of hazardous materials and safety precautions. 3. Lack of detailed emergency response plans for dealing with emergencies at project sites, including fire safety and evacuation protocols. **Gap Filling Measures:** 1. **Construction Site Safety:** • Secure construction areas with fencing, warning signs, and controlled access to prevent unauthorized entry. • Ensure that all construction sites have emergency exits, clear pathways, and trained personnel to handle accidents or safety concerns. • The proper training of security personnel, encouragement of ethical behavior, and establishment of an effective control mechanism are critical for ensuring safety at construction sites and protecting project stakeholders. This process must be structured in alignment with World Bank standards and national regulations. • A robust Code of Conduct (CoC) will be enforced for workers, including specific guidelines to manage Sexual Exploitation, Abuse, and Sexual Harassment (SEA/SH) risks. Reporting mechanisms and awareness training will also be implemented for project workers and affected communities, ensuring alignment with World Bank standards and national regulations. 2. **Traffic Safety Measures:** • Develop and implement traffic management plans to minimize road safety risks. • Schedule material transport during non-peak hours to reduce congestion and risks to nearby communities. • Provide clear signage and designated crossing areas for pedestrians near project sites. 3. **Hazardous Materials Management:** • Establish asbestos management procedures to ensure safe handling and disposal of hazardous materials. • Provide training to workers and inform nearby communities about safety measures.

	4. **Community Awareness and Preparedness:** • Conduct public awareness campaigns to educate communities about the risks and mitigation measures associated with project activities. • Inform communities about evacuation protocols and emergency response strategies under the Emergency Response Plan (ERP). • Develop and implement a SEP to ensure effective communication with communities, tailored engagement strategies for vulnerable groups, and clear dissemination of information regarding project risks and benefits. 5. **Emergency Response Plan (ERP):** • Prepare for unexpected emergencies, such as natural disasters, environmental spills, or critical accidents, by developing an ERP. • Include evacuation protocols, first aid training, and clear communication strategies in the ERP to protect community health and safety. 6. **Retrofitted Building Safety:** • Ensure retrofitted buildings are equipped with emergency response supplies and meet universal accessibility standards. By integrating construction site safety and traffic safety measures into the Community Health and Safety framework, the project ensures enhanced protection for local communities while aligning with international best practices. These measures will safeguard health and safety and foster trust among stakeholders during project activities.
5. Cultural Heritage (ESS8)	**Relevance:** ESS8 is relevant to the project, even though cultural heritage sites are not expected to be present in the project areas. The project primarily involves retrofitting, demolishing, and reconstructing existing buildings within previously developed sites. However, there remains a possibility of encountering cultural heritage during construction or demolition activities, particularly in Istanbul, which has a rich historical and cultural legacy. Key considerations include: 1. **Existing Structures:** • Cultural artifacts or elements may exist within project sites, necessitating careful evaluation. 2. **Chance-Find Procedures:** • During excavation or demolition, there is a small risk of uncovering buried artifacts or archaeological remains, requiring a systematic approach to documentation and preservation. 3. **Stakeholder Engagement:** • Effective communication with local authorities, heritage organizations, and the community will ensure proper handling of any cultural heritage concerns. **Key Gaps:** Although Türkiye has robust legal frameworks for protecting cultural heritage (e.g., Law on the Protection of Cultural and Natural Assets, No. 2863), the following gaps may exist: • Lack of proactive screening for cultural heritage in project areas unless explicitly required by local authorities. • Inadequate capacity among contractors to manage chance-finds in alignment with international best practices.

	• Limited awareness and training regarding cultural heritage preservation among project personnel. **Gap Filling Measures:** To address these gaps, the project will: 1. Conduct **cultural heritage screening** for all sites before construction to identify any historical or architectural significance. 2. Implement **chance-find procedures** to ensure proper handling of unexpected discoveries during construction. • Halt work immediately upon discovery. • Notify relevant heritage authorities and follow their guidance for documentation and preservation. 3. Engage with local heritage organizations and authorities to ensure compliance with national and international standards. 4. Train contractors and workers on cultural heritage protocols, including handling, documentation, and reporting. While cultural heritage is not expected to pose significant risks in the project, adherence to ESS8 ensures that any potential impacts are effectively managed. The project's proactive approach to cultural heritage will uphold Istanbul's rich cultural and historical legacy, ensuring compliance with both national laws and World Bank standards.
6. Stakeholder Engagement and Information Disclosure (ESS10)	**Relevance:** ESS10 is highly relevant to the project, as effective stakeholder engagement and transparent information disclosure are critical to the success of project activities. Given the scope of the project, including retrofitting and reconstruction of public buildings and community preparedness activities, multiple stakeholder groups are impacted, necessitating clear and inclusive communication strategies. 1. **Diverse Stakeholder** Groups will be engaged, including direct stakeholders (e.g., Steering Committee), disadvantaged/vulnerable groups (e.g., women, elderly, disabled), and others indirectly or otherwise interested in the project. 2. **Information Disclosure:** o Timely dissemination of project information, including potential impacts, mitigation measures, and schedules, is essential to foster transparency and trust among stakeholders. o Public access to grievance mechanisms and updates on the progress of project activities is vital for stakeholder confidence. 3. **Meaningful Consultations:** o Ensuring active participation of all stakeholders, including vulnerable groups, in decision-making processes related to project activities and mitigation measures. **Key Gaps:** While Türkiye has mechanisms for public consultation and information sharing (e.g., Right to Petition Law No. 3071 and Access to Information Law No. 4982), the following gaps may exist: • Limited participation of vulnerable groups in public consultation processes. • Inadequate mechanisms to ensure timely feedback loops between stakeholders and project implementers. • Lack of tailored communication strategies for marginalized groups, such as disabled individuals or non-native speakers. **Gap Filling Measures:** To address these gaps, the project will: 1. **Stakeholder Engagement Plan (SEP):**

	o Prepare and implement a SEP to guide meaningful consultations and ensure the inclusion of all stakeholder groups, particularly vulnerable populations. o The SEP will outline roles, responsibilities, and a timeline for stakeholder engagement activities. 2. **Inclusive Communication Strategies:** o Use diverse communication channels (e.g., community meetings, printed materials, digital platforms) to ensure information reaches all stakeholder groups. o When necessary, provide project updates in accessible formats (e.g., braille, simplified language) to accommodate varying needs. o IPCU will hold public consultation meetings prior and throughout the project lifecycle to inform stakeholders about the project, its potential environmental and social impacts/risks, timeline, and the Grievance Mechanism (GM). 3. **Grievance Mechanism (GM):** o Establish a robust GM to address stakeholder concerns promptly and effectively. o Ensure the GM is easily accessible to all stakeholders, including remote and marginalized communities. o The project will establish its own dedicated GM in addition to the national GMs, with specific procedures for handling SEA/SH (Sexual Exploitation, Abuse, and Sexual Harassment) complaints, ensuring confidentiality and sensitivity in the resolution process. 4. **Capacity Building:** o Train project staff and contractors on best practices for stakeholder engagement and inclusive communication. 5. **Monitoring and Reporting:** o Regularly monitor stakeholder engagement activities and disclose outcomes through quarterly basis progress reports. By adhering to ESS10, the project ensures that stakeholder voices are heard, and their concerns addressed throughout the project lifecycle. Transparent communication and meaningful engagement foster trust, reduce conflicts, and enhance the overall success and sustainability of the project.

4. Potential Environmental and Social Risk Impacts and Standard Mitigation Measures

Table 3: Environmental and Social Risks and Mitigation Measures

Subcomponent Activity	Risks and Impacts	Mitigation Measures
New Construction of Public Buildings	Construction related environmental and social risks and impacts (generation of construction waste, air/water pollution, noise, vibration, road/traffic safety, community health and safety, OHS, SEA/SH risks, environmental/social incidents, etc.) Stakeholder engagement risks (complaints, inadequate consultations, etc.)	▪ Implement the Screening Form provided in Annex 2 to identify and manage risks at an early stage. ▪ Customize the project-level ESMP (based on the risk level of the subproject) provided in Annex-3 of this ESMF before initiating the tendering process. ▪ Ensure that the Contractor ESMP (C-ESMP), along with other relevant sub-management plans, is prepared, reviewed, and cleared by the IPCU prior to the commencement of any civil works on the ground. ▪ Apply the Waste Management Plan included as Annex 5 to manage construction and operational waste effectively. ▪ Ensure compliance with the OHS Plan outlined in Annex 6 to prioritize worker safety throughout the project. ▪ Follow the Chance Find Procedures outlined in Annex 4 to ensure cultural and historical heritage preservation during construction. ▪ Prepare Community Safety and Traffic Management Plan (Annex 7) to minimize disruptions and ensure road safety. ▪ Ensure implementation of LMP ▪ Prepare site-specific Emergency Response Plan (ERP) ▪ Processing of meaningful consultations, inclusion of vulnerable groups, and effective communication with all stakeholders in accordance with Stakeholder Engagement Plans (SEP) establishing/maintaining an effective Grievance Mechanism ▪ Ensure all E&S trainings (including GBV, SEA/SH, OHS, etc.), as described in this ESMF and project-level ESMP (Annex 3) are delivered to all parties of the project prior to commencement of any project activities and ensure refreshers are conducted at least once a year
Demolition and Reconstruction of Public Buildings	In addition to E&S and stakeholder engagement risks/impacts identified above for “New Construction of Public Buildings”;	▪ Implement the mitigation measures provided for “New Construction of Public Buildings” ▪ Implement an Asbestos Management Plan (AMP) that is Annex 8 of this ESMF to safely remove and dispose of hazardous materials, when needed.

	- Improper handling and disposal of demolition waste, including hazardous materials like asbestos - Retrofitting and demolition activities are one of the largest sources of waste. • Demolition Debris Handling • Hazardous Waste Handling	
Community Preparedness Training	- Exclusion of vulnerable groups from training sessions. - Lack of accessibility for people with disabilities.	▪ Utilize SEP to (i) identify key stakeholders, (ii) monitor and evaluate the effectiveness of community preparedness training. ▪ Ensure inclusive participation by conducting consultations with community leaders and vulnerable groups. ▪ Provide training materials in accessible formats (e.g., braille, audio, simplified language). ▪ Schedule sessions at accessible locations and times to encourage broad participation.
Procurement of Goods (Materials and Equipment, Office and IT Equipment)	- Primary Supplier based E&S risks (labor management, OHS, etc.) - Generation of electronic waste (e-waste) at the end of the equipment's lifecycle. - Energy consumption of the equipment's	▪ Ensure the bidding documents incorporates relevant E&S provisions to comply with the project standards. ▪ Conduct supplier assessments to verify compliance with social and environmental responsibility.

4.1 Risks and Mitigation Measures Specific to Disadvantaged and Vulnerable Groups

Disadvantaged and vulnerable groups in the context of this project include women and girls, elderly individuals, persons with disabilities, low-income households, ethnic or linguistic minorities, and children. These groups may face heightened risks or barriers during the project, such as exclusion from decision-making processes, increased exposure to construction-related risks/impacts, and limited accessibility to newly developed infrastructure. Additionally, risks of GBV or SEA/SH may arise due to interactions between workers and the community, particularly for women and children.

To address these challenges, the project will ensure inclusive stakeholder engagement by conducting targeted consultations and providing information in accessible formats. Infrastructure design will adhere to universal accessibility principles, prioritizing the needs of vulnerable groups, such as gender-sensitive facilities and accommodations for persons with disabilities. Construction safety measures, such as restricted access to hazardous areas and public awareness campaigns, will protect local communities. Moreover, a robust Code of Conduct will be enforced among workers to prevent harassment or abuse, with specific details provided in the LMP.

Grievance mechanisms will offer accessible and confidential channels for resolving concerns. These measures are further detailed in the SEP and LMP, which outline specific strategies for inclusive engagement, labor practices, and grievance redress mechanisms. These efforts aim to promote equitable benefits and protect vulnerable groups, ensuring that the project aligns with international best practices and social equity standards.

4.2 Planning and Design Considerations for Avoidance of Environmental and Social Risks and Impacts

- Most project sites already host existing structures, and reconstruction will occur within the same footprints, minimizing the need for additional land clearance or habitat disturbance.
- A tree survey will be conducted at the planning stage to document existing vegetation, ensuring the protection of mature and significant trees. Where removal is unavoidable, trees will be replaced with native species to maintain biodiversity and mitigate environmental impacts. Additionally, in accordance with The Planned Areas Development Regulations (Law No. 30113), for residential, trade, tourism, education, worship, health, and sports parcels, one tree will be planted for every 30 m^2 of the area outside the building footprint. If planting within the parcel is not feasible, the trees will be planted in designated public areas per zoning plans.
- The areas designated for waste management during the operation process will be identified and planned in advance to ensure safe and efficient handling, storage, and disposal.
- Comprehensive environmental and social screenings will be conducted prior to demolition to identify site-specific risks, including the presence of hazardous materials like asbestos, ensuring appropriate mitigation measures.
- Designs will prioritize the reuse of existing materials, such as recycling iron and using demolition debris as filling material, to reduce waste generation and resource consumption.
- Construction and demolition waste will be managed through site-specific plans to ensure safe handling, transportation, and disposal, in compliance with local regulations.
- Retrofitted and newly constructed buildings will adhere to universal accessibility standards, incorporating features to accommodate persons with disabilities and other vulnerable groups.
- Transparent communication with local communities will ensure they are informed about construction timelines, potential disruptions, and safety measures, fostering trust and collaboration.
- Emergency Response Plans (ERPs) will be integrated into building designs to enhance disaster preparedness, including independent power, water supply, and sanitary facilities for use as emergency shelters.
- Traffic management plans will minimize disruptions during material transport and ensure the safety of local communities near project sites.
- The use of environmentally friendly construction methodologies and energy-efficient technologies will support sustainability goals while reducing the project's ecological footprint.
- Failure to consider accessibility features in the design phase may exclude persons with disabilities, the elderly, and other vulnerable groups from fully benefiting from the project’s infrastructure and services. To mitigate this, all designs will incorporate universal accessibility standards, ensuring inclusivity and equitable access for all user groups.
- All designs will comply with national building codes and environmental standards, incorporating feedback from local stakeholders and lessons learned from previous IPCU’s similar projects

5. Procedures and Implementation Arrangements

5.1. Environmental and Social Risk Management Procedures

The environmental and social risk management procedures will be implemented through the Project's subproject selection process. In summary, the procedures aim to do the following:

Table 4: Project Cycle and E&S Management Procedures

Project Stage	E&S Stage	E&S Management Procedures
a. Assessment and Analysis: *Subproject identification*	Screening	• During subproject identification, ensure subproject eligibility by referring to the Exclusion List in Table 5. • Use the E&S Screening Form (Annex 2 of this ESMF) to identify potential environmental and social risks, impacts, and mitigation measures and E&S risk rating of the subproject. • Identify required documentation, permits, and clearances under national regulations. • Submit the completed Screening Forms for all sub-projects to the WB for review and approval.
b. Formulation and Planning: *Planning for subproject activities, including human and budgetary resources and monitoring measures*	Planning	• Prepare site-specific ESMPs (including relevant E&S sub-management plans) based on screening results • Submit at least the first five site specific ESMPs to the WB for review and clearance. • Disclose site-specific ESMPs to stakeholders, consult with stakeholders (including affected communities) in accordance with the SEP, and ensure accessibility of information. • Complete all required permits, clearances, and documentation in line with national legislation. • Provide training to staff and contractors on implementation and monitoring of E&S tools, procedures, and plans. Include site-specific ESMPs along with relevant E&S sub-management plans, in contractor tender documents, and ensure contractors receive adequate training on their implementation.
c. Implementation and Monitoring: *Implementation support and continuous monitoring for projects*	Implementation	• Monitor implementation of site-specific ESMPs (including relevant E&S sub-management plans) through regular site visits, regular reporting from the field and other planned monitoring activities/tools. • Track grievances/beneficiary feedback. • Conduct awareness-raising sessions and ongoing training for staff, contractors, and communities. • Prepare Quarterly E&S Progress Report and share with the WB.
d. Review and Evaluation: *Qualitative, quantitative and/or*	Completion	• Evaluate the effectiveness of implemented plans by collecting data and obtaining feedback from stakeholders.

participatory data collection on a sample basis		• Ensure that all sites are restored to acceptable conditions following the completion of implementation activities. • Document lessons learned and integrate them into the planning and execution of future projects.

More detail for each stage is provided below.

a. Subproject Assessment and Analysis – E&S Screening

As an initial step, all proposed activities should be screened to ensure that they fall within the scope of the Project's eligible activities and are not included in the E&S Exclusion List outlined in the Table 5 given below.

Table 5: Exclusion List

Weapons, including but not limited to mines, guns, ammunition, and explosives
Support of production of any hazardous good, including alcohol, tobacco, and controlled substances
Any construction in protected areas or priority areas for biodiversity conservation, as defined in national law
Activities that have the potential to cause any significant loss or degradation of critical natural habitats, whether directly or indirectly, or which would lead to adverse impacts on natural habitats
Activities that involve extensive harvest and sale/trade of forest resources (post, timber, bamboo, charcoal, wildlife, etc.) for large-scale commercial purposes
Activities involving changing forestland into agricultural land or logging activities in primary forest
Purchase or use of banned/restricted pesticides, insecticides, herbicides, and other dangerous chemicals (banned under national law and World Health Organization (WHO) category 1A and 1B pesticides)
Construction of any new dams or rehabilitation of existing dams including structural and or operational changes; or irrigation or water supply subprojects that will depend on the storage and operation of an existing dam, or a dam under construction for the supply of water
Activities that may cause or lead to forced labor or child abuse, child labor exploitation or human trafficking, or subprojects that employ or engage children, over the minimum age of 14 and under the age of 18, in connection with the 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
Any activity on land that has disputed ownership or tenure rights
Any activity that will cause physical relocation of households or will require the use of eminent domain
Substantial and high E&S risk projects according to ESS1.
Projects which have significant adverse impact on cultural heritage and biodiversity.
Activities which would cause restrictions on land use, land acquisition and/or involuntary resettlement.
Any activity triggering OP7.50 International Waterways

As a second step, the IPCU will use the E&S Screening Form (Annex 2 of this ESMF) to identify and assess relevant environmental and social risks specific to each subproject activity. This form will systematically evaluate potential risks, such as environmental (e.g., asbestos handling) and social (e.g., community disruptions) impacts/risks and occupational safety concerns. The form will also guide the identification of

the appropriate mitigation measures tailored to the specific activities. The E&S Screening Form will help determine relevant plans (ESMP, Labor Management Plan [LM Plan], Chance Find Procedures, Emergency Response Plan [ERP], etc.) and procedures to be prepared and implemented for each subproject.

IPCU will also identify the documentation, permits, and clearances required under the government's relevant national legislation.

b. Subproject Formulation and Planning – E&S Planning

Based on the E&S Screening Form, if a site-specific ESMP is required, the IPCU will customize the project-level ESMP (Annex-3) and relevant E&S sub-management plans to address site-specific needs. The IPCU will review, approve, and compile the ESMPs and other applicable forms. The draft ESMPs will be shared with stakeholders in an accessible format, and consultations will be conducted with affected communities to discuss environmental and social risks and mitigation measures. For subprojects or contracts initiated simultaneously or within the same location, a consolidated ESMP covering multiple subprojects or contracts may be prepared.

At least the first five site-specific ESMPs will also be submitted to the World Bank for prior review and no objection. After these first five ESMPs, the World Bank and the IPCU will reassess whether prior review is required for subsequent ESMPs or for specific categories of ESMPs (e.g., activities exceeding a certain budget or specific types of activities).

The IPCU will also complete the documentation, permits and clearances required under the government's Environmental Regulation before any project activities begin.

Prior to commencement of any civil works and implementation, staff who will be working on the various subproject activities should be trained in the environmental and social management plans relevant to the activities they work on. The IPCU should provide such training to field staff.

The IPCU should also ensure that all selected contractors, subcontractors, and vendors understand and incorporate environmental and social mitigation measures relevant to them as standard operating procedures for civil works. The IPCU should provide training to awarded contractors to ensure that they understand and incorporate environmental and social mitigation measures; and plan for cascading training to be delivered by contractors to subcontractors and vendors. As part of this scope, a meeting and training session will be held at the IPCU building within 7 business days following the signing of the contract. The participants of this meeting will include at least the Civil and Environmental Engineer of IPCU, Site Manager and Environmental Engineer of Contractor.

The IPCU should further ensure that the entities or communities responsible for ongoing operation and maintenance of the investment have received training on operations stage environmental and social management measures as applicable.

c. Implementation and Monitoring – E&S Implementation

During implementation, the IPCU will conduct regular monitoring visits on weekly basis.. If there are contractors implementing subproject activities, the contractors will be responsible for implementing the mitigation measures in the E&S risk management documents, with IPCU oversight.

The IPCU working to implement the project will ensure that monitoring practices include the environmental and social risks identified in the ESMF and will monitor the implementation of E&S risk management mitigation plans as part of regular project monitoring.

At a minimum, the reporting will include (i) the overall implementation of E&S risk management instruments and measures, (ii) any environmental or social issues arising as a result of project activities

and how these issues will be remedied or mitigated, including timelines, (iii) Occupational Health and Safety performance (including incidents and accidents), (iv) community health and safety, (v) stakeholder engagement updates, in line with the SEP, (vi) public notification and communications, (vii) progress on the implementation and completion of project works, and (viii) summary of grievances/beneficiary feedback received, actions taken, and complaints closed out, in line with the SEP. Reports from the local levels will be submitted to the IPCU at the national level, where they will be aggregated and submitted to the World Bank on a quarterly basis.

Throughout the Project implementation stage, the IPCU will continue to provide training and awareness raising to relevant stakeholders, such as staff, awarded contractors, and communities, to support the implementation of the environmental and social risk management mitigation measures. An initial list of training needs is proposed below in Table 7.

The IPCU will also track grievances and beneficiary feedback (in line with the SEP) during project implementation as a monitoring tool for the implementation of project activities and environmental and social mitigation measures.

Last, if the IPCU becomes aware of a serious incident in connection with the project, which may have significant adverse effects on the environment, the affected communities, the public, or workers, it should notify the World Bank within 48 hours of becoming aware of such incident and send an incident investigation report together with the root-cause analysis and corrective action plan no later than 10 days to the World Bank. A fatality is automatically classified as a serious incident, as are incidents of forced or child labor, abuses of community members by project workers (including gender-based violence incidents), violent community protests, or kidnappings.

d. Review and Evaluation – E&S Completion

Upon completion of Project activities, the IPCU will review and evaluate progress and completion of project activities and all required environmental and social mitigation measures. Especially for civil works, the IPCU will monitor activities with regard to site restoration and landscaping in the affected areas to ensure that the activities are done to an appropriate and acceptable standard before closing the contracts, in accordance with measures identified in the ESMPs and other plans. The sites must be restored to at least the same condition and standard that existed prior to commencement of works. Any pending issues must be resolved before a subproject is considered fully completed. The IPCU will prepare the completion report describing the final status of compliance with the E&S risk management measures and submit it to the World Bank within six (6) months after the completion of all project activities.

5.2 Technical Assistance Activities

The IPCU will ensure that the consultancies, studies (including feasibility studies), capacity building, training, and any other technical assistance activities under the Project are carried out in accordance with Terms of Reference (ToR) acceptable to the Bank, that are consistent with the ESSs. IPCU will also ensure that the outputs of such activities comply with the ToR.

5.3 Contingency Emergency Response Component

The Contingency Emergency Response Component (CERC) Manual, to be prepared for the Project, will outline the description of the environmental and social risk assessment and management arrangements applicable if the CERC component is activated. This may include the development of a dedicated CERC ESMF or an Addendum to this ESMF, depending on the subproject activities funded under the CERC component. Should additional documentation or revisions to existing documentation to be required, the IPCU will prepare, consult on, adopt, and disclose these documents in alignment with the CERC Manual.

The IPCU will also implement the necessary measures and actions to address the identified risks and ensure compliance.

5.4 Implementation Arrangements

This chapter describes the institutional arrangements for the ESMF aspects of the full project management and implementation.

Institutional Capacity and Structure of the IPCU

The IPCU, established under the Istanbul Governorship, plays a central role in implementing projects that enhance Istanbul's resilience against disasters, particularly earthquakes. Operating under a robust organizational framework, IPCU is structured to ensure effective E&S management throughout the lifecycle of its projects.

The IPCU's organizational chart, as shown in Figure 1, illustrates a well-defined structure that includes the Director, Deputy Directors, and specialized departments such as Procurement, Finance, Human Resources, Legal, IT, and Technical Teams. This setup ensures clear roles and responsibilities, effective coordination, and streamlined decision-making processes. IPKB, as a project implementing entity, also has a flexible structure that allows personnel to take on different tasks and responsibilities when necessary.

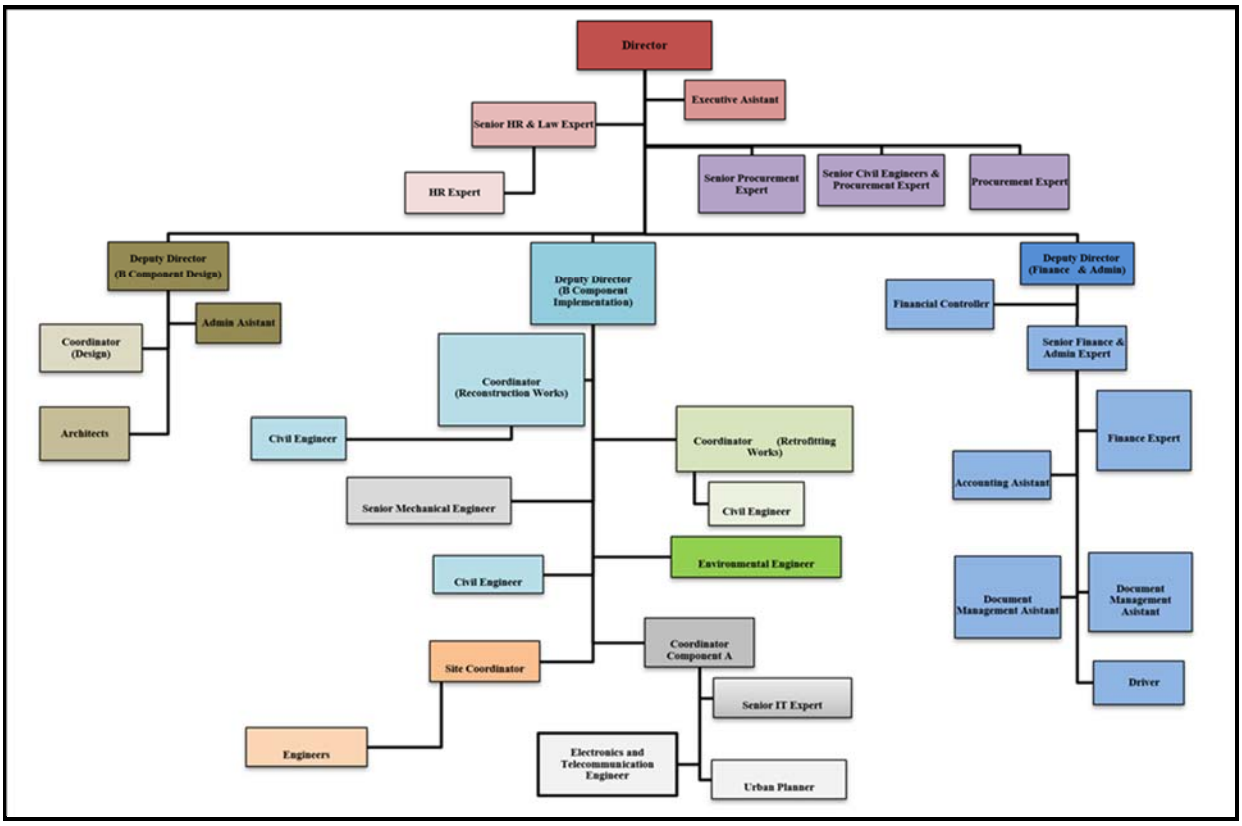


Figure 1: IPCU Organogram

To further strengthen its capacity for E&S management, IPCU is expanding its team. In addition to its current Environmental Engineer, IPCU will recruit an additional Environmental Engineer, a full-time OHS spesiyalist and a full-time Social Specialist under the IRP project. These additions will strengthen implementation, monitoring, reporting, stakeholder engagement, and compliance efforts essential for managing complex infrastructure and social projects effectively.

The organization's existing capacity includes:

- A comprehensive grievance mechanism to address community concerns.
- Established frameworks for stakeholder engagement and consultation.
- Expertise in environmental and social compliance, supported by experienced consultants and contractors.

Roles and Responsibilities for E&S Management

- **Director:** Oversees all activities, ensures alignment with project goals, and provides strategic direction for E&S management.
- **Deputy Directors:** Supervise specific components, including E&S compliance, and ensure resources are allocated appropriately.
- **Environmental, OHS and Social Specialists:** Monitor and evaluate E&S risks, liaise with contractors and consultants, and ensure compliance with national and international standards.
- **Supervision Consultants** will have their Environmental Engineers and Social Specialists who will provide on-site monitoring, conduct inspections, and report compliance with E&S plans.
- **Contractors:** Responsible for implementing site-specific ESMP along with its E&S management plans, including labor management, stakeholder engagement, and community health and safety measures.
- **Stakeholder Engagement Team:** Conducts public consultations, gathers feedback, and ensures inclusive participation during project planning and execution phases. The team will also be responsible for managing the Grievance Mechanism (GM), ensuring that all grievances from project-affected people and stakeholders are recorded, addressed, and resolved in a timely and transparent manner, in accordance with the provisions outlined in the SEP.

Coordination Mechanisms

The IPCU's multi-tiered approach to Environmental and Social (E&S) management, which will also be applicable to the IRP, is outlined below:

a. **Design Phase:** E&S considerations are incorporated into the project design by including relevant requirements in the Terms of References (ToRs). Stakeholder feedback is gathered during consultations to refine project components.

b. **Construction Phase:** E&S compliance is monitored by supervision consultants who collaborate with contractors to implement approved plans. Regular site visits, progress reports, and grievance tracking ensure adherence to standards.

c. **Post-Construction Phase:** Monitoring continues to ensure the sustainability of E&S measures. Feedback loops from stakeholders are used to make iterative improvements.

The table below summarizes the roles and responsibilities regarding the implementation arrangements for **environmental and social management.**

Table 6: Implementation Arrangements

Responsible Party	Roles and Responsibilities

IPCU	• Hire/appoint one environmental, one social, and one OHS specialist to ensure the effective management and monitoring of environmental, social, and OHS risks in compliance with project requirements. • Through its environmental, social and OHS specialists; - Coordinate closely with local authorities, contractors, and community leaders to ensure alignment with project goals, environmental and social requirements, and stakeholder expectations. - Develop and maintain a centralized database to track the implementation of environmental and social mitigation measures, grievances, and monitoring data, ensuring accessibility and up-to-date information for reporting to the World Bank and other stakeholders. - Provide oversight, support, and quality control for field staff and contractors working on environmental and social risk management. - Ensure subprojects are screen against the Exclusion List (Table 5). - Prepare E&S Screening Forms for each of the subprojects and submit them to the WB for approval. - For activities requiring ESMPs, prepare site-specific ESMPs by customizing the project level ESMP (Annex-3) and submit at least first five (5) ESMPs for prior review and no objection by the WB for disclosure and consultation purposes. - Disclose and consult upon the WB cleared version of the site specific ESMPs prior to the initiation of the tendering process. Following the consultations, update the site-specific ESMPs to incorporate the outcomes of the consultations and submit it to the WB's clearance for tendering purposes. - Ensure all tender, bidding and contract documents include relevant E&S management provisions and references to relevant E&S instruments (i.e. ESMPs, SEP, LMP, etc.). - Ensure site-specific ESMPs are annexed to the relevant tendering documents. • Train central and field staff, as well as contractors, on implementing the ESMF and associated plans. • Prior to commencement of civil works, review and approve C-ESMP, LM Plan and E&S sub-management plans to be prepared by the contractor and ensure their implementation throughout the duration of subproject implementation. - Visit and monitor E&S performance of construction sites monthly and maintain all correspondences with governmental authorities. - Establish and maintain a grievance mechanism and resolve complaints at all levels. - Notify the World Bank of any serious E&S incidents within 48 hours and provide incident reports with root cause analysis and corrective actions within 10 days. - Oversee the implementation and monitoring of environmental and social mitigation measures. - Maintain documentation of progress and prepare consolidated reports for submission to the World Bank on a quarterly basis.
Design Consultant	• Complete and submit assigned E&S Screening Forms and submit to IPCU.

	• Maintain one Environmental and Social Specialist (at least part time project-specific assignment will be required) with relevant certification and/or experience in charge of E&S management, as required. • Prepare site-specific ESMPs by customizing the project level ESMP provided in Annex-3 of this ESMF and submit them to the IPCU. • When/where relevant, address grievances received from the stakeholders
Supervision Consultants (Construction)	• Overseeing daily implementation and monitoring of environmental, social and health and safety (ESHS) mitigation measures, and report progress and ESHS performance of the sub-projects to the implementing IPCU monthly. • Ensure contractors comply with legislation, site-specific ESMPs and relevant E&S sub-management plans. • Maintain one OHS specialist and one Environmental and Social Specialist (full time site-specific assignment may be required according to sub-project complexity) with relevant certification and/or experience in charge of E&S management, as required. • Monitor daily performance and implementation of E&S mitigation measures and report progress monthly (as per the reporting requirements described in Section 5.1.c.) to the IPCU. • In coordination with IPCU, review and approve C-ESMP, LM Plan and E&S sub-management plans prepared by the contractor and ensure their implementation throughout the duration of subproject implementation. All approved documents will be submitted to IPCU within 5 business days. Any deficiencies or non-compliances identified by IPCU will be communicated to the contractor by the supervisor, and the contractor will be required to address them within 15 business days. • Provide training to contractors on E&S and OHS measures. • In close collaboration with the IPCU, ensure effective implementation of the SEP at the site level. • When/where relevant, address grievances received from the stakeholders. • Inform the IPCU about serious E&S (including OHS) incidents immediately.
Contractors	• Prior to commencement of any civil works prepare C-ESMP, LM Plan and relevant E&S sub-management plans and submit these documents to the IPCU for their review and approval. • Maintain one OHS specialist and one Environmental and Social Specialist with relevant certification and/or experience in charge of E&S management, as required (full time site-specific assignment may be required according to sub-project complexity). • Ensure implementation of and compliance with the Project's environmental and social mitigation measures as outlined in the C-ESMP, LM Plan and relevant E&S sub-management plans, and contract documents, and ensure adherence to national and local legislation. • Address construction-related grievances as per the GM procedure described in the Project SEP and escalate unresolved issues to Supervision Consultants/IPCU immediately. • Notify Supervision Consultant/IPCU through of any serious E&S incidents immediately. • Monitor site activities on daily basis and report on the E&S performance to supervision consultants/IPCU on monthly basis.

	• Provide regular training and capacity-building sessions for the workforce on, but not limited to, E&S risk management (labor rights and obligations under the LMP, Stakeholder engagement practices based on SEP requirements, ERP, OHS plan, community safety and traffic management plan, waste management plan, Code of Conduct, etc.)

5.5 Proposed Training and Capacity Building

Training and capacity building are crucial for key stakeholders to ensure the proper implementation of the ESMF, SEP, LMP, and other related documents. Training on environmental and social risk management will be integrated into the project cycle and operational procedures, utilizing a cascading model to effectively disseminate information from the national level to field levels.

Table 7: Proposed Training and Capacity Building Approach

Responsible Party	Audience	Topics/Themes that May Be Covered
IPCU (Environmental, Social, and OHS Specialists)	IPCU other Staff	• E&S screening and preparation of relevant E&S management measures/instruments • Specify aspects of environmental and social risk management implementation • Sub-management plans (i.e. OHS Plan, ERP, Community Safety and Traffic Management Plan, CoC, etc.) • Stakeholder engagement (SEP, citizen engagement, GM, etc.) • E&S monitoring and reporting • Management and reporting of E&S (including OHS) incidents/accidents
IPCU (Environmental, Social, and OHS Specialists)	Supervision Consultants (Construction)	• Project's E&S standards • Application of SEP and grievance/beneficiary feedback mechanism • Application of relevant E&S risk management measures/instruments (e.g., ESMPs) • E&S monitoring and reporting • LMP implementation, including Code of Conduct, SEA/SH prevention, and reporting • OHS Plan and its measures, emergency response plan • Gender equality and GBV/SEA/SH • Community health and safety
Supervision Consultants	Contractors	• Project's E&S standards • C-ESMP implementation • SEP implementation and grievance/beneficiary feedback mechanisms

		• OHS measures, including safe use of tools, machinery, and working at heights • Labor requirements and contractual E&S provisions • SEA/SH prevention and respectful workplace practices • Code of Conduct
Contractors	Workers	• OHS including on emergency prevention and preparedness and response arrangements to emergency situations, vehicular safety, safe use of tools, machinery and equipment, working at heights • Contractual environmental and social requirements • C-ESMP • Code of Conduct • Labor requirements for primary suppliers • Diverse and respectful workplaces, free of SEA/SH

5.6 Estimated Budget

The Table 8 lists the estimated cost items for the implementation for the ESMF, which have been included in the overall project budget:

Table 8: Indicative ESMF Implementation Budget

Activity/Cost Item	**Potential Cost (USD)**
Trainings for staff (venue, travel, refreshments etc.)	20.000,00 USD
Trainings for contractors (venue, travel, refreshments, etc.)	50.000,00 USD
Printing of awareness raising materials / grievance redress materials	2.000,00 USD
Software for data collection/supervision/monitoring/grievance redress	70.000,00 USD
Environmental and social staff (for different levels)	600.000,00 USD
Travel and accommodation budget for environmental and social staff site visits	10.000,00 USD
Rental vehicles will be used for site visits to ensure accessibility and efficient monitoring	500.000,00 USD
Social, Environmental, and OHS Trainings, Awareness, Information Dissemination	100.000,00 USD
TOTAL	1.350.000,00 USD

6. Stakeholder Engagement, Disclosure, and Consultations

A Stakeholder Engagement Plan (SEP) has been prepared for the Project, based on the World Bank's Environmental and Social Standard 10 (ESS10) on Stakeholder Engagement. The E&S documents prepared for IRP are available in both Turkish and English at the following links:

https://www.ipkb.gov.tr/e-kutuphane-kategorisi/cevre-ve-sosyal-yonetim/wb/
https://www.ipkb.gov.tr/en/e-library-category/environmental-and-social-management/wb-en/

The ESMF and SEP will be subject to public consultation. A consultation meeting will be held following the completion of 10-day disclosure period for the E&S instruments cleared for disclosure and consultation purposes. These documents will be finalized to reflect the outcomes of the consultation process. Please note that the ESCP and LMP are not subject to consultations; however, these documents will be disclosed publicly to ensure transparency and compliance with project requirements.

The Project's Grievance Mechanism (GM) will be accessible throughout this process to ensure all stakeholders, including project-affected persons and vulnerable groups, have an effective channel to voice their concerns and provide input. Detailed procedures for submitting and resolving grievances are outlined in the GM Procedures provided in the Project's SEP. For further details on the consultation process, grievance mechanisms, and engagement strategies, please refer to the Project's SEP.

ANNEXES

List of Annex Tables

ANNEX 1. NATIONAL ENVIRONMENTAL (INCLUDING OHS) LEGISLATION AND INTERNATIONAL AGREEMENTS AND CONVENTIONS APPLICABLE TO THE PROJECT ACTIVITIES

The national legal framework of Türkiye provides comprehensive guidance for managing environmental and social risks and impacts associated with subproject activities under the Istanbul Resilience Project (IRP). Relevant laws, policies, and regulations are summarized in Table 1. Türkiye's national approach to environmental protection, cultural heritage conservation, and biological resource management has been shaped by both domestic legislation and international agreements ratified by Türkiye. Relevant environmental, OHS, and international labor agreements and conventions ratified by Türkiye are listed in **Error! Reference source not found.**Table 2, and
Table ***3***.

Table 1: Relevant Legal Framework of Türkiye

Law /Regulation	Description and Relevance to Project Activities
Environmental Law (Law No. 2872)	Establishes principles for environmental protection and pollution prevention, directly applicable to all subproject activities.
Conservation of Cultural and Natural Assets Law (Law No. 2863)	Governs the preservation of cultural heritage and archaeological sites, applicable for subprojects in areas with cultural significance.
Energy Efficiency Law (Law No. 5627)	Promotes energy efficiency measures, applicable for retrofitting and construction projects.
Electricity Market Law (Law No. 6446)	Regulates energy generation and distribution, relevant for renewable energy integration in project activities.
Law on the Use of Renewable Energy Resources (Law No. 5346)	Encourages the use of renewable energy, supporting sustainability in infrastructure projects.
Forestry Law (Law No. 6831)	Protects forest resources and biodiversity, applicable to projects near forested areas.
Groundwater Law (Law No. 167)	Regulates the protection and use of groundwater resources, relevant for site-specific considerations.
Labor Law (Law No. 4857)	Protects workers' rights, prohibits discrimination, and ensures fair labor practices for project-employed personnel.
Occupational Health and Safety (OHS) Law (Law No. 6331)	Regulates workplace safety and health standards, ensuring worker protection during construction and retrofitting activities.
Law on Soil Protection and Land Use (Law No. 5403)	Provides measures for soil conservation and land management, applicable for construction activities.
Expropriation Law (Law No. 2942)	Outlines procedures for land acquisition, applicable for subprojects requiring land use.
Zero Waste Regulation (Official Gazette No. 30829)	Sets principles for waste segregation and recycling, aligning with sustainable development goals.
Regulation on Demolition of Buildings (Official Gazette No. 31627)	Provides standards for safe demolition practices, including handling of hazardous materials.
Public Health Law (Law No. 1593)	Public Health Law (Law No. 1593)
Law on Relieves and Measures to be Taken Against Disasters (Law No. 7269)	Law on Relieves and Measures to be Taken Against Disasters (Law No. 7269)

Regulation on the Protection of Monumental Trees (Law No. 28358)	Protects historically, culturally, or naturally significant trees; critical for safeguarding such trees during project activities.
Regulation on Health and Safety Measures in Asbestos Handling (Law No. 28539)	Ensures safe handling and disposal of asbestos materials; essential for retrofitting and demolition activities.
Medical Waste Management Regulation (Law No. 29959)	Sets guidelines for handling, storing, and disposing of medical waste; relevant for hospital-related projects.
Regulation on the Control of Excavation, Construction, and Demolition Wastes (Law No. 25406)	Governs the safe disposal of debris generated by construction and demolition activities.
Regulation on Health and Safety Conditions in the Use of Work Equipment (Law No. 28628)	Ensures the use of appropriate protective equipment and safety measures on construction sites.
Radiation Safety Regulation (Law No. 23999)	Regulates safety measures for radiation-emitting equipment, particularly important for healthcare facilities.
Exhaust Emission Control Regulation (Law No. 27190)	Requires vehicles and machinery used in construction to comply with emission standards.
Regulation on the Control of End-of-Life Tires (Law No. 26357)	Ensures environmentally safe disposal of used tires.
Regulation on the Control of Waste Batteries and Accumulators (Law No. 25569)	Ensures the safe disposal of batteries used in construction vehicles and equipment.
Law on the Protection of Personal Data (Law No. 6698)	Ensures the legal processing, storage, and protection of personal data. Relevant to stakeholder engagement, grievance mechanisms, and management of personal information.
Law on Protection of Family and Prevention of Violence Against Women (Law No. 6284)	Aims to protect women from domestic violence, promote gender equality, and ensure the safety of vulnerable individuals. Relevant for stakeholder engagement and community health and safety measures.
Turkish Civil Code (Law No. 4721)	Governs family law, including marriage, divorce, inheritance, and property rights, ensuring equality between men and women. Relevant for addressing family-related social issues in project-affected areas.
Planned Areas Development Regulations (Law No. 30113)	Regulation set forth comprehensive guidelines for urban development, ensuring that construction activities adhere to zoning plans, environmental sustainability, and community needs, while maintaining compliance with national building codes and safety standards.

Table 2: International Agreements and Conventions

Law /Regulation	Description and Relevance to Project Activities
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes (1994)	Ensures safe handling and disposal of hazardous materials during project activities.
Bern Convention on the Conservation of European Wildlife (1999)	Promotes biodiversity conservation, relevant for subprojects near natural habitats.
Ramsar Convention on Wetlands (1994)	Protects wetlands of international importance, applicable to nearby sensitive ecosystems.

Montreal Protocol on Substances that Deplete the Ozone Layer (1991)	Regulates harmful emissions, relevant for retrofitting activities.
Paris Agreement (Ratified 2021)	Encourages greenhouse gas reduction and renewable energy use in infrastructure projects.
ILO Occupational Safety and Health Convention (2015)	Sets standards for worker safety and health, applicable for labor-intensive activities.
Stockholm Convention on Persistent Organic Pollutants (2009)	Prohibits the use of hazardous chemicals, ensuring compliance in project activities.
UN Framework Convention on Climate Change (Kyoto Protocol)	Supports climate change mitigation measures, applicable to sustainable design and construction practices.
Vienna Convention for the Protection of the Ozone Layer	Requires mitigation of ozone-depleting activities during project implementation.
European Convention on the Protection of the Archaeological Heritage	Governs preservation of archaeological sites, applicable to projects in culturally sensitive areas.
UN Convention on Biological Diversity	Promotes biodiversity conservation and sustainable management in project design and implementation.
Convention on Long-range Transboundary Air Pollution (1983)	Aims to reduce and prevent transboundary air pollution, relevant for industrial activities with potential cross-border environmental impacts.
Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES, 1996)	Regulates the trade of endangered species, relevant for projects near sensitive ecosystems or involving biodiversity conservation.
United Nations Convention to Combat Desertification (1998)	Addresses land degradation and desertification, applicable to projects involving large-scale land use or reclamation.
Geneva Convention on Long-Range Transboundary Air Pollution (1983)	Aims to reduce and prevent transboundary air pollution impacts, relevant for managing construction emissions.
UN International Convention for the Protection of Birds (1966)	Protects bird species and their habitats, applicable for projects near sensitive ecological areas.
Barcelona Convention on the Protection of the Marine Environment and the Coastal Region of the Mediterranean (1976)	Ensures protection of marine environments and coasts, relevant for activities near marine zones.
Izmir Protocol on Hazardous Wastes (2003)	Regulates the transboundary movement of hazardous wastes in the Mediterranean region, relevant for hazardous waste management during project activities.
Floransa Convention – European Landscape Convention (2003)	Promotes landscape conservation and management, relevant for projects impacting scenic or cultural landscapes.
Stockholm Convention on Persistent Organic Pollutants (2010)	Prohibits the use of harmful chemicals, ensuring compliance during hazardous material management.

Table 3: EU-Aligned Environmental and Safety Legislation

Law /Regulation	Description and Relevance to Project Activities
Regulation Concerning Follow-up of Greenhouse Gas Emissions	Monitors emissions to align with international climate goals, applicable for energy-efficient retrofitting.
Environmental Auditing Regulation	Ensures compliance with environmental standards through periodic audits, relevant for monitoring during construction.
Regulation on Environmental Impact Assessment (EIA)	Requires assessment for projects with potential environmental impacts, ensuring mitigation measures for high-risk activities.
Regulation for the Preparation of Spatial Plans	Guides land use planning, relevant for project site selection and urban development.
Regulation on Waste Management	Governs waste segregation, recycling, and disposal, applicable for demolition and construction waste.
Regulation on Water Pollution Control	Protects water resources from contamination, applicable to wastewater management during construction.
Regulation on the Control of Excavation Materials	Provides guidelines for excavation and disposal, ensuring compliance during infrastructure projects.
Regulation on Health and Safety Measures in Working with Asbestos	Ensures safe handling of asbestos, applicable for retrofitting and demolition activities.
Regulation on the Control of End-of-Life Vehicles	Promotes recycling and safe disposal of vehicles, relevant for transport and logistics in the project.
European Landscape Convention (2006)	Promotes the conservation and management of landscapes, relevant to projects impacting scenic or ecological areas.

ANNEX 2. ENVIRONMENTAL AND SOCIAL SCREENING FORM

The E&S Screening procedure comprises of two stages-process: (i) initial screening by using the **Exclusion List** in Table 5 of the ESMF; and (ii) screening the proposed activities to identify the approach for E&S risk management.
This Screening Form is the second stage of screening process and is to be used for all subproject activities. The completed forms will be signed and kept in the records of the IPCU.

1. Subproject Information:

Subproject Title	
Subproject Location	
Regional Unit in Charge	
Estimated Cost	
Start/Completion Date	
Brief Description of Subproject	

2. Environmental and Social Screening Questionnaires

	Questions	Answer		Next Steps
		Yes	No	
ESS1				
1	Is the subproject likely to have significant adverse environmental impacts that are sensitive and unprecedented that trigger the 'Ineligible Activities' or other exclusion criteria?			If "Yes": Exclude from project.
2	Does the subproject involve new construction or significant expansion of ponds, solid waste management systems, shelters, roads (including access roads), community centers, schools, bridges and jetties?			If "Yes": 1. Prepare a site-specific ESMP by customizing the project level ESMP for the proposed subproject, based on the template in ANNEX 3. 2. Include E&S risk management measures in bidding documents.
3	Does the subproject involve renovation or rehabilitation of any small-scale infrastructure, such as groundwater wells, latrines, showers/washing facilities, or shelters?			If "Yes": 1. Prepare a site-specific ESMP by customizing the project level ESMP for the proposed subproject, based on the template in ANNEX 3. 2. Include E&S risk management measures in bidding documents.
4	Will construction or renovation works require new borrow pits or quarries to be opened?			If "Yes": 1. Prepare a site-specific ESMP by customizing the project level ESMP for the proposed subproject, based on the template in ANNEX 3. 2. Include E&S risk management measures in bidding documents.

5	Does the project lead to any risks and impacts on, individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable.[1]			If "Yes": Apply relevant measures described in the ESMF and SEP.
ESS2				
6	Does the subproject involve uses of goods and equipment involving forced labor, child labor, or other harmful or exploitative forms of labor?			If "Yes": Exclude from project.
7	Does the subproject involve recruitment of workforce including direct, contracted, primary supply, and/or community workers?			If "Yes": Apply LMP
8	Will the workers be exposed to workplace hazards that needs to be managed in accordance with local regulations and World Bank Group (WBG) Environmental, Health and Safety Guidelines (EHSGs)? Do workers need Personal Protection Equipment (PPE) relative to the potential risks and hazards associated with their work?			If "Yes": Apply LMP
9	Is there a risk that women may be underpaid when compared to men when working on the project construction?			If "Yes": Apply LMP
10	Is the project expected to have any OHS related risks and impacts?			If "Yes": Prepare a site-specific ESMP by customizing the project level ESMP and OHS Plan for the proposed subproject, based on the templates in ANNEX 6 and ANNEX 3.
ESS3				
11	Is the project likely to generate solid or liquid waste that could adversely impact soils, vegetation, rivers, streams or groundwater, or nearby communities?			If "Yes": 1. Prepare a site-specific ESMP by customizing the project level ESMP for the proposed subproject, based on the template in ANNEX 3. 2. Include E&S risk management measures in bidding documents.
12	Do any of the construction works involve the removal of asbestos or other hazardous materials?			If "Yes": Prepare a site-specific ESMP by customizing the project level ESMP and Asbestos Management Plan for the proposed subproject, based on the template in ANNEX 3 and ANNEX 8
13	Are works likely to cause significant negative impacts to air and / or water quality?			If "Yes": 1. Prepare a site-specific ESMP by customizing the project level ESMP and Asbestos Management Plan for

[1] "Disadvantaged or vulnerable" refers to those individuals or groups who, by virtue of, for example, their age, gender, ethnicity, religion, physical, mental or other disability, social, civic or health status, sexual orientation, gender identity, economic disadvantages or ethnic peoples status, and/or dependence on unique natural resources, may be more likely to be adversely affected by the project impacts and/or more limited than others in their ability to take advantage of a project's benefits.

				the proposed subproject, based on the template in ANNEX 3. 2. Include E&S risk management measures in bidding documents.
14	Does the activity rely on existing infrastructure (such as discharge points) that is inadequate to prevent environmental impacts?			If "Yes": 1. Prepare a site-specific ESMP by customizing the project level ESMP based on the template in ANNEX 3. 2. Include E&S risk management measures in bidding documents.
ESS4				
15	Is there a risk of increased community exposure to communicable disease (such as infectious disease outbreaks, HIV/AIDS, Malaria), or increase in the risk of traffic related accidents?			If "Yes": Apply LMP and relevant measures in SEP.
16	Is an influx of workers, from outside the community, expected? Would workers be expected to use health services of the community? Would they create pressures on existing community services (water, electricity, health, recreation, others?)			If "Yes": Apply LMP
17	Is there a risk that SEA/SH may increase as a result of project works?			If "Yes": Apply LMP
18	Would any public facilities, such as schools, health clinic, mosque/church be negatively affected by construction?			If "Yes": Prepare a site-specific ESMP by customizing the project level ESMP based on the template in ANNEX 3.
19	Will the subproject require the government to retain workers to provide security to safeguard the subproject?			If "Yes": Prepare a site-specific ESMP by customizing the project level ESMP based on the template in ANNEX 3
ESS5				
20	Does the sub-project involve involuntary land acquisition?			If "Yes": Exclude from project.
21	Does the sub-project involve physical and/or economic displacement of people?			If "Yes": Exclude from project.
22	Is private land required for the sub-project activity being voluntarily donated to the sub-project?			If "Yes": Exclude from project.
23	Is there any possibility to move out, or close of business/commercial/livelihood activities of persons during construction *(are there any formal/informal users or non-titled people who are utilizing/inhabiting/doing business or using for other purposes etc.)* the proposed site/project locations that will be used for civil work? If yes, please provide how many and for what purposes)?			If "Yes": Exclude from project.
24	Will there be any expropriation under the sub-project?			If "Yes": Exclude from project.
ESS6				
25	Does the subproject involve activities that have potential to cause any significant loss or degradation			If "Yes": Exclude from project.

	of critical habitats[2] whether directly or indirectly, or which would lead to adverse impacts on natural habitats[3]?			
26	Will the project involve the conversion or degradation of non-critical natural habitats?			If "Yes": 1. Prepare a site-specific ESMP by customizing the project level ESMP based on the template in ANNEX 3 2. Include E&S risk management measures in bidding documents.
27	Will this activity require clearance of natural forests?			If "Yes": Exclude from project.
28	Will this activity require clearance of trees, including inland natural vegetation?			If "Yes": 1. Prepare a site-specific ESMP by customizing the project level ESMP based on the template in Annex 3 2. Include E&S risk management measures in bidding documents.
29	Will there be any significant impact on any ecosystems of importance (especially those supporting rare, threatened or endangered species of flora and fauna)?			If "Yes": Exclude from project.
ESS8				
30	Is the subproject to be located adjacent to a sensitive site (historical or archaeological or culturally significant site) or facility?			If "Yes": Apply Chance Find Procedures in ANNEX 4.
31	Is the subproject locate near buildings, sacred trees or objects having spiritual values to local communities (e.g. memorials, graves or stones) or require excavation near there?			If "Yes": Apply Chance Find Procedures in ANNEX 4.

3. Conclusion

Based on the result from the screening above, please write the E&S risk rating and list the E&S risk management instruments to be prepared/adopted and implemented:

a)
b)

Name and title of person who conducted screening:
Date of screening:

[2] Environmental and Social Standard 6, paragraph 23: "Critical habitat is defined as areas with high biodiversity importance or value, including (a) Habitat of significant importance to Critically Endangered or Endangered species, as listed in the IUCN Red List of threatened species or equivalent national approaches; (b) Habitat of significant importance to endemic or restricted-range species; (c) Habitat supporting globally or nationally significant concentrations of migratory or congregatory species; (d) Highly threatened or unique ecosystems; and (e) Ecological functions or characteristics that are needed to maintain the viability of the biodiversity values described above in (a) to (d)."

[3] Environmental and Social Standard 6, paragraph 21: "Natural habitats are areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition."

ANNEX 3. PROJECT LEVEL ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

[Environmental and social risks and impacts are strongly linked to subproject location and scope of activities. This ESMP should be customized for each specific subproject location and activities.]

Sub-project Information

Sub-project Title:	
Estimated Cost:	
Start/Completion Date:	

Site/Location Description

This section concisely describes the proposed location and its geographic, ecological, social and temporal context including any offsite investments that may be required (e.g., access roads, water supply, etc.). Please attach a map of the location to the ESMP.

Sub-project Description and Activities

This section lists all the activities that will take place under the subproject, including any associated activities (such as building of access roads or transmission lines, or communication campaigns that accompany service provision).

ESMP Matrix: Risk and Impacts, Mitigation, Monitoring

This section should identify anticipated site-specific adverse environmental and social risks and impacts; describe mitigation measures to address these risks and impact; and list the monitoring measures necessary to ensure effective implementation of the mitigation measures. It may draw from the ESMF's pre-identification of potential risks/impacts and mitigation measures, as applicable, and drill down further to ensure relevance and comprehensiveness at the site-specific level. For subprojects involving construction, two sets of tables may be needed, for the construction phase and the operation phase. The below Environmental and Social Management Plan covers all sub-project activities and will be customized for "Low' and "Moderate" risk sub-projects. (please add rows depending on the impacts of the components).

Potential Risks and Impacts	Proposed Mitigation Measures	Phase			Indicators for monitoring	Frequency of Monitoring			Responsibility for implementation and monitoring	Estimated Cost[4]
		Planning	*Construction*	*Operation*		Continuous	Monthly	Quarterly		
General for All Construction Works										
Environmental and Social (E&S) Management	Contractor will prepare and submit for approval and subsequently implement its Contractor ESMP (C-ESMP). The C-ESMP should be submitted prior to the commencement of construction works and no construction activities will be carried out under the sub-project until approval of the C-ESMP. The C-ESMP will include at least the following site-specific management plans: • Occupational health and safety (OHS) management plan including risk assessment and emergency response plan (see the outline in ANNEX 9 of the Environmental and Social Management Framework (ESMF) of the project) • Community health and safety (CHS) management plan including traffic management plan (see outline in ANNEX 7 of ESMF of the project) • Waste management Plan (see ANNEX 5 of ESMF of the project) • Chance Find Procedure (see ANNEX 4 of ESMF of the project)	X	X		All sub-management plans are approved prior to construction and implemented throughout the construction period.		X		Contractor (Implementation) Supervision Consultant (Design)	

[4] This is an estimation cost for the proposed mitigation measures. Relevant bodies should assess this column accordingly to the sub-projects under their responsibilities.

	• Labor Management Plan (to be prepared in accordance with project LMP) • Grievance mechanism (GM) for both community and workers.									
	The Contractor shall hire or appoint full-time[5] one environmental and social and OHS specialists to the commencement of construction works. The Contractor shall submit the CVs of specialists for approval. These specialists should be present at the site throughout the construction period.	X	X		Relevant E&S staff is mobilized and maintained throughout the construction period.		X		Contractor (Implementation) Consultant (Supervision)	
	• The Contractor will prepare a training program and provide training to all its staff, before they start working on site, on basic environmental, social, health and safety (ESHS) risks associated with the proposed construction works and the workers' responsibility. The training program shall be repeated on quarterly basis. The Contractor's quarterly training program will also cover topics related to Code of Conduct such as sexual harassment particularly towards women and children, violence, including sexual and/or gender-based violence and respectful attitudes while interacting with the local community.	X	X		Training program approved and all relevant staffed trained. Training records		X		Contractor (Implementation) Consultant (Supervision)	
Resource Efficiency and Pollution Prevention	To address the identified risks and enhance resource efficiency and pollution prevention, the following measures will be implemented: • Ensure that all retrofitted buildings achieve at least Turkish Class C Energy Performance Certification standards (TS825) and all newly constructed buildings achieve at least Class B.	X	X		compliance with energy and water efficiency standards, proper waste and			X	Contractor (Implementation) Consultant (Supervision)	

[5] Full time site-specific assignment may be required according to sub-project complexity.

	• Integrate renewable energy systems, such as solar panels, to reduce energy consumption and ensure operational continuity during disasters. • Install water-saving systems, including low-flow toilets, efficient taps, and showerheads, and implement rainwater harvesting and greywater reuse where feasible and/or applicable. • Reuse demolition materials (e.g., debris as filling material) and ensure high percentage of recycling of iron and other recyclable materials. • Enhance green infrastructure by creating parks, green roofs, and vegetative buffers to manage stormwater, mitigate urban heat effects, and conserve biodiversity where feasible and/or applicable. • Regularly monitor and evaluate the performance of nature-based solutions to ensure their long-term effectiveness. • The areas where waste management will be carried out during the operation process should be determined at the planning stage. • Conduct a tree survey during the planning phase to identify and document existing trees on the site, ensuring protection and conservation of mature trees wherever possible. • Tree planting and the use of fire-resistant native plant species in landscaping projects can mitigate urban heat island effects while supporting ecological functions. • Nature-based solutions, such as rainwater gardens and permeable surfaces, can reduce runoff, recharge groundwater, and enhance local ecosystems.				pollution management, implementation of nature-based solutions, and stakeholder feedback resolution.					

Air Pollution (Dust and Exhaust)	• Minimize dust from exposed work sites by applying water on the ground regularly during the dry season. • Construction debris shall be kept in a controlled area and sprayed with water mist to reduce debris dust especially during the dry season • Keep stockpiles of aggregate materials covered to prevent suspension or dispersal of fine soil particles during windy days or disturbances by stray animals. In case of pneumatic drilling during excavation, dust shall be suppressed by ongoing water spraying and/or construction dust screen enclosures at the site. • The surrounding environment, such as roads, shall be kept free of debris to minimize dust. • Trucks transporting excavated materials or construction waste shall have their loads securely covered to prevent dust and spillage during transit. • There shall be no open burning of construction or waste materials at the site.		X		Visual inspection of air quality control measures Records of maintenance Records of complaints	X			Contractor (Implementation) Consultant (Supervision)	
Noise	To reduce noise in buildings located near highways or other significant noise sources solutions shall be taken in consideration: • Use acoustic panels or soundproof drywall to reduce sound transmission • Incorporate mineral wool, fiberglass, or foam boards into walls to enhance noise reduction • Use soundproof glass with air gaps to block external noise • Place sound walls or acoustic barriers between the building and the noise source such as noise barriers • Use dense vegetation, such as trees and shrubs, to naturally block and absorb sound	X							Design Consultant Contractor (Implementation) Consultant (Supervision)	

	waves. • Include acoustic ceiling tiles and sound-absorbing wall panels to reduce reverberation inside the building.									
	• Limit construction activities to hours specified by national regulations, and coordinate with nearby communities to schedule noisy tasks during times that cause minimal disturbance. • During operations, equipment will be placed as far away from residential/community areas as possible. • All equipment will be maintained to keep it in good working order by manufacturing maintenance procedures and installing acoustic enclosures around generators to reduce noise levels. • Use when needed and feasible noise-control methods such as fences, barriers or deflectors (such as muffling devices for combustion engines or planting of fast-growing trees) • Avoid the unnecessary use of alarms, horns and sirens. • Minimize project transportation through community areas. • Maintain a buffer zone (such as open spaces, rows of trees or vegetated areas) between the project site and residential areas to lessen the impact of noise to the living quarters. • Noise measurements shall be conducted if any grievance regarding noise generation is received from the nearest receptors. If measured levels are above limit values, mitigation measures shall be enhanced in this respect, i.e., installing acoustic barriers for mechanical equipment, limiting the hours of operation for specific pieces of equipment or operations, etc		X		Visual inspection of noise control measures Records of complaints	X			Contractor (Implementation) Consultant (Supervision)	

Health and Safety OHS-related risks due to unsafe practices and hazards at work sites such as work at height, rotating and moving equipment, electrical safety, working with hazardous material, etc.	When planning activities, discuss steps to avoid people getting hurt. It is useful to consider: • Construction place: Are there any hazards that could be removed or should warn people about? • The people who will be taking part in construction: Do the participants have adequate skill and physical fitness to perform their work safely? • The equipment: Are there checks you could do to make sure that the equipment is in good working order? Do people need any particular skills or knowledge to enable them to use it safely? • Electricity Safety: Do any electricity good practices such as the use of safe extension cords, voltage regulators and circuit breakers, labels on electrical wiring for safety measures, awareness on identifying burning smells from wires, etc. apply at the site? Is the worksite stocked with voltage detectors, clamp meters and receptacle testers?	X			Visual inspection Employee records Equipment		X		Contractor (Implementation) Consultant (Supervision)	
	• Appropriate signposting of the construction sites will inform workers of key rules and regulations to follow. • The contractor's OHS specialist will provide a brief daily toolbox talk to the construction workers on ESHS risks associated with the construction activity that will be carried out on that particular day that particular day. • The Contractor will ensure a safe working environment for the workers and before construction activities will supply appropriate personal protective equipment (PPE) in line with international best practice and Turkish Legislation (hard hats, gloves, dust masks, goggles, harnesses and safety boots, etc.).		X		Visual inspection of control measures OHS records Employee records Incident statistics and records Records of worker's complaints	X			Contractor (Implementation) Consultant (Supervision)	

	• All activities will be implemented in line with both the Law on Occupational Health and Safety (Official Gazette No:.28339, dated June 30, 2012) and its relevant regulations and also with the World Bank Group EHS Framework. • The Contractor will Immediately notify the IPCU (through supervision consultants) about any serious incident which may have significant adverse effects on the environment, the affected communities, the public or workers. Then, IPCU will notify the World Bank about any serious incident in 48 hours and send an incident investigation report together with the root-cause analysis and corrective action plan no later than 10 days to the World Bank. • Keep the worksite clean and free of debris on a daily basis. • The first aid kit should be equipped with bandages, antibiotic creams, etc. or delivered to health institutions. • Following safety guidelines for the storage, transport, and distribution of hazardous materials aiming to minimize the potential for misuse, spills, and accidental human exposure. • Keep corrosive fluids and other toxic materials in properly sealed containers for collection (considering its MSDS) and disposal in properly secured areas. • Ensure structural openings are covered/protected adequately. • Secure loose or light material that is stored on roofs or open floors. • Keep hoses, power cords, welding leads, etc. from laying in heavily travelled walkways or areas.									

	• During heavy rains or emergencies of any kind, suspend all work. • Follow the below measures for construction involving work at height: • Do as much work as possible from the ground. • Do not allow people with the following personal risks to perform work at height tasks: eyesight/balance problem; certain chronic diseases – such as osteoporosis, diabetes, arthritis or Parkinson's disease; certain medications – sleeping pills, tranquilizers, blood pressure medication or antidepressants; recent history of falls – having had a fall within the last 12 months, etc. • Only allow people with sufficient skills, knowledge and experience to perform the task. • Check that the place (e.g., a roof) where work at height is to be undertaken is safe. • Take precautions when working on or near fragile surfaces. • Clean up oil, grease, paint, and dirt immediately to prevent slipping in accordance with Emergency Response Plan; and • Provide fall protection measures e.g. safety hardness, and simple scaffolding/guard rail for works over 4 meters from the ground. • The contractor shall hire trained operators for the safe operation of specialized construction's vehicles									
Community Health and Safety Community health and safety risks associated with	• Rope off construction area and secure materials stockpiles/ storage areas from the public and display warning signs including at unsafe locations. • Do not allow to entrance unauthorized person in construction areas.		X		Visual inspection of control measures Traffic	X			Contractor Supervision Consultant	

construction activities, including health issues arising from exposure to waste, stagnant water, wastewater, particulate matter, and construction workers, as well as traffic and road-related risks caused by increased traffic volume and the movement of heavy-duty vehicles due to inadequate construction and traffic management.	• Fill in all earth borrow-pits once construction is completed to avoid standing water, water-borne diseases and possible drowning. • Regularly drain stagnant water from construction areas to prevent the breeding of mosquitoes and other disease vectors. • Use covered and sealed storage for wastewater to prevent leaks and odors, while maintaining safe drainage systems to avoid contamination of nearby water bodies. • Provide clean and well-maintained sanitation facilities for workers, including toilets and washing stations. • The construction site security personnel must be trained and officially certified. • Control the driving speed of vehicles particularly when passing through a community or nearby school, health center or other sensitive areas. • If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours, if needed. • The project site must be lit during the night. • The surrounding construction area should be kept clean, without waste disposed of there. The broken glass should be cleaned immediately to avoid any fires. • Following safety guidelines for transportation of hazardous materials to the site aiming to minimize the potential for spills and accidental human exposure due to traffic accidents. • Effective communication systems are needed to inform communities about project activities, potential risks, and emergency procedures. • Regular maintenance such as periodical				accident records Records of complaints					

	control of vehicles to minimize potentially serious accidents caused by equipment malfunction or premature failure. • The public will be informed about the work to be carried out, including the measures taken regarding communicable diseases relating to labor influx and -post-disaster context (i.e., infectious disease outbreaks), using appropriate communication tools and methods (e.g., online/virtual and/or physically) in areas accessible to all stakeholders (including work sites). • In case of any epidemic or pandemic / communicable disease, including infectious disease outbreaks, the guidance, guidelines, and recommendations to be provided by the Ministry of Health, the Ministry of Family and Social Services, the Ministry of Labour and Social Security, and the World Health Organization will be followed, and all relevant measures will be taken for both employees and workplaces in terms of OHS and CHS. In addition, all construction works will follow the World Bank guidelines to minimize the risk of infectious disease outbreaks transmission during the execution of civil works. • Include evacuation protocols, first aid training, and clear communication strategies in the ERP to protect community health and safety. • Any traffic diversions should take into account the needs of disabled persons. • The Contractor will ensure the construction site is properly secured and construction-related traffic regulated properly (including proper route planning). This will include but not be limited to:									

	• Signposting, warnings, barriers, and traffic diversions: the site will be visible, and the public warned of all potential hazards. • Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. • Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement. • Active traffic management by trained and visible staff at the site, if required for a safe and convenient passage for the public.									
Water Quality and Wastewater: Water pollution in nearby surface waters due to wastewater/waste generated at the construction area due to construction activities	• The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and/or silt fences to prevent sediment from moving off-site and causing excessive turbidity in nearby surface waters. • Minimize storage or disposal of generated wastewater on the site. • Temporary or final waste disposal and wastewater discharge without treatment near/in surface waters is strictly forbidden to prevent possible adverse impacts on surface waters. No soiled materials, solid wastes, toxic or hazardous materials should be stored in, poured into or thrown into water bodies for dilution or disposal. • Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface waters. • Wastewater generated at the construction site will be connected to the sewerage system, if possible, and approved by local authorities. If this is not possible, it will be		X		Visual inspection of control measures Septic tank effluent disposal records (if any) Effluent quality measurement records (if any) Records of complaints	X			Contractor *(Implementation)* Consultant *(Supervision)*	

	deposited in the septic tank that will be impervious, in accordance with "Regulation on Pit Opening Where Sewer System Construction is not Applicable" published in Official Gazette No: 13783 dated 19.03.1971. Toilets with temporary septic tank might be used for this purpose as well. Septic tank effluent will be removed periodically by sewage trucks, and disposal will be provided within the scope of the protocol to be made with the relevant municipality that has a licensed wastewater treatment plant (WWTP). The Protocol will be submitted to the IPCU. • Activities should not affect the availability of water for drinking and hygienic purposes. • The flow of natural waters should not be obstructed or diverted in another direction, which may lead to the drying up of river beds or flooding of settlements. • Separate concrete works in waterways and keep concrete mixing separate from drainage leading to waterways.									
Soil and Groundwater Quality: Soil and groundwater pollution due to improper waste management and accidental spills, and soil erosion	• Apply the mitigation measures specified in the "Solid and Hazardous Waste" section for proper waste management. Residual (left out) concrete in concrete mixers will not be allowed to wash out into the construction site, its vicinity, or access roads of construction sites. Related trainings will be provided to concrete mixer drivers. • Hazardous and chemicals and materials will be secured in a designated storage area to prevent spillage and tip-over. • Semi-used chemical-containing containers will have lids and lids will be tightened while they are not in use.		X		Visual inspection of control measures Incident records Training records Records of complaints	X			Contractor *(Implementation)* Consultant *(Supervision)*	

	• In case of a spill of any hazardous material or hazardous wastes, spill prevention methods mentioned in ERP will be put in place in order to limit the exposure area. Workers who might intervene in such incidents should have relevant trainings on emergency response to spills. • Proper spill kits will be placed at appropriate locations in the construction area. • Schedule construction during the dry season, as appropriate. • Contour and minimize the length and steepness of slopes. • Cover with topsoil and re-vegetate (plant grass, fast-growing plants/bushes/trees) construction areas quickly once work is completed.									
Waste Management EHS risks due to inappropriate management of waste generated due to construction activities (such as construction demolition wastes, hazardous waste, biodegradable waste, recyclable waste, non-hazardous waste, etc.)	• Excavation soil, construction and demolition waste Dumping Permit must be obtained from the Municipality. • Excavation waste will be re-used for backfilling purposes as much as possible and recovery and other re-use options will be considered as appropriate (except asbestos or asbestos-containing waste). • Recycling and reusing materials during demolition and construction reduces demand for raw natural resources, indirectly supporting sustainable management practices. • The excess excavation waste shall be transported and disposed of separately by licensed transport vehicles to existing licensed excavation waste storage area(s), identified by the relevant governmental authorities, in the district/region. • On-site storage of wastes prior to final	X	X		Visual inspection of control measures Waste generation and disposal records Training records Records of complaints	X			Contractor (Implementation) Consultant (Supervision)	

	disposal (including earth dug for foundations) should be at least 300 meters from rivers, streams, lakes and wetlands. • After each construction site is decommissioned, all debris and waste shall be cleared. • Keep the records of waste generation and disposal.									
	• Manage wastes in accordance with the waste management hierarchy (prevent, reduce, reuse, recycle, recover, dispose) and train personnel to raise awareness on waste management. • Temporarily storage on site of all hazardous or toxic substances will be in safe containers labelled in line with Material Safety Data Sheet (MSDS), with details of composition, properties, and handling information. • Segregate waste as recyclable, hazardous and non-hazardous waste. • Non-hazardous wastes, inert and biodegradable wastes and also recyclables must be collected separately, and special attention must be paid to prevent hazardous wastes in leak-proof container to prevent spillage and leaching in case of mixing with other types of waste. • Collect, store and transport waste to appropriately designated /controlled licensed disposal areas/facilities (such as excavation waste storage areas, sanitary landfills, recycling/recovery facilities, etc.). Submit an official letter to IPCU stating that these wastes will be accepted at licensed sites • Temporary waste storage area (to be established at the construction area) should be on impermeable ground, covered with a									

	roof, and equipped with a suitable drainage system, proper spill kits and appropriate firefighting equipment. Wastes shall be temporarily stored in this area in separate compartments (labelled with waste codes) according to their types in order not to react with each other. Hazardous wastes shall be stored in the temporary waste storage area for a maximum of six (6) months and non-hazardous wastes for a maximum of one year. • Hazardous waste shall be transferred to a licensed disposal facility via licensed waste transportation companies, and recyclable wastes to a relevant licensed recycling/recovery facility. All protocols and waste logs shall be submitted to the IPCU. • Train workers on correct transfer and handling of fuels and other substances and require the use of gloves, boots, aprons, eyewear and other protective equipment for protection in handling highly hazardous materials.									
Stakeholder Engagement and Grievance Mechanism Construction-related complaints and temporary disruption to the local community including eligible property owners	• Follow the relevant measures suggested in the SEP. • Early liaison and effective communication shall be carried out with people who may be affected by the work of the contractor and supervision consultant. • Implementation of a program of ongoing liaison and respect for the local environment and residences shall be formed • The supervision consultant will appoint a dedicated person(s) accountable for community liaison who will be focused on engaging with the community to provide the appropriate information and to be the first line of response to resolve issues of concern.		X		Records of complaints Stakeholder engagement records		X		IPCU Contractor (Implementation) Consultant (Supervision)	

	• The Project Grievance Mechanism shall be implemented through the opening and closing of forms and complaints. • The names and contact telephone numbers and e-mail addresses of all site personnel with responsibilities for both supervision and management of the works will be displayed on the site information boarding. • Once planning consent has been obtained, formal contact will be established with the mukhtar of the neighbourhood and those who could potentially be affected by the construction will be informed via mukhtar. This will include consultation with relevant E&S risk management instruments and identifying any particularly sensitive times of the day. • Outside normal working hours, security personnel will act as the main point of contact via a dedicated phone number. Security will alert the person(s) accountable for liaison if necessary (available 24 hours). • All workers will sign/commit to and be trained on the Code of Conduct to manage the potential adverse impacts on social cohesion and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) risks. • Any complaints will be logged, fully investigated, and responded to quickly, advising what action has been taken. Complaints will be registered and reported to the Contractor, Training Consultant, Supervision Consultant and also IPCU. • Public notice boards will be established at site entrances providing relevant contact details of the for liaison including environmental matters.									

Labour and Working Conditions: Risks associated with potential labour influx and presence of worker camps (such as accommodation conditions, child labour risks, gender-based violence and harassment, human rights risks, etc.) and other labour issues	• Follow the relevant measures in Labour Management Plan (LM Plan) to be prepared in accordance with project LMP. • Workers will be provided with information and documentation that is clear and understandable regarding their terms and conditions of employment such as their rights under national labour and employment law (which will include any applicable collective agreements). • Workers will be paid on a regular basis as required by national law and project LMP. • Workers will be provided with adequate periods of rest per week, annual holiday and sick, maternity and family leave, as required by national law and project LMP. • Workers will receive written notice of termination of employment and details of severance payments in a timely manner. • Workers will be employed on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship. • Project workers, including specific groups of workers, such as women, people with disabilities, migrant workers and children of working age, will be provided with appropriate measures of protection and assistance in line with ESS2 of WB ESF. This process will be executed in accordance with the project LMP. • Workers are allowed to participate, or seek to participate, in workers' organizations and collective bargaining or alternative mechanisms. • Children under the minimum age of 18 will not be employed or engaged by the		X		Visual inspection of control measures Health records Employee records Training records Records of worker's complaints	X			Contractor (Implementation) Consultant (Supervision)	

	Contractor in connection with this sub-project. • Forced labor, which consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty, will not be used in connection with this sub-project. • A worker's GM will be established by the Contractor at the construction site for all workers to raise workplace concerns. Contact details of the worker's GM will be provided. • All workers will receive training about their rights under national labour and employment law and regarding the GM upon recruitment and before the implementation of the work. • Code of Conduct will be shared with project workers during employment. All workers are obliged to comply with the Code of Conduct and sign relevant documentation at the time of employment. • Movement in and out of the construction site will be controlled, and unauthorized access to the site will be prevented. • Contractor will confirm that workers are fit for work before they start work, paying special attention to workers with underlying health issues or who may be otherwise at risk. • The Contractor shall provide information and awareness of communicable diseases to workers. • The Contractor shall arrange safe drinking water, adequate toilet facilities for both genders, accommodation, rest and dining areas for the workers. • The Contractor shall provide a first aid kit with bandages, antibiotic cream, etc. or health care facilities, and shall identify and train an									

	adequate number of workers to provide first aid during medical emergencies.									
Cultural Heritage Chance Find	• Effective communication with local authorities, heritage organizations, and the community will ensure proper handling of any cultural heritage concerns at the beginning of the design stage • No disturbance of cultural or historic sites. • If encountered with any cultural heritage/assets during construction works (especially excavation and earthworks) apply the chance finds procedure (see ANNEX 4 of ESMF of the project).	X	X		Chance finds records		X		IPCU Contractor *(Implementation)* Supervision Consultant *(Supervision)*	
Biodiversity: Potential risks to flora and fauna due to construction activities and improper waste management	• According to Planned Areas Development Regulations (published in the Official Gazette dated July 03, 2017, and numbered 30113 and Attachment: RG-31/12/2022-32060) for residential, trade, tourism, education, worship, health, and sports parcels: 1 tree per 30 m² of area outside the building footprint. If planting on the parcel is not feasible, trees must be planted in designated public areas per zoning plans • If trees need to be cut in new resettlement plots, at least two times more than the trees cut will be planted at the site (preferably a site in the nearby region) identified by the General Directorate of Forestry. • Creation or enhancement of green spaces, such as parks and green roofs, can provide habitats for urban flora and fauna, contributing to biodiversity in developed areas. • Tree planting and the use of fire-resistant native plant species in landscaping projects can mitigate urban heat island effects while	X			Tree plantation records, Screening Visual inspection of control measures			X	Contractor (Implementation) Consultant (Supervision)	

	supporting ecological functions • Nature-based solutions, such as rainwater gardens and permeable surfaces, can reduce runoff, recharge groundwater, and enhance local ecosystems.									
Asbestos Management: Environmental, health and safety risks due to asbestos or asbestos-containing materials	• If asbestos or asbestos containing materials (ACM) are found at a construction site, they should be clearly marked as hazardous waste and managed according to a comprehensive Asbestos Management Plan (AMP). • The AMP should outline detailed procedures for the safe handling, containment, removal, and disposal of ACM, ensuring compliance with local and international regulations. • The asbestos should be appropriately contained and sealed to minimize exposure. • Prior to removal, if removal is necessary, ACM should be treated with a wetting agent to minimize asbestos dust. • If ACM is to be stored temporarily, it should be securely placed inside closed containers and clearly labelled.		X		Visual inspection of control measures Asbestos or ACM removal records	X			Contractor *(Implementation)* Consultant *(Supervision)*	
General for Procurement of Goods and Training										
Community Preparedness Training	• Ensure inclusive participation by conducting consultations with community leaders and vulnerable groups. • Provide training materials in accessible formats (e.g., braille, audio, simplified language). • Schedule sessions at accessible locations and times to encourage broad participation. • Climate change adaptation and emergency preparedness training should be provided.	X		X	Training reports		X		IPCU Training Consultants	

ANNEX 4. CHANCE FINDS PROCEDURES

Cultural heritage encompasses tangible and intangible heritage, which may be recognized and valued at a local, regional, national, or global level. Tangible cultural heritage 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 includes practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artifacts, and cultural spaces associated with them—that communities and groups recognize as part of their cultural heritage, 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 artifacts of cultural value are found, the following procedures for identification, protection from theft, and treatment of discovered artifacts should be followed and included in standard bidding documents. These procedures take into account requirements related to Chance Finding under below mentioned legislations;

1. Law on the Protection of Cultural and Natural Assets (Law No: 2863):
The primary legislation for the protection, registration, and preservation of archaeological sites, historical monuments, and natural heritage.

2. International Conventions on Cultural Heritage Protection:
Türkiye is a party to several key conventions, including:

- **UNESCO World Heritage Convention (1972)**: Protection of cultural and natural properties on the World Heritage List.
- **The Hague Convention (1954)**: Safeguarding cultural property during armed conflicts.
- **Granada Convention (1985)**: Focused on the protection of architectural heritage in Europe.
- **Convention for the Safeguarding of Intangible Cultural Heritage (2003)**.

3. Environmental Law (Law No: 2872):
Includes provisions for the preservation of cultural and natural heritage within the context of environmental protection.

4. Regulations on Archaeology and Historical Artifacts:

- Excavation and Research Regulation: Governs the approval and execution of archaeological excavations and surface surveys.
- Museums and Collections Regulation: Defines rules for the exhibition and preservation of historical artifacts.

5. **Zoning Law (Law No: 3194):**
Regulates construction activities in protected areas to ensure the integrity of cultural heritage sites.

6. Constitution of the Republic of Türkiye (Article 63):
Mandates the state to safeguard historical, cultural, and natural assets and to take the necessary measures for their protection.

7. Regulation on the Protection of Designated Sites:
Provides detailed guidelines for the identification, registration, and protection of archaeological, urban, natural, and historical conservation sites.

8. Legislation Preventing the Illegal Export of Cultural Assets:
Includes measures under the **Anti-Smuggling Law (Law No: 5607)** to prevent the unauthorized export of cultural heritage.

Given the critical importance of safeguarding cultural heritage during project implementation, the following procedures are designed to ensure compliance with the aforementioned legislations. These procedures will be integrated into the project's construction and operational protocols to address any chance finds effectively. They align with both national laws and international best practices, ensuring the preservation and responsible management of cultural resources that may be encountered during project activities.

Procedures for Chance Find

A. **Stop Construction Activities Immediately**:

- Construction work must stop in the area where the find is discovered.
- A safety buffer zone must be established around the site to prevent further disturbance.
- Chance Finds shall be recorded in the Chance Finds Notification Form (see Table 4). Print copies of Chance Find Notification Forms shall be available on-site, which shall be always scanned once filled in and registered and saved.
- Chance Find Notification Forms shall be updated by the site supervisor, which is recorded in the Chance Finds Log (see **Table 5**). This document shall be regularly checked.

B. **Secure the Site**:

- Protective measures must be taken to safeguard the area against theft, vandalism, or further damage.
- If movable objects are involved, the site must be guarded until responsible authorities intervene.

C. **Notify Responsible Authorities**:

- Inform the Regional Conservation Board / District Municipality /Law enforcement through the IPCU or environmental/social specialists on site.
- The notification should include a description, photos and approximate location of the find.

D. **Evaluation and Decision**:

- Responsible archaeologists or cultural heritage experts from the regional museum will evaluate the find's significance.
- If the museum archaeologist determines the find/site is of no significance, the site supervisor informs the authorities, and construction may proceed once clearance is granted.
- If the museum archaeologist deems the find/site significant, the museum director decides on further actions, and construction resumes only after the necessary documentation and studies are initiated,

completed, and clearance is provided. If deemed significant, appropriate documentation and studies will be initiated.

E. **Obtain Clearance**:

- Construction can only resume upon written clearance from the Regional Conservation Board after assessing and managing the find appropriately.

F. **Detailed Documentation**:

- All chance finds must be recorded, including photographs, maps, and descriptions.
- A Chance Find Log must be maintained for audit purposes.
- The details of the responsible individuals and institutions for such cases are outlined in Table 6, which includes the Museum Directorate and the Conservation Board along with their contact details.

Training and Awareness

- Construction personnel must receive training on identifying and safeguarding cultural heritage during construction.
- Clear communication protocols must be established to ensure immediate reporting and compliance with procedures.

Table 4: Reporting of Chance Finds – Notification Form

PART A **BÖLÜM A**				
Sub-Project Location: *Proje Sahası*	District (İlçe):	Date: *Tarih:*	Form No:	*Project Information* Proje Bilgisi
Name of person reporting chance find: *Rastlantısal buluntuyu rapor eden kişinin ismi*				
Was work stopped in the immediate vicinity of the chance find? ☐ Yes ☐ No *Rastlantısal buluntu tam çevresinde iş durduruldu mu? Evet Hayır*				
Was a buffer zone created to protect the chance find? ☐ Yes ☐ No *Rastlantısal bulguyu korumak için tampon bölge oluşturuldu mu? Evet Hayır*				
NOTIFICATION ***BİLDİRİM***				
Site manager and E&S manager contacted ☐ Yes ☐ No *Saha Müdürü ve Çevre Müdürü ile irtibata geçildi Evet Hayır*				
CHANCE FIND DETAILS ***ŞANS BULGU AYRINTILARI***				
GPS coordinates *GPS koordinatları*		Photo record ☐ Yes ☐ No (HD quality – no cell phone photos) *Fotoğraf kaydı Evet Hayır* *(HD kalitesinde –cep telefonu fotoğrafı değil)* If not, explain why: *Değil ise nedenini açıklayınız* Other records ☐ Yes ☐ No Specify (drawings, HD quality videos, etc.): *Diğer kayıtlar Evet Hayır* *Belirtin (çizimler, HD kalite videolar, vb.)*		
Description of chance find: *Rastlantısal bulgunun tanımı*				
Description of site/finding and other specifications of site/finding: (e.g. surface sediment type, ground surface visibility, distance to closest watercourse, etc.) *Sahanın / bulgunun ve saha/bulgunun diğer özelliklerinin tanımı: (örn. Yüzey sediman türü, yüzey zemin görünürlüğü, en yakın suyoluna olan mesafe, vb.)*				

PART B ***BÖLÜM B***	
NOTIFICATION OF MUSEUM DIRECTORATE ARCHAEOLOGIST ***MÜZE MÜDÜRLÜĞÜ ARKEOLOĞUNA BİLDİRİ***	
Monitoring archaeologist contacted museum directorate archaeologist ☐ Yes ☐ No *İzleme arkeoloğu, müze müdürlüğü arkeoloğu ile irtibata geçti.* *Evet* *Hayır* Date of notification: *Bildirim tarihi* Name of museum directorate and name of museum archaeologist: *Müze müdürlüğünün adı ve Müze müdürlüğü arkeoloğunun adı* Contact number of museum directorate archaeologist: *Müze müdürlüğü arkeoloğunun iletişim numarası*	
DECISION OF MUSEUM DIRECTORATE ARCHAEOLOGIST MÜZE MÜDÜRLÜĞÜ ARKELOĞUNUN KARARI	
Date of site visit: *Saha ziyaret tarihi:*	
☐Site/Finding of no significance - Construction to proceed with no further action – End of a chance find the procedure *Önemsiz Saha – Bulgu - daha fazla araştırma yapılmadan inşaat devam edilebilir – Rastlantısal bulgu prosedürün sonu.* Date of notice to resume work: *İşe devam etme tarihinin bildirisi*	☐ **Site/Finding of significance - Further actions required** *Önemli Saha – Bulgu - Ek araştırma gerekmektedir* Please Fill out Part C *Lütfen Bölüm C'yi doldurun.*
Name of museum directorate archaeologist: *Müze müdürlüğü arkeoloğunun ismi* Contact information: *İletişim numarası*	
Site manager and E&S manager contacted ☐ Yes ☐ No Saha Müdürü ve E & S müdürü ile irtibata geçildi Evet Hayır	
PART C ***BÖLÜM C***	
FURTHER FIELD INVESTIGATION ***EK SAHA ARAŞTIRMASI***	

☐ Site/Finding of minor significance *Az önem taşıyan saha/bulgu*	☐ Site/Finding of moderate significance *Orta derecede önemli saha/bulgu*	☐ Site/Finding of high significance *Çok önemli saha/bulgu*	
Describe additional work to be conducted. Yapılması gereken ek islerin tanımı			

Istanbul Resilience Project

Date started:
Başlangıç tarihi

Date of notice to resume work
İşe geri dönme tarihi bildirisi

Name of museum directorate archaeologist:
Müze müdürlüğü arkeoloğunun ismi:

Contact information:
İletişim numarası

Date completed:
Bitiriş tarihi

Construction manager contacted *İnşaat müdürü ile irtibata geçildi*	☐ Yes *Evet*	☐ No *Hayır*

Table 5: Chance Finds Record

DATE OF FIND	BRIEF DESCRIPTION OF THE CHANCE FIND	NAME OF AUTHORİZED STAFF HAS BEEN	ACTION TAKEN	CHANCE FIND NOTIFICATION COMPLETE	STATUS OPEN OR CLOSED	OTHER CONSIDERATIONS

Table 6: Contact Information

MUSEUM DIRECTORATE	ADDRESS	TELEPHONE	FAX	E-MAIL

CONSERVATION BOARD	AREAS OF RESPONSIBILITY	ADDRESS	TELEPHONE	FAX	E-MAIL

ANNEX 5. WASTE MANAGEMENT PLAN

Purpose and Scope

The Waste Management Plan is developed to establish the primary requirements associated with waste management in compliance with national legislation and the World Bank Environmental and Social Framework (ESF), including its Environmental and Social Standards (ESSs). This plan applies to the construction phase and operational activities of the project.

Throughout the project's lifecycle, various types of waste and materials will be generated from different sources and activities. The purpose of this plan is to ensure the appropriate collection, segregation, storage, handling, transportation, and disposal of both non-hazardous and hazardous wastes in a manner that minimizes impacts on human health and the environment, while optimizing the reuse and recycling of valuable materials.

This plan complies with:

- National legislation and relevant regulations on waste management.
- World Bank ESS3 on Resource Efficiency and Pollution Prevention.
- Good International Industry Practices (GIIPs).

The Waste Management Plan will be implemented alongside related management plans and programs, including:

- The Environmental and Social Management Plan (ESMP).
- Labor Management Procedures (LMP).
- Community Safety and Traffic Management Plan.
- Stakeholder Engagement Plan (including grievance mechanisms).

This Plan is a dynamic document, subject to periodic updates to reflect changes in regulations, project requirements, or improvements in industry standards.

5.1. Legislative Requirements and Standards

5.1.1. National Legislation

The Environmental Law (No. 2872), which was published in the Official Gazette No. 18132 dated August 11, 1983, provides the legislative framework for the regulation of industries and their potential impact on the environment. Industrial projects are subject to varying levels of review that begin while projects are in the development phase. Additional regulations apply to facilities once they are in operation.

The Environmental Law authorized the promulgation of several regulations. Those that pertain to waste management and the Project must comply with are described below.

5.1.2. Regulation on Waste Management

The Regulation on Waste Management is the implementing legislation aimed at aligning with the EU Waste Framework Directive. The Regulation was published in the Official Gazette No. 29314 dated April 2, 2015.

The Regulation on Waste Management provides a single comprehensive framework for waste management. As of April 2015, it repealed and replaced the Regulation on Solid Waste Management and the Regulation on General Principles of Waste Management. As of April 02, 2016, it also repealed and replaced the Regulation on Control of Hazardous Wastes.

Article 9 of the Regulation stipulates the responsibilities of the waste generators and waste owners, including:

- Implementation of necessary measures to minimize waste generation;
- Preparation and submission of waste management plan regarding generated wastes (with prevention and minimization measures);
- Declaration of annual waste generation via the web-based system of the Ministry of Environment, Urbanization and Climate Change and use of National Waste Transport Form for wastes that require its use (template is provided in Annex 9-A of the Hazardous Waste Control Regulation which is repealed and replaced by Regulation on Waste Management).

5.1.3. Regulation on Control of Excavation, Construction, and Demolition Wastes

Regulation on Control of Excavation, Construction and Demolition Wastes was published in Official Gazette No. 25406 dated March 18, 2004. Articles 10, 34, 35, 36, 37, 38, 39, 40, 41, and 42 regarding the storage of the wastes were repealed by the Landfill Regulation published in Official Gazette No.27533 dated March 26, 2010.

This regulation aims to set the principles and procedures to minimize excavation, construction, and demolition waste at the source of generation, as well as to collect, temporarily store, transfer, recycle,

reuse, and dispose of waste, in an environmentally sound manner.
By Article 9 of the regulation; excavation, construction, and demolition generating facilities are obliged to implement waste management in a way that will minimize the adverse effects of waste on the environment and human health. The facilities must acquire the necessary permissions that concern the generation, transportation, and storage operations of waste. The facilities are not allowed to dump construction wastes on the sites/locations and facilities other than the permitted ones by the municipal or other authorities.

The regulation also stipulates that the project owner is responsible for taking precautions to minimize noise impacts, visual impacts, and dust emissions during the removal of excavation material. The operation area must also be enclosed. In addition, planning should be one in a way that the amount of excavated soil is equal to the filling volume. Excavated soils must be utilized within the operation area to the extent possible.

5.1.4. Packaging Waste Control Regulation (PWCR)

PWCR was published in the Official Gazette No. 28035 dated August 24, 2011, and also updated and published in the Official Gazette No: 31523 dated June 26, 2021. The regulation aims to;

- Provide certain environmental criteria, requirements, and characteristics for packaging production,
- Prevent direct and indirect disposal of packaging wastes causing environmental damage, and
- Prevent and minimize the generation of package waste through reuse, recycling, and recovery methods.

PWCR states that the packaging wastes should be collected and stored separately from other wastes at the source to ensure their disposal without causing any environmental damage; to reduce environmental pollution; to benefit from the landfills at maximum levels; and to contribute to the economy.

Packaging waste-generating parties located in the boundaries of municipalities that conduct separate collection at source are obliged to deliver the packaging wastes to the responsible municipalities or their contracted and licensed collection/separation entities.

5.1.5. Waste Batteries

Waste Batteries and Accumulators Control Regulation was published in Official Gazette No. 25569 dated August 31, 2004. The purpose of this Regulation is;

- Arrange legal and technical principles for the development of policies and programs for batteries and accumulators from their production to their final disposal,
- Ensure production of batteries and/or accumulators with certain criteria and basic conditions

and characteristics in terms of the environment,

-
- Prevent discharge to the receiving environments,
- Ensure technical and administrative management standards are in place, and
- Establish a collecting system for the recovery and final disposal of used batteries and accumulators.

According to the Regulation, battery, and accumulator consumers are obliged to;

- Collect used batteries separately from household wastes,
- Deliver used batteries to the collection points established by municipalities or enterprises that are engaged in the distribution and sales of battery products,
- Deliver the old accumulators to the temporary storage facilities established by the enterprises engaged in the distribution and sale of accumulator products and enterprises operating vehicle maintenance/ repair sites (accumulators cannot be delivered over 90 days once they are out of use),
- Pay a deposit if a new accumulator is to be purchased when delivering the old one and
- Ensure impervious ground and other required conditions are met for the temporary storage sites where batteries and accumulators will be stored,

5.1.6. Waste Oils Management Regulation (WOMR)

WOMR was published in the Official Gazette No. 26952 dated June 30, 2008, and also updated and published in the Official Gazette No. 32071 dated January 12, 2023. The purpose of the WOMR is:

- To prevent direct and indirect disposal of waste oils in the environment;
- To ensure temporary storage, transportation, and disposal thereof without causing harm to the environment and human health;
- To set up necessary technical and administrative standards in the management of waste oils;
- To determine the required principles and programs to establish temporary storage, handling, and disposal facilities;
- To manage these facilities in an environmentally friendly manner.

According to Article 9 of WOMR, waste oil producers are obliged to take the required measures to minimize the generation of waste oils, including waste motor oils and residues resulting from the processing of waste oils. Waste oil producers must conduct waste oil analyses and declare generated amounts to the Ministry of Environment, Urbanization, and Climate Change. Waste oil from different categories should not be mixed with other hazardous wastes.

Waste oil producers shall comply with the provisions of the Regulation on Waste Management for disposal. All records including waste oil declaration forms and analysis reports are required to be kept for at least five years. To transport waste oils, the regulations that will be determined by MoEUCC shall be complied with.

Waste oil is required to be collected in red colored tanks/containers with a label of "Waste Oil" on it as

stated in Annex 5/Article 5.1.6. The containers are placed in storage with provisions for protection from rain, as well as the impermeable ground (a thickness of at least 25 cm and covered by epoxy, geo membrane, and similar insulation materials).

5.1.7. Regulation on Control of Waste Electrical and Electronic Equipment

The regulation was published in the Official Gazette No. 28300 dated May 22, 2008, and also updated in the Official Gazette No: 32055 dated December 26, 2022. One of the main purposes of the Regulation is to identify the methods and targets regarding the minimization of electrical and electronic waste generation through reuse, recycling, and recovery.

5.1.8. Regulation on General Principles of Waste Pre-treatment and Recycling Facilities

The regulation was published in Official Gazette No. 31623 dated October 09, 2021. It is to determine the procedures and principles regarding the technical criteria of the waste pre-treatment and recovery facilities operating for the processing of wastes and the minimum requirements to be found in these facilities.

5.2. Requirements of World Bank ESF

5.2.1. Resource Efficiency, Pollution Prevention, and Management ESS3

ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services, and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention, GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable.

This ESS sets out the requirements to address resource efficiency and pollution[6] prevention and Management[7] throughout the project life cycle consistent with Global International Industry Practice (GIIP).Resource Efficiency and Pollution Prevention and Management Standard's objectives are provided below:

- To promote the sustainable use of resources, including energy, water, and raw materials.
- To avoid or minimize adverse impacts on human health and the environment by avoiding or

[6] The term "pollution" is used to refer to both hazardous and nonhazardous chemical pollutants in the solid, liquid, or gaseous phases, and includes other components such as thermal discharge to water, emissions of short- and long-lived climate pollutants, nuisance odors, noise, vibration, radiation, electromagnetic energy, and the creation of potential visual impacts including light.

[7] Unless otherwise noted in this ESS, "pollution management" includes measures designed to avoid or minimize emissions of pollutants, including short- and long-lived climate pollutants, given that measures which tend to encourage reduction in energy and raw material use, as well as emissions of local pollutants, also generally result in encouraging a reduction of emissions of short- and long-lived climate pollutants.

minimizing pollution from project activities.

- To avoid or minimize project-related emissions of short- and long-lived climate pollutants.
- To avoid or minimize the generation of hazardous and non-hazardous waste.
- To minimize and manage the risks and impacts associated with pesticide use.

5.2.2. European Union (EU) Legislation

Directive 2008/98/EC (the Waste Framework Directive) provides general provisions for waste management and sets the basic waste management definitions. It requires that waste is managed without endangering human health and harming the environment, and in particular without risk to water, air, soil, plants, or animals, without causing a nuisance through noise or odors, and without adversely affecting the countryside or places of special interest. The Directive amended the former EU directive on waste, hazardous waste, and waste oils and is currently covering all wastes identified by Decision 2000/532/EC (i.e. the European Waste Codes).

To harmonize Turkish environmental protection standards with the EU's Waste Framework Directive (2008/98/EC) and the European Commission Decision establishing a list of waste (2000/532/EC), the Turkish MoEUCC adopted a new regulation on waste management that will significantly affect companies that produce waste in Türkiye. Waste management implementing legislation aimed at aligning with the Waste Framework Directive was adopted in 2015. Currently, waste codes provided in Annex 4 of the Turkish Regulation on Waste Management are entirely the same as the European Waste Codes.

5.3. Roles and Responsibilities

Roles and responsibilities for Environmental and Social (E&S) management for the Project are described in detail in the Project ESMF. Within this scope, roles and responsibilities regarding waste management are provided in Table 7.

Table 7: Roles and Responsibilities

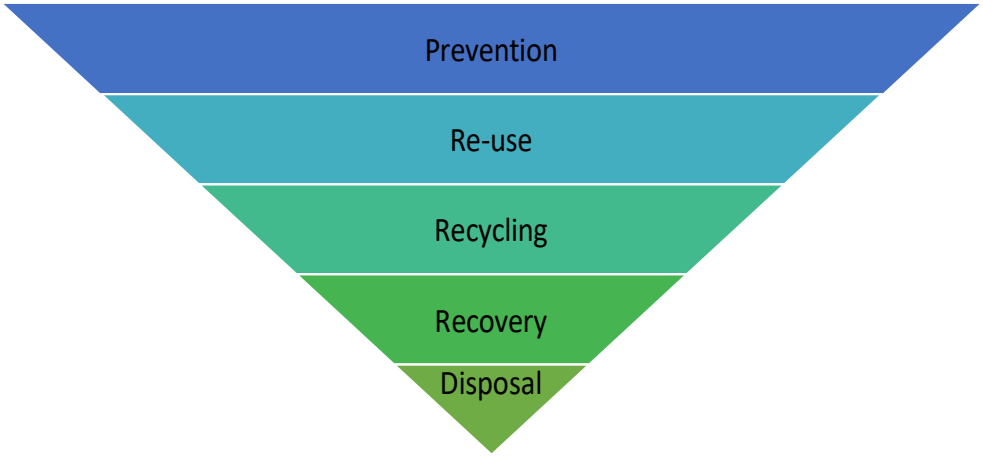
Roles	Responsibilities
IPCU	• Ensure adequate resources are provided for the implementation of this Plan. • As required, review and update the Plan
Design Consultant	• Incorporate waste minimization strategies into project designs. • Identify hazardous materials and recommend safe handling or replacement solutions • Specify recyclable or sustainable materials to minimize environmental impact. • Collaborate with contractors to align construction practices with waste management objectives.
	• Ensure technical support is provided to the Contractor for the implementation of the Plan.

Supervision Consultant	• Ensure related trainings are provided by the Contractor, through a review of training records and related training documents. • Oversee Contractors' HSE compliance with Project requirements through Contractor monitoring and reports.
Contractors	• Ensure this plan is implemented in line with Project standards • The main responsibility for ensuring the implementation of the Plan (including by the Sub-Contractors if any) and reporting non- compliances and implementation performance of the Plan to the supervision consultant. • As required (e.g. in the case compliance is identified, a change in applicable legislation occurs, etc.), participate in the development of corrective and/or enhancement actions. • Provide related trainings. • Conduct internal audits and daily inspections and record identified in compliance. • Ensure related non-compliances are recorded and responded to immediately. • As required, review and update the Plan (in coordination with the supervision consultant). • Ensure waste management issues are included in the daily checklist to be integrated into the monthly report to be submitted to IPCU.
All personnel	• Participate in trainings required for waste management. • Ensure self-competency in terms of the implementation of this plan.

5.4. Waste Management

5.4.1. Waste Management Approach

Turkey's Regulation on Waste Management (2015) establishes a waste hierarchy that prioritizes environmentally favorable waste management practices, forming the basis for national legislation and policies. Similarly, the EU's Waste Framework Directive (Directive 2008/98/EC) adopts this hierarchy as a foundational approach for applicable waste legislation and policy. This hierarchy will also guide the Project's waste management strategy. Accordingly, waste management will be implemented in the following order of decreasing preference:



In order to minimize and appropriately manage the waste generated on-site, the following good management practices will be used:

- Reduction of waste generation (through management practices, avoiding or decreasing materials use, etc.) is the primary goal of this plan.
- Non-hazardous wastes will be segregated from hazardous wastes.
- Recycling of wastes will be mandatory throughout all Project activities and related trainings will be provided.
- All waste management activities, including the segregation of wastes by type for delivery to licensed recycling or recovery firms, will be documented and regularly reviewed to ensure compliance with project requirements and relevant regulations.
- An effort will be made to minimize the number of hazardous materials used.
- Contractors must designate an environmental engineer and at least one responsible personnel for the waste site at the construction site, provide their contact details to the IPCU, and ensure that all personnel handling hazardous materials and wastes are properly trained in their handling and management.
- Spills of hazardous materials will be prevented through careful and sensible management of the materials. An emergency response plan will be established for waste-related incidents, including procedures for containment and clean-up of hazardous spills.
- Where possible, non-hazardous alternatives will be used in place of hazardous materials.
- Regular inspections of storage areas will be conducted. If damaged or leaking containers are detected, they will be replaced.
- Preventive maintenance will be performed on equipment to avoid potential spills.
- Waste storage areas will have secondary containment or spill trays.
- Under no circumstances, waste will be disposed of on-site.
- Stakeholder engagement and awareness will be fostered to ensure effective implementation of waste management practices.
- To ensure resilience against climate and disaster risks, waste storage and management processes will incorporate the following measures:
- Waste storage areas will be located outside flood prone zones and designed to withstand extreme weather conditions.
- Fire suppression systems, including chemical extinguishers for hazardous materials, will be installed.

- Temporary waste management protocols for disaster scenarios will be established to address emergency needs effectively.

5.4.2. Classification of Wastes Generated During Project Activities

The Project activities will lead to the generation of various non-hazardous and hazardous wastes.

5.4.2.1. Non-Hazardous Wastes

Typical non-hazardous wastes are given below;

- Domestic waste (e.g., food scraps, household items),
- Recyclable wastes such as paper, glass, metals, wooden waste, trees, tin cans, textiles, etc.,
- Packaging waste (e.g., cardboard, plastics, composite materials),
- Waste tires, and
- Excavation waste such as soil, rocks and construction debris, etc.

5.4.2.2. Hazardous Wastes

Different types of hazardous wastes, that may potentially be generated as a result of the project activities, are given below:

- **Asbestos-containing materials (ACM)** will be managed in accordance with a dedicated **Asbestos Management Plan**,
- Waste batteries and accumulators,
- Waste vegetable oil,
- Medical waste,
- Waste oil generated from equipment and vehicle maintenance, such as engine oil, hydraulic fluids, and transformer oil,
- Waste paint, thinner related wastes,
- Other hazardous waste related to operation and maintenance (O&M) activities such as broken lighting fixtures, cables, and insulation materials that may contain heavy metals, and
- Contaminated materials, including containers and materials that have been in contact with hazardous substances.

5.4.3. Implementation

The Istanbul Project Coordination Unit (IPCU) requires all contractors to register with the Ministry of Environment, Urbanization, and Climate Change EÇBS (Entegre Çevre Bilgi Sistemi)8 for the transport and disposal of hazardous waste. This registration must be completed by the contractor within one

[8] The **Entegre Çevre Bilgi Sistemi (EÇBS)**, or Integrated Environmental Information System, is an online platform developed by Turkey's Ministry of Environment, Urbanization, and Climate Change. It centralizes environmental compliance processes, including waste management, environmental permits, emissions monitoring, and more. Businesses and facilities use EÇBS to report, track, and fulfill legal environmental requirements.

month following the contract signing. All hazardous waste-related operations, including declarations, transport, and disposal, must be carried out exclusively through the MoTAT system to ensure compliance with legal and environmental standards. Documentation related to these processes should be provided to IPCU for monitoring purposes and included in the monthly progress report appendices.

To maintain traceability and accountability, all waste transactions must be documented in EÇBS, including the use of licensed transporters and disposal facilities, the issuance of transport forms (TATF), and disposal certificates. Contractors are responsible for ensuring that all required records are properly maintained for a minimum of five years. Detailed requirements and key considerations for the management, transport, and disposal of hazardous waste are provided in the relevant sections below. These measures ensure alignment with national regulations, promote environmental protection, and enable effective oversight by IPCU.

5.4.3.1. Waste Collection, Storage, Transportation and Disposal

In compliance with applicable legal requirements, a comprehensive waste management plan covering both hazardous and non-hazardous wastes will be prepared and submitted to the Istanbul Project Coordination Unit (IPCU) for review and approval. This plan will ensure that all project activities align with the Regulation on Waste Management (2015) and other relevant regulations.
All wastes will be managed in accordance with the following principles:

a. Wastes will be segregated at the source to facilitate recycling and safe disposal.
b. Temporary storage of wastes will be carried out in designated, secure areas that are clearly marked and protected from environmental factors.
c. Transportation of wastes will only be conducted by authorized firms with valid licenses, ensuring compliance with national regulations.
d. Disposal of all waste types will be performed at facilities licensed by the relevant authorities, ensuring environmental and human health protection.
e. **Asbestos-containing materials (ACM)** will be managed in line with the **Asbestos Management Plan**, which provides detailed procedures for the safe handling, storage, transportation, and disposal of such materials to prevent exposure and health risks.

5.4.3.2. Collection, Segregation and Storage

To ensure proper waste management, the following procedures will be implemented:

a. **Designated Storage Areas:** Separate, secured, and clearly marked storage areas will be allocated for hazardous and non-hazardous wastes to prevent cross-contamination and ensure safety. These storage areas will be adequately sized to accommodate the volume of waste generated and will be equipped with fire extinguishers suitable for chemical fires to address potential fire risks.
b. **Waste Containers:** Suitable containers, appropriate to the type of waste, will be provided at waste generation points. Containers will be labeled and appropriate colored to identify their contents and prevent mishandling. **Asbestos-containing materials (ACM)** will be stored in line

with the **Asbestos Management Plan.**

c. **Regular Inspections:** Storage areas will be regularly inspected to ensure compliance with safety and environmental standards, and any damaged or leaking containers will be replaced immediately.
d. **Training and Awareness:** Personnel involved in waste handling will be trained on proper segregation, storage, and transportation practices to ensure compliance with the project's waste management plan.

Non-Hazardous Wastes

Management of non-hazardous wastes will adhere to the following procedures:

Domestic Wastes:

- Domestic wastes will be collected in designated trash bins and temporarily stored onsite in compliance with the Regulation on Waste Management (2015) and Packaging Waste Control Regulation (2020).
- Regular collection and removal schedules will be established to prevent accumulation and pest infestations.

Recyclable Wastes:

- Recyclable materials, such as paper, glass, and metals, will be segregated at the source and stored temporarily in clearly marked areas dedicated to recyclable wastes.
- Transportation of recyclable wastes to related district municipalities/licensed recycling facilities will be prioritized.
- Packaging wastes will be collected separately and stored temporarily onsite in designated areas in compliance with Regulation.
- Proper labeling of packaging waste storage areas will ensure alignment with regulatory requirements.

Waste Containers and Labeling:

- Suitable waste containers will be provided at each waste generation point to facilitate safe and environmentally sound temporary storage.
- All containers will be clearly labeled and colored according to their contents (e.g., domestic waste, recyclable materials, packaging waste) to prevent mismanagement and cross-contamination.

Periodic Monitoring and Reporting:

- Waste management practices will be monitored periodically, and any non-conformities will be documented and addressed immediately.
- A reporting system will be established to track waste generation, storage, and disposal activities.

Hazardous Wastes

- The management of hazardous wastes will adhere to both national and international standards, ensuring safe handling, storage, and disposal practices throughout the Project. The following procedures will be implemented:

Storage of Hazardous Wastes:

- Hazardous wastes will be stored in non-damaged, leak-proof, secure, and appropriately sized containers to suit the type and volume of waste.
- Containers will be placed in dedicated storage areas designed to isolate the wastes from the environment and human activities, ensuring no adverse effects on human health or the environment.
- Storage areas will provide facilities to protect wastes from seasonal weather conditions, such as rain or extreme heat, to maintain the structural integrity of the wastes.
- Secondary containment systems (e.g., spill trays or containment barriers) will be installed in hazardous waste storage areas to capture and contain any potential spills or leaks. In accordance with the emergency response plan, waste-related incidents, including the containment and clean-up of hazardous spills, will be managed effectively.

Labeling and Identification:

- All waste containers will have clear and accurate labels, detailing the type of waste, classification/category, volume, Material Safety Data Sheet (MSDS), and required Personal Protective Equipment (PPE).
- Unidentified wastes will be treated as hazardous by default.
- Old or incorrect labels will be removed or covered to avoid mismanagement.

Access Control and Security:

- Waste storage areas will be designed to prevent unauthorized access and will include locking mechanisms to ensure security.
- Only trained and authorized personnel will have access to hazardous waste storage areas.

Regular Inspections:

- Hazardous waste containers will be inspected regularly for signs of damage, leakage, or other risks. Damaged containers will be replaced immediately.
- Spillages will be addressed promptly using absorbent materials, and contaminated materials will be managed as hazardous waste.

Safe Handling Practices:

- Containers will always be kept closed to prevent accidental spills or reactions.
- Wastes will be stored in a manner that prevents chemical reactions, including maintaining appropriate separation distances between incompatible materials.

Machinery Maintenance Waste:

- Maintenance of vehicles and construction machinery (e.g., oil changes, battery replacements) will primarily occur off-site at licensed service providers.
- If on-site maintenance is unavoidable, designated areas with appropriate drainage and impermeable surfaces will be used to prevent soil contamination.
- Absorbent materials will be placed under vehicles during maintenance activities, and any contaminated soil will be stripped and managed as hazardous waste.

Waste Oil Management:

- Waste oils will be segregated by category and temporarily stored in labeled containers on impermeable surfaces, in line with the Waste Oil Management Regulation.
- Waste oils of different categories will not be mixed, and all storage containers will bear a "Waste Oil" label.
- Discharge of waste oils into sinks, drains, or natural environments is strictly prohibited.

Vegetable Oils:

- If meals are prepared and served to workers at the construction site, waste vegetable oils will be collected and temporarily stored in special containers, ensuring compliance with relevant regulations.

Toner Waste:

- Used toner cartridges from site office printers and copiers will be collected in dedicated containers clearly labeled as "Toner Waste" and stored temporarily in an easily accessible and secure location within the site office.

Electronic Waste:

- E-waste, including damaged or obsolete electronic equipment such as computers, monitors, and printers, will be collected and stored separately in secure and weather-resistant storage areas.

Batteries and Accumulators:

- Waste batteries and accumulators will be collected and stored separately in compliance with the Waste Batteries and Accumulators Control Regulation, with a dedicated collection box placed in an easily accessible location within the site office, clearly labeled as "Waste Battery Collection Box."

End-of-Life Tires:

- Changed tires from vehicles or construction machinery will be stored in designated areas, in line with the End-of-Life Tires Control Regulation.

Explosives (If Applicable):

- While the Project does not require the use of explosives, any waste explosives will be stored in their original containers, marked as "Explosive Waste," and managed by licensed firms.

Training and Awareness:

- Personnel handling hazardous wastes will be trained on proper handling, storage, and emergency response measures to ensure safe practices across all Project activities.

Compliance with Regulations:

- All hazardous waste management activities will comply with Turkey's relevant regulations, including the Regulation on Waste Management, and adhere to EU directives where applicable.

5.4.3.3. Transportation and Disposal

Non-Hazardous Wastes

The following management controls will be implemented for the transport, recycling, recovery, and disposal of non-hazardous wastes:

- A protocol will be signed with the related municipality for the transfer of domestic wastes to a sanitary landfill.
- Agreements will be signed with licensed firms for the transport of segregated recyclable and packaging wastes, ensuring compliance with the Packaging Waste Control Regulation.
- Excavation waste that cannot be reused on-site will be transported to excavation, construction, and demolition disposal areas approved by the respective municipality. This process will adhere to the Excavation, Construction, and Demolition Waste Control Regulation.

Agreements between the Contractors and licensed waste facilities must be annexed to their Management Plan (MP) for reference and submitted to the IPCU as an appendix to the monthly reports.

Hazardous Wastes

- The following management controls will be implemented for the transport, reuse, recovery, recycling, and disposal of hazardous wastes:

Transportation and Disposal of Hazardous Wastes:

- Hazardous wastes will be transported off-site when on-site storage nears maximum capacity.
- Wastes will be securely packed, labeled, and accompanied by appropriate documentation to ensure safe transport to approved disposal facilities, minimizing risks to handlers and the environment.

Batteries and Accumulators:

- Separately collected waste batteries and accumulators will be delivered to collection points established by recovery enterprises, distribution and sales firms, or municipalities, in compliance with the Waste Batteries and Accumulators Control Regulation.

Waste Tires:

- Waste tires will be transported to licensed facilities for recycling, reuse, or energy recovery, following the End-of-Life Tires Control Regulation.

Medical Waste:

- While the project does not anticipate the generation of medical waste, if required, medical waste will be delivered to nearby healthcare facilities or licensed medical waste disposal firms under the supervision of the workplace doctor, as per national regulations.

Waste Oils:

- Waste oils will be transported by licensed transporters to licensed processing and disposal facilities.
- The National Transportation Form will be completed before transportation, and the Waste Oil Declaration Form will be submitted to the relevant authorities annually, as required by the Waste Oil Management Regulation.

Toner Waste:

- Toner waste will be transported by licensed transporters to authorized recycling or disposal facilities in compliance with relevant regulations.

Vegetable Oils:

- Waste vegetable oils collected in special containers will be sent to licensed companies for reuse or recovery.

Asbestos-Containing Materials (ACM):

- ACM will be managed according to the Asbestos Management Plan, which includes detailed procedures for safe handling, secure packaging, and transportation to approved disposal facilities. Licensed firms will handle all aspects of ACM management to prevent exposure risks to workers and the public.

Other Hazardous Wastes:

- Licensed disposal facilities will be used for the transfer and disposal of other hazardous wastes, ensuring compliance with relevant regulations.

Documentation and Agreements:

- Agreements between the Company and licensed hazardous waste facilities will be annexed to this Management Plan (MP) for transparency and accountability.

5.5. Monitoring and Reporting

The waste types, quantities, and classifications will be systematically recorded and monitored to ensure compliance with this plan and relevant regulations. The following procedures will be implemented:

Monthly Waste Records:

- Records of all waste types, from generation to their final destination, will be maintained. A sample waste log form is provided in Table 8.

Annual Waste Declarations:

- Waste declaration forms will be submitted annually using the online system of the Ministry of Environment, Urbanization, and Climate Change (MoEUCC) at **http://online.cevre.gov.tr.** These forms, along with National Waste Transport Forms, will be retained on-site for a minimum of 5 years.

Daily Inspections:

- Daily inspections of on-site waste management practices will be conducted during both construction and operation phases. A sample checklist for inspection items is included in Table 9.

Quarterly Internal Audits:

- Internal audits will be performed quarterly during the construction phase to identify areas for improvement.

Reporting to Stakeholders:

- Inspection and monitoring results will be reported to the supervision consultant, Provincial Directorate of Environment, Urbanization, and Climate Change (PDoEUCC), and the World Bank within the scope of biannual reporting.

Corrective and Preventive Actions:

- Based on monitoring and audit results, corrective and/or preventive actions will be designed and implemented. The performance of these actions will be tracked, monitored, and reported to ensure continuous improvement.

5.6. Training

Effective waste management training is critical to ensure the successful implementation of this plan. The following training measures will be implemented:

General Training:

- Contractors will provide sufficient training to all personnel, including sub-contractors, to ensure awareness of relevant aspects of this plan, related legislation, standards, and general waste management practices (e.g., waste segregation, tidiness).

Specialized Training:

- Personnel working routinely with hazardous wastes will receive specialized training on handling, segregation, labeling, storage, spill response, and disposal requirements.

Training Records:

- Training sessions will be documented, including details such as participants, topics covered, and training duration. These records will be kept on-site for verification purposes.

Emergency Response Training:

- Personnel involved in hazardous waste handling will also receive practical training on emergency response measures to mitigate risks effectively.

5.7. Review and Update

This plan is a living document, meaning it will be reviewed and updated periodically to reflect changes in project requirements, related legislation, or industry standards. The following principles will guide this process:

Regular Updates:

- Updates will be made as necessary, especially after legislative changes or the identification of new waste management practices.

Roles and Responsibilities:

- Supervision consultants and contractors are responsible for staying informed about the plan's content and ensuring compliance with its measures and commitments.

5.8. Implementation Oversight:

Contractors must provide relevant training to their staff and ensure the plan's measures are effectively implemented. This includes tracking compliance and addressing any identified deficiencies.

Table 8: Waste Log Form

Month: Waste Log Form No:

No	Date	Type (Hazardous/ Non-hazardous)	Sub-type	Waste (ton/ m^3)	Transporter	Disposer	Disposal Method
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Table 9: Waste Management Inspection Checklist

Inspection Date:
Inspection
Location:

Control Measure	Compliance (Yes/No)	Comment
Are all waste streams being properly separated and labeled into the following categories? - Hazardous Waste - Non-hazardous waste		
Is the site waste inventory current and up to date?		
Are hazardous and non-hazardous wastes stored at separate locations?		
Has a map been produced showing the correct waste storage locations which are visible to all workers		
Are all waste storage containers appropriately labeled to prevent cross-contamination of waste materials?		
Are all waste labels complete and include the appropriate information? - Waste stream (Hazardous, non-hazardous, etc.) - Type of waste (solid, liquid, or sludge) - Amount of waste Known environmental, health, and safety hazards (e.g. MSDS forms)		
Are licenses of companies contracted for waste transport and waste disposal valid and up-to-date?		

ANNEX 6. OCCUPATIONAL HEALTH AND SAFETY PLAN OUTLINE

The main objective of the OHS Plan is to ensure a safe and healthy working environment through careful planning, routine inspections, safety awareness, training of all personnel, and safety meetings. All contractors shall apply the *Zero Accident Policy*.

Although OHS Plans should be frequently reviewed and updated as needed, incidents, accidents, new methods, and changes in the working environment (new methods, new materials, tools, etc.) are examples of items that must be taken into account when OHS Plans are reviewed and updated. All workers and subcontractors involved in retrofitting, demolition, reconstruction, or any other activities shall read the appropriate OHS Plan and shall be encouraged to prevent accidents and incidents detrimental to people and the environment.

The items listed below shall be addressed in the OHS Plan:

- Policy, Leadership, Commitment
- Emergency Response Plan
  - The Emergency Response Plan shall outline how to respond to general and sector-specific emergencies i.e. well blow-out (what phone number to call, whom to contact, how to contact, where to gather, etc.)
- Outline of health and safety issues and goals of the OHS Plan
- Roles and responsibilities (including roles and responsibilities of subcontractors)
- Applicable laws and regulations (6331 Code on OHS Law and relevant regulations)
- Training plan and goals
- Risk analysis and preventive measures
- General health and safety requirements (including instructions, personal protective equipment, work clothes, caution labels, tool inspections, and required qualifications)
- Access to good pads during drilling and testing
- Measures against the infectious disease outbreaks to be integrated into the OHS Plan

Table of contents for a sample OHS Management Plan
Content

ANNEX 7. COMMUNITY SAFETY AND TRAFFIC MANAGEMENT PLAN OUTLINE

Major community health and safety issues in sub-projects involving construction and reconstruction activities are i) noise and dust; ii) work site safety; iii) emergencies; and iv) traffic safety. ANNEX 7 introduces general guidelines for the preparation of a Community Safety and Traffic Management Plan. The main objective of the plan is to ensure the safety and health of the community through careful planning, routine inspections, awareness, and training of the community during project development, exploration/drilling and to reduce risks associated with motor vehicle travel and to define practical actions which can be put in effect to mitigate road safety risks. The construction and reconstruction activities may require detailed planning depending on site-specific issues. Each Contractor must prepare Contents of a Sample Community Safety and Traffic Management Plan.
The items listed below shall be addressed in each plan:

- Policy, Leadership, Commitment.
- Outline of health and safety issues and goals of the plan.
- Roles and responsibilities (including roles and responsibilities of subcontractors).
- Applicable laws and regulations.
- Training plan and goals.
- Risk analysis and preventive measures against below topics:
    - Pandemic/epidemic diseases
    - Release of pollutants and dust emissions into ambient air
    - Excessive noise
    - Excessive or unregulated vehicle traffic near the sub-project site and through communities at inappropriate times (e.g. children going to school) due to the movement of trucks and other vehicles and machinery to and from the plant
    - Ensuring the driver is properly licensed for the class of a vehicle and free from fatigue, drug, or alcohol impairment.
    - Driving with care at appropriate speeds for road conditions, ensuring all occupants fasten seatbelts.
    - Avoiding the use of all mobile communication devices and other driver distractions, while using any project related leased vehicle on company time
    - Designating safe areas while working around moving vehicles
    - Exposure to hazardous substances
    - Exposure to project-related emergencies (accident, fire, explosion, etc.)
    - Improperly controlled or trained security guards
    - Unresolved problems due to the absence of an external grievance mechanism
    - Placement of access deterrents, such as fences and warning signs, to prevent access and warn of existing hazards.

Table of Contents of a Sample Community Safety and Traffic Management Plan

ANNEX 8. ASBESTOS MANAGEMENT PLAN (AMP)

1. Introduction

This document outlines the updated Asbestos Management Plan (AMP), enhanced with insights from regulatory frameworks and best practices in Turkey. The AMP aims to safeguard health and safety during asbestos-related activities, while ensuring compliance with both national and international standards.

2. Regulatory Framework and Guidance

The AMP aligns with the following regulations and standards:

- Asbestos Regulations (Resmi Gazete: 25.01.2013, No:28539)
- EU Directives on hazardous material handling
- NIOSH-NMAM 9002 and HSG 248 standards for asbestos analysis
- Asbestos Management in the Urban Transformation Process guidance by Istanbul Governorship.

3. Asbestos Identification and Risk Assessment

A detailed asbestos survey will be conducted for all buildings constructed before 1999. The survey will include:

- Sampling and testing using PLM and PCM methods
- Documentation of asbestos-containing materials (ACMs)
- Categorization of risks associated with identified ACMs.

4. Mitigation Measures

Mitigation measures will include:

- Safe removal of ACMs by licensed professionals
- Use of personal protective equipment (PPE)
- Containment measures, such as isolation barriers and warning signs.

5. Waste Transport and Disposal

Waste management will adhere to the following protocols:

- Licensed transport of hazardous materials to certified facilities
- Documentation of disposal activities, including transport manifests.

6. Training and Awareness

Training programs will cover:

- Proper handling and removal of ACMs
- Emergency response procedures
- Awareness about health risks associated with asbestos exposure.

7. Monitoring and Reporting

Regular monitoring will be carried out to ensure full compliance with applicable laws and regulations. In alignment with these requirements, the Contractor is responsible for preparing the necessary documentation and completing Table 10: Checklist for Contractors. This checklist, along with supporting documents, must be submitted to the IPCU for review and approval.

- Occupational hygiene asbestos analysis result and report
- Photographic evidence of removal and containment measures
- Asbestos removal expert documentation

- Accreditation and authorization documentations
- Documents regarding agreement with the licensed company and disposal if asbestos is detected

Table 10: Checklist for Contractors

No	Task	Requirement	Compliance Confirmation (Yes/No)	Remarks
1	Conduct pre-removal asbestos survey	Licensed professional	❑ Yes / ❑ No	
2	Site Isolation	Complete isolation and placement of warning signs and barriers	❑ Yes / ❑ No	
3	Provide sample results to Supervision Consultan and IPCU	Laboratory report submission	❑ Yes / ❑ No	
4	Use PPE during removal	Proper use of required equipment	❑ Yes / ❑ No	
5	Transport asbestos waste	Licensed transporter	❑ Yes / ❑ No	
6	Dispose of waste	Certified facility details	❑ Yes / ❑ No	
7	Disposal Documentation	Certificates from disposal facilities	❑ Yes / ❑ No	
8	Documented in Waste Log Form [9]	Asbestos Disposal Activities	❑ Yes / ❑ No	

[9] Please see Waste Management Plan, Table 8.

ANNEX 9. EMERGENCY RESPONSE PLAN TEMPLATE

[Project Name & Location]
Date:
Prepared by:

1. Introduction

- **Purpose:** To establish procedures for effectively managing emergencies, minimizing risks to personnel, community, and the environment.
- **Scope:** Applicable to all activities under [Project Name] during construction and operation phases.

2. Legal Framework and Standards

- Relevant laws and regulations, including:
  - [Law No. 7269 - Disaster Relief Law]
  - OHS Law No. 6331
  - National and international environmental and social regulations[10]

3. Roles and Responsibilities

Define roles for emergency management, including:

- **Emergency Coordinator:** Ensures plan implementation and coordination with local authorities.
- **Site Supervisors:** Oversee emergency response execution and staff training.
- **Contractors/Subcontractors:** Ensure compliance with ERP and provide necessary resources.

4. Emergency Scenarios and Risk Assessment

Identify potential emergencies:

- **Natural Disasters:** Earthquakes, floods, storms.
- **Environmental Incidents:** Chemical spills, asbestos exposure[11]
- **Fire and Explosion:** Onsite or offsite hazards.
- **Community Safety Risks:** Traffic incidents, exposure to pollutants.[12]

5. Preventive Measures

Detail measures to reduce emergency risks:

- Emergency drills and regular training sessions[13]
- Proper storage of hazardous materials
- Installation of fire extinguishers, spill kits, and safety signage onsite.[14]

6. Emergency Response Procedures

Outline clear, step-by-step actions for each scenario:

Earthquake Response:

- Evacuate personnel to designated safe zones.
- Conduct headcount to ensure all are accounted for.

[10] ANNEX 1 National and international environmental and social regulations and ANNEX 2 Screening Form.
[11] ANNEX 8 Asbestos Management Plan
[12] ANNEX 7 Community Safety and Traffic Management Plan
[13] ANNEX 7 Community Safety and Traffic Management Plan
[14] ANNEX 9 Emergency Response Plan

Fire or Explosion:

- Activate fire alarms and notify local fire services.
- Evacuate affected areas following the site's fire escape routes.

Spills or Leaks:

- Isolate the area and use spill containment kits.
- Notify local environmental authorities and the Istanbul Project Coordination Unit (IPCU).

7. Communication Plan

- Emergency contact list for:
  - Local authorities (e.g., fire department, police).
  - Project stakeholders (e.g., IPCU).
- Internal communication tree for reporting incidents.

8. Training and Awareness

- Regular training sessions for all staff on:
  - Evacuation procedures and safe equipment handling.
  - Use of personal protective equipment (PPE).

9. Monitoring, Reporting, and Review

- **Monitoring**: Conduct regular audits and drills to test ERP effectiveness[15]
- **Incident Reporting**: Maintain a log of all incidents with details of response actions taken.
- **Plan Review**: Update the ERP annually or after significant changes in project scope or regulations.

10. Appendices

- **Site Maps**: Include evacuation routes, assembly points, and hazard areas.
- **Contact Information**: Emergency numbers for relevant agencies and personnel.
- **Checklist Templates**: Forms for conducting drills, incident reporting, and post-incident evaluations[16]

[15]ANNEX 3 Environmental and Social Management Plan (ESMP) Template and ANNEX 6 Occupational Health and Safety Plan Outline

[16] ANNEX 8 Asbestos Management Plan