Republic of Turkey

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Ministry of Environment and Urbanization

SEISMIC RESILIENCE AND ENERGY EFFICIENCY IN PUBLIC BUILDINGS PROJECT (SREEPBP)(P175894)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

DRAFT DOCUMENT

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ABBREVIATIONS AND ACRONYMS

AFAD	Disaster and Emergency Management Presidency
BAT	Best Available Technologies
BP	Bank Procedure
CCs	Construction Contractors
CERC	Contingent Emergency Response Component
CDM	Clean Development Mechanism
CPF	Country Partnership Framework
CTF	Clean Technology Fund
CSTMP	Community Safety and Traffic Management Plan
DP	Development Plan
EEPB	Energy Efficiency in Public Buildings
ECA	Europa and Central Asia
E&S	Environmental and Social
EIA	Environmental Impact Assessment
ESCO	Energy Service Company
ESF	World Bank Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
EU	European Union
FM	Financial Management
GDCW	Directorate General of Construction Works
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GHG	Greenhouse Gas
GM	Grievance Mechanism
HAVS	Hand-Arm Vibration Syndrome
OHS	Occupational Health and Safety
IBRD	International Bank of Reconstruction and Development
IIP	Independent Inspection Panel
ILO	International Labor Organization
KAYES	Public Structures Inventory System
LMP	Labor Management Procedures
LA	Loan Agreement
M&E	Monitoring and Evaluation

MFI	Microfinance Institution
MoAF	Ministry of Agriculture and Forestry
MoCT	Ministry of Culture and Tourism
MoEU	Ministry of Environment and Urbanization
MoFLSS	Ministry of Family, Labor and Social Services
MoH	Ministry of Health
MoNE	Ministry of National Education
MoYS	Ministry of Youth and Sports
NCCAP	National Climate Change Action Plan
NCCS	National Climate Change Strategy
NDMS	National Disaster Management Strategy
NEEAP	National Energy Efficiency Action Plan
NZEB	Near-Zero Energy Buildings
OECD	Organization for Economic Co-operation and Development
OHS	Occupational Health and Safety
OHSP	Occupational Health Safety Plan
OP	Operational Policy
PAD	Project Appraisal Document
PAP	Project Affected People
PCN	Project Concept Note
PIU	Project Implementation Unit
POD	Project Development Objective
POM	Project Operational Manual
PPR	Project Progress Reports
PPP	Pollution Prevention Plan
RE	Renewable Energy
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan
SREEPB	Seismic Resilience and Energy Efficiency in Public Building
TA	Technical Assistance
TAMP	National Disaster Response Plan
TARAP	National Disaster Risk Reduction Plan
WB	World Bank
WBG	World Bank Group

WHO	World Health Organization

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Executive Summary

Turkey is vulnerable to a wide variety of natural hazards, including earthquakes, landslides, and floods. Among these, earthquakes have claimed the highest number of lives and caused the greatest economic loss, with approximately 90,000 fatalities in 76 earthquakes since 1900, a total affected population of seven million, and direct losses of US$ 25 billion. About half the casualties were due to two earthquakes on the North Anatolian Fault in 1939 and 1999. In the 1999 Marmara earthquakes, which affected ten cities in the Marmara Region of Turkey where almost 35 percent of the Turkey's GNP was produced, the death toll was over 18,000 with a direct economic impact estimated at US$ 5 billion (2.5 percent of GNP). Although less dramatic, floods and landslides are frequent events that cause localized losses. Observed and anticipated climate change impacts, such as more intense precipitation and rising sea level, are expected to lead to increasing risks to natural disasters, including more frequent and intense flooding in low-lying areas of river deltas and coastal cities and other extreme weather events. In earthquakes, globally and in Turkey, evidence have shown public buildings to be particularly vulnerable to damage or collapse which risks the lives as well as disrupting the provision of service quality.

The Ministry of Environment and Urbanization (MoEU) has applied financing from the World Bank toward the cost of the Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project. The proposed 5-year, US$200 million Seismic Resilience and Energy Efficiency in Public Buildings Project Loan will support improvements in seismic and disaster resilience and energy efficiency (EE) of central government and central government affiliated buildings through retrofitting and renovation or demolition and reconstruction. The Project will also advance policy and regulatory mechanisms, technical analyses, data collection and institutional capacity development to ensure that the learning under the Project can be used to scale up investment needs in disaster resilience and EE in public buildings across Turkey.

The project will be supported by a US$200 million International Bank of Reconstruction and Development (IBRD) loan. The Project will include four components: (i) investments in central government buildings for structural strengthening and improvement of EE; (ii) advanced technical assistance and capacity building; (iii) project management and implementation support; and (iv) Contingent Emergency Response Component (CERC).

1. ***Project objective.*** is to improve the disaster resilience and energy savings in selected central government buildings and strengthen the policy framework and institutional capacity to develop, finance and implement resilient and sustainable public buildings in Turkey.
2. ***Rationale of the Proposed Project.*** Seismic Resilience and Energy Efficiency on Public Buildings (SREEPB) Project will support seismic strengthening and EE interventions in tertiary education buildings[1], dormitories, social service providers, hospitals and public administrative buildings that were constructed prior to 2007 and are under high seismic risk and are energy inefficient. In short, the Project shall support the priorities driving the "Seismic Resilience and Energy Efficiency" are linked to the national security and development goals, and include the following:

- enhancing the public safety in the seismic areas,
- enabling reliable energy supply,
- improving the energy efficiency in public buildings,
- fostering sustainable economic development, and
- supporting the competitiveness of the economy.

[1] This will not include primary and secondary schools under the Ministry of National Education as this is being supported by a complementary IBRD Disaster Risk Management in Schools Project.

3. ***Expected Beneficiaries.*** The immediate beneficiaries in the Project will be the users and employees of public buildings of line ministries and other central government institutions, such as the Ministry of Health (MoH), Ministry of Family, Labor and Social Services (MoFLSS), , Ministry of Youth and Sport (MoYS), Ministry of Agriculture and Forestry (MoAF), Ministry of Culture and Tourism (MoCT), Ministry of National Education (MoNE), Ministry of Energy and Natural Resources (MENR), and the Council of Higher Education., which will be part of the project implementation process in some way. Project beneficiaries include local people who are directly using the facilities of the targeted public buildings, such as: children in schools, and their visitors, employees and patients in the targeted hospitals, etc. Other interested parties might be individuals, groups, or organizations with an interest in the project, which may be because of the project location, its characteristics, its impacts, or matters related to public interest. For example, these parties may include regulators, government officials, the private sector, the scientific community, academics, unions, women's organizations, other civil society organizations, and cultural groups.
4. ***Location*****.** The majority of project sites are expected to be on government-owned land in urban, peri-urban locations nationwide. At this stage, it is anticipated that between approximately 80 large public buildings could be retrofitted/reconstructed. The sub-projects will be selected from the provinces (e.g., Istanbul, Izmir, Tekirdag, Kocaeli, Kahramanmaras, Tunceli, Ardahan, Hatay, Usak, Burdur, Manisa, Mugla, Bingol) where seismic gap is present.
5. ***Project components.*** The project components and activities are as follows:

Component 1(a). Retrofitting and Renovation (~US$150 million IBRD): This sub-component will finance consultancies to support all technical documentation for investments on priority buildings, including energy and structural audits, technical design as well as construction supervision, commissioning and energy monitoring for both renovation and demolition/reconstruction as well as civil works contractors for buildings retrofit and renovation.

Retrofitting and renovation will include (i) structural strengthening measures, (ii) EE measures (including appropriate building-level renewable energy), and (iii) other measures necessary to improve the buildings' accessibility, safety, and operation.

Component 1(b). Demolition and Reconstruction (~US$ 40 million IBRD): This sub-component will finance civil works contractors for demolition and reconstruction of public buildings for which structural strengthening via retrofitting and renovation is not technically and economically feasible These buildings are also most likely to be at risk during other disasters, such as fires or flooding due to their construction age. During reconstruction it may also be possible to include additional capacity to meet increased service provision in rapidly growing urban areas. Reconstructed buildings expected to be classified Class C or higher, and potentially near-zero energy buildings (NZEB); the types of EE measures for new buildings will be determined based on economic efficiency, and potentially with a longer payback period (e.g., up to 20 years). During demolition, as per Turkish regulations, materials will be recycled and re-used where feasible.

Component 2. Advanced technical assistance and capacity building (~US$5 million IBRD): While this Project supports a relatively modest intervention in approximately 50 public buildings, it is expected to generate significant learning and support to enable the Government to scale up investment in seismic resilience and energy efficiency in thousands of other central government buildings. This Component supports the development of a long term and a significantly scaled up investment program focused on increasing the energy efficiency, structural strengthening and resilience of public buildings in Turkey. Activities undertaken and lessons learnt under this Component also have broader applicability to private and residential structures in Turkey.

Component 3. Project management and implementation support (~US$5 million IBRD loan, US$3-5 million in-kind contribution from MoEU)

This Component will finance project management and implementation support activities, including, inter alia, engineering, architectural, Occupational Health and Safety (OHS), individual consultants

and other necessary technical expertise; sub-project supervision; monitoring, evaluation and reporting of the Project; communication with Project beneficiaries; training of PIU staff, etc. It would also finance requirements related to the Bank's fiduciary policies and guidelines, Project audits, gender and citizen engagement, social surveys as well as the implementation of environmental and social framework.

6. ***Project Risk Ratings*. *Environmental Risk Rating*** is "Moderate" as the physical works envisaged under the project component 1 will not generate irreversible adverse environmental impacts, and are expected to be temporary and reversible, moderate in magnitude and nature, and sub-project sites are not located in environmentally sensitive areas. Nor are they expected to generate serious adverse effects to human health and the environment.

***Social Risk Rating*.** Social risks directly inherent in project activities are deemed as "Moderate". Sub-projects that may require involuntary land acquisition will not be eligible for funding under the project. Large labor influx to project sites is also not expected and the Sexual Exploitation Abuse/Sexual Harassment (SEA)/(SH) risk is assessed as low.

7. ***Purpose of Environmental and Social Management Framework*.** The main goal of the ESMF is to avoid, minimize or mitigate or compensate, potential negative environmental and social impacts caused by implementation of the project. While all buildings under the SREEPB Project will be eligible for financing, the applications will be demand-driven, with specific sites/sub-projects to be selected in the course of the project implementation. Therefore, the Framework approach is chosen for the project, with details to unfurl as and when the sub-projects are identified. Hence, The Framework ensures that the identified sub-projects are correctly assessed from environmental and social point of view to meet the WB's Environmental and Social Framework and its applicable Standards, as well as Turkey's Environmental and Social Laws and Regulations for adequate mitigation of any residual and/or unavoidable impacts. The Framework serves as a guidance tool for the Ministry of Environmental and Urbanization of Republic of Turkey the implementing agency, in identifying and assessing the potential environmental and social impacts of sub-projects, in preparing Environmental and Social Management Plans that will summarize necessary and specific mitigation measures to avoid, minimize or prevent impacts, and to provide guidance on environmental and social monitoring and reporting.
8. ***Institutional capacities to manage environmental and social risks and impacts***. The project will be implemented by MoEU through its GDCW. The department has qualified technical staff who have experience in managing design, construction, and retrofitting contracts. The implementation of the project will be carried out through the established structure comprising: SREEPB Project Implementation Unit (PIU).

   MoEU's GDCW would assume overall responsibility for the Project and serve as the main implementing agency. Within GDCW a separate department, Department of External Investments has been established in 2019 to work as the dedicated Project Implementation Unit (PIU) to manage the ongoing Energy Efficiency Public Buildings Project, (P162762) under terms of reference, and with adequate staffing, and with qualifications and functions acceptable to the Bank. The PIU currently includes about 18 technical staff and 4 individual consultants hired to support the PIU in the areas of procurement, financial management, project assistance and environment and social issues.

   The same PIU would be responsible for the overall implementation, management, and coordination of the Seismic Resilience and Energy Efficiency in Public Buildings Project; execution of the Project activities' preparation, design and implementation phases in accordance guiding principles and good practices with utmost technical quality; the overall management, coordination and implementation of the Project.
9. ***Potential environmental impacts*.** The proposed project activities under Component 1 and 2 could generate environmental impacts associated with noise, dust, air and water pollution, solid waste generation, health hazards and labor safety issues, etc. The environmental risks are

expected to be typical for reconstruction/rehabilitation works of existing public buildings, temporary by nature and site specific and can be easily mitigated by applying best construction and/or energy supply or energy efficiency practices and relevant mitigation measures.

10. ***Potential social impacts*.** The sub-projects to be implemented under the Component 1 and 2 will contribute to improved comfort level in the targeted public buildings and costs savings due to increased energy efficiency. The proposed sub-project activities could generate adverse social impacts associated with temporary access restrictions, labor management issues and associated Sexual Exploitation Abuse/Sexual Harassment, occupational and community health and safety risks. Resettlement issues are not envisaged with the sub-project activities.

11. ***Environment and Social Management Framework (ESMF) structure.***
The ESMF was prepared based on the following information: (1) Technical documentation provided by WB; (2) Desk review and the Republic of Turkey's environmental, social, and occupational health and safety laws, regulations, and policies; (3) World Bank ESF, World Bank Environmental, Health and Safety General Guideline (4) Meetings and discussions with WB's Environmental and Social Experts and Consultants.
The document consists of 10 chapters that outline environmental and social assessment procedures and mitigation requirements in line with the Bank's ESF requirements and standards for the sub-projects which will be supported by the Project.

i. Chapter One includes the Brief Description of the Project Context and the project development objectives and components.

ii. Chapter Two narrates the Baseline Data on population, social-economical and seismicity background of selected provinces.

iii. Chapter Three describes the national Legal, Regulatory and Policy Framework and provides an overview of laws and regulations that have relevance for environmental and social issues for the SRSEEPB Project.

iv. Chapter Four has a summary of the World Bank's Environmental and Social Standards (ESS) that are designed to support Borrowers' projects. The ESS requirements are related to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing.

v. Chapter Five analyzes Potential Positive and Adverse Environmental and Social Risks and Impacts, and associated mitigation measures related to the project activities implementation.

vi. Chapter Six includes Environmental and Social Risk Management Instruments and specific measures, or actions planned to prevent, avoid, minimize, reduce or mitigate or compensate the environmental and social risks and impacts of the project over the project cycle to meet the ESS requirements.

vii. Chapter Seven describes the Implementation Arrangements. It provides details on procedures, criteria and responsibilities for sub-projects preparing, screening, appraisal, implementation, and monitoring.

viii. Chapter Eight describes format of stakeholder engagement plans and Project's Grievance Mechanism.

ix. Chapter Nine includes ESMF's implementation sub-management project level monitoring instruments.

x. Chapter Ten provides brief information on ESMF and SEFs disclosure.

Relevant Appendices are enclosed at end of this document to complement the above-mentioned chapters.

12. ***ESMF disclosure and consultation*.** The final ESMF will be disclosed on the MoEU website in Turkish and English language. MoEU will officially submit the final ESMF to the World Bank for

disclosure in English and Turkish on the WB external webpage. The final version of this document will be used by respective government agencies and other Project stakeholders and partners during the project implementation.

13. **ESMF Implementation Budget**. The total budget for the implementation of the ESMF is $1.122.000 + VAT and 0,5% of The Project Budget. This budget covers individual environmental, social, health and safety consultants, monitoring activities, preparation of site-specific ESMPs, SEPs and LMPs, social and environmental trainings, awareness, information disseminations, capacity building, implementation of the site-specific SEPs, LMPs ESMPs' measures and COVID-19 measures.

1. INTRODUCTION

1.1. Country Context

Turkey is a large, upper-middle-income country with a strong record of inclusive growth, but recent shocks are risking the economic and social gains made since the early 2000s. A hardening of external economic conditions in mid-2018, together with tense international relations, led to a collapse in the Lira. Turkey experienced three quarters of negative growth from late 2018 to mid-2019. GDP per capita has fallen to US$9,000, from a high of US$12,500 in 2013, while poverty reduction progress stalled in 2018. An emergent economic recovery starting late 2019 has been undermined by the COVID-19 pandemic. Over the course of late 2018 and 2019, the country's economy went through significant adjustments. By the end of 2019, economic activity was rebounding with strong growth in the fourth quarter, and GDP growth was projected to accelerate to 3 percent in 2020. However, with the onset of the COVID-19 pandemic, the outlook for 2020 has deteriorated considerably. The economy faced combined shocks of lower demand, activity restrictions, and supply chain disruption due to the pandemic. This caused a contraction of GDP by 9.9 percent (yoy) in 2020, the most in over a decade. More than 2.5 million people left the labor market and employment contracted by 6.5 percent in May 2020 compared to the end of 2019.

The economy is expected to rebound in the second half of the year, but GDP is still projected to contract by 1.8 percent in 2020, led by the massive deterioration in the current account, lower consumption on the demand side, and declines in both services and manufacturing output. The pace of recovery beyond 2021 will depend on the duration of the pandemic, the availability and distribution of a vaccine and restoration of international trade and investment flows.

1.1.1. Sectoral and Institutional Context

Long term sustainable growth in Turkey requires a reduction in the physical, social and economic shocks associated with geophysical and climate disasters with a commensurate reduction in greenhouse gas (GHG) emissions and energy intensity. Buildings with the greatest vulnerability to disasters are typically energy inefficient, as these buildings pre-date modern building codes, which is the case for a vast number of public and private sector buildings in Turkey. As such there are significant time and cost efficiencies that can be generated by integrating structural strengthening and energy efficiency improvements. This has been tested in various Bank projects in Turkey and the Europe and Central Asia region, wherein energy efficiency projects will include some structural improvements of buildings, especially in roofs, or in seismic reduction projects that include energy efficiency measures alongside strengthening measures.

The government has recognized the importance of energy efficiency (EE) as evidenced by its inclusion in various policy documents. The National Energy Efficiency Strategy of 2012 calls for a 10 percent reduction in energy intensity across all sectors, and the National Energy Efficiency Action Plan (NEEAP), approved in January 2018, calls for US$11 billion investment in energy saving measures. In 2016, the Ministry of Energy and Natural Resources (MENR) commissioned a study to assess the potential for energy efficiency in public buildings.

Exposure and vulnerability to natural hazards, including earthquakes, landslides, and floods also threaten sustainable development in Turkey. Among these disasters, earthquakes have claimed the highest number of lives and caused the greatest economic loss.

Turkey has enacted regulatory and institutional reforms to reduce seismic risk, often in response to major disaster events. Over time, these revisions have resulted in a strong regulatory framework for seismic resilient design and construction of buildings and infrastructure and improved supervision and enforcement of the regulations. The most recent probabilistic seismic hazard map of Turkey was finalized in 2016 under the leadership of AFAD. This seismic hazard map of Turkey provides a consistent and official measure of the seismic hazard across the country and will facilitate

mainstreaming of seismic risk reduction investments. However, despite these advances, Turkey has millions of buildings that were constructed prior to 2000 when the modern seismic codes were introduced in Turkey.

This Project aims to reduce energy use in central government buildings and inform the development of sustainable financing mechanisms to support a scaled-up, national program for energy efficiency in public buildings. In order to demonstrate the potential energy savings and potential payback of energy efficiency, all buildings under this Project must be assessed as structurally and seismically safe[2] to be eligible for investment. Buildings found to have structural deficiencies are not eligible for financing under the EEPBP. In parallel, the MoEU initiated the development of an inventory of public buildings (Public Structures Inventory System, KAYES) to identify seismically vulnerable buildings that need strengthening[3]. The MoEU anticipates conducting field investigations between 2020 and 2023 to populate the KAYES database, and to use this information to develop a national prioritized program of structural strengthening in public buildings.

1.2. Project Background

The Seismic Resilience and Energy Efficiency in Public Buildings Project (SREEPBP) directly supports Turkey's seismic resilience and energy efficiency policy in public buildings and the 11th Development Plan objectives. The key objectives and results of the project are aligned with the strategic national approach to increasing energy efficiency and seismic performance in public buildings through an integrated approach which can be scaled towards addressing challenges in the rest of the building vast stock in Turkey.

Such an approach is expected to yield the following benefits: (i) reduction in total construction cost through shared labor and complementary concurrent investments; (ii) sustainability of energy efficiency improvements through the building lifetime and payback period by ensuring investment in earthquake resistant buildings; (iii) functional upgrades such as autonomous energy (e.g. solar panels), which are crucial to ensure energy supply and continuity of service in the aftermath of an earthquake where energy service can be disrupted for days or weeks; (iv) upgrade to roofs associated with energy efficiency which can increase the performance of building during an earthquake (e.g. minimizing damage to non-structural elements) and in storm events; (v) assessing the full economic case for building improvement versus demolishing and rebuilding; and (vi) minimizing disruption to building occupants and government services.

Approaches developed under the operation would be shared with other line ministries, municipalities, etc. to build awareness and expertise in such efforts, and used to help develop capabilities among market actors (energy auditors, technical designers and architects, construction firms, etc.) on the benefits of these dual objectives during renovations. The benefits, which are expected to be gained from applying the combined approach on increasing energy efficiency and seismic performance of the public buildings, are well established in Turkey and internationally. For example, one of the main lessons learnt from the "Seismic Risk Mitigation Project in Istanbul" Project (ISMEP, P078359) was that functional and energy efficiency upgrades improved the quality of the learning environment in the schools, and health service delivery in the hospitals. Performing these upgrades in conjunction with seismic retrofitting was vital to build support among beneficiaries and stakeholders for the risk reduction intervention.

[2] A building was considered structurally and seismically safe in the EEPBP project (P162762), if: (a) the construction permit for the building was issued in or after January 2000; or (b) for buildings whose construction permit was issued before January 2000, the building is officially assessed by a civil engineer (registered with the Turkish Chamber of Civil Engineers) as structurally and seismically safe, and such assessment has been accepted by MoEU (recognizing that should a building be assessed as not structurally and seismically sound, the related structural works to address such deficiencies may be added to a Subproject only if the total cost of the renovations have a payback period of under 12 years.

[3] The system is being developed in collaboration with the Hacettepe University, Gazi University and Middle East Technical University. The database supports the identification of public buildings at seismic risk by collecting data on the building age, structural system, use, requirements for further structural analysis for potential retrofitting etc.

Turkey stated that the government wants to decrease the energy consumptions and CO_2 emissions. By 2023 it is aimed to decrease primary energy consumption of Turkey by 14%. The project is fully consistent with the action of NEEAP under building sector stating to improve energy performance of existing public buildings.

1.2.1. Public Buildings Seismic Resilience in Turkey

1.2.1.1. Earthquakes in Turkey

Turkey is vulnerable to a wide variety of natural hazards, including earthquakes, landslides, and floods. Among these, earthquakes have claimed the highest number of lives and caused the greatest economic loss, with approximately 90,000 fatalities in 76 earthquakes since 1900, a total affected population of 7 million, and direct losses of US$ 25 billion[4]. About half the casualties were due to two earthquakes on the North Anatolian Fault in 1939 and 1999. In the 1999 Marmara earthquakes, which affected ten cities, Kocaeli, Sakarya, Yalova, Istanbul, Bursa, Bolu, Eskisehir, Duzce, Karabuk, and Zonguldak, in the Marmara Region of Turkey where almost 35 percent of the Turkey's GNP was produced, the death toll was over 18,000 with a direct economic impact estimated at US$ 5 billion (2.5 percent of GNP). Although less dramatic, floods and landslides are frequent events that cause localized losses. Observed and anticipated climate change impacts, such as more intense precipitation and rising sea level, are expected to lead to increasing risks to natural disasters, including more frequent and intense flooding in low-lying areas of river deltas and coastal cities and other extreme weather events[5].

The most recent major earthquake (magnitude 6.9) occurred on October 30, 2020 in the Aegean Sea and severely impacted the region of Izmir, which is the third largest urban area and economic hub in Turkey. A rapid damage assessment conducted by the World Bank[6] estimated a preliminary economic loss exceeding US$900 million (or equivalent of 0.12% of the Turkish 2019 GDP), from direct damage associated with the event. The City of Izmir suffered disproportionately from this event, with 17 multi-story buildings collapsed, 500 to 1,000 buildings damaged beyond repair, and 116 fatalities. Buildings constructed after 2000, according to the code, performed well in this earthquake.

National Disaster Management Strategy (NDMS, 2015), the National Disaster Response Plan (TAMP) (2016) and the National Disaster Risk Reduction Plan (TARAP) (2017). In addition, a new seismic hazard map of Turkey (see Figure 1), based on probabilistic seismic hazard assessment, has been finalized in 2016 under the leadership of AFAD which also revised the standing earthquake code in 2016.

The Earthquake Regulation was updated and was published in the Official Gazette dated March 18, 2018 and entered into force on January 1, 2019. The latest Earthquake Regulation was prepared by a Regulation Preparation Commission and the 110-person sub-working group members. The objective of the revised code is to establish minimum structural performance and design standards for public and private building stock which is in full or in part exposed to seismic risk and which are considered to be rebuilt, retrofitted, renovated and/or expanded.

[4] Erdik, M. (2013), Earthquake Risk in Turkey, Science Mag, Vol. 341, Issue 6147, pp. 724-725, DOI: 10.1126/science.1238945
[5] IFC &EBRD, (2013), Pilot Climate Change Adaptation Market Study: Turkey
[6] M 6.9 Aegean Sea Earthquake – Impact on Turkey: Global Rapid Damage Estimation (GRADE) Report

Figure 1. Probabilistic Seismic Hazard Map of Turkey*6* (SA at 0.2s – 475 yrs -10 percent in 50 yrs), AFAD

1.2.2.Public Buildings Energy Efficiency (EE) in Turkey

The Turkish Government has taken measures to use energy efficiently and economically; various policies have been implemented and legal regulations have been put into force in various sectors including the building/construction sector. The government highlighted energy efficiency as a key component of its energy security strategy in its 10th and 11th Development Plans. Turkey, taking advantage of its geostrategic position wants to be the leader in the region in the energy sector. On the other hand, Turkey, with its developing economy, ranks high in energy demand in the world. Regarding to energy efficiency it is indicated that in order to promote and disseminate exemplary energy efficiency practices, energy efficiency projects will be supported, and regulatory and technical infrastructure will be established for the implementation.

There are also provisions for the greenhouse gas emissions. Within the framework of Intended National Contribution of Turkey studies will be carried out in energy, industry, transportation, waste, agriculture and forestry sectors for emission control. Additional measures, such as energy efficiency gains and increased forest assets are also aimed to be developed to reduce carbon emissions.

The Energy Efficiency Strategy Document for 2012-2023 targets to reduce energy demands and carbon emissions of buildings and to promote sustainable eco-friendly buildings using renewable energy sources. The 'Energy Strategy Plan' sets a 20% primary energy intensity reduction target for 2023 compared with the 2008 level.

1.3. Project Information

1.3.1.Project Objective

The Project Development Objective (PDO) is to improve the disaster resilience and energy savings in selected central government buildings, and to strengthen the policy framework and institutional capacity to develop, finance and implement resilient and sustainable public buildings in Turkey.

PDO level indicators: Progress made under the proposed project will be monitored according to following key project performance indicators:

- Number of beneficiaries (building occupants) benefitting from disaster resilient and energy efficient public buildings under the Project;
- Projected lifetime energy savings in the public buildings under the Project;
- Completion of policy and regulatory analysis, and practical recommendations for regulatory improvements, related to seismic resilience and energy efficiency;
- Endorsement of a 10-year investment plan for scaling up integrated investments in disaster

resilient and energy efficient central government buildings by MoEU; and
- Number of government staff and technical professionals trained in the design and implementation of building retrofitting and renovation, including with the latest technologies (and percentage of women).

Other intermediate indicators include *inter alia*:

- Projected lifetime CO_2 emission reduction (tCO_2 eq/year) (tons/year)
- Annual energy costs savings (Amount (USD))
- Renewable energy generation capacity (other than hydropower) constructed under the project (Megawatt)
- Buildings structurally strengthened and renovated or demolished and reconstructed to meet current building code and energy efficiency standards (Number)
- Increase in the number of women in energy audits, structural assessments, and design/construction supervision firms contracted under the Project who are key staff (Percentage)
- Structural renovation and energy efficiency good practices, case studies, guides and model designs developed and disseminated (Number)
- Satisfaction with the renovation processes, including consultations, and results (Percentage, and disaggregated by gender)
- Stakeholders grievances that are addressed and closed (Percentage, and disaggregated by gender)

In addition, intermediate results indicators will be used to monitor Project progress. Annex 3 of the Project Operational Manual provides an overview of the PDO and intermediate results indicators.

1.3.2.Project Location

Project sites are expected to be on government-owned land in urban, peri-urban locations nationwide. At this stage, it is anticipated that between 50 and 250 buildings could be retrofitted/reconstructed. The sub-projects will be selected from the provinces (e.g., Istanbul, Izmir, Tekirdag, Kocaeli, Kahramanmaras, Tunceli, Ardahan, Hatay, Usak, Burdur, Manisa, Mugla, Bingol) where there is high seismic hazard (defined as Peak Ground Acceleration (known as a seismic gap) which could indicate a higher likelihood of an earthquake in the future is present. Long term sustainable growth in Turkey requires a reduction in the physical, social and economic shocks associated with geophysical and climate disasters with a commensurate reduction in greenhouse gas (GHG) emissions and energy intensity. Buildings with the greatest vulnerability to disasters are typically energy inefficient, as these buildings pre-date modern building codes, which is the case for a vast number of public and private sector buildings in Turkey. As such there are significant time and cost efficiencies that can be generated by integrating structural strengthening and energy efficiency improvements. This has been tested in various Bank projects in Turkey and the Europe and Central Asia region, wherein energy efficiency projects will include some structural improvements of buildings, especially in roofs, or in seismic reduction projects that include energy efficiency measures alongside strengthening measures.

The government has recognized the importance of energy efficiency (EE) as evidenced by its inclusion in various policy documents. The National Energy Efficiency Strategy of 2012 calls for a 10 percent reduction in energy intensity across all sectors, and the National Energy Efficiency Action Plan (NEEAP), approved in January 2018, calls for US$11 billion investment in energy saving measures. In 2016, the Ministry of Energy and Natural Resources (MENR) commissioned a study to assess the potential for energy efficiency in public buildings.

Exposure and vulnerability to natural hazards, including earthquakes, landslides, and floods also threaten sustainable development in Turkey. Among these disasters, earthquakes have claimed the highest number of lives and caused the greatest economic loss.

Turkey has enacted regulatory and institutional reforms to reduce seismic risk, often in response to major disaster events. Over time, these revisions have resulted in a strong regulatory framework for seismic resilient design and construction of buildings and infrastructure and improved supervision and enforcement of the regulations. The most recent probabilistic seismic hazard map of Turkey was finalized in 2016 under the leadership of AFAD. This seismic hazard map of Turkey provides a consistent and official measure of the seismic hazard across the country and will facilitate mainstreaming of seismic risk reduction investments. However, despite these advances, Turkey has millions of buildings that were constructed prior to 2000 when the modern seismic codes were introduced in Turkey.

This Project aims to reduce energy use in central government buildings and inform the development of sustain However, the exact location of the sub-projects will not be known before project appraisal. Potential provinces where sub-projects will be selected are provided in Figure 2.

Figure 2. Selected Sub-Project Provinces

1.3.3. Project Components

The Project will include four components: (i) investments in central government buildings for structural strengthening and improvement of EE; (ii) advanced technical assistance and capacity building; (iii) project management and implementation support; and (iv) Contingent Emergency Response Component (CERC).

1.3.3.1. Component 1: Investments in central government buildings for seismic strengthening and improvement of energy efficiency

Component 1. Investments in Central Government Buildings for Structural Strengthening and Improvement of Energy Efficiency (~US$190 million IBRD)

Under this component, MoEU would support the renovation or, in cases where it is deemed economically unviable to renovate a building, the demolition and reconstruction of central government and central-government affiliated buildings (i.e., public buildings under central line ministries, such as education facilities, dormitories and social facilities, health facilities, cultural centers, and administrative buildings). It is expected that these sub-projects will generate demonstrable energy cost savings and life safety benefits and will provide a basis for a scaled up national program aimed at structural and disaster resilience and EE in Turkish public buildings.

Component 1(a). Retrofitting and Renovation (~US$150 million IBRD). This sub-component will finance consultancies to support all technical documentation for investments on priority buildings, including energy and structural audits, technical design as well as construction supervision, commissioning and energy monitoring for both renovation and demolition/reconstruction as well as civil works contractors for buildings retrofit and renovation.

Retrofitting and renovation will include (i) structural strengthening measures, (ii) EE measures (including appropriate building-level renewable energy), and (iii) other measures necessary to improve the buildings' accessibility, safety, and operation.

(i) Structural strengthening measures via retrofitting and renovation are expected to be technically and economically feasible for many public buildings, where retrofitting and renovation costs (without EE measures) do not exceed 40% of the reconstruction cost (with pure structural strengthening interventions not exceeding 25%) and may include improvement of soil conditions and the building foundation, local or global structural strengthening solutions to reduce seismic risk and to ensure that the building is resilient to wind and snow loads in extreme weather. Structural interventions will range from local solutions that focus on specific sections of a building, such as, inter alia, column and beam jacketing, strengthening of individual footings and roofs to global solutions that include interventions across the whole building such as base isolation, bracing, addition of shear walls, etc. The exact nature of the intervention will depend on the age of the building, identified deficiencies, the criticality of the building and decisions as to whether the buildings should be retrofitted to life safety, damage control or immediate occupancy requirements. The Project will also ensure that only buildings located outside known riverine flood zones are eligible for retrofitting and renovation, and discussions will be Long term sustainable growth in Turkey requires a reduction in the physical, social and economic shocks associated with geophysical and climate disasters with a commensurate reduction in greenhouse gas (GHG) emissions and energy intensity. Buildings with the greatest vulnerability to disasters are typically energy inefficient, as these buildings pre-date modern building codes, which is the case for a vast number of public and private sector buildings in Turkey. As such there are significant time and cost efficiencies that can be generated by integrating structural strengthening and energy efficiency improvements. This has been tested in various Bank projects in Turkey and the Europe and Central Asia region, wherein energy efficiency projects will include some structural improvements of buildings, especially in roofs, or in seismic reduction projects that include energy efficiency measures alongside strengthening measures.

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This Project aims to reduce energy use in central government buildings and inform the development of sustain with building owners on how to minimize damage from water ingress in the chance of flash or urban flood. The slope of the soil and potential for landslide/liquefaction will also be considered at specific sites.

(ii) EE measures would include building envelop measures (e.g., roof/wall insulation, attics, windows, doors), heating and cooling systems (boilers, radiators, chillers, pipe insulation, heat

pumps, controls), water heating, pumps/fans, lighting (inside the building and in the building perimeter) and automatic control systems. Some renewable energy applications (e.g., rooftop solar PV, biomass heating, solar water heating, heat pumps) would also be considered if they are cost-effective and designed primarily for self-consumption. The suitable combination of EE measures will be determined by energy audits and shall result in a payback period of less than 15 years and a minimum energy performance of the renovated buildings (i.e., Turkish Class C energy performance certificates or higher). Moreover, the EE measures under the Project will support increased functionality and comfort during extreme heat and cold events – which are expected to increase with climate change, and the promotion of renewable energy sources will improve business continuity during disasters.

(iii) Other eligible measures included in the retrofit and renovation of buildings will support universal access improvements (e.g., addition of wheelchair ramps), water efficiency improvements (e.g., rainwater harvesting during times of water scarcity) and measures to improve fire safety – particularly as they relate to the upgrading of heating systems, electricity supply (rooftop solar PV, capacitors, transformers, rewiring) – and for fire detection and warning. An additional allowance of up to 10% of the total building renovation cost (civil works) can be used to meet other requirements requested by the building owner to improve the building, such as functionality improvements, increased internal ventilation and air filtration to reduce airborne diseases, painting, basic repairs, etc.

Testing of New and Innovative Approaches to Energy Efficiency and Disaster Resilience Improvements in Public Buildings. Traditional solutions to improve the structural strength and EE of building are often limited by three key factors: i) significant disruption and typically relocation of building occupants during renovation; ii) the long duration of renovation works, which can exceed 18 months; and iii) high and often prohibitive costs that frustrate efforts to renovate and strengthen buildings at scale. However, new technologies are being developed that optimize EE and structural strengthening improvements and it is anticipated that some of these new innovative approaches could be applied and tested on a sub-set of Project buildings under this component subject to their technical viability and cost-effectiveness. These innovative technologies could include inter alia application of prefabricated panels that add strength and insulating materials to the exterior of reinforced concrete buildings; seismic and energy-efficient exoskeletons and frames; seismic isolators and dampers, innovative column jacketing and bracing systems and use of other alternative materials and methods.

Component 1(b). Demolition and Reconstruction (~US$ 40 million IBRD): This sub-component will finance civil works contractors for demolition and reconstruction of public buildings for which structural strengthening via retrofitting and renovation is not technically and economically feasible (all consultancy contracts will be financed under Component 1a). These buildings are expected to be older and at the end of their economic life, have very low concrete quality (i.e. 8MPa or lower) and/or have other major structural deficiencies that increase the risk of serious damage or collapse in earthquake – which risks lives and serious injury to occupants but also disrupts critical service provision during emergencies, such as emergency departments or maternity hospitals. These buildings are also most likely to be at risk during other disasters, such as fires or flooding due to their construction age. During reconstruction it may also be possible to include additional capacity to meet increased service provision in rapidly growing urban areas. Reconstructed buildings expected to be classified Class C or higher, and potentially near-zero energy buildings (NZEB); the types of EE measures for new buildings will be determined based on economic efficiency, and potentially with a longer payback period (e.g., up to 20 years). During demolition, as per Turkish regulations, materials will be recycled and re-used where feasible.

There is also an opportunity to test innovative approaches for the design and reconstruction of new buildings aimed at optimizing EE, disaster resilience and climate adaptation in a cost-efficient manner. For disaster resilience, these innovative approaches could include, inter alia , fully base isolated buildings, application of new materials and approaches to maximize seismic resistance, designs to prevent and withstand multiple forms of hazard (such as raised finished floor level), custom-tailored solutions for site specific conditions. For EE, newly designed buildings could include

passive energy measures such as optimized window-to-wall ratio, solar orientation, natural lighting, shading, passive ventilation, cool roofs, use of thermal mass, etc., as well as extended active (e.g., heat pumps for cooling and heating), renewable energy (e.g., biowaste or solar PV) and other measures (e.g., rainwater harvesting, efficient water fixtures). A range of innovative technologies and approaches, relevant for Turkey, will be identified under Component 2.

1.3.3.2. Component 2. Advanced technical assistance and capacity building

While this Project supports a relatively modest intervention in approximately 50 public buildings, it is expected to generate significant learning and support to enable the Government to scale up investment in seismic resilience and energy efficiency in thousands of other central government buildings. This Component supports the development of a long term and a significantly scaled up investment program focused on increasing the energy efficiency, structural strengthening and resilience of public buildings in Turkey. Activities undertaken and lessons learnt under this Component also have broader applicability to private and residential structures in Turkey.

To develop and implement a long-term investment plan, there are key measures that need to be undertaken, including: i) development of a robust evidence base, ii) ensuring that regulations are well aligned with objectives and needs, iii) increasing the skills and experience of key professional groups, iv) through time reduction in the cost and disruption of civil works as well as increased efficiency, and v) identification and adoption of innovative technologies. Under Component 2, activities that contribute to this long-term plan will be by IBRD and Global Facility for Disaster Reduction and Recovery (GFDRR) resources.

1.3.3.3. Component 3. Project management and implementation support

Component 3. Project management and implementation support (~US$5 million IBRD loan, US$3-5 million in-kind contribution from MoEU)

This Component will finance project management and implementation support activities, including, inter alia, engineering, architectural, Occupational Health and Safety (OHS), individual consultants and other necessary technical expertise; sub-project supervision; monitoring, evaluation and reporting of the Project; communication with Project beneficiaries; training of PIU staff, etc. It would also finance requirements related to the Bank's fiduciary policies and guidelines, Project audits, gender and citizen engagement, social surveys as well as the implementation of environmental and social framework.

For the purposes of this Project, "Operating Costs" entail necessary and reasonable incremental expenses directly incurred by the PIU in Project implementation, including office supplies, office rental, publication of procurement notices, vehicle rental, office and equipment maintenance and repair, communication, translation and interpretation services, travel and supervision costs (including, as appropriate, hotel accommodation, travel services, and per diem), subscription to publications and databases, publication fees, ownership of intellectual property rights, and other miscellaneous expenses, all within a budget and work plan satisfactory to the World Bank.

1.3.3.4. Component 4. Contingent Emergency Response Component

This component would support emergency recovery and reconstruction efforts under an agreed action plan of activities designed as a mechanism to implement the government's response to an emergency. This provisional component would allow rapid reallocation of uncommitted IBRD financing under streamlined procurement and disbursement procedures, to cover emergency response costs (such as contracting emergency works, procurement of goods and services) following an adverse natural event. The contingent emergency component would be triggered by an official government declaration of an emergency, in accordance with the country's laws and policies. The types of eligible investments would be included in the CERC Manual (to be developed prior to Project Effectiveness) and the ESMF will be updated to include the CERC component.

1.3.4. Purpose of Environmental and Social Management Framework

The ESMF sets out the principles, guidelines, and procedures to assess the overall risks and impacts of the project and determines the approach for the environmental and social management to be adopted to address the potential environmental and social risks/impacts of the SREEPB Project. The ESMF follows both the World Bank Environmental and Social Framework (ESF) and the national legal framework for environmental, social, occupational health and safety management. The ESMF is the key document committed by MoEU to comply with national legislation and WB's ESF and respective Environmental and Social Standards (ESSs) and to be shared and consulted with stakeholders before Bank's approval Following the Bank's approval, this ESMF will be publicly disclosed.

The main objectives of this ESMF is (i) to establish procedures for the Environmental and Social (E&S) screening, review, approval, implementation, and monitoring of activities; (ii) to provide guidance on the preparation of the sub-project specific Environmental and Social Management Plan (ESMP) (iii) to specify the institutional arrangements, responsibilities and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to sub-projects; (iv) to determine the training, capacity building needed to successfully implement the provisions of the ESMF building trainings ; (v) to address mechanisms for public consultation and disclosure of project documents as well as summarizes the stakeholder engagement and grievance mechanism which are detailed in a Stakeholder Engagement Framework (SEF) and sub-project specific Stakeholder Engagement Plans (SEP); (vi) to integrate relevant measures from the Labor Management Procedures (LMP) to address labor risks associated with the project.

In order to enhance its capacity, PIU will maintain at least one Environmental and one Social and one Health and Safety Expert throughout the implementation period of the project. Supervision Consultants, Contractors and PIU Environmental and Social Experts will receive trainings regarding ESMF implementation to properly fulfill. The training details are provided in Section 6.

2. BASELINE DATA

The sub-projects are expected to take place in Istanbul, Izmir, Tekirdag, Kocaeli, Kahramanmaras, Tunceli, Ardahan, Hatay, Usak, Burdur, Manisa, Mugla, Bingol provinces, where there are high seismic hazard (above 0.4 Peak Ground Acceleration) and in areas where high seismicity is expected in the near term because, these provinces have not been experienced severe earthquakes for a long time. By focusing on buildings constructed prior to 2007, the Project will also address the buildings in these provinces with the greatest risk of serious damage or collapse in earthquake – buildings that are also typically more energy inefficient.

In the following sections, a short general description of the geographical, climatological conditions along with the social and economic baseline of the thirteen provinces as shown in Fig. 2 above are provided.

ISTANBUL

Istanbul is located in north-western Turkey and straddles the strait Bosporus, which provides the only passage from the Black Sea to the Mediterranean via the Sea of Marmara. Several islands—Büyükada, Heybeliada, Burgazada, Kınalıada, and five smaller islands—are part of the city. Istanbul's shoreline has grown beyond its natural limits. Large sections of Caddebostan sit on areas of landfill, increasing the total area of the city to 5,343 square kilometers (2,063 sq mi).

The nearby North Anatolian Fault is responsible for much earthquake activity, although it doesn't physically pass through the city itself. North Anatolian Fault caused the earthquakes in 1766 and 1894. The threat of major earthquakes plays a large role in the city's infrastructure development, with over 500,000 vulnerable buildings demolished and replaced since 2012. The city has repeatedly upgraded its building codes, most recently in 2018, requiring retrofits for older buildings and higher engineering standards for new construction.

Istanbul has borderline Mediterranean climate, humid subtropical climate and oceanic climate with generally cool winters and warm to hot summers (mean temperature peaking at 21.5 °C in August). Spring and fall are usually mild, with varying conditions dependent on wind direction.

Istanbul's weather is strongly influenced by the Marmara Sea to the south, and the Black Sea to the north. This moderates temperature swings and produces a mild year-round climate with little seasonal temperature variation. Because of its hilly topography and maritime influences, Istanbul exhibits a multitude of distinct microclimates. Within the city, rainfall varies widely owing to the rain shadow of the hills in Istanbul, from around 635 mm on the southern fringe at Florya to 1,167 mm on the northern fringe at Bahçeköy.

Lake-effect snow is common and forms when cold air, upon contact with the Black Sea, develops into moist and unstable air that ascends to form snow squalls along the lee shores of the Black Sea. These snow squalls are heavy snow bands and occasionally thundersnows, with accumulation rates approaching 5–8 cm per hour.

The highest recorded temperature at the official downtown observation station in Sarıyer was 41.5 °C and on 13 July 2000. The lowest recorded temperature was −16.1 °C on 9 February 1929. The highest recorded snow cover in the city center was 80 centimeters on 4 January 1942, and 104 centimeters in the northern suburbs on 11 January 2017.

Climate change in Turkey may cause more urban heatwaves, droughts, storms, and flooding. Sea level rise is forecast to affect city infrastructure, for example Kadıkoy metro station is threatened with flooding. Istanbul has a climate-change action plan.

The Turkish Statistical Institute estimates that the population of Istanbul Metropolitan Municipality was 15,190,000 at the end of 2020, hosting 19 percent of the country's population. 64.4% of the residents live on the European side and 35.6% on the Asian side.

Istanbul ranks as the seventh-largest city proper in the world, and the second-largest urban

agglomeration in Europe, after Moscow. The city's annual population growth of 1.5 percent ranks as one of the highest among the seventy-eight largest metropolises in the Organization for Economic Co-operation and Development. The high population growth mirrors an urbanization trend across the country, as the second and third fastest-growing OECD metropolises are the Turkish cities of Izmir and Ankara. Istanbul is the "industrial center" of Turkey. It employs approximately 20% of Turkey's industrial labor and contributes 38% of Turkey's industrial workspace. In addition, the city generates 55% of Turkey's trade and 45% of the country's wholesale trade, and generates 21.2% of Turkey's *gross national product*. Istanbul contributes 40% of all taxes collected in Turkey and produces 27.5% of Turkey's national product.

Istanbul experienced especially rapid growth during the second half of the 20th century, with its population increasing tenfold between 1950 and 2000. This growth was fueled by internal and international migration. Istanbul's foreign population with a residence permit increased dramatically, from 43,000 in 2007 to 856,377 in 2019.

A summary of the disaster and climate risks of Istanbul provided by the World Bank and Global Facility for Disaster Reduction and Recovery (GFDRR) *Think Hazard*[7] website, shows that Istanbul has high hazard ratings for riverine flood, earthquake, landslide, water scarcity and wildfire.

IZMIR

İzmir is a province and metropolitan municipality of Turkey in western Anatolia Aegean Region, situated along the Aegean coast. To the west, it is surrounded by the Aegean Sea, and it encloses the Gulf of Izmir. Its area is 11,973 square kilometers, with a population of 4.394.694 in 2020. Neighboring provinces are Balıkesir to the north, Manisa to the east, and Aydın to the south.

Major rivers of the province include the Küçük Menderes river, Koca Çay (with Güzelhisar dam), and Bakırçay.

An earthquake on 30 October 2020 resulted in deaths of 117 people in the Izmir area, with many more injured. Izmir sustained significant damages from the earthquake and tsunami, with 111 residential buildings collapsed or required immediate demolition, 960 buildings (with 10,170 units) have been identified as moderately to severely damaged and 5,119 buildings (55,235) units currently assessed with low damage. Key municipal buildings were also damaged including the main administrative building of the Izmir Municipality, a municipal hospital, and several other smaller municipal owned buildings.

Modern İzmir is growing in several directions at the same time. The north-western corridor extending to Aliağa brings together both mass housing projects, including villa-type projects and intensive industrial area, including an oil refinery. In the southern corridor towards Gaziemir yet another important growth trend is observed, contributed to by the Aegean Free Zone, light industry, the airport and mass housing projects.

İzmir has a Mediterranean climate, which is characterized by prolonged, hot, and dry summers, and mild to cool, rainy winters. The total precipitation for İzmir averages 695.4 mm per year; however, the vast majority of the city's rainfall occurs from November through March. The rest of the precipitation generally falls during April through May and September through October. There is usually very little to no rainfall from June through August, with frequent summer droughts. The city received its greatest rainfall, 145.3 mm, on September 29, 2006, while the highest wind speed of 127.1 km/h was recorded on March 29, 1970. The city also suffered recent flash floods (in mid-December 2020 and early February 2021) that resulted from heavy rainfall that exceeded storm water capacity, and which resulted in additional damage and loss of life.

Maximum temperatures during the winter months are mostly between 10 and 16 °C. Although it is rare, snow can fall in İzmir from December to February, staying for a period of hours rather than a

[7] *www.thinkhazard.org*

whole day or more, with a record 32 cm of snow depth recorded on January 31, 1945. During summer, the air temperature can climb as high as 40 °C from June to September; however, the high temperatures are usually between 30 and 36 °C.

Earthquake Risks in Izmir Built up Zone Izmir is one of the seismically active parts of the Aegean Plate. It shows a very complex, active, movie and rapidly changing tectonic pattern due to the relative motions of surrounding tectonic plates. According to history readers, earthquakes have been the most damaging natural disasters that have affected the Izmir built up area. There have been at least 20 disastrous earthquakes with magnitudes greater six reported, which are in literature. For example, readers documented that 9 historical cities in and around Izmir were destroyed in AD. 17, 47, 105 and 178. (Report of Radius Project August 2001)

In the last century three damaging earthquakes occurred in Izmir and its surroundings: 1928 Torbali, 1949 Karaburun and 1992 Seferihisar earthquakes mostly affected the southern part of Izmir. Izmir built up zone belongs to the first degree hazard zone in the official Earthquake Hazard Rationalization Map of Turkey. The Izmir area takes place at the west part of the Gediz Graben system and contains several morphologically prominent active normal faults with approximately eastwest strike. Moreover, the NE-SW and NW-SE trending faults, whose kinematics characteristics differentiate, form north to south, take major roles on the tectonic regime of the region. Even though there is no evidence on the active faults that could create a high earthquake activity except Gediz Graben, both historical and instrumental seismic activity is rather dense between Karaburun–Chios, Izmir BayLesbos and Doganbey-Samos axes (Selvitopu, 1999).

A summary of the disaster and climate risks of Izmir provided by the World Bank and GFDRR *Think Hazard* website, shows that Izmir has high hazard ratings for riverine and urban flood, landslide, water scarcity and wildfire. Earthquake is rated moderate, but this data pre-dates the recent Izmir earthquake.

TEKİRDAĞ

Tekirdağ is located in the East Thrace within Marmara Region of the country, also known as European Turkey, one of only three provinces entirely within continental Europe. Tekirdağ Province is bordered by Istanbul Province to the east, Kırklareli Province to the north, Edirne Province to the west, and the Gallipoli peninsula of Çanakkale Province to the south. The population of Tekirdag was recorded as more than 1 million at the end of 2019.

Tekirdağ is the capital of the province, and the largest city in European Turkey aside from the European section of Istanbul.

Tekirdağ Metropolitan Municipality is in a part of Turkey with high seismicity which is related to the tectonic environment in the Marmara Sea and more specifically the Tekirdağ Basin. Within the wider region, the western part of the North Anatolian Fault Line (NAF) has experienced a recorded 46 large historical earthquakes. This includes the 7.4 magnitude earthquake that occurred in 1912 on the westernmost section of the NAF zone, a 7.9 magnitude earthquake that occurred in Erzincan Province in 1939 on the easternmost section of the NAF zone. These two events were the beginning of an earthquake cycle that included 9 large earthquakes that ruptured a total of 1,000 km of the NAF with each earthquake typically triggering a subsequent event to the west. According to the AFAD seismic map, the earthquake hazard (measured by Peak Ground Acceleration) for Tekirdağ is 0.4-0.5 which is considered high.

Tekirdağ has a borderline mediterranean/humid subtropical climate Where summers are long, hot and humid whilst winters are cool and wet. Snowfall is quite common between the months of December and March, snowing for a week or two.

A summary of the disaster and climate risks of Tekirdağ provided by the World Bank and GFDRR *Think Hazard* website, shows that Tekirdağ has high hazard ratings for riverine and urban flood, earthquake, landslide and wildfire.

KOCAELİ

Kocaeli Province one of only two to not have the same official name as its capital, İzmit, which is thus also sometimes called Kocaeli. The geographical location of İzmit is in Marmara Region, surrounded by the Gulf of İzmit at south, Istanbul and the Sea of Marmara. The population of the province (including rural areas) is 1,906. Unlike other provinces in Turkey, apart from Istanbul, the whole province is included within the municipality of the metropolitan center.

The city is mostly built on hill slopes because of the cramped area, while flat plains surround the gulf, near the sea. This topographic structure divided the city into two parts. The first was created on flat plains, where the city center is. The railway and highway networks pass from this area which is close to the Sea of Marmara.

On 17 August 1999, an earthquake in northwestern Turkey resulted in death of around 17,000 people and left more than 250,000 people homeless. The shock had a moment magnitude of 7.6 and a maximum Mercalli intensity of IX (Violent). The event lasted for 37 seconds, severely damaging the city of İzmit.

The North Anatolian Fault Zone in Turkey has produced a remarkable sequence of westward propagating large earthquakes throughout the last century, leaving the Sea of Marmara segment close to Istanbul as the only part of the entire fault zone that has not been activated for about 250 years. The North Anatolian Fault Zone (NAFZ) is the most active strike-slip fault in Europe and Asia Minor. It acts as the boundary between the Anatolian and Eurasian tectonic plates. This fault has produced a series of large and devastating earthquakes during the 20th century, starting in the west with the 1912 Ganos earthquake and followed in 1939 by the Erzincan earthquake in eastern Anatolia. The locations of these disastrous events have since then systematically propagated westwards towards Istanbul. The two most recent earthquakes, both M>7, occurred in 1999, near Izmit and Düzce, to the east of Istanbul. The Izmit event appears to have produced increased seismic activity along the part of the NAFZ that lies immediately south of Istanbul and below the Sea of Marmara . Further to the west, where the NAFZ comes back on land, lies the similar magnitude (Ms~7.3) 1912 Ganos earthquake rupture segment. The Marmara part of the NAFZ thus appears to represent an earthquake-deficit zone. This zone is as much as 150 km long and is the only part of the NAFZ that has not produced a significant event during last century's earthquake series.

A summary of the disaster and climate risks of Koceali provided by the World Bank and GFDRR *Think Hazard* website, shows that Kocaeli has high hazard ratings for riverine flood, earthquake, landslide, water scarcity and wildfire.

KAHRAMANMARAŞ

Kahramanmaras province is located in the southern Turkey, namely the Mediterranean Region. Kahramanmaras is surrounded by Sivas from the north, Malatya from the northeast, Adiyaman from the east, Gaziantep from the south, Adana and Osmaniye from the west and Kayseri from the northwest.

The city center is located on the slopes of the Ahir Mountain and on the Maras plain. The topographic structure of the city center has a sloping structure from north to south. There is no natural lake in Kahramanmaras province. The lake of Gavur, which is in the swampy the basin, is dried by DSI. In the Ahir mountains to the north of the city center, Karagol and Kucuk Gol, which are in the tectonic-karstic characteristics, are located in the mountains. There is a small lake and reeds in the area.

Elbistan District is rich in ground water and surface waters. The Ceyhan River is rising in district center

of Elbistan called Pinarbasi Region. It is connected with Sogutlu Creek and leaves Elbistan from north-west. The land is generally inclined from the South to the North. In the northern parts of the zoning plan, the land inclined towards the South Sogutlu Creek. The altitude of the land is slightly descends towards to Ceyhan River and Sogutlu Creek.

A Mediterranean climate similar to a terrestrial one is dominating in Kahramanmaras. Kahramanmaras is located on an area which is close to three different regions (Mediterranean Region, East Anatolia Region, and Southeast Anatolia Region). Because of Kahramanmaras's geographical location and other factors, spoilt Mediterranean climate dominates among the three different climates. Summers are hot and winters are cold in Kahramanmaras. Unlike the climate which dominates in the center, terrestrial climate becomes dominate in the northern part of the city owing to altitude. Annual temperature average in the center is 16.9°C. It decreases from south to north and from west to east because of the effects of terrestrial climate. Rainfalls are generally seen in winter months. The annual average precipitation amount is 710 mm. The dominant wind direction is north.

Kahramanmaraş and its surround is located in tectonically very complicated active region. It is stated that the junction point of faults, which form the tectonic framework in this region, is the region between Kahramanmaraş and Gölbaşı. Important tectonic structures located in Kahramanmaraş and its surround are the northern branch and the southern branch of the EAFZ, the Engizek fault zone, Kahramanmaraş fault zone and Narlı segment of the DSFZ. It is also known that there have been numerous earthquakes in the region in the historical period along the faults and segments.

Kahramanmaras basin developed by tectonic-origin surface deformations in the Quaternary and Holocene is located in south of the Bitlis-Poturge Massif area nearby the triple junction of the Arabian, African, and Anatolian plates. Due to the collision of Arabian and Eurasian plates over the Bitlis Suture, the basin was eventually filled out by heavy alluvial sediments and dense turbiditic flysch sequences. In the basin, Alacik formation overlies the older units with unconformable contact starting with base conglomerate. In the north, the formation shows different lithological properties that contain marl, clayey limestone, coal band alternations, and claystone. The quaternary age alluviums, dominant materials available in the basin, are composed of gray/light gray, gravel, sand, and silt, which are loose textured and cementless deposited in horizontal and vertical directions. The alluviums thickness in the region was found to increase up to 300 m, which can increase the earthquake intensity by 2-3 degrees.

A summary of the disaster and climate risks of Kahramanmaraş provided by the World Bank and GFDRR *Think Hazard* website, shows that Kahramanmaraş has high hazard ratings for riverine flood, earthquake, landslide and wildfire.,

TUNCELI

Tunceli Province is located in the Eastern Anatolia region of Turkey. The adjacent provinces are Erzincan to the north and west, Elazığ to the south, and Bingöl to the east. The province covers an area of 7,774 km2 and has a population of 76,699. Tunceli is traversed by the northeasterly line of equal latitude and longitude. The Munzur Valley National Park is also situated in the province.

Tunceli has a dry-summer continental climate with very hot, dry summers and freezing cold, snowy winters. The main economic activity is animal breeding. Wheat is the only notable agricultural product but there are few factories based on agriculture. There are also chromium salt and marble deposits. But only salt is produced.

Tunceli province is located very critical territory of Anatolia surrounded by very active faults. There are also two inactive faults. However, there are two expected intense earthquakes on Ovacık fault and Nazımiye fault. Ovacık fault is located on North-West side of Tunceli and Nazımiye fault is located North-East part of the Tunceli. Last intense earthquake on this region was 2011 Van Tabanlı and 2011 Van Edremit earthquakes. Due to this high seismic region, all structural design should be conducted by considering these fatalities.

The main economic activity is animal breeding. Wheat is the only notable agricultural product. There are chromium salt and marble deposits. But only salt is produced. There are a few factories based on agriculture**.**

The Eastern Anatolian Region of Turkey is one of the most seismically and tectonically active regions due to the frequent occurrence of earthquakes.

A summary of the disaster and climate risks of Tunceli provided by the World Bank and GFDRR *Think Hazard* website, shows that Tunceli has high hazard ratings for earthquake, landslide and wildfire.

ARDAHAN

Ardahan is a province in the north-east of Turkey, at the very end of the country, where Turkey borders with Georgia and Armenia. Ardahan is a small province in the Eastern Anatolian Region with around 100 thousand inhabitants. The province covers an area of 5,661 km2. The city stands on a high mountain plateau and 70% of the population lives on the countryside, so agriculture is the main economy in Ardahan.

Ardahan has a mountainous character and harsh climatic conditions. It has a warm summer humid continental climate. Like in other parts of Eastern Anatolia, the climate turns subalpine on the hillsides. Major cities and towns have been situated on lower elevations for milder climatic conditions, as much as possible, therefore the city and the main towns have less characteristics of subalpine climate in comparison to the province in general. Winters are very snowy with snow cover lasting from late October to mid-April.

Ardahan and its surrounding take part in second-degree earthquake zone. The most important geological-fault lines influencing (affecting / striking) Ardahan, Kars, Iğdır, Ağrı cities and the living areas, suburbs, towns and villages.

A summary of the disaster and climate risks of Ardahan provided by the World Bank and GFDRR *Think Hazard* website, shows that Ardahan has high hazard ratings for urban flood, landslide and wildfire. Earthquake is rated as moderate but this is expected to reflect the recent lack of seismicity – thus it is considered a seismic gap.

HATAY

Hatay Province is Turkey's southern east province. Hatay is located in Southern Turkey, on the eastern shores of Gulf of Iskenderun. It is surrounded by the Mediterranean in the west, Syria in the south and east, Adana in the northwest, Osmaniye in the north and Gaziantep in the northeast. Province of Hatay has fifteen counties, including central county (Antakya).

Hatay is traversed by the north-easterly line of equal latitude and longitude. 46% of the land is mountain, 33% plain and 20% plateau and hillside. The climate is typical of the Mediterranean, with warm wet winters and hot, dry summers. The mountain areas inland are drier than the coast.

Hatay’s agricultural areas, soil structure, climate and other natural conditions allow product variety, early harvest and growing second crops. It is possible to cultivate four seasons of the year in Hatay. Especially fruits, vegetables and olive grove areas are well above average in Turkey.

Hatay province, is located among the northern part of sinistral Dead Sea Fault Zone (DSFZ), southern part of the sinistral East Anatolian Fault Zone (EAFZ) and eastern continuation of the Cyprus Arc. Hatay have been struck by devastating earthquakes several times in the past. The region is very rich in terms of fault morphology. It is also very active in earthquakes.

A summary of the disaster and climate risks of Hatay provided by the World Bank and GFDRR *Think Hazard* website, shows that Hatay has high hazard ratings for riverine and urban flood, extreme heat, landslide and wildfire, with the moderate seismic hazard rating reflecting limited recent seismic activity.

UŞAK

Uşak is a province in western Turkey. Its adjacent provinces are Manisa to the west, Denizli to the south, Afyon to the east, and Kütahya to the north. The province covers an area of 5,341 km2. The city has a population of 500,000.

Uşak has a hot summer Mediterranean climate with continental influences, with cold, wet and regularly snowy winters and hot, long and dry summers.

The city is situated at 210 km from İzmir, the region's principal metropolitan center and port city. Benefiting from its location at the crossroads of the Central Anatolian plateau and the coastal Aegean Region, and from a climate and agricultural production incorporating elements of both zones, Uşak has also traditionally had a strong industrial base. The tradition of industriousness continues today around two industrial zones.

Western Anatolia is one of the most seismically active continental regions. Usak city is located in the second-degree seismic zone while Esme, a town and district of Usak Province, is in the first-degree seismic zone. Therefore, Usak has 2 active seismic stations which are in Usak city centre and Esme town. Moreover, cities in neighborhood of Usak, such as Gediz, Simav towns of Kütahya city and Dinar district of Afyon city have many active faults which led to severe seismic damages in and around Usak.

A summary of the disaster and climate risks of Uşak provided by the World Bank and GFDRR *Think Hazard* website, shows that Uşak has high hazard ratings for wildfire, with moderate seismic hazard rating reported.

MUĞLA

Muğla is a city in south-western Turkey. Muğla is the center of the District of Menteşe and Muğla Province, which stretches along Turkey's Aegean coast. The population of Mugla province is around one million, but during summer months this number is tripled with people coming to their summer homes or hotels in the major holiday destinations within the province. Muğla has 1,100 kilometers of coastline by the sea. Köycegiz and Bafa lakes are the biggest lakes of the province.

Muğla has a Mediterranean climate. It is characterized by long, hot and dry summers with cool and wet winters.

The economy of Muğla relies mainly on tourism (on the coast), and agriculture, forestry and marble quarries inland. Agriculture in Muğla is rich and varied; the province is one of Turkey's largest producers of honey, pine-forest honey in particular and citrus fruits are grown in Ortaca, Fethiye, Dalaman and Dalyan. Moreover, the province is the second center of marble industry in Turkey after Afyonkarahisar in terms of quantity, variety and quality. However, Muğla is by no means an industrialized province.

Muğla situated on major seismic fault lines which is regularly hit by earthquakes. The Earthquake which occurred in the years of 1631- 1632 in Milas is the most ancient one, after the region came under the Turkish rule. In this study, the earthquake seen in the Province of Muğla can be examined in three periods. The first of them is the ones happened between 1923-1933. In this period there occurred first earthquake in 1926, giving rise to little damage. Then between 23 April 1933 and 4 May 1933 Muğla center and the districts of Datça and Bodrum experienced earthquake swarms numbered as 5. As a result of these earthquakes especially the villages of Datça and the Island of Cos in Greece suffered great damages and casualties. The second of these is the ones occurred between 1940-1948. During this period, Muğla centre, Bodrum and Datça districts experienced 13 earthquakes of intervals. As a result of these earthquakes many villages of Muğla center have been inflicted with the loss of properties and lives. The measures which were taken as a result of the earthquakes occurred in Muğla Province between 1923-1960 and the Gölcük Earthquake of 1999 enable people to increase the consciousness of earthquake to a great degree and so make preparations for the future.

A summary of the disaster and climate risks of Muğla provided by the World Bank and GFDRR *Think Hazard* website, shows that Muğla has high hazard ratings for riverine and urban flood, earthquake, landslide and wildfire hazard.

MANISA

Manisa is a province in western Turkey. Its neighboring provinces are İzmir to the west, Aydın to the south, Denizli to the southeast, Uşak to the east, Kütahya to the northeast, and Balıkesir to the north.

The city has 17 districts. Present geographical area of the district is about 13230 square km and total population is approximately 1.455.451 million in 2021. Urban population is concentrated on the 17 district centres. Urban migration rates are around 1-2% and is driven by economic dynamics, particularly poor returns in agriculture.

The climate of Manisa is in the category of Mediterranean climate. Since Manisa has a lot of plains nearly % 38 of the land is productive in agriculture. The most productive areas are Gediz, Bakırçay, Alaşehir, Salihli and Turgutlu plains located around the rivers Gediz and Bakırçay. The city is well known for its olives, grapes, pistachios, corn. Modern Manisa is also a booming center of industry and services, advantaged by its closeness to the international port city and the regional metropolitan center of İzmir and by its fertile hinterland rich in quantity and variety of agricultural production.

Manisa Fault Zone (MFZ) is an active structural discontinuity that is geomorphologically expressed as a trace of north-facing Quaternary fault scarps bounding the southern margin of the Manisa basin which is subsidiary to the Gediz Graben. It is known that the present-day fault trace is over 50 km long from Manisa city in the northwest to the Turgutlu town in the southeast. Manisa Fault Zone (MFZ) is an active large-scale normal fault system in this area. Western Turkey is an area of active continental extension and contains many east-west trending grabens.

A summary of the disaster and climate risks of Manisa provided by the World Bank and GFDRR *Think Hazard* website, shows that Manisa has high hazard ratings for riverine flood, earthquake, landslide and wildfire hazard.

BINGÖL

Bingöl is a province of Turkey in Eastern Anatolia. Surrounded by provinces Erzincan and Erzurum in north, Muş in east, Diyarbakır in south, Elazığand Tunceli in west, Bingöl is on Iran Transit Route- which is one of the main highways from east to west.

Its neighboring provinces are Tunceli, Erzurum, Muş, Diyarbakır, Erzincan and Elazığ. The province covers an area of 8,125 km2 and has a population of 255,170. The capital is Bingöl. Bingöl is 144 kilometers east of Elâzığ and is situated in the high region of Eastern Anatolia. Bingöl is a mountainous area with heights reaching 3000m, Bingöl city is at about 1120m above sea level. The Gayt River, a right-bank tributary of the Eastern Euphrates, runs through the city.

Bingöl has a continental climate, with hot and dry summers and cold and snowy winters. The driest months are July and August and the wettest are February and December.

Agriculture and animal husbandry activities are the main income source of the Bingöl Province. Total agricultural land of the province is 59.140 hectares and 47.100 hectares of it is irrigable agricul- tural lands.

The Eastern Anatolia Region is the most seismologically deformed area of the Anatolian plate and is under compression due to the relative movement of the Arabian and Eurasian plates in general. The Anatolian plate bounded by the North Anatolian Fault Zone (NAFZ) and Eastern Anatolian Fault Zones (EAFZ) moves relatively westward. Bingöl Earthquakes are located within the Eastern Anatolian Fault Zone and this fault zone occurs due to the movement of the parts. Bingöl and the surrounding area is the most active regions in Turkey in terms of seismicity. The most important earthquakes in Bingöl during the instrumental period were the 1971 and 2003 earthquakes. On 1 May 2003 the whole area suffered from a magnitude 6.4 earthquake, leaving 176 dead and 520 injured. On 8 March 2010, the area suffered another earthquake, of magnitude 5.9, with its epicenter in Elâzığ Province, 45 km west of Bingöl. On 14 June 2020, a relatively small earthquake occurred in the region, killing a village guard and injuring 21 others.

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A summary of the disaster and climate risks of Manisa provided by the World Bank and GFDRR *Think Hazard* website, shows that Manisa has high hazard ratings for riverine and urban flood, earthquake, landslide and wildfire hazard.

BURDUR

Burdur province is situated in the south Mediterranean regions of Turkey. It has a surface area of 6.887 km2 and a height of 1000 m. 60.6% of the province's arable land consists of mountains, and the soil. Burdur has a hot summer Mediterranean climate with continental influences, with cold, wet and often snowy winters and very hot, long and dry summers.

Burdur economy is based on agriculture, animal husbandry, forest industry and natural stone sector. There are integrated facilities which produce milk and meat at a considerable level in the region, industrial facilities that manufacture agricultural and natural stone processing machinery and also forest processing facilities. Natural stone and marble production is gaining importance in the region in recent years.

The Burdur region is seismically active. The Burdur fault is an important active fault which separates the extensional regime seen in the Aegean plate from the compressional regime effective in the South, and has an important role in the tectonic structure of the region. The Burdur fault line, which is the most important fault of this region, strikes to Northeastern and starts from Fethiye Gulf to Hoyran Lake.

A summary of the disaster and climate risks of Burdur provided by the World Bank and GFDRR *Think Hazard* website, shows that Burdur has high hazard ratings for riverine and urban flood, earthquake, landslide and wildfire hazard.

3. POLICY, REGULATORY AND INSTITUTINAL FRAMEWORK FOR ENVIRONMENTAL AND SOCIAL ASSESSMENT

3.1. Legal Framework for Environmental Protection and Conservation in Turkey

Turkish environmental regulations were developed in line with national and international initiatives and standards, and some of them have recently been revised to be harmonized with the EU Directives in the scope of Turkey's pre-accession efforts.

The Ministry of Environment and Urbanization (MoEU) is the responsible organization for the implementation of policies adopted for the protection and conservation of the environment, and for sustainable development and management of natural resources.

The MoEU (central organization) is based in Ankara and it has provincial directorates in each province. The MoEU has an overall coordinating role for the development and implementation of environmental policies in Turkey, including the approximation process for the EU environmental Acquis. The central organization is mainly composed of the following primary directorates and departments.

- General Directorate of EU and Foreign Relations
- General Directorate of Environmental Management
- General Directorate of Environmental Impact Assessment, Permit and Inspection
- General Directorate of Natural Assets Conservation
- General Directorate of Local Administrations
- General Directorate of National Estate
- General Directorate of Structural Works
- General Directorate of Infrastructure and Urban Transformation Services
- General Directorate of Professional Services
- General Directorate of Spatial Planning
- General Directorate of Geographic Information Systems
- General Directorate of Legal Services
- General Directorate of Personnel
- Directorate of High Technics Board
- Directorate of Strategy Development
- Directorate of Support Services
- Directorate of Training and Publication
- Office of Press and Public Relations
- Directorate of Revolving Fund

Main environmental responsibilities of the MoEU are summarized below:

- Prepare the legislation on environment, public works, and housing development and monitor and audit the related implementations;
- Identify the principles and policies on environmental protection, rehabilitation of environment and

prevention of environmental pollution, develop standards, criteria and programs in this context; outline the principles for implementing and monitoring these standards and criteria; undertake the works related to climate change;

- Assess the impacts of all facilities/activities that pollute the environment due to their activities resulting in solid, liquid or gaseous waste disposal/discharge into receiving environments; monitor, audit and issue the permits of such facilities/activities;
- Perform the measurements/analyses and monitoring studies concerning receiving environments; and
- Establish the plans and policies regarding the global climate change and measures to be taken against its effects.

For the management of environmental issues, MoEU collaborates with other ministries (including their provincial organizations where relevant), government agencies and relevant stakeholders, such as; Ministry of Transport and Infrastructure (General Directorate of Highways, General Directorate of Infrastructure Investments), Ministry of Agriculture and Forestry (General Directorate of Nature Protection and National Parks, General Directorate of Water Management, General Directorate of State Hydraulic Works, General Directorate of Forestry, General Directorate of Meteorological Services, General Directorate of Agricultural Reform), Ministry of Culture and Tourism (General Directorate of Cultural Heritage and Museums), Ministry of Energy and Natural Resources (General Directorate of Mining and Petroleum Affairs, General Directorate of Mineral Research and Exploration), Ministry of Family, Labor and Social Services (General Directorate of Occupational Health and Safety, General Directorate of Labor) and Ministry of Health (General Directorate of Health Services, General Directorate of Public Health).

The Turkish Environmental Law (Law No: 2872; Date of Ratification: 1983), which came into force in 1983, addresses environmental issues on a broad scope. According to the basic principles that govern the application of the Environmental Law, and as stated in the Constitution, citizens as well as the state bear responsibility for the protection of environment.

Complementary to the Environmental Law and its regulations, other laws also govern the protection and conservation of the environment, resources and cultural and natural assets, the prevention and control of pollution, the implementation of measures for the prevention of pollution, health, and safety and labor issues. Some of these laws are:

- Conservation of Cultural and Natural Assets Law (Law No: 2863, Date of Ratification: 1983)
- Energy Efficiency Law (Law No: 5627, Date of Ratification: 2007)
- Forestry Law (Law No: 6831, Date of Ratification: 1956)
- Groundwater Law (Law No: 167, Date of Ratification: 1960)
- Labor Law (Law No: 4857, Date of Ratification: 2003)
- Law on Soil Protection and Land Use (Law No: 5403; Date of Ratification 2005)
- Law on Soil Protection and Land Use (Law No: 6537; Date of Ratification 2014)
- Occupational Health and Safety Law (Law No: 6331, Date of Ratification: 2012)
- Public Health Law (Law No: 1593, Date of Ratification: 1930)
- Social Insurances and General Health Insurance Law (Law No: 5510, Date of Ratification: 2006)

3.2. National Environmental, Social and Occupational Health and Safety Legislation and Regulatory Requirements

Infrastructure projects are subject to varying levels of review that begin while projects are in the development and pre-operation phases. Additional regulations apply to facilities once they are in operation. As part of European Union (EU) accession process, several institutional and legislative reforms have been made by Turkey. Because of these reforms, environmental legislation and instruments for environmental protection have been aligned with international standards. Those that pertain to construction works include but not limited to the following:

Air Quality Control and Management

- Regulation Concerning Follow up of Greenhouse Gas Emissions, Official Gazette date: May 31, 2017, No: 30082
- Regulation on the Control of Air Pollution from Heating, Official Gazette date: January 13, 2005, No: 25699
- Regulation on the Control of Exhaust Emissions, Official Gazette date: March 11, 2017, No: 30004
- Industrial Air Pollution Control Regulation, Official Gazette date: December 20, 2014, No: 29211
- Regulation on Assessment and Management of Air Quality, Official Gazette date: June 6, 2008, No: 26898

Environmental Management, Permitting and Planning

- Environmental Auditing Regulation, Official Gazette date: November 21, 2008 and No: 27061
- Environmental Impact Assessment Regulation, Official Gazette date: November 25, 2014 and No: 29186
- Regulation Concerning Environmental Land Use Plans, Official Gazette date: November 11, 2008 and No: 27051
- Regulation on Environmental Permit and Licenses, Official Gazette date: September10, 2014, No: 29115
- Regulation for Starting up and Operating a Work Place, Official Gazette date: August 10, 2005, No: 25902

Health and Safety

- Communiqué on Hazard Classes List related to Occupational Health and Safety, Official Gazette date: March 29, 2013, No: 28602
- First Aid Regulation, Official Gazette date: July 29, 2015, No: 29429
- Heavy and Hazardous Works Regulation, Official Gazette date: June 16, 2004, No: 25494
- Health and Safety Measures in Working with Asbestos Regulation, Official Gazette date: January 259, 2301385, No: 2
- Health and Safety Signs Regulation, Official Gazette date: September 11, 2013, No: 28762 (based on EU Council Directive 92/58/EEC dated June 24, 1992)
- Regulation Concerning the Use of Personal Protection Equipment at Workplaces, Official Gazette date: July 2, 2013, No: 28695 (based on EU Council Directive 89/656/EEC dated November 11, 1989)
- Regulation on Health and Safety in Fixed Term and Temporary Employment, Official Gazette date August 23, 2013, No: 28744

- Regulation on Health and Safety Measures in the Use of Work Equipment, Official Gazette date: April 25, 2013, No: 28628
- Regulation on Health and Safety Measures to be taken at Works Involving Chemicals, Official Gazette date: August 12, 2013, No: 28733
- Regulation on Methods and Essentials of Work Health and Safety Training for Workers, Official Gazette date: May 15, 2013, No: 28648
- Regulation on Occupational Health and Safety, Official Gazette date: December 9, 2003, No: 25311) (based on EU Council Directive 89/391/EEC dated June 6, 1989)
- Regulation on Radiation Safety, Official Gazette date: March 24, 2000, No: 23999

Management of Chemicals and Other Dangerous Substances

- Regulation Concerning the Classification, Packaging, and Labeling of Dangerous Substances and Preparations, Official Gazette date: December 11, 2013, No: 28848, repeated
- Regulation Concerning the Material Safety Data Sheets for the Dangerous Substances and Preparations, Official Gazette date: December 3, 2014, No: 29204
- Regulation on the Inventory and Control of Chemicals, Official Gazette date: December 26, 2008, No: 27092 (repeated)

Nature Protection

- Regulation on Pastures, Official Gazette date: July 31, 1998, No: 23419
- Regulation on the Protection of Wetlands, Official Gazette date: April 4, 2014, No: 28962
- Regulation on Procedures and Principles Concerning the Protection of Game and Wild Animals and their Habitats and Combat with their Pests, Official Gazette date: October 24, 2005, No: 25976

Noise Control and Management

- Regulation on the Assessment and Management of Environmental Noise, Official Gazette date: June 4, 2010, No: 27601
- Regulation on the Environmental Noise Emission caused by Equipment used Outdoors, Official Gazette date: June 30, 2016, No: 29758

Soil Quality Control and Management

- Implementation Regulation on Soil Protection and Land Use, Official Gazette date: December 15, 2005, No: 26024
- Regulation on the Control of Soil Pollution and Polluted Areas by Point Sources, Official Gazette date: June 8, 2010, No: 27605

Waste Management

- Regulation of Waste Management, Official Gazette date: April 2, 2015, No: 29314
- Regulation Concerning the Landfill of Wastes, Official Gazette date: March 26, 2010, No: 27533
- Regulation on the Control of Excavation Materials, Construction and Demolition Wastes, Official Gazette date: March 18, 2004, No: 25406
- Regulation on the Control of Medical Wastes, Official Gazette date: January 25, 2017, No: 29959
- Regulation on the Control of Packaging Wastes, Official Gazette date: December27, 2017, No: 30283

- Regulation on the Control of Waste Batteries and Accumulators, Official Gazette date: August 31, 2004, No: 25569
- Regulation on the Control of Waste Oils, Official Gazette date: July 30, 2008, No: 26952
- Zero Waste Regulation, Official Gazette date: July 12, 2019, No: 30829
- Regulation on the Control of Waste Tires, Official Gazette date: March 11, 2015, No: 29292

Water Quality Control and Management

- Ordinance on Groundwater Resources, Official Gazette date: August 8, 1961, No: 10875
- Regulation Concerning Protection of Ground Waters against Pollution and Deterioration, Official Gazette date: May 22, 2015, No: 29363
- Regulation Concerning Quality of Surface Waters Planned or Used as Drinking Water Supply, Official Gazette date: June 29, 2012, No: 28338
- Regulation Concerning Water for Human Consumption, Official Gazette date: March 7, 2013, No: 28580
- Regulation on the Control of Pollution Caused by Dangerous Substances in Water Environment, Official Gazette date: November 26, 2005, No: 26005
- Regulation on Pit Opening Where Sewer System Construction is not Applicable, Official Gazette date: March 19, 1971, No: 13783
- Surface Water Quality Management Regulation, Official Gazette date: April 15, 2015, No: 29327
- Urban Wastewater Treatment Regulation, Official Gazette date: January 8, 2006, No: 26047
- Regulation Concerning Wastewater Collection and Disposal Systems, Official Gazette date: January 6, 2017, No: 29940
- Water Pollution Control Regulation, Official Gazette date: December 31, 2004, No: 25687

General

- Turkey Building Earthquake Regulation, Official Gazette date: March 18, 2018, No: 30364 (repeated)
- Regulation Concerning the Decrease of Ozone Depleting Substances, Official Gazette date: April 7, 2017, No: 30031
- Regulation Concerning the Increase of Efficiency in the Usage of Energy and Energy Resources, Official Gazette date: October 27, 2011, No: 28097
- Regulation on Control of Large-Scale Industrial Accidents, Official Gazette date: August 18, 2010, No: 27676
- Regulation on the Implementation of the Law Concerning Private Security Services, Official Gazette date: September 26, 2009, No: 27358

COVID-19 Related Regulations

The Ministry of Health has a national pandemic preparedness plan and various guidelines and measures such as Covid-19 Disease Guideline, Guidance to Covid-19 Outbreak Management and Working, etc., which are in line with WHO and other international standards. The first version of the guideline has been published on January 24, 2020. Following the scientific developments and World Health Organization (WHO) guidance/recommendations (see Annex 7), it is constantly updated and published on the website of the Ministry of Health[8] together with Covid-19 posters, leaflets, frequently

[8] https://covid19.saglik.gov.tr/TR-66301/covid-19-rehberi.html

asked questions and algorithms. Guidance to Covid-19 Outbreak Management and Working has also been prepared by Scientific Advisory Board and it provides measures to be taken at workplaces such as shopping malls, worksites, etc. Annex 7 provides a copy of the World Bank ESF/Safeguards Interim Note on Covid-19 Considerations in Construction/Civil Works Projects including resource list for Covid-19 guidance.

3.3. The Turkish Regulation on EIA

Under Article 10, Environmental Law sets out the general scope of the Environmental Impact Assessment (EIA) procedure in Turkey, indicating that institutions, agencies and establishments that lead to environmental problems as a result of their planned activities are obliged to prepare Environmental Impact Assessment report or Project Information File (PIF). Based on this legal framework, the Regulation on Environmental Impact Assessment (henceforth "EIA Regulation") was put into force for the first time after being published in the Official Gazette numbered 21489 and dated on February 7, 1993. Since then, there had been several amendments in the first regulation and new EIA regulations were published in 2008 and 2013 repealing the former regulations in force. The latest EIA Regulation has been published in the Official Gazette dated November 25, 2014 and numbered 29186, which repealed the 2013 EIA Regulation.

The EIA Regulation is largely in line with the EU Directive on EIA. The key relevant steps of the Turkish EIA procedure namely screening public consultation, scoping, disclosure and supervision are briefly reviewed below in the order they are prescribed to occur.

3.3.1.Screening

The EIA Regulation classifies projects into two categories:

- Annex I projects[9]. These are projects that have significant potential impacts and require an EIA. Annex I of the EIA Regulation lists these projects types, so project proponents are expected to start the EIA procedure without any other screening process; and
- Annex II projects[10]. Annex II of the EIA regulation covers the projects that may or may not have significant effects on the environment. Proponents of Annex II projects are required to submit a Project Information File (PIF) to the Ministry of Environment and Urbanization (MoEU). The PIF is prepared following the General Format for PIF provided in Annex IV of the EIA Regulation and contains information on: (i) project characteristics; (ii) environmental characteristics of the project site and impact area; and (iii) significant impacts of the project and measures to be taken during construction and operation phases of the project. A non-technical summary of the above items is also to be added to the PIF. The PIF is submitted to the MoEU for review and evaluation. Provincial Directorate gives its "EIA is Necessary" or "EIA is not necessary" decision regarding the project. The decision of the Provincial Directorate is communicated to public using appropriate means (i.e. announcement boards, internet).

There would be no sub-projects within the scope of SRPBEE Project that would be considered as subject to the EIA Regulation. The social impacts within the screening are not compulsory in the national EIA regulation and generally are either very briefly mentioned or not at all.

3.4. National Laws on Social Impacts

Although the Turkish EIA Regulation does not entirely meet the requirements of international standards in terms of social impacts and stakeholder engagement, there are some legal arrangements for managing various social impacts. In this respect, the following are identified to be a non-exhaustive list of social legal framework applicable for this project:

[9] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=20235&MevzuatTur=7&MevzuatTertip=5
[10] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=20235&MevzuatTur=7&MevzuatTertip=5

- Labor Law (No. 4857), published in the Official Gazette no. 25134 dated 10 June 2003
- Law on Occupational Health and Safety (No. 6331), published in the Official Gazette no. 28339 dated 30 June 2012
- Regulation on Contractors and Sub-contractors, published in the Official Gazette no. 27010 dated 27 September 2008
- Laws on Right to Information (No. 4982), published in the Official Gazette no 25269 dated 24 October 2003
- Regulation on the Environmental Impact Assessment (EIA) published in the official Gazette no. 29186 dated 2525 November 2014

In terms of land acquisition and involuntary resettlement, the relevant legal arrangements of Turkey are summarized below:

- Expropriation Law, published in the Official Gazette no. 18215 dated 8 November 1983
- Amendment on Expropriation Law, published in the Official Gazette no. 24393 dated 5 May 2011

3.4.1.National Laws on Labor and Working Conditions

Occupational Health and Safety

In recent years, Turkey has undergone a reform to improve its national Occupational Health and Safety (OHS) system through adapting a set of international and regional standards into its national level requirements for the prevention occupational risks as defined in the ILO Occupational Safety and Health Convention, 1981 (No. 155). The convention, along with the Occupational Health Services Convention, 1985 (No. 161) were both ratified by Turkey in 2005 who Turkey is also party to the Labor Inspection Convention, 1945 (No. 81) since 1951. In 2014, Turkey ratified the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187).

During 2012, a stand-alone Law on OHS (No. 6331) was put into force (20 June 2012). The OHS Law governs workplace environments and industries (both public and private) as well as virtually all classes of employees including part-time workers, interns, and apprentices. The legislation is comprehensive and is generally applicable across all sectors and many industries.

Labor and Working Conditions

Turkey is party to a multitude of ILO conventions, including but not limited to conventions on equal treatment of employees, gender equality, child labor, forced labor, OHS, right of association and minimum wage. Accordingly, the current Turkish Labor Law (No.4857) is to large extent consistent with ESS2 requirements.

There are also secondary legislations that may apply to the project which include regulations on annual leave, working hours, overtime work, minimum wage, female and child employees. The Ministry of Family Labor and Social Services has published various communiques and circulars that set ground for the implementation of the Labor Law which may also be referenced during project implementation.

3.4.2.National Laws on Land Acquisition

In the scope of the Turkish legal framework, land acquisition/expropriation related issues are handled through the Expropriation Law No: 2942 (amended by Law No: 4650 in 2001).

Compensation for the subject property/assets to be expropriated is determined according to procedures and principles outlined in Articles 8, 10 and 11 of the Law. Article 27 authorizes the expropriation agency to confiscate the assets required by the project earlier than the time needed in normal expropriation procedure. This process does not prevent challenges of the property owners against the determined valuation.

3.5. International Agreements and Conventions

Turkish national policy on protection of environment, cultural heritage and conservation of biological resources has been formulated based on relevant international agreements signed or ratified by Turkey. Relevant environmental, OHS and international labor agreements and conventions ratified by Turkey are listed below:

- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (22 June 1994)
- Bern Convention on Protection of Europe's Wildlife and Living Environment (05 January 999)
- Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) (22 December1996)
- Convention on Long-range Transboundary Air Pollution (18 April1983)
- European Convention on the Protection of the Archaeological Heritage (9 March2005)
- European Landscape Convention (10.03.2006)
- International Convention for the Protection of Birds (12.September1967)
- Montreal Protocol on Substances that Deplete the Ozone Layer (20 December 1991)
- Paris Convention on the Protection of the World Cultural and Natural Heritage (14 April 1982)
- Ramsar Convention on Wetlands of International Importance Especially as Wildfowl Habitat (3 November 1994)
- Stockholm Convention on Persistent Organic Pollutants (14 October 2009)
- United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (31 Mar 1998)
- United Nations (UN) Framework Convention on Climate Change (Kyoto Protocol) (28 May 2009)
- UN (Rio) Convention on Biological Diversity (14 Feb 1997)
- Vienna Convention or the Protection of the Ozone Layer (20 Sep 1991)
- ILO Occupational Safety and Health Convention (23 March 2015)
- Occupational Health Services Convention (22 April 2005)
- Labor Inspection Convention (05 March 1951)
- Promotional Framework for Occupational Safety and Health Convention (16 January 2014)
- Worst Forms of Child Labor Convention (2 August 2001)

4. WORLD BANK ENVIRONMENTAL AND SOCIAL STANDARDS

The World Bank Environmental and Social Framework (ESF) sets out the World Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social Standards[11] (ESSs) that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity.

Ten ESSs set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing (IPF).

The standards will:

a. support Borrowers in achieving good international practice relating to environmental and social sustainability;

b. assist Borrowers in fulfilling their national and international environmental and social obligations;

c. enhance nondiscrimination, transparency, participation, accountability and governance;

d. enhance the sustainable development outcomes of projects through ongoing stakeholder engagement

Six out of the ten ESSs establish the standards that the Borrower and the Project will meet through the project life cycle, as follows:

ESS1: Assessment and Management of Environmental and Social Risks and Impacts

ESS2: Labor and Working Conditions

ESS3: Resource Efficiency and Pollution Prevention and Management

ESS4: Community Health and Safety

ESS8: Cultural Heritage:

ESS10: Stakeholder Engagement and Information Disclosure

ESS7 "Indigenous People/Sub-Saharan African Historically Underserved Traditional Local Communities" and ESS9 "Financial Intermediaries" are not relevant to this project as there are no indigenous groups in Turkey that meet the definition provided in ESS7 and the project does not involve any Financial Intermediary.

ESS5 "Land Acquisition Restrictions on Land Use and Involuntary Resettlement" and ESS6 "Biodiversity Conservation and Sustainable Management of Living Natural Resources" are not also applicable to this project since none of the sub-project will require involuntary land acquisition, all sub-projects are implemented in existing buildings and/or existing public lands in urban and peri-urban areas. Furthermore, the sub-projects relevant to the mentioned ESSs will be screened out through the screening criteria set out in this ESMF and will not be financed under the project.

In accordance with the ESSs, the Project will also apply the relevant requirements of the World Bank Group's Environment, Health and Safety (EHS) Guidelines. When the Turkish requirements differ from the levels and measures presented in the EHS Guidelines, the more stringent one (such as the most stringent discharge and emission standards) will be applied in the project specifications. The applicable EHS Guideline for this project is World Bank Group's EHS General Guidelines.

[11] *www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards* and *http://projects-beta.vsemirnyjbank.org/ru/projects-operations/environmental-and-social-framework/brief/environmental-and-socialstandards*

Table 1. Brief Description of World Bank's ESSs

ESS	Topic	Brief requirement
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	ESS1 sets out the Borrower's responsibilities for assessing, managing and monitoring the environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).The environmental and social assessment will be based on current information, including a description of the project and any associated aspects, and environmental and social baseline data at an appropriate level of detail sufficient to inform characterization and identification of risks and impacts and mitigation measures. The assessment will evaluate the project's potential environmental and social risks and impacts, with a particular attention to those that may fall disproportionally on disadvantaged and/or vulnerable social groups; examine project alternatives; identify ways of improving project selection, sitting, planning, design and implementation in order to apply the mitigation hierarchy for adverse environmental and social impacts and seek opportunities to enhance the positive impacts of the project. The environmental and social assessment will include stakeholder engagement as an integral part of the assessment, in accordance with ESS10. According to ESS1 the Borrower will identify, evaluate and manage the environmental and social risks and impacts of the project throughout the project life cycle in a systematic manner, proportionate to the nature and scale of the project for the environmental and social risks assessment).
ESS2	Labor and Working Conditions	The objectives of ESS2 is to: (i) promote safety and health at work; (ii) promote the fair treatment, nondiscrimination and equal opportunity of project workers; (iii) protect workers including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with ESS2) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate; (iv) prevent the use of all forms of forced labor and child labor (v) support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law; and (vi) provide project workers with accessible means to raise workplace concerns. The applicability and scope of application of ESS2 depends on the

		environmental and social assessment described in ESS1 and the type of employment relationship between the Borrower and the project workers. ESS2 requirements cover; the development and implementation of written Labor Management Procedure (LMP) which will be applicable to the project. These procedures will set out the way in which project workers will be managed, in accordance with the requirements of national law and this ESS, and will include the description of the following; (i) working conditions and management of worker relationships (such as development and implementation of labor management procedures applicable to the project and Code of Conduct (CoC) that will be followed by project contractors) including terms and conditions of employment, nondiscrimination and equal opportunity, and worker's organizations; (ii) protecting the work force including defining a minimum age for workers, prohibition of child labor and forced labor; (iii) grievance mechanism (for the workers, including arrangements for referral to national system for any potential Sexual Exploitation Abuse/Sexual Harassment (SEA/SH) risks; (iv) occupational health and safety; (v) contracted workers; (vi) community workers; and(vii) primary supply workers.
ESS3	Resource Efficiency, Pollution Prevention and Management	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 and 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 prevention and management throughout the project life cycle consistent with Good International Industry Practice (GIIP). Assessment of risks and impacts and proposed mitigation measures related to relevant requirements of ESS3, including raw materials, water use, air pollution, hazardous materials, and hazardous waste are included within scope of the ESMF, and ESMPs as relevant. The example of ESMP could be find in Annex 3 of ESF. The anticipated environmental and social risks are considered in this ESMF will be further assessed and addressed in detail specified for individual project sites, in the site-specific ESMPs.

ESS4	Community Health and Safety	ESS4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities. ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.
ESS5	Land Acquisition Restrictions on Land Use and Involuntary Resettlement	ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land, or loss of shelter), economic displacement (loss of land, assets, or access to assets leading to loss of income sources or other means of livelihood), or both. The term “involuntary resettlement” refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	The environmental and social assessment as set out in ESS1 will consider direct, indirect and cumulative project-related impacts on habitats and the biodiversity they support. This assessment will consider threats to biodiversity, for example habitat loss, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading, pollution and incidental take, as well as projected climate change impacts. It will determine the significance of biodiversity or habitats based on their vulnerability and irreplaceability at a global, regional or national level and will also take into account the differing values attached to biodiversity and habitats by project-affected parties and other interested parties.
ESS7	Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities	This ESS recognizes that Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities have identities and aspirations that are distinct from mainstream groups in national societies and often are disadvantaged by

		traditional models of development.
ESS8	Cultural Heritage	The Borrower will avoid impacts on cultural heritage. When avoidance of impacts is not possible, the Borrower will identify and implement measures to address impacts on cultural heritage in accordance with the mitigation hierarchy. Where appropriate, the Borrower will develop a Cultural Heritage Management Plan.
ESS9	Financial Intermediaries	Financial intermediaries will put in place and maintain an ESMS to identify, assess, manage, and monitor the environmental and social risks and impacts of sub-projects on an ongoing basis.
ESS10	Stakeholder Engagement and Information Disclosure	This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. The client will engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts. Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process and is an integral part of early project decisions and the assessment, management and monitoring of the project's environmental and social risks and impacts. In consultation with the Bank, the Borrower will develop and implement a Stakeholder Engagement Plan (SEP) proportionate to the nature and scale of the project and its potential risks and impacts.

4.1. Comparison Between Turkish Regulations and the World Bank Standards and Related Key Gaps

The Turkish EIA procedures are, with some exceptions, in line with the WB's ESSs. The primary exceptions are in project categorization, scope of environmental and social assessment, and public consultation. In cases where the Turkish legislation differs from the ESSs, the more stringent one will be applied to the project implementation.

Project Categorization

According to the World Bank's E&S Policy, projects are classified into one of four risk classifications: High Risk, Substantial Risk, Moderate Risk or Low Risk considering relevant potential risks and impacts, such as the type, location, sensitivity and scale of the project; the nature and magnitude of the potential E&S risks and impacts; the capacity and commitment of the Borrower; and other areas of risks that may be relevant to the delivery of E&S mitigation measures and outcomes.

There are no clear-cut border values distinguishing the classification of the projects or, unlike the Turkish EIA Regulation (where projects are classified into two categories as Annex I and Annex II projects), any ready lists of project types for classification; rather projects are screened on a case-by-case basis in the environmental and social risk classification of the WB.

Scope of Environmental and Social Assessment

The scope and type of E&S assessment required as per ESS1 varies proportionate to the potential risks and impacts of the project and, in an integrated way, all relevant direct, indirect and cumulative environmental and social risks and impacts throughout the project life cycle, as per the ESSs 2-10, are assessed. Indicative outlines of ESMP are given in Annex 3.

Comparison of the indicative outline required by the WB for ESIA with the general format of a Turkish EIA indicates a number of key differences as follows:

Table 2. Comparison ESIA's requirements of WB with the General Format of a Turkish EIA

WB ES Assessment	Turkish EIA	Remarks
Executive Summary	The absence of an executive summary and information on the legal and institutional framework in the Turkish EIA	Technical level of information in the non-technical summary required in the Turkish EIA may not meet WB requirements
Social Impact Assessment (SIA)	SIA is not completely integrated to the Turkish EIA and this results in the absence of proper social baseline, identification and assessment of the project induced social impacts including impacts on disadvantaged or vulnerable and gender related issues	Labor Law 4857 regulates associated risks and impacts
Community Health and Safety	Limited requirements to cover associated risks and impacts	Law 6331 on OHS regulates associated risks and impacts
Occupational Health and Safety	Limited requirements to cover associated risks and impacts	Labor Law 4857 and Law 6331 on OHS regulate associated risks and impacts
Labor and Working Conditions	Limited requirements to cover associated risks and impacts	Labor Law 4857 and Law 6331 on OHS regulate associated risks and impacts

Cumulative Impacts	Limited requirements to cover related impacts	
Overall Environmental and Social Impacts	Possible discrepancies with regard to the level at which the project's environmental and social impacts, its alternatives, and mitigation measures for the impacts are discussed (such as lack of discussions on residual impacts, limited discussion on indirect and induced impacts, limited assessment regarding use of resources and GHG emissions);	

Public Consultation and Disclosure

Pursuant to ESS 1, stakeholder engagement is an integral part of E&S assessment and should be conducted in accordance with ESS 10. Within this scope, the Borrowers should identify the different stakeholders (project-affected parties and other interested parties including disadvantaged or vulnerable) and develop and implement a Stakeholder Engagement Plan (SEP), in consultation with the Bank, proportionate to the nature and scale of the project and its potential risks and impacts. SEP should describe the timing and methods of engagement with stakeholders throughout the life cycle of the project, and also describe the range and timing of information to be communicated to the parties as well as type of information to be sought from them. The Borrower should disclose project information to allow stakeholders to understand the risks and impacts of the project, and potential opportunities, in a timeframe that enables meaningful consultations with the stakeholders on project design.

The Turkish EIA Regulation requires "pre-scoping" public consultation only for projects requiring an EIA, and only requires announcement of the environmental assessment together with the justification. However, ESS 10 does not specify an exact number and method of public consultation and information disclosure but instead the standard requires a continuous stakeholder engagement approach through the life cycle of the project that will be decided proportionate to the nature, scale and impact magnitude of the project.

Key gaps between WB ESSs and Turkish E&S legislation is also provided in Table 3.

Table 3. Key Gaps Between WB ESSs and Turkish E&S Legislation

WB Environmental and Social Standards (ESSs)	**Gaps**	**ESF documents to fulfill the gaps**
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	As described in Table 2 above.	Sub-project specific environmental and social assessment studies (i.e. ESMP) will be prepared including potential social impacts of the sub-projects as well. Sub-management plans to be determined on a case-by-case basis will also be prepared to address any specific risks/impacts depending on their level.
ESS2: Labor and Working Conditions	In general, Turkish national laws and regulations regarding labor and working conditions satisfies ESS2 requirements. Worker grievance mechanism is the main gap between national legislative requirement and ESS2. Per the Turkish	LMP is developed as a part of ESF documents. LMP will also provide guidance on the required mitigations or management implementations such as workers GM, code of conduct etc. stipulated by ESS2 and relevant WB EHS guidelines.

	national legislation on labor and working conditions, there is no specific requirement related to grievance mechanism that allow workers to communicate their complaints to the employer.	In line with the LMP developed for the Project, sub-project specific LMPs will be developed, as relevant.
ESS3: Resource Efficiency and Pollution Prevention and Management	Local regulations are mostly aligned with the EU Directives. Although the impacts associated with ESS3 are assessed through the EIA Regulation, none of the project activities are subject to this EIA Regulation and furthermore there is no detailed management perspective (including mitigation, monitoring and reporting) of some specific impacts.	The risks and impacts associated with ESS3 will be addressed through the ESMPs to be prepared for each sub-project. Sub-management plans (e.g. waste management, pollution prevention etc.) will be developed as a part of ESMPs depending on the level of risks/impacts to be determined on a case-by-case basis.
ESS4: Community Health and Safety	In general, there is no gap in terms of policy level. On the other hand, project level management of specific risks such as labor influx, sexual exploitation and abuse and sexual harassment are the key gaps in terms of ESS4.	The risks and impacts associated with ESS4 will be addressed through the ESMPs to be prepared for each sub-project. Sub-management plans (e.g. Traffic Management Plan, Community Health and Safety Plan etc.) will be developed as a part of ESMPs depending on the level of risks/impacts to be determined on a case-by-case basis.
ESS8: Cultural Heritage	No major gaps in between the ESS8 and Turkish Regulations with respect to the scope of the project activities.	The project will not finance any activities adversely affecting the cultural heritage. The chance find procedure will be integrated into all the ESMPs that will be prepared for the project activities.
ESS10: Stakeholder Engagement and Information Disclosure	Effective and transparent stakeholder engagement is the main gap in terms of ESS10 requirement. Within this scope, a Stakeholder Engagement Plan required to identify the different stakeholders (project-affected parties and other interested parties including disadvantaged or vulnerable). Stakeholder engagement should be a continuous and well-documented process throughout project duration	SEF is in place as part of ESF documents and sub-project specific SEPs will be prepared. The sub-project specific SEPs will be operational throughout implementation of the Project, including overall disclosure of information on sub-projects and grievance mechanism.

5. POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS AND APPLICATION OF ESSs TO PROJECT COMPONENTS

5.1. Positive Environmental and Social Impacts

Sub-projects to be implemented under this project are expected to generate both direct and indirect positive social and environmental impacts. Direct positive social impacts will be generated by preventing injuries and loss of lives and property, as well as easing the tension against potential earthquakes, of users of public buildings by seismic resilience retrofitting/reconstructing.

Indirect positive impacts will relate to overall improvement of interior environment of the public buildings, better ventilation, and heating systems, and buildings that are more accessible to people with disabilities. Furthermore, the project would bring positive impacts in terms of energy conservation and reduction of air pollutants and include the following:

- Reliable energy supply
- Sustainable economic development
- Competitiveness of the economy
- Increased lifetime seismic resilience and energy savings from EE investments in public buildings;
- CO_2 emissions reductions as a result of the energy savings;

These priorities will be achieved by a series of strategic measures, including the following:

- Reduction of dependence on imported fuels through and electricity consumption for non-productive use.
- Modernization of the energy infrastructure, and diversification of energy supply (the extension of a natural gas network is an important basic element in the realization of all expected energy efficiency measures).
- Energy sector management and training, including technology transfer (Best Available Technologies – BAT, clean development mechanism – CDM).
- Building a framework that will allow viability of energy efficiency improvements on a commercial basis.

5.2. Adverse Environmental and Social Risks and Impacts

Potential Impacts during Construction Phase

The potential environmental and social impacts that could be associated with the rehabilitation/ demolishing and reconstruction of existing public building for energy efficiency improvement and seismic hazards strengthening are associated with:

- noise, dust, air and water pollution,
- solid/demolition waste management,
- community health and safety (including traffic management related risks and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) risks), -
- occupational health and safety risks,
- temporary relocation of government staff, workers and other building occupants to work in designated areas in buildings or in other buildings,
- Temporary disruption to livelihoods of certain workers in buildings, such as workers of commercial enterprises like shops, canteens, cleaners and other service providers etc.

Risks are expected to be typical for construction/rehabilitation works for energy efficiency activities in public buildings and street lighting, temporary by nature and site specific and can be mitigated by applying best construction and/or energy supply or energy efficiency practices and relevant mitigation measures.

5.2.1.Noise and Vibration

Increased noise level (noise from the mechanical machinery and equipment, vehicles, removal of the old buildings equipment, etc.) may occur during the construction works of the sub-projects. In line with the applicable national legislation and World Bank's ESF, contractors should fulfil requirements for noise limit values for the site-specific area for all construction sites, considering the sensitive receptors around the project sites.

5.2.2.Air Pollution

Air Pollution may be caused by emissions from demolishing works, vehicles, mechanization, excavation of soil, dismantling of the old equipment and constructions, transportation of demolition / construction materials, and also during the final interior and exterior works. The interior works (painting, surface preparation) can generate dust which contain hazardous substances such as lead and carbon fibers that could be inhaled by workers.

5.2.3.Waste

Throughout the project implementation, different waste streams will be generated: excavation of small amounts of soil, communal waste, construction and demolition waste, biodegradable waste, packaging waste, possible hazardous waste – asbestos from roofs/walls/pipes, light bulbs (might have mercury), PV panels, etc. Chemicals and hazardous materials wastes are mainly from activities such as use of paints for refurbishing of walls and facades, use of new insulation materials, and fuel filling, vehicle and machinery maintenance works. Other hazardous waste such as waste oil that might be generated from varies construction activities, from generators and machineries etc.

5.2.4.Water and Soil Pollution

It is not expected that the project activities will cause any significant impacts on water quality. Leakage of fuels and lubricants (fuel and lubricants) from construction activities, machinery maintenance, and unproper stored waste, can pollute the soil, and may contaminate groundwater or drain into surface water bodies. Maintenance and cleaning of construction machinery and mechanisms near natural streams can lead to water pollution. If temporary workers camps are established on a construction site, pollution of the nearby environment can be caused by sanitary facilities from the camps.

5.2.5. Hazardous Waste Management

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

- Waste batteries,
- Waste oil (from maintenance of equipment and vehicles, transformers, etc.),
- Waste paint,
- Other hazardous waste related to operation and maintenance (O&M) activities, and
- Materials that came into contact with hazardous materials.
- Waste management including hazardous wastes is detailed in Waste Management Plan (pls see Annex 9)

5.2.6.Asbestos Management

As some of the buildings are relatively old, asbestos containing materials could possibly be encountered as a result of the renovation and construction activities for these buildings. Exposure to airborne fibers from these asbestos materials pose significant health risks including lung, kidney, and

throat cancer. Therefore, the handling and disposal of asbestos-containing waste materials must comply with pertinent national regulations and WBG EHS guidelines, and managed by authorized, skilled & experienced professionals. Provisions of asbestos management is provided in Annex 8.

5.2.7.Resources Required

Water and construction materials such as concrete, construction iron, wooden molds will be utilized for renovation and reconstruction activities. Water to be used for construction activities will be brought to sites by water trucks. Concrete will be obtained from local licensed ready mixed concrete plants.

5.2.8.Traffic

Retrofitting / reconstruction activities may increase traffic load in and around the construction sites of sub-projects. Traffic congestion and temporary interruptions from construction phases of the investments and which could potentially cause annoyance, disruption, health and safety impacts. Poorly trained or inexperienced vehicle drivers have increased risk of accident with other vehicles, pedestrians, locals, and equipment. Delivery vehicles, as well as private vehicles on-site likely to cause increased frequency and severity of accidents.

5.2.9.Occupational Health and Safety (OHS) Risks

The project activities mainly cover construction works for (partial/full) retrofitting and improving structural resiliency of existing public buildings. The potential OHS risks include physical hazards such as rotating and moving equipment, noise, vibration, electrical, welding/hot work, eye hazards, site traffic, ergonomics, repetitive motion, manual handling, working environment temperature, working at height, illumination, and chemical hazards such as air quality, fire and explosions, asbestos containing materials (ACM), corrosive, oxidizing, and reactive chemicals, and biological hazards. However, although strict national regulation is in place, the experience is that low enforcement in practice is expected. In this regard, there is a moderate risk of insufficient enforcement of the OHS measures for all sub-project activities.

Contractors shall meet the OH&S requirements according to the national regulations, that are provided in Section 3.2 and in accordance with the World Bank General EHS Guidelines. Furthermore, the site-specific ESMP and the contractor's ESMP on occupational health and safety will include specific OHS measures and the capacity-building needs to mitigate any potential risks during construction works.

As part of the OHS measures special attention will be devoted to avoiding gender-based discrimination in the workplace (including sexual harassment and bullying), with additional efforts being made by the PIU to raise awareness on these issues and provide responses if such cases occur.

In addition, the PIU environmental and social specialists will monitor the implementation of the OHS requirements during the construction activities through conducting regular site visits and the monthly reporting by the supervision consultants.

5.2.9.1. Noise and Vibration Risks and Hazards

Noise is one of the most common physical hazards present in the occupational setting. Inadequate hearing protection or prolonged exposure to noise can result in either temporary or permanent hearing loss. Machinery and equipment are the most likely sources of hazardous noise in the workplace.

Vibration exposure to hand-arm vibration from equipment such as hand and power tools, or whole-body vibrations from surfaces on which the worker stands or sits. **Vibration** can cause changes in tendons, muscles, bones, and joints, and can affect the nervous system. Collectively, these effects are known as Hand-Arm **Vibration** Syndrome (HAVS). Workers affected by HAVS commonly report attacks of whitening (blanching) of one or more fingers when exposed to cold.

5.2.9.2. Electrical Risks and Hazards

Exposed or faulty electrical devices, such as circuit breakers, panels, cables, cords, and hand tools, can pose a serious risk to workers. Overhead wires can be struck by metal devices, such as poles or ladders, and by vehicles with metal booms. Vehicles or grounded metal objects brought into close proximity with overhead wires can result in arcing between the wires and the object, without actual contact.
An electrical hazard can be defined as a dangerous condition where a worker could make electrical contact with energized equipment or a conductor, and from which the person may sustain an injury from shock; and/or, there is potential for the worker to receive an arc flash burn, thermal burn, or blast injury.

5.2.9.3. Risks and Hazards of Working at Height

Height is any height (including at or below ground level) from which a fall could cause personal injury. Construction works often exposes people to risks from working at height:

- Steel works erecting the steel framework of a building.
- Scaffolders erecting or striking (taking down) a scaffold.
- Roofers cladding the roof of a steel-framed building.
- Demolishing workers dismantling machinery on the roof of a building.
- Painters painting walls or ceilings or facades.

Many of these tasks may involve the use of some form of access equipment (e.g., scaffolding or ladders) and those using this equipment is usually familiar with and used to such work, which can lead to complacency. Other workers may not be used to these tasks at height and lack competence.

The main risks associated with working at height are:

- The worker failing from height.
- An object falling from height onto someone below.

Falls from height:

- Account for the largest percentage of annual fatalities in the workplace
- Can result in:
  - Fatalities
  - Neck or spinal injury leading to permanent disability or paralysis.
  - Multiple fractures.

Falling objects can also cause severe injuries that may result in death, brain damage, paralysis or multiple fractures.

5.2.9.4. Fire and Explosion

Fire and explosive hazards include combustible and flammable liquids and substances, and/or when hot work is performed. Fire and explosion can occur when the temperature has reached the flash point of the volatile material, and where there is sufficient vapor present in the atmosphere.

Fires and or explosions resulting from ignition of flammable materials or gases can lead to loss of property as well as possible injury or fatalities to project workers.

5.2.9.5. Hazardous Substances

Any substances with the potential to cause harm are hazardous. They may be classed as an irritant, a corrosive, toxic or health hazard depending on the danger they present. Dangerous substances can cause health issues when they come into contact with skin or eyes, when they're inhaled, swallowed or injected. While it's unlikely that the employees will be injecting dangerous substances, they can enter the body's bloodstream through cuts and open wounds.

Substances can take different forms, including:

- Chemicals
- Fumes
- Dust
- Vapor
- Mist
- Nanoparticles
- Gases
- Fibers
- Germs (bacteria and viruses)

Possible side effects of exposure to hazardous substances:

- Poisoning.
- Nausea and vomiting.
- Headache.
- Skin rashes, such as dermatitis.
- Chemical burns.
- Birth defects.
- Disorders of the lung, kidney or liver.
- Nervous system disorders.

5.2.10. Community Health and Safety Risks

As the project will carry out construction activities in public buildings where potentially local population will be present, there is potential risk for injuries or negative health impacts during the sub-projects' implementation. Crucial consideration shall be given to the time schedule for working hours to be set in a manner to avoid any disturbance to local people, for example, coordinate working hours with regular school/hospital hours, provide safe entrance/exit to/from school/administrative building/ambulance during the work in the corridors, toilets, prevention and protection measures from traffic accidents during the movements of construction machineries, etc.

Site specific ESMPs to be prepared under the project will include, as necessary, mitigation measures to reduce potential adverse impacts and risks to the public during constructions activities before the civil works begin. Table 4 provides a generic description of the measures to be implemented.

Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH)

Sub-project activities will take place in urban and peri-urban, densely populated areas. The size of the labor force required will depend on the nature of project activities: For minor strengthening and rehabilitation, a small sized labor force and influx are expected; for reconstruction of buildings, a moderate to large sized labor force and influx can be expected. The introduction of the new labor force to urban communities surrounding the construction sites may increase the risk of SEA/SH in these communities. A Code of Conduct included in the LMP will be used to manage these risks, along with training to all workers and the availability of a grievance mechanism.

As per the project design, the renovation activities under component 1 will ensure improvement of the life and fire safety aspects of the existing buildings. In addition to that, all new buildings to be reconstructed after demolishing shall be designed, constructed, and operated in full compliance with local building codes, local fire department regulations, local legal/insurance requirements, and in accordance with an internationally accepted life and fire safety (L&FS) standard. Respective emergency preparedness and response measures for the sub-projects will also be integrated into the site-specific ESMPs.

5.2.11. Other Potential Impacts

No land acquisition will be taken in place with the project. ESS5 is not relevant. A Land Acquisition Checklist (pls. see Annex 4) is prepared for the project to screen out any activities to which ESS5 may apply (including economic displacement resulting for land taking).

During rehabilitation or reconstruction of buildings, it is possible that the workforce in these buildings will be asked to move from a designated place inside the building for their safety and comfort or to work from another location. For example, for schools and hospitals, it is possible that the government education and health employees may be assigned to a different school or hospital, along with students and patients. To the extent possible, the project will try to avoid and minimize such disturbances by timing the construction works outside of use seasons or hours. During the preparation of sub-projects stakeholder identification and engagement will be used to understand the needs and concerns of the building occupants, including disadvantaged and vulnerable groups and make accommodations to minimize disturbances to the extent possible.

Commercial enterprises such as shops, canteens, barbers, hairdressers, tailors, shoe repairer or other service providers may operate within the public buildings. Rehabilitation or reconstruction may result in a temporary disruption to their livelihoods if their buildings is subject to reconstruction. In order to prevent their temporary livelihood loss, the commercial enterprises in these buildings will be assigned to operate in another location/building, together with the workforce of the buildings, and assisted in moving. If it is not the case and appropriate workplaces cannot be allocated for those enterprises in temporarily buildings, notifications will be given to the public building's administration 2 years prior to commencement of construction stating that contracts of the commercial enterprises operating within the subject buildings will not be renewed or new contracts will not be signed till the completion of the construction. In this case, the commercial enterprises will have 2 years advance notice before any disruption to livelihoods.

During the demolishing of public buildings for reconstruction, excessive noise and dust could be generated. Local community, premises and institutions might be adversely affected by demolishing activities. Construction Environmental Method Statements including the realization time of demolishing activities will be prepared by constructors to communicate mitigation measures and demolishing time of the day with the local potentially affected groups. Muhtar of the neighboring community will be informed beforehand regarding demolishing activities. Related mitigation measures that will be integrated into Construction Environmental Method Statements and Community Safety and Traffic Management Plan are provided in the contents of Annex 11 and Annex 13 respectively of this ESMF and will be detailed in site-specific ESMPs and relevant sub-management plans.

All potential negative impacts are expected to appear only in the construction phase of the sub-projects.

Potential Impacts during the Operational Phase of the Retrofitted/Reconstructed Facilities

a) During the routine operational phase of the retrofitted/reconstructed facilities, adverse impacts on the air quality are not expected. The buildings will be provided with thermal insulation, new windows and door(s). Hence, the loss of energy and consequently need for heating will be minimized which will lead result in decreased fuels consumption and reduced impact on air quality.

Regular maintenance of the installed boilers, heating systems should be made according to the previously prepared Plan (if any) for maintenance of such equipment, in order to minimize emissions of exhaust gases from the combustion of the fuel.

b) During the operational phase, facilities will generate urban wastewaters, which must be disposed either into the centralized sewage system or treated separately in-situ (in the absence of a centralized sewage system).

c) Communal wastes are also expected to be generated during operational phase, which may include recyclable wastes such as paper, glasses, plastic bottles, lighting bulbs, packaging waste from cleaning products, batteries, electric and electronic equipment, etc. All these wastes shall be

managed though contracting specialized licensed communal services for collection, transportation and reuse of packaging waste, waste from electric and electronic equipment, etc. As for the communal solid (non – hazardous) waste generation, the beneficiaries shall manage the wastes in line with the national regulation.

In addition to those, OHS risks may arise due to maintenance and repair of the buildings and energy efficiency appliances. Those are considered to be typical and similar to the construction phase OHS risks and impacts.

The identified impacts will be managed at sub-project level, while typical and recommended mitigation measures are specified in Table 4.

5.3. Overall Risk Assessment

As part of the environmental and social procedures, The Bank classifies all projects into one of four classifications: High Risk, Substantial Risk, Moderate Risk or Low Risk. In determining the appropriate risk classification, the Bank considers relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Client to manage the environmental and social risks and impacts in a manner consistent with the Environmental and Social Standards.

SREEPB Project Environmental Risk Rating is "Moderate" as the physical works envisaged under the project component 1 will not generate irreversible adverse environmental impacts, and are expected to be temporary and reversible, moderate in magnitude and nature, and sub-project sites are not located in environmentally sensitive areas. Nor are they expected to generate serious adverse effects to human health and the environment.

Social risks directly inherent in project activities are deemed as “Moderate”. Activities requiring involuntary land acquisition will not be eligible for during under the project. Other identified potential adverse social impacts, such as community health and safety risks or temporary disruption to commercial enterprises, are limited and can be managed with the measures described in this ESMF, and the SEF and LMP.

5.4. Environmental Risk Classification

It is not expected that sub-projects will have significant adverse effects to human health and/or the environment and that the project will not result in significant adverse cumulative impacts. Overall, the project will finance a variety of sub-projects carrying low to moderate environmental risks which may materialize both at the construction and operation phases. The potential environmental risks associated with the renovation/retrofitting and demolishing and reconstruction include: (i) generation of noise, dust, wastewater, excess material, and other waste in the construction phase, (ii) emission of dust, and vehicle exhaust, noise and vibration from the operation of construction equipment, (iii) community health and safety impacts such as visual, dust problems as well as scavenging related impacts and physical, chemical and biological hazards (iv) occupational health and safety impacts such as accidents and injuries, chemical exposure, noise and vibration exposure.

5.5. Social Risk Classification

The work activities are limited in the nature and scope to energy efficiency measures and improvement of structural resiliency in buildings. There will be no land acquisition impacts with the activities financed by the project. It is expected that small and medium construction companies will be hired. Thus, the labor influx risk is low. The PIU has experienced E&S staff and engineers which are cognizant and apply the Occupational Safety and Health Standards and safety at work standards with the contractors. Given the limited nature of risks and experienced staff at the implementing agency the Social Risk of sub-projects are assessed as moderate.

The following risk management instruments and specific measures or actions planned to prevent, avoid, minimize, reduce, mitigate or compensate the environmental and social risks and impacts of the project over the project cycle:

ESMPs will cover assessment of and mitigation measures for potential adverse environmental and social impacts listed above.

Contractors will prepare Labor Management Plans based on the LMP for their construction activities to ensure that labor and working conditions risks are managed based on national law and ESS2.

SEPs will be prepared for the sub-projects for information disclosure, engaging stakeholders and host communities in the project areas.

5.6. Mitigation of the Environmental and Social Risks and Impacts

Table 4. Mitigation Measures for Renovation/Demolishment /Re-construction Works

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
Preparatory activities for renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***a) OH&S issues*** Possible adverse safety and health impacts to the workers, local population, and employees due to: - Possible injury to employees resulted from such as working at height, working with hazardous material, electrical appliances etc.; - Non compliance with national occupational health and safety at work; -Non compliance with asbestos occupational health and safety at work	• The local construction and environment inspectorates and communities have been notified of upcoming activities. • The public has been notified of the works through appropriate notification in the media through stakeholder engagement, and/or at publicly accessible sites (including the site of the works) • All legally required permits have been acquired for construction and/or rehabilitation. • Regular site inspection will be conducted by PIU and Supervision consultant in order to monitor and ensure that all construction activities to be implemented have been carried out in line with national law and regulations and requirements of WB's standards	• PIU • Supervision Consultant
		• Preparation of an occupational health and safety management plan • If public building entrances (e.g. schools, hospital etc.) will be diverted to other entrances of the building during the renovation works, it will be ensured that appropriate structures will be established for disabled users. • While renovation (energy efficiency) designs are being prepared the fire and safety standards will also be improved to the extent possible (without significant architectural changes). The national and international standards should be used for fire safety precautions.	• Supervision Consultant
		• Before the construction works start, a Risk Assessment study will be implemented for all works to be carried out. Relevant procedures and plans: Health and Safety Plans (Health and Safety Plans will be prepared by Supervision consultants and will be enhanced by Construction contractors by adding site specific risk assessments, procedures, instructions etc.) which will include risk assessment, procedures on safety, training, monitoring, incident investigation and reporting, Emergency Plans, with relevant procedures such as Asbestos Containing Structures Removal Procedure (including. Requirements and Measures When Handling Asbestos that is provided in Annex 8) will be put in place.	• Construction Contractors

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
		• Appropriate signposting of the sites will inform workers of key rules and regulations to follow. • Occupational Health and Safety (OHS) trainings and toolbox talks will be provided to the employees indicating the possible risks regarding the work site and works to be carried out. • The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. • The Contractor assigns a staff/specialist/expert with relevant certification and experience in charge of occupational health and safety. • The Contractor will ensure a safe working environment for the workers and prior to construction activities will supply appropriate personal protective equipment (PPE) in line with international best practice and Turkish Legislation (always hardhats, as needed masks and safety glasses, harnesses and safety boots, etc.) • All activities will be implemented in line with both 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 Guidelines. • The public will be informed about the work to be carried out, including the measures taken regarding Covid-19, 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 COVID-19, the guidance, guidelines, and recommendations to be provided by the Ministry of Health, the Ministry of Family, Labour and Social Services and the World Health Organization will be followed, and all relevant measures will be taken for both employees and workplaces in terms of occupational health and safety. In addition, all construction works will follow the World Bank guidelines to minimize the risk of COVID-19 transmission during execution of civil works. • The contractor notifies MoEU immediately in case of any significant event occurs. MoEU will notify the World Bank about any significant incident (accidents, spills, fatalities, etc.) in 2 days (48 hours) and will send an incident investigation report together with the corrective action plan in 30 business days to the World Bank.	

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
Renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***b) OH&S issues*** Possible adverse health impacts to the workers, facility users, children and general public as a result of emissions of asbestos fibers and dust during the removal of asbestos sheets, their transport and final disposal	• The contractor notifies MoEU immediately in case of any significant event occurs. MoEU will notify the World Bank about any significant incident (accidents, spills, fatalities, etc.) in 2 days (48 hours), and will send an incident investigation report together with the corrective action plan in 30 business days to the World Bank. • Regular site inspection will be conducted by PIU and Supervision consultant in order to monitor and ensure that all construction activities to be implemented has been carried out in line with national law and regulations and requirements of WB's standards	• PIU
		• Health & safety and environmental measures of demolishing public building for reconstruction will be detailed in sub-project specific Waste Management Plan and Occupational Health and Safety Management Plan	• Supervision Consultant
		• Project site must be lighted during the nights. • The surrounding area should be kept clean, without waste disposed there. The waste needs to be collected and removed from the construction site. • The eventually broken glass should be cleaned immediately. • Separation of the work areas from demolition and occupied areas of the building using physical barriers. • The cleaning schedule of the building should be increased to address the extra dust and dirt created by the demolition work; • Following safety guidelines for the storage, transport, and distribution of hazardous materials aiming to minimize the potential for misuse, spills, and accidental human exposure. • The old windows and doors should be temporary stored in a safe place which is designed to prevent access of unauthorized persons. • Regular maintenance of vehicles to minimize potentially serious accidents caused by equipment malfunction or premature failure. • Both trainings and incidents (fatalities, lost time incidents, any significant events including spills, fire, etc.) will be recorded. • The contractor notifies MoEU immediately in case of any significant event occurs. MoEU will notify the World Bank about any significant incident (accidents, spills, fatalities, etc.) in 2 days (48 hours), and will	• Construction Contractors

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
		send an incident investigation report together with the corrective action plan in 30 business days to the World Bank.	
Renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***c) Waste management*** Possible adverse environmental impact and health effects could occur due to inappropriate waste management with various waste streams (the improper waste management could generate direct and indirect pollution on waters, soil and will impact the air quality)	• PIU will review and send site-specific Environmental and Social Management Plans including relevant sub-management plan to WB for final approval and published final version of plans at Project's webpage. • PIU and supervision consultant will monitor implementations of E&S mitigation measures through site audits. • Regular site inspection will be conducted by PIU and Supervision consultant in order to monitor and ensure that all construction activities to be implemented has been carried out in line with national law and regulations and requirements of WB's ESF.	• PIU
		• Waste Management Plan (pls. see Annex 9) will be prepared by supervision consultant. • Waste collection and disposal pathways and sites will be identified in site-specific Waste Management Plans for all major waste types expected from renovation, demolition and reconstruction activities. • Daily visual construction site audits will be conducted by supervision consultants in order to monitor implementation of mitigation measures • PIU and supervision consultant will monitor implementations of E&S mitigation measures through site audits.	• Supervision Consultants
		• Mineral construction wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. • Construction waste will be collected and disposed properly by licensed collectors. • The records of waste disposal will be maintained as proof for proper management as designed. • Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos) • If asbestos is located on the project site, it shall be marked clearly as hazardous material	• Construction Contractors

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
		• When possible, the asbestos will be appropriately contained and sealed to minimize exposure • The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust • Asbestos will be handled and disposed by authorized, skilled & experienced professionals (Annex 8. Requirements and Measures When Handling Asbestos) • If asbestos material is being stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately. Security measures will be taken against unauthorized removal from the site. • The removed asbestos will not be reused and will be disposed according to national regulations and will be sent to licensed facilities. Necessary documentation for transport of the material and its disposal will be kept at the construction site and will be presented to MoEU and WB if requested. • Temporarily storage on site of all hazardous or toxic substances will be in safe containers labelled with details of composition, properties and handling information • The containers of hazardous substances shall be placed in a leak-proof container to prevent spillage and leaching • The wastes shall be transported by specially licensed carriers and disposed in a licensed facility. • Paints with toxic ingredients or solvents or lead-based paints will not be used • The used fluorescent lamps removed during the renovation/construction works will be disposed at licensed facilities. Necessary documentation for transport of the material and its disposal will be kept at the construction site and will be presented to MoEU and WB if requested.	
Renovation/demolishment /re-construction works at public building for seismic	***d) Pollution Prevention*** Demolishing and reconstruction activities may result in pollution at construction sites.	• Site-specific Pollution Prevention Plans will be reviewed and approved by PIU, as needed. • Regular site inspection will be conducted by PIU and Supervision consultant in order to monitor and ensure that all construction activities	• PIU

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
resilience and energy efficiency improvement		to be implemented has been carried out in line with national law and regulations and requirements of WB's ESF.	
		• Proper waste management will be applied to the construction sites by construction contractors. • Ambient air pollution related to dust generation will be controlled by implementing mitigation measures provided in ***"F Air quality"*** section of this mitigation measures table. • Hazardous material will be secured in designated storage area in order to prevent spillage and tip over. • Semi-used chemical containing containers will have lids and lids will be tighten while there are not in used. • Residual (left out) concrete in concrete mixers will not be allowed to wash out into construction site, vicinity or access roads of construction sites. Related training will be provided to drivers of concrete mixers. • In case of a spill of any hazardous material or hazardous wastes, spill prevention methods will be put in place in order to limit exposure area. • Spill kits will be in place at appropriate points in construction sites. • In case of any spill, workers are determined to intervene in such incidents and trainings are provided on emergency response to the spills. • Training records will be kept in construction sites.	• Construction contractors
		• Detailed site-specific Pollution Prevention Plan will be prepared by supervision consultant	• Supervision Consultant
Renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***e) Noise*** The present of workers on the site and demolishing works, movement of the transportation vehicle etc. will increase the noise and vibration level	• Site specific ESMP including detail mitigation measures about noise to be generated from demolishing activities will be prepared by supervision consultant and approved by PIU. • Regular site inspection will be conducted by PIU and Supervision consultant in order to monitor and ensure that all construction activities to be implemented has been carried out in line with national law and regulations and requirements of WB's ESF.	• PIU • Supervision Consultant

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
		• Noise during demolishing and construction will be limited to restricted times agreed to in the permit. • Principles of preventing adverse noise impact during demolishing of entire buildings for reconstruction will be provided in Demolition and Construction Environmental Method Statements (will be prepared by construction contractors and approved by PIU) • During operations, the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible.	• Construction Contractors
Renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***f) Air quality*** The demolishing and reconstruction activities will initiate emissions from the mobile sources (vehicles and construction machinery and dismantling activities)	• Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust • Principles of preventing air quality problems during the demolishing activities will be provided in a Demolition and Construction Environmental Method Statement (will be prepared by construction contractors and approved by PIU) • In case pneumatic drilling during excavation dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site • The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust • There will be no open burning of construction / waste material at the site • There will be no excessive idling of construction vehicles at sites • Health & Safety and Environmental measures of demolishing public building for reconstruction will be detailed in site-specific Health and Safety Plans.	• Construction Contractors
Renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***g) Water quality*** Generated wastewater/waste on the reconstruction site may affect nearby streams and rivers	• The site will establish appropriate erosion and sediment control measures such as e.g. haybales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers. • Minimize storage or disposal of generated waste on the site;	• Supervision Consultants • Construction Contractors

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
		• Temporary or final waste disposal near/in water stream is strictly forbidden in order to prevent possible adverse impact on surface waters • Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.	
Renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***h) Resource Required***	• Water to be used for construction activities will be bought to the construction sites by water trucks. (If contractors could not obtain necessary permits from administrations of buildings to use water from water systems of the buildings) • Concrete will be obtained from local licensed ready mixed concrete plants. • Electricity to be used for construction activities will be supplied by generators (if contractors could not obtain necessary permits from administrations of building to use existing electricity power of the buildings) • Records of consumptions of electricity, fuel (for generators), and water to be used for construction activities will be kept in construction sites.	• Construction Contractors
Renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***i) Temporary disruption to livelihoods*** *Small businesses are operating within the public buildings such as canteen, hairdressers, barbers, tailors will be temporarily shut down in case of the building subject to reconstruction*	• Commercial enterprises such as shops, canteens, barbers, hairdressers, tailors, shoe repairer or other service providers may operate within the public buildings. Rehabilitation or reconstruction may result in a temporary disruption to their livelihoods if their buildings is subject to reconstruction. In order to prevent their temporary livelihood loss, the commercial enterprises in these buildings will be asked to move to operate to another location with workforce of the buildings. If it is not the case and appropriate workplaces would not be allocated for those enterprises in temporarily in other buildings, notifications will be given to the public building's administration approximately 2 years prior to commencement of construction stating that contracts of the commercial enterprises operating within the subject buildings will not be renewed or new contracts will not be signed till the completion of the construction. The building administration will communicate this 2-year notice information to the commercial enterprises.	• PIU
Renovation/demolishment /re-construction works at public building for seismic	***a) Temporary disruption to local community during demolishing the entire building***	• Regular site inspection will be conducted by PIU and Supervision consultant in order to monitor and ensure that all construction activities to be implemented has been carried out in line with national law and regulations and requirements of WB's standards	• PIU • Supervision consultant

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
resilience and energy efficiency improvement		• Early liaison and effective communication will be caried out with people who may be affected by the works by construction contractor. • Implementation of a program of ongoing liaison and respect with regards to the local environment and residences will be formed. • The contractor will appoint a dedicated person(s) accountable for neighborhood 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. • The names and contact telephone numbers and email addresses of all Site personnel with responsibilities for both supervision and management of the Works will be displayed on the site hoarding. • Once planning consent has been obtained, formal contact will be established with mukhtar of neighborhood and those who could potentially be affected by demolition of the existing buildings will be informed via mukhtar. This will include consultation a Demolition and Construction Environmental Method Statement (will be prepared by construction contractors and approved by PIU) and include identifying any particularly sensitive times of day. • Outside normal working hours, site security will act as the main point of contact via a dedicated phone number. Security will alert the person(s) accountable for neighborhood liaison if necessary (available 24 hours) • All workers will commit to and be trained on the Code of Conduct included in this ESMF to manage 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 PIU. • Public notice boards will be established at site entrances providing contact details of the person(s) accountable for neighborhood liaison including environmental matters. • Details of early liaison and effective communication method with local community will be provided in Community Safety and Traffic Management Plan.	• Construction Contractors

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
		• Contractors will report any serious incident on community health and safety (such as traffic accident caused by construction trucks or grievances related to SEA/SH) to the PIU immediately.	
Renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***b) Land Acquisition***	• Public buildings requiring extra land for demolishing and reconstructing are not eligible for this project. To screen out such sub-projects, a Land Acquisition Checklist is provided in Annex 4	• PIU
Renovation/demolishment /re-construction works at public building for seismic resilience and energy efficiency improvement	***c) Impact on local traffic load and pedestrian safety***	• Regular site inspection will be conducted by PIU and Supervision consultant in order to monitor and ensure that all construction activities to be implemented has been carried out in line with national law and regulations and requirements of WB's standards • PIU will review and approve site-specific Community Safety and Traffic Management Plan	• PIU • Supervision consultant
		• Supervision Consultant will prepare Community Safety and Traffic Management Plans. The Traffic Management Plans and specifically any traffic diversions should take into account the needs of disabled persons.	• Supervision consultant

		(a) In compliance with national regulations and the WB ESF, the contractor will ensure that the construction site is properly secured, and construction related traffic regulated. This includes but is not limited to:
		  • Signposting, warning signs, barriers and traffic diversions: site will be clearly 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 safe and convenient passage for the public.
			• Construction Contractors

PROJECT STAGE	POTENTIAL RISKS/ IMPACT	PROPOSED MITIGATION MEASURES	RESPONSIBILITY
Operational phase impacts and risks	***d) Waste management*** Possible adverse environmental impact and health effects could occur due to inappropriate waste management with various waste streams (the improper waste management could generate direct and indirect pollution on waters, soil and will impact the air quality)	(a) The waste streams will be separately collected and stored and disposed of through the licensed companies and in line with the national regulatory requirements	• Respective beneficiary public institutions
	e) OHS risks Maintenance and repair activities for the proper building operations may result in OHS risks to the workers	(b) The associated OHS risks will be mitigated through the provisions set out in national regulations. (c) Regular preventive and maintenance measures for the building proper operation (regular checks and maintenance of the roof, windows, doors, any leakages, etc.) (d) Keeping records of the Main Design Project and relevant project documentation for easy maintenance and replacements of any parts of the building	• Respective beneficiary public institutions

5.7. Application of the ESSs to Sub-Projects

Table 5. Potential Impacts/Risks of sub-projects and Mitigation Measures

ESSs	Relevance	Potential Impacts/Risks	Mitigations to address the potential Impacts/Risks
ESS 1: Assessment and Management of E&S Risks and Impacts	Relevant to this Project	The Project will support seismic resilience (demolition when necessary) and energy efficient renovation of public facilities of central government across Turkey. The renovation and re-construction activities are expected to generate typical construction associated impacts such as construction waste generation and disposal due to demolition, handling and disposal of asbestos waste where relevant, other hazardous waste generation and disposal due to the replacement of old electrical appliances with energy efficient ones, dust formation, impacts on air quality, and noise, as well as occupational health and safety and community health and safety adverse impacts. Renovations and reconstruction activities are not expected to have any large-scale, significant or irreversible negative impacts, and there will be no land acquisition. Physical displacement is not expected. Large labor influx to project sites is also not expected and the Sexual Exploitation Abuse/Sexual Harassment (SEA)/SH risk is assessed as low	Within the scope of the project, the design and supervision consultants to be hired by MoEU will prepare a full Environmental and Social Management Plan (ESMP) for each sub-project. Concept and format of ESMP is provided in Annex 3. Sub-management plans such as Waste Management Plan (WMP), Pollution Prevention Plan (PPP), Community Safety and Traffic Management Plan (CSTMP), Occupational Health and Safety Management (OHSMP), will also be integrated in sub-project specific ESMPs. Formats of these sub-management plans are provided in Annex 3, Annex 9, Annex 12, Annex 13 and Annex 14. This ESMPs will be an integral part of the works contract for each public building. Public buildings registered as cultural assets will not be eligible for this project. However, if a historical artifact is found by chance, the act will be taken according to the relevant laws and regulations in force. In such cases, necessary permits from the Ministry of Culture and Tourism and other relevant government authorities would need to be secured. Chance Find Procedure of the project will be applicable in case of such a situation occurs (see Annex 10). The project will implement Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) mitigation measures including a Code of Conduct for workers, a mechanism to report SEA/SH cases and training and awareness sessions for project workers and affected communities. The impacts related to the project are expected to be temporary, reversible and manageable through the application of the national laws as well as the use of good international industrial practices. Therefore, it is considered that the site-specific impacts can be mitigated through Environmental and Social Management Plans (ESMPs) and sub-management plans prepared, reviewed, consulted upon and disclosed for the sub-

			projects. The ESMF and the LMP will guide the preparation of site-specific, ESMPs, Stakeholder Engagement Plans (SEPs) and Contractor's Labor Management Procedure (Contractor's LMPs) through the screening (Annex 1-2) procedure, assessment of the anticipated environmental and social impacts associated with the project activities, monitoring requirements as well as roles and responsibilities for ensuring effective implementation of the ESMF requirements throughout the project duration. The project will not finance any sub-projects categorized as High or Substantial environmental and social risk such as sub-projects that may require any involuntary land acquisition and physical displacement and those that may have impacts on sensitive receptors such as schools, hospitals, urban settings with tight space, heavy traffic and high population. This ESMF provides a screening mechanism to ensure such activities are screened out. Commercial enterprises such as shops, canteens, barbers, hairdressers, tailors, shoe repairer or other service providers may operate within the public buildings. Rehabilitation or reconstruction may result in a temporary disruption to their livelihoods if their buildings is subject to reconstruction. In order to prevent their temporary livelihood loss, the commercial enterprises in these buildings will be asked to move to operate to another location with workforce of the buildings. If it is not the case and appropriate workplaces would not be allocated for those enterprises in temporarily buildings, notifications will be given to the public building's administration approximately 2 years prior to commencement of construction stating that contracts of the commercial enterprises operating within the subject buildings will not be renewed or new contracts will not be signed till the completion of the construction. The PIU, with the support of technical and supervision consultants, will oversee the preparation of the site-specific,

			ESMPs and Contractor's LMPs. The sub-project specific ESMPs will be a part of the bidding documents and subsequently become part of the construction contract. The awarded contractors will be responsible for the implementation of the ESMPs and LMPs, as well as setting up a Grievance Mechanism (GM) for the project workers; alongside the project level GM established by the MoEU's. MoEU will be responsible for the review and approval of all documents and the quality of each the ESMP and Contractor's LMP, and overall SEP implementation MoEU will also be responsible to closely monitor the effective implementation of the site-specific ESA documents and report the status of implementation to the Bank, as agreed in the Environmental and Social Commitment Plan (ESCP) is prepared by the client. Since the re-construction activities will be carried out in existing facilities used by government employees and citizens, there will be temporary disruptions for these users. These will be minimized and managed by timing and phasing works to the extent possible, traffic planning around sub-project sites, timely dissemination of information, collecting feedback through a grievance mechanism, and a proactive stakeholder engagement campaign to raise public awareness about seismic resilience and energy efficiency among women and men, as well as community safety measures identified (such as phased work schedule and traffic planning) to meet the requirements of ESS4 incorporated into the site-specific ESMPs. During stakeholder identification and engagement, potentially disadvantaged and vulnerable groups (such as persons with disabilities) will be identified to ensure that community health and safety measures take into account their needs during potential disruptions. These information dissemination, stakeholder identification and engagement and grievance mechanism principles and activities will be outlined in the Stakeholder Engagement Plan (SEP) to be prepared by MoEU and implemented by MoEU.
ESS 2: Labor and Workers Condition	Relevant to this Project	Project workers include direct workers and contracted workers. MoEU would hire consultants to prepare structural studies, detailed energy audits, detailed designs and technical specifications as direct workers; and	SREEPB Project's LMP is developed to address ESS2 requirements, both for direct and contracted workers, as well as primary supply workers. The LMP will guide the preparation of site-specific Contractor's Labor Management Procedures (Contractor's LMPs).

		hire renovation works contractors and construction supervisors as contracted workers. It will be assessed during project preparation if primary supply workers, as per ESS2 definition, would be engaged. Community workers will not be engaged under the project. MoEU staff who will be engaged in the project activities are civil servants and they will remain subject to the terms and condition of their public sector employment. Only ESS2 provisions on OHS, and prohibition of child and forced labor shall apply to civil servants engaged under the project. Since the number and location of sub-projects are not known at this time, it is not possible to estimate the number of workers that will be employed under the project. Given that sub-project sites will be existing government buildings, most likely located in urban areas, no large-scale labor influx or worker accommodation is expected. The World Bank Sexual Exploitation, Abuse and Harassment (SEAH) tool has been applied and the SEA/SH risks are assessed as low. Turkey is party to a multitude of International Labor Organization (ILO) conventions, which is in line with ESS2 requirements. National Labor Law includes provisions on non-discrimination, freedom of association, minimum employment age, child and forced labor, occupational health and safety and dispute resolution. Risks related to child/forced labor are not foreseen.	For Occupational Health and Safety (OHS), Turkey has undergone a reform in recent years to improve its national OHS system by adapting a set of international and regional standards into its national level requirements. In addition to ILO ratification, Turkey has also passed a Law No. 6331 on Occupational Health and Safety in 2012. The OHS Law governs workplace environments and industries (both public and private) as well as all classes of employees including part-time workers, interns, and apprentices. The legislation is comprehensive and is generally applicable across all sectors and many industries. The Ministry of Labor, Family and Social Services has a Labor Inspectorate that enforces the law and conduct regular OHS and labor audits. The construction contractors shall be subject to national OHS legislation and requirements of ESS2. MoEU will include provisions in line with the World Bank Group Environment, Health and Safety (EHS) Guidelines in its bidding documents for contractors, including OHS criteria for bid selection. MoEU will also ensure that the sub-project contractors develop Occupational Health and Safety Plans, which will include risk assessment, procedures on safety, training, monitoring, incident investigation and reporting. The Bank will also review the above OHS Plans and advise on related gap-filling measures that might be required to ensure effective implementation of these plans. Potential risks related to COVID-19 to workers at construction sites shall be mitigated by implementing the latest COVID-19 protection guidelines and best practices. Contractors will be contractually required to monitor and enforce safety plans.
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant to this Project	The anticipated project activities will include renovation and demolishing and reconstruction activities of public buildings. Potential negative impacts associated with these activities could be attributed to dust and noise emissions, generation of construction waste, wastewater generation, and, hazardous materials and waste	The construction impacts are considered to be temporary and reversible through the use of national regulatory requirements and the application of the WB group EHS general and sector specific guidelines and other good international industrial practices. In this respect, this ESMF addresses i) establishing and adhering to general good housekeeping, ii) emissions (including dust, noise, etc.) control, and iii) proper waste

		(oil, grease, hydrocarbons, old fluorescent bulbs, old appliances, asbestos containing materials, lead-based paint, and potentially asbestos)	management including hazardous, solid and construction waste management. Measures to ensure resource efficiency (water, energy, construction material) is also included in the ESMF and will be further detailed in the respective ESMPs as well as in Waste Management Plans, Pollution Prevention Plans, as needed, to be prepared for specific sub-project sites.
ESS 4: Community Health and Safety	Relevant to this Project	Community health and safety risks are based on construction phase impacts of sub-projects, such as noise and air quality, traffic management and temporary road closures and construction waste management. Large scale labor influx and worker accommodation are not expected.	The sub-project specific SEP will identify stakeholders. This ESMF is also identified likely impacts of construction on community health and safety, as well as mitigation measures, monitoring and reporting requirements. Site-specific ESMPs will include measures addressing disturbance of the community members as well as the staff in the buildings in addition to traffic management measures/plans that will cover management of traffic safety risks, accident prevention, training programs, relevant stakeholder engagement activities and site safety awareness and access restrictions, depending on the level of risk. During stakeholder identification and engagement, potentially disadvantaged and vulnerable groups (such as persons with disabilities or persons with limited mobility) will be identified to ensure that community health and safety measures take into account their needs during potential disruptions. The design of the new buildings and buildings renovation should include universal access, where technically and economically viable. In addition, the design should include adequate life and fire safety measures. The contractors will be required to appoint a focal person who will keep local communities informed of project implementation schedule, expected impacts and other issues of interest for them. At this stage, security forces are not foreseen to be utilized within the Project, but usage of security forces will be reassessed later in sub-project specific ESMPs. The World Bank Sexual Exploitation, Abuse and Harassment (SEAH) tool has been applied and the SEA/SH risk was assessed as low. The contractors will be required to implement the Code of Conduct (CoC) and train its employees on the prohibition of SEA/SH. As a part of stakeholder engagement activities, communities will be made aware of the project CoC and channels where they can report SEA/SH cases.

ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not relevant. Any sub-project causing physical or economic displacement is not eligible.	The sub-projects will consist of renovation to existing central government buildings on public/state treasury land. Accordingly, it is not expected that the project will involve any land acquisition, restriction on land use or involuntary resettlement.	Sample of a Land Acquisition Checklist (Annex 4) is attached in this ESMF to screen out any activities that may fall into the scope of ESS5.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not relevant to the Project	The renovation and construction works are mainly expected to cover existing buildings and/or existing public lands in urban and peri-urban areas.	The sub-projects that would result in adverse impacts on natural or critical habitats as per the standard will not be eligible for financing. This is ensured through the screening (Annex 1 - 2) procedure set out in this ESMF.
ESS 7: Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities	Not relevant to the Project		There are no indigenous groups in Turkey who meet the definition of this standard.
ESS 8: Cultural Heritage	Relevant to this Project	None of the government buildings selected for renovation under the project is registered as cultural heritage/cultural assets in the property inventory. However, there is a potential risk that, during construction activities some sort of artifacts might be found by chance.	In such cases, Chance Find Procedure (Annex 10) will be applied which is included in this ESMP.
ESS 9: Financial Intermediaries	Not relevant to the Project		No financial intermediaries will be part of project implementation.
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant to the Project	Directly impacted stakeholders are identified as public sector workers/employees and users of services located in central government buildings, as well as residents and business owners residing or operating close to these government buildings. Additionally, civil society	The SEP will cover different modalities for engagement with different stakeholders, including disadvantaged and vulnerable stakeholders (such as people with disabilities, people with limited mobility). MoEU will prepare a SEP to meet the requirements of ESS10 and to ensure engagement with identified stakeholders throughout the project and use the

		organizations working on seismic resilience and energy efficiency, community leaders, local government representatives and those residing or working in the sub-project areas are also considered stakeholders (other interested parties). Additional stakeholders, including any vulnerable and disadvantaged groups, will be identified and mapped during the project preparation phase.	project as an opportunity to proactively raise awareness and provide training on seismic resilience and energy efficiency to the general public and to MoEU staff. The project already includes intermediary monitoring and evaluation indicators for number of persons trained on seismic resilience and energy efficiency (disaggregated by gender) and percentage of project beneficiaries reporting an improvement in building safety and comfort level (disaggregated by gender). MoEU has established a project-level grievance system for EEPBP, which receives grievances at four levels – at the contractor level, the supervision consultant level, the regional office level (through Provincial Directorates) and the PIU level. Given that the PBEE project has newly started its implementation and civil works/retrofitting works have not started yet, the GM is not functional yet in receiving or responding to any inquiries or grievances. As the PBEE GM becomes operational and monitoring indicates certain areas for improvement, the GM will be strengthened as necessary to respond to the needs of both the EEPB and the SREEPB projects to resolve and administer grievances to be encountered during renovation of central government buildings.

6. IMPLEMENTATION ARRANGEMENTS PROCEDURES FOR ENVIRONMENTAL AND SOCIAL MANAGEMENT AND RESPONSIBILITIES AND REPORTING

6.1. Implementation Arrangements

6.1.1.Institutional Framework

The project will be implemented by MoEU through its GDCW. The department has qualified technical staff who have experience in managing design, construction, and retrofitting contracts (see Figure 3)

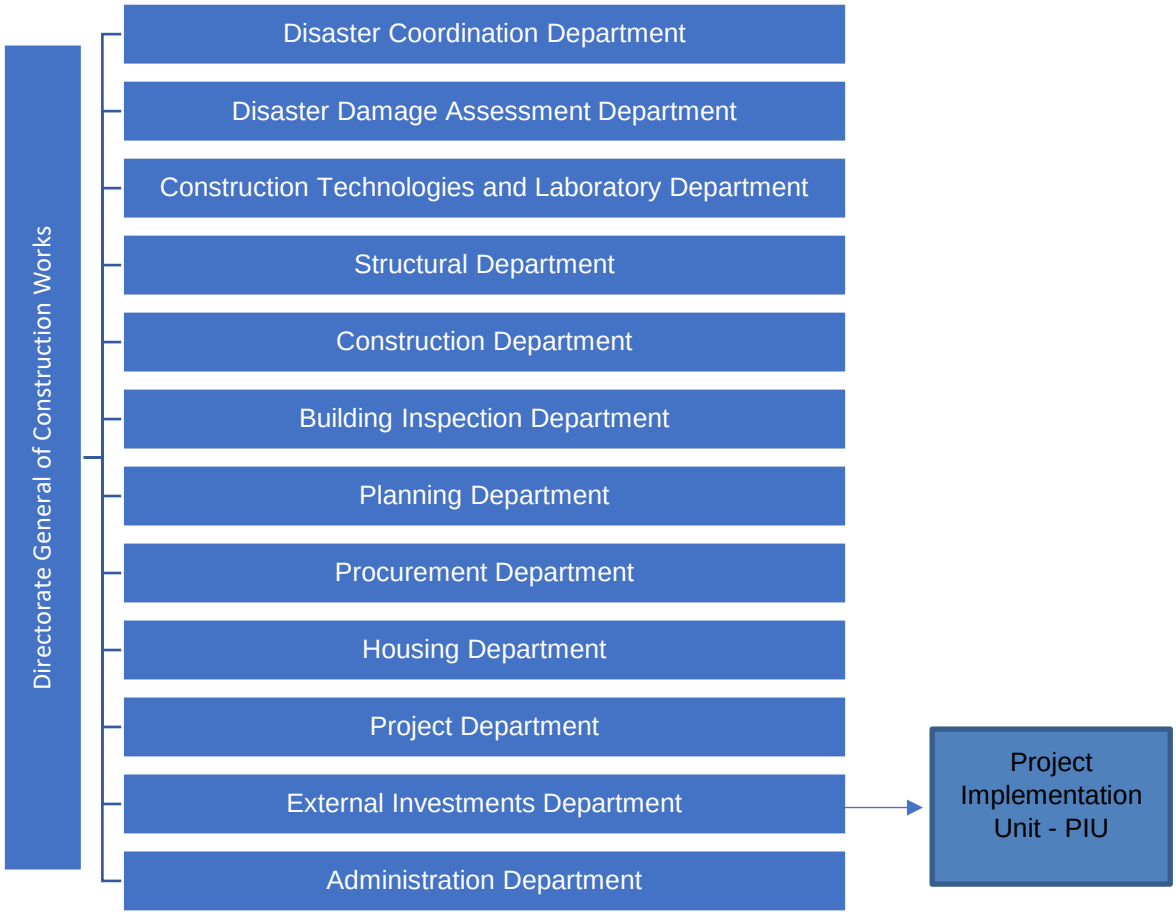

Figure 3. Organogram of General Directorate of Construction Affairs

6.1.1.1. ESMF and ESMPs Implementation Capacity

MoEU's GDCW would assume overall responsibility for the Project and serve as the main implementing agency. Within GDCW a separate department, Department of External Investments has been established in 2019 to work as the dedicated Project Implementation Unit (PIU) to manage the ongoing Energy Efficiency Public Buildings Project, (P162762) under terms of reference, and with adequate staffing, and with qualifications and functions acceptable to the Bank. PIU currently includes about 18 technical staff and 4 individual consultants hired to support the PIU in the areas of procurement, financial management, project assistance and environment and social issues.

The same PIU would be responsible for the overall implementation, management, and coordination of the Seismic Resilience and Energy Efficiency in Public Buildings Project; execution of the Project activities' preparation, design and implementation phases in accordance guiding principles and good practices with utmost technical quality; the overall management, coordination and implementation of the Project procurement for preparation of structural studies, detailed energy audits, detailed designs and technical specifications/bills of quantity, renovation works contractors, and construction contractors, and TA consultancies; assurance of the proper application in the Project of the

requirements, criteria, policies, procedures and organizational arrangements set forth in the Operational Manual (OM); undertaking of entire bidding processes, financial management arrangements and preparation of withdrawal applications in the scope of the Project; monitoring and evaluation of the Project against the progress indicators identified in the Project Appraisal Document. communications and outreach and raising awareness about the Project.

The GDCW will ensure that the PIU, and its other departments supporting the Project, are staffed in an acceptable manner to the Bank with qualified staff to provide adequate resources to support, inter alia, procurement, financial management, disbursement, environmental and social, communications and outreach and site-specific monitoring functions required by the Project. This includes, increasing the operational capacity of the PIU to enable it to manage both Bank Projects by hiring qualified individual consultants specialized in designated operational areas.

The PIU will hire experts to strengthen the PIU for technical issues related with the project. The PIU in the short run shall ensure onboarding of the below listed key staff – at the least considering the additional workload to be borne by the Project's investment package.

a. One (1) designated procurement expert – by the end of effectiveness of the declaration deadline
b. two (2) designated finance experts - by the end of effectiveness declaration deadline
c. One (1) designated environmental expert, one (1) OHS expert and one (1) social expert – prior to contract awards of design review and construction supervision consultancies shall be hired no later than 30 days after project effective date.
d. Three (3) designated engineers or technical staff including specialists for monitoring and evaluation (M&E), mechanical and structural engineer- prior to contract awards of design review and construction supervision consultancies

In order to ensure smooth implementation pursuant to kick off, additional key and support staff such as experts and junior engineers on energy, measurement and evaluation (M&E), architects, mechanical and electrical experts and assistants may be hired according to the needs after the effectiveness date of the project within the 1st year. Further staffing needs to ensure smooth implementation are closely monitored by the PIU and addressed per the emerging needs of the Project. Figure 3 demonstrates the Organogram of the PIU.

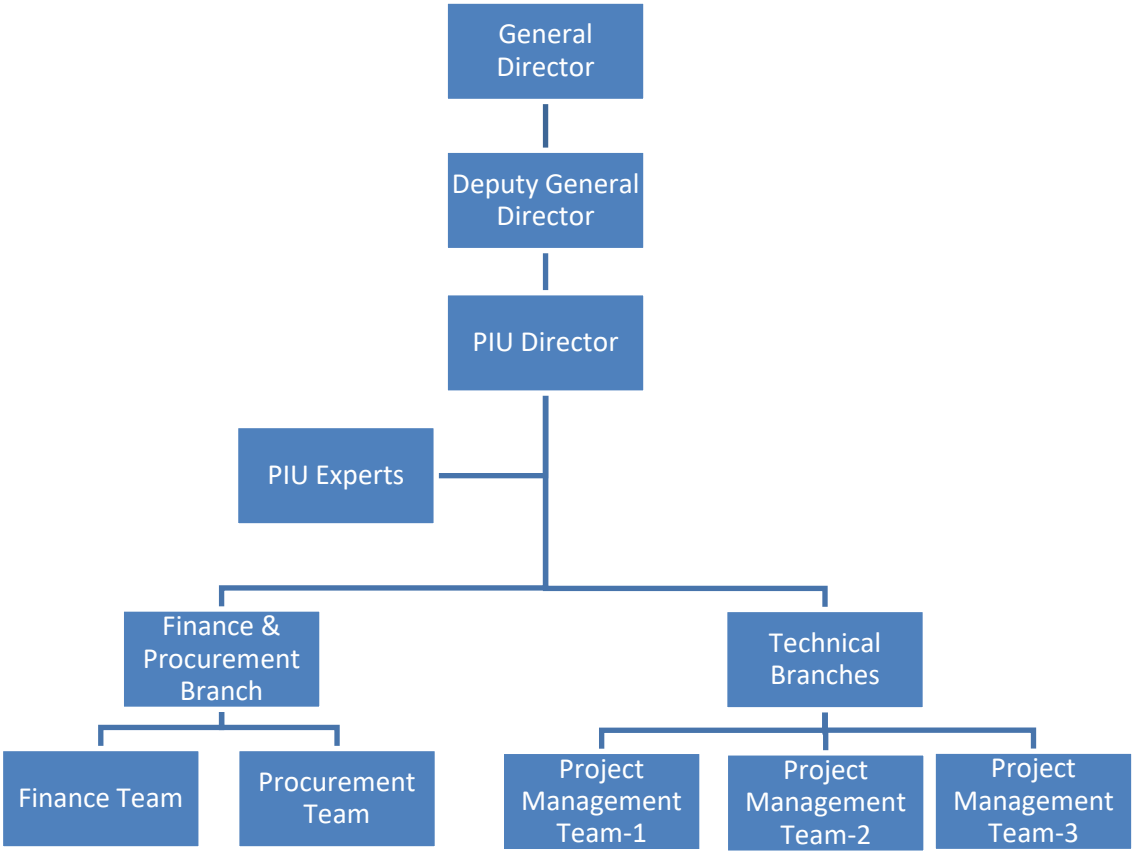

Figure 4. Organogram of the PIU

6.2. Role and Responsibilities

Since the seismic strengthening and energy efficiency renovation activities are exempt under the Turkish laws from the requirements of Environmental Impact Assessment, the implementation of ESMF would require extra efforts from MoEU. MoEU will hire dedicated Environmental, Social and Health and Safety Individual Consultants/Specialists in order to fulfill requirements of WB ESF and associated ES Standards. Individual Consultants/Specialists in the PIU will be responsible for continuous monitoring of construction works to assure compliance with the ESMF and site-specific ESMPs and will inform WB on regular basis. The PIU Individual Consultants will prepare inputs for the 6-monthly progress reports and submitted to World Bank for review.

PIU will guide the construction contractors that will be responsible for implementing the ESMPs. PIU will also guide and assist the energy service companies and supervision consultants for the preparation of site-specific ESMPs. PIU will be responsible for the review of all documents and the quality of each ESMP. PIU will submit ESMPs to WB for prior review and when the WB is confident that MoEU has demonstrated that the process is accurate, WB will transfer this prior review to post review.

PIU will make site specific screening (pls. see Annex 2) for each of proposed sub-projects in accordance with national legislation as well as WB Environmental and Social Framework and associated Environmental and Social Standards and integrate them into the ESMPs which will be a part of bidding documents.

The awarded contractors will be responsible for the implementation of the ESMPs and setting up and ensure the sustainability of the Grievance Mechanism.

6.3. Project Implementation Unit

PSEEP Project Implementation Unit (PIU) is formed by civil servants of MOEU as well as external environmental, social, and OHS experts, and will be located in the premises of the Ministry of Environmental and Urbanization. PIU will have main responsibilities regarding the Project implementation, project coordination, monitoring activities and reporting.

An independent Environmental Expert (EE), Social Expert (SE), Occupational Health and Safety Expert (HSE) will be engaged by the PIU on a full-time basis for the entire period of the project implementation. The EE, SE and HSE will be responsible for ensuring proper environmental and social management of all Project activities, will conduct environmental and social supervision by carrying out document reviews, audit and site visits and interviews with Contractor, Supervision consultants, and the other project related persons. The EE, SE and HSE would be responsible for reviewing all environmental and social documentation (site-specific ESMPs including site-specific Sub-Management Plans, SEPs, LMPs) submitted by sub-project supervision consultants, providing recommendations, advising on the sub-project category advising on the quality of, and clearing the environmental and social safeguard documentation on behalf of the PIU.

6.4. Project Beneficiaries

The immediate beneficiaries in the Project will be the users and employees of public buildings of line ministries and other central government institutions, such as the Ministry of Health (MoH), Ministry of Family, Labor and Social Services (MoFLSS), Ministry of Youth and Sport (MoYS), Ministry of Agriculture and Forestry (MoAF), Ministry of Culture and Tourism (MoCT), Ministry of National Education (MoNE), Ministry of Energy and Natural Resources (MENR), and the Council of Higher Education. Public buildings to be renovated would include hospitals, dormitories, governor buildings, university campus, tertiary schools, ministerial office buildings, court buildings, libraries, conference centers etc.

Due to the importance of addressing i) identification of public buildings to be intervened while factoring the age-population dynamics of investment provinces/districts, ii) the necessity of temporary transfer of building users (staff of the government facilities, hospital staff, students of the universities, etc.) to be reconstructed, iii) the upcoming enrollment processes for the public buildings which will be subject to change in the building due to the nature of reconstruction works, the Project calls for close coordination and cooperation with provincial and district level directorates of MoEU and the related ministries. Complementing the subsidiarity principle, the PIU establishes and maintains close coordination with local units/provincial directories and makes every effort to ensure necessary information with appropriate communications tools through local units/provincial directories.

6.5. Contractors and Consultants

Project contractors are responsible for complying with all environmental and social mitigation measures, requirements and procedures, and for the implementation of the respective sub-project specific ESMPs and associated Sub-Management Plans and SEPs.

6.5.1. Supervision Consultants

For the proposed sub-projects, detailed relevant audits will be carried out by a certified and qualified Supervision Consultant Company, in order to assess potential EE and Seismic Resilience measures, estimate energy savings, assess their financial viability and identify potentially hazardous waste that may result from the proposed renovations/reconstruction/demolishing.

After such audit is completed, to prepare detailed technical design, including energy efficiency, seismic resilience calculations, technical drawings, technical specifications, bill of quantities, subproject specific ESMP, SEP, LMP and costs estimates of facilities subject to investment as well as design audit. The ESMP, SEP and LMP as part of the detailed technical design will include analysis and quantification of presences of the amount of waste and hazardous waste materials, specifically asbestos and mercury containing light-bulbs, including methodology specifications and bill of quantities for removal, packaging, transport and disposal/interim storage of these hazardous

materials, personal safety equipment. This will also include the guidelines for location where the asbestos can be disposed and the temporary storage location for the mercury containing light-bulbs as per the World Bank's ESF, project ESMF and national legislation. PIU will review and approve the final energy audit and detailed technical design, in consultation with line ministries of sub-projects concerned. The sub-projects' design consultants will visit each sub-project site at least once, or more if needed, during preparation of technical documentation. During these visits, the consultants will meet with project beneficiaries to discuss any issues related to subproject implementation.

Supervision consultants shall be responsible for ensuring that respective provisions of sub-project specific ESMPs are duly incorporated into the project design. The sub-projects' design consultant will be required to retain qualified EHSS staff and comply with monitoring and reporting requirements defined in this section.

6.5.2.Construction Contractors (CCs)

Construction contractors (CCs) will be contracted by PIU for the sub-projects. Contractors shall be also responsible for implementing applicable mitigation measures requirements identified in respective sub-project specific ESMP and SEP. The civil/construction works contractors will need to retain qualified EHSS staff and comply with implementing, monitoring, and reporting requirements defined in this section.

Construction Contractors' EHSS Staff

Each civil/construction contractor is responsible for retaining EHSS Staff to oversee compliance with mitigation measures applicable to their scope of work. The construction contractors are responsible for selecting EHSS staff, which includes environment, OHS and social capacity, with the necessary skills, experience, and availability to perform their duties adequately. Necessary qualifications include previous experience monitoring the implementation of mitigation measures on a project of similar scope and scale. The experience in World Bank's ESF is preferred. Construction contractors shall ensure their EHSS staff have completed all necessary EHSS training prior to the sub-project implementation, as required per all requirements with respect to the ESMF and other commitments made under the project. EHSS staff will be responsible for the day-to-day implementation of mitigation measure requirements identified in respective ESMPs, SEPs and LMP. EHSS staff will be responsible for:

- Acting as the key point of contact for the PIU EE, SE, OHS experts, as well as supervision consultants, regarding compliance with mitigation measures
- Ensuring that all personnel/workers, including subcontractors, have received H&S, environmental and social training with respect to the project requirements set out in the ESMF, site-specific ESMP and sub-management plans as needed, as well as LMP and SEP, prior to work on the project site and have been informed of mitigation measures and their associated responsibilities when working
- Ensuring that all personnel comply with mitigation measures
- Inspecting active work sites on a daily basis, and documenting compliance through completion of a daily compliance checklist and photographs
- Preparing required reports and managing compliance documentation during all phases of construction
- Ensuring that compliance documentation is complete and available for PIU or supervisory body auditing
- Managing any rehabilitation of environmental damage that may have occurred.

6.5.3.Supervision in Social Context

The social monitoring and assessment of the implementation of EE and SR measures will be conducted to elicit feedback from project beneficiaries, project affected persons, employees and users of public services on accessibility, community health and safety, indoor comfort satisfaction, as well as to define the level of knowledge and awareness of EE and SR.

The social monitoring will be implemented by the PIU.

To implement the ESMF the PIU, Supervision consultants and Construction Contractors will follow the Process Cycle for Component 1 as presented in Table 6 below:

Table 6. Process Cycle for Implementation of Component 1 Investments

	Activity	Lead Responsibility	Secondary Responsibility	Timeline (month for implementation of the activity)
1.	Stakeholder Engagement Plan Implementation including Public Consultations with NGOs and stakeholders	PIU	Supervision Consultants and Construction Contractors	Throughout the project implementation
2.	Establishment of GM at project and sub-project level	PIU	Supervision Consultants and Construction Contractors	Prior to project effective Date
3.	Establishment of LMP at project and sub-project level	PIU	Supervision Consultant and Construction Contractors	Throughout the project implementation
4.	Outreach and community public hearing for sub-project implementation	PIU	Supervision Consultant and Construction Contractors	Throughout the project implementation
5.	Development of sub-project technical design, ESMPs, Sub-Management Plans (ESS instruments)	Supervision Consultants	PIU	Throughout the project implementation
6.	Public consultations for the sub-project ESMPs	PIU	Supervision Consultants and Construction	Throughout the project implementation
7.	Sub-project design approval	PIU	Supervision Consultants with project beneficiaries	Throughout the project implementation
8.	Project Appraisal Document (PAD) development and approval	PIU	Supervision Consultants with project beneficiaries	Throughout the project implementation

ESMF Process Flow at the Sub-project Level

6.6. Identification of Sub-Projects

Under Component 1, Subprojects for energy efficiency and seismic resilience investments in the public sector will be selected based on prioritization assessment at the MOEU level.

Preliminarily Eligibility Criteria for the public buildings suitable for SREEPB Project as follows:

- Be owned by (or ownership assigned to) the central government (excluding publicly-owned enterprises, private buildings with public agency tenants)[12].
- location within an area of high seismic hazard[13];
- having no land acquisition or ownership issue,
- does not have any adverse impact on the natural and critical habitats
- building does not have a cultural heritage designation,
- not had a retrofitting in the past 10 years,
- with construction area of 5.000 m^2 and above[14],
- Construction period prior to 2007. (For the buildings constructed before 2000, the ratio of the retrofit cost to the reconstruction cost would be above the acceptable threshold, which might make retrofitting decision uneconomical. So, retrofitting of the buildings constructed before 2000, in accordance with the current legislation would be probably very costly.)
- Have no plan for office moves, closure, building demolition, or privatization.

Prioritization

Taking into the consideration the "life safety" and "immediate occupancy" performance criteria established for public buildings in the Seismic Building Code and the "sustainable energy efficiency" addressed in the Energy Efficiency Strategy Documents, explicit prioritization criteria developed to maximize the benefits of the investment. The main objectives of prioritization are to;

- reduce seismic risk and therefore save lives and prevent injury to occupants;
- maximize the number of benefitted occupants and building users;
- reduce disruption of public services;
- promote and disseminate the efficient use of energy resources and
- promote socio-economic equity.

The identification and prioritization of buildings for inclusion in the Project would be elaborated in three steps.

- **1st step:** The first step focuses on building construction information regarding structural vulnerabilities that increase the probability of severe damage or collapse in earthquake, such as building age, structural irregularities, number of floors, soil slope and so forth. The initial risk assessment data provided from the Turkish KAYES database which covers more than **100,000 public buildings will be used in the 1st step.**
- **2nd step:** The second step considers additional factors, such as importance of the building's functionality during and after an earthquake, the location of the building with respect to socio-economic vulnerability, occupancy and service provision of the building. The prioritization method developed by MoEU and Bank will be applied to the long list of the KAYES database.

[12] Public buildings related to defense, law enforcement or security are not be eligible. Buildings that involve land acquisition, resettlement, use of or discharge into certain waterways, reliance on existing hydroelectric dams, etc. would also not be eligible.
[13] High Seismic Hazard is defined as regions with Peak Ground Acceleration (PGA) above 0.4g or located in the seismic gap region (an area with no recent earthquakes that scientists are concerned could be the site of future earthquakes).
[14] Note smaller auxiliary buildings adjacent to Project buildings (such as an annex to a hospital) may be exempted from this criterion.

- **3rd step**: The third step considers data on energy consumption of the selected buildings considered for seismic retrofitting, with buildings having higher cooling and heating energy consumption prioritized over buildings with lower levels of consumption.

Finally, based on the final list the buildings to be retrofitted or reconstructed will be determined.

6.6.1. Screening of Subprojects for Environmental and Social Risks and Impacts

6.6.1.1. List of Non-Eligible Types of Subproject for SREEPB Project

The initial screening for the eligibility of the subproject will be based on the list of excluded subprojects that will be not financed by the WB.

Non-eligible types of subprojects are listed in Table 7 below.

Table 7. **List of Non-eligible types of subprojects for SREEPB Project**

Administrative services and facilities, i.e., rehabilitation of political parties' and trade unions' offices, rehabilitation of cooperatives' or other owner groups' facilities,
Religious infrastructure facilities and services as the rehabilitation of mosques, churches and other buildings for religious purposes,
Facilities with a commercial character such as private, commercial and entertainment facilities (e.g., bars, dance clubs, camps, health strengthening centers, summer camps for children)
Buildings related to national defense and correctional facilities (prisons),
Procurement of transport units or other machines to be used by mayor's office workers
Other types of subprojects and activities that would have a negative impact on the environment, encourage the marginalization of social and ethnical groups, duplicate other projects and activities supported by other institutions are not in compliance with Turkish Legislation.
Subprojects submitted by central government institutions when previously renovated buildings under the Project have not followed their obligations regarding maintenance and operations.
Any subproject which would fall within the scope of ESS5, Land Acquisition Restrictions on Land Use and Involuntary Resettlement, i.e., buildings that involve land acquisition or resettlement, including economic displacement.
Any subproject that involves use of or discharge into certain waterways, reliance on existing hydroelectric dams, etc.
Any subproject which would be classified as *High Risk*, *Substantial Risk project* according to ESS1 Environmental and Social Assessment Standard of WB Environmental and Social Framework (details are given in the ESMF).
Any subproject which would have impacts on Natural Habitats and trigger ESS6, Biodiversity Conservation and Sustainable Management of Living Natural Resources
Any subproject is on the list of Turkish Cultural Heritage and would trigger ESS8, Cultural Heritage

6.6.1.2. Subproject Screening Procedures

Once it is confirmed that the subproject is not part of the list of non-eligible types of subprojects, supervision consultant's environmental and social experts in the fields will carry out a rapid assessment of the likely environmental and social impact, that will be based on the requirements of national legislation and WB ESSs, completing the screening checklist presented in the Appendix 1-2. Subproject activities will be also checked against WB criteria for High/Substantial Risk Projects.

This will make it possible to identify the type and scale of potential environmental and social impacts and determine to which risk category the subproject should be attributed. , Subsequently, the scale and level of the environmental and social assessment (ESA) required for a subproject will depend on the type and scale of the subproject, its location, sensitivity of environmental and social issues, and the nature and magnitude of potential risks and impacts.

Type and scale of sub-projects. Subprojects that are considered as "High or Substantial Risk Subprojects" and will not be financed. A "High Risk" rating generally would entail the following impacts (a) significantly impact on human populations, including settlements and local communities (b) alteration of environmentally important areas, including wetlands, native forests, grasslands, and other "critical" natural habitats and ecosystem services; (c) direct pollutant discharges that are large enough to cause degradation of air, water or soil, endangered species and "critical" habitats; (d) largescale physical disturbances of the site and/or surroundings; (e) extraction, consumption or conversion of substantial amounts of forest and other important natural habitats, including above and below ground and water-based ecosystems; (f) measurable modification of hydrologic cycle; (g) hazardous materials in more than incidental quantities; and (h) involuntary displacement of people and other significant social disturbances.

Location. There are a number of locations which should be considered while deciding to rate the project as "High Risk": (a) in or near sensitive and valuable ecosystems and "critical" habitats — juniper forests, wetlands, wild lands, vulnerable soils, and particular habitats of endangered rare and endemic species; (b) in or near areas with archaeological and/or historical sites or existing cultural and social institutions; (c) in densely populated areas, where resettlement may be required or potential pollution impact and other disturbances may significantly affect communities; (d) in regions subject to heavy development activities or where there are conflicts regarding the allocation of natural resources; along watercourses, in aquifer recharge areas or in reservoir catchments used for potable water supply; and on lands or waters containing valuable resources (such as fisheries, minerals, medicinal plants, prime agricultural soils). Subprojects located in the proximity of such areas will be classified as High-Risk projects and will not be considered for support by the SREEPB Project.

Sensitivity. Sensitive issues may include (but are not limited to): conversion of wetlands, potential adverse effects on endangered species and habitats as well as protected areas or sites, involuntary resettlement, impacts on international waterways and other transboundary issues, and toxic waste disposal.

Magnitude. There are a number of ways in which magnitude can be measured, such as the absolute amount of a resource or ecosystem affected, the amount affected relative to the existing stock of the resource or ecosystem, the intensity of the impact and its timing and duration. In addition, the probability of occurrence for a specific impact and the cumulative impact of the proposed action and other planned or ongoing actions may need to be considered. Taking into account the scale of the proposed subprojects, it is expected that the magnitude of their environmental impacts will be moderate, and their social impacts will be moderate. Therefore, only subprojects that are rated as "Moderate Risk" or lower will be considered for SREEPB project. Table 4 provides guidance on the various types of mitigation activities that could be proposed for SREEPBP subprojects.

6.6.2.Development of Environmental and Social Risk Management Instruments

Sub-Projects ESMP (Format and concept of the ESMP is provided in Annex 3 including) and its respective sub-management plans will be prepared by Supervision Consultants' E&S experts. The purpose of the ESMP is to identify the potential impacts associated with the rehabilitation / demolition and reconstruction subprojects activities and improve the environmental and social aspects of subprojects by minimizing, mitigating or compensating for negative effects.

For all type of subprojects, it is necessary to disclose the ESMP document and conduct public consultations with the project affected persons (PAP) and interested parties. For that purpose, it is necessary to disclose in advance the EA document (30 calendar days) on the MoEU's websites as well as providing hard copies to local public administrations and key interested parties (environmental authorities). During the consultations, all comments and suggestions on improving the site-specific

ESMP documents will be documented, and responses will be included in the final version of the ESMPs. Furthermore, other specific information related to the project activities and ESMP should be also publicly available on-line on the MoEU's website. Based on that, the public consultation can be done virtually receiving relevant questions/proposals on-line and taking them into consideration while finalizing the ESMPs. The ESMP will be submitted to the World Bank team to receive the "no-objection" approval.

Table 8 indicates the process flow for the risk management instruments development:

Table 8. **ESF Instruments Development for Component 1 Investments**

Step 1	(a) PIU (engineers and EE/SE/HSE) conduct screening of the subproject with regard to non-eligible type of subprojects;
	(b) If the subproject passes the screening for the list of non-eligible type of subprojects, PIU (engineers and EE/SE/HSE) and Supervision Consultant will complete Environmental and Social Screening Checklist to identify the environmental and social risk level and the respective environmental and social assessment instruments.
	(c) The results of the screening including potential negative impacts and possible measures to mitigate impacts, are presented to community representatives during subproject prioritization meetings held at the community meetings.
Step 2	(d) If the subproject is selected for funding, the Supervision Consultant prepares full ESMP/LMP/SEP/ for the sub-project. Format and concept of ESMP format is provided in Annex 3;
Step 3	(e) The supervision consultant and PIU will conduct disclosure of the draft ESMP/LMP/SEP and organizes a public consultation, involving NGOs, community representatives, affected groups, etc. Formal minutes will be prepared to record inputs provided by the participants in the consultation process
Step 4	(f) Supervision Consultants will submit the full set of environmental and social documents prepared specific to the subprojects to PIU for review and approval
Step 5	(g) Upon approval of subprojects, PIU will complete overall subproject appraisal and proceed with signing of the financing agreement with respective sub-project contractors.
Step 6	(h) Sub-management specific method statements will be prepared by Construction Contractors and submitted to supervision consultant and PIU for approval. Methods Statements will be integrated to ESMPS following their approval.
Step 7	(i) Construction Contractors implement of the mitigation measures set out in the site-specific instruments, during construction works.
Step 8	(j) The PIU EE, SE, HSE and Supervision Consultants conduct ES auditing and monitoring during the implementation of the sub-project.
Step 9	(k) Monitoring and reporting results will be included in semiannual reports that will be prepared by PIU.

6.6.3. ESMP Review Process

As explained above, a site-specific evaluation will be conducted in accordance with the WB's Environmental and Social Framework (ESF), and site-specific ESMPs (concept and format of ESMP is provided in Annex 3) and respective sub-management plans will be prepared as a result of such evaluation as needed. These sub-management plans will be prepared by the contractors as and when needed depending on the sub-project requirements. These will be the responsibility of

Supervision Consultant, based on the information from the Environmental and Social Screening Checklist (Appendix 1-2) developed by PIU EE and SE. The ESMP must be annexed to the bidding documents for construction works. Stakeholder Engagement Plan (SEP) and Labor management procedures will also form a part of bidding documents.

The preparation of the ESMPs and associated sub-management plans (e.g. Waste Management Plan, Pollution Prevention, Community Safety and Traffic Management Plan, Occupational Health and Safety Plan etc.), SEPs, LMPs would require an estimated time period of about 60 days for each site as and when needed. These sub-management plans will be prepared by the contractors as and when needed depending on the sub-project requirements. This period also includes MoEU's review (and WB's review and approval for the projects subject to prior approval) and disclosure. All ESMPs will be developed, consulted, completed, and disclosed by MoEU on their website before any tendering works begin.

Implementation of ESMP on the ground will be the part of the construction contractor's task, however in case of any non-compliance; PIU will inform the project participant which is expected to take corrective action as the primary responsible party for law enforcement. Distribution of the responsibilities of all parties involved in the project is given in Table 9.

In case of higher environmental risk category – "moderate" and larger scope, an ESMP should be developed according to the specificities of the sub-projects. Should be highlighted the fact, that no sub-project with environmental and social risk high of substantial will be eligible for financing under SREEPB Project, only low and moderate risks are considered eligible.

Table 9. Roles and Responsibilities for the Project ESF Implementation

Responsible Party	Responsibilities
World Bank	• review the site specific ESMPs and provide no objections to MoEU • conduct implementation support missions in order to ensure that the project is in compliance with WB Standards • review and clear, then disclose the finalized ESMF on WB's official website
Construction Contractors	• implement ESMPs on site, if required can revise the ESMP together with the supervision consultant • Prepare method statements for implementing E&S mitigation instruments • welcome and apply the relevant laws and regulations that are introduced by MoEU, in discussion with WB and included in the tender documents • disclose ESMPs before any civil works begin • ensure health and safety measures are taken on site • ensure that construction related grievances are received and addressed • ensure the sustainability of the grievance mechanism • monitor site activities on regular (daily, weekly monthly, etc.) basis as defined in ESMPs • prepare ESHS related ESMPs as needed (e.g. Waste Management Plan, pollution prevention plan, Community Safety and Traffic Management Plan, Health and Safety Plan etc.)
Supervision Consultants	• conduct the initial project site assessment • develop the ESMPs, LMPs and SEPs • monitor/assess the contractor's activities in compliance with the ESMP • prepare the ESMPs' progress reports for the review of MoEU • give feedback and notice to the MoEU

Responsible Party	Responsibilities
MoEU/PIU	• implement the project and monitor the utilization of the funds • ensure that funds are used to finance eligible expenditures in accordance with the applicable policies and procedures stipulated in the loan agreement. • collect data for results indicators from the field through its M&E unit, and by outsourcing as needed, monitor the quality of data collection, and evaluate results. • follow the project progress and to report to the government and WB management on implementation progress, results, potential issues, and proposed solutions • realize and follow the required correspondences with governmental authorities • maintain at least one Environmental and one Social and one Health and Safety Expert throughout the implementation period of the project. • review and verify the data and evaluate results before including these results in reports to be sent to the World Bank • identify the first set of priority public buildings to be intervened • produce data necessary to prepare regular project reports requested from the stakeholders • handle the procurement activities through PIU • develop a project operational manual in consultation with the WB • establish the grievance mechanism and resolve the complaints both at provincial and national level. • Award the construction contracts • develop, consult, adopt, disclose and monitor the implementation of the ESMF, Labor Management Procedure (LMP), Stakeholder Engagement Framework (SEF), Environmental and Social Management Plan (ESMP), Environmental and Social Commitment Plan (ESCP) both in Turkish and English acceptable to the World Bank • report to the WB on compliance with environmental and social requirements set out in the project framework documents

Responsible Party	Responsibilities
	• notify the World Bank about any significant incident (accidents, spills, fatalities, etc.) in 2 business days (48 hours) and send an incident investigation report together with the corrective action plan in 30 business days to the World Bank.

6.6.4. Public Consultation

Sub-projects specific Stakeholder Engagement Plans (SEPs) proportionate to the nature and scale of the proposed subprojects will be prepared.
The timing and methods of engagement with stakeholders throughout the life cycle of the project will be described in SEP. Public consultation activities (including public consultation meetings) will be carried out as per SEP to be prepared.

- Records of meetings and consultations with stakeholders will be included in the draft and final E&S assessment documents.
- Preparing and implementing a satisfactory SEP is the responsibility of Supervision Consultants.

6.6.5.World Bank Clearance

The WB will provide prior review and approval to all subprojects and then provide a no-objection for the relevant environmental and social assessment documents. During the implementation of the project, the Bank can mutually agree with GDCW, that GDCW conducts prior review of the environmental and social assessment documents of the sub-projects and the World Bank conducts post review.
The risk categorization of sub-projects is tentatively shared in this ESMF document, but in case any change in the risk category, GDCW should discuss the new risk category with the WB and reach a consensus.

6.6.6.Incorporation in Works Contracts

For all subprojects, the site specific ESMPs, SEPs and LMP will be attached to the procurement documents and be part of the contract with the contractor selected to carry out the subproject works. These sections include potential impacts that may occur during the set of works in question and measures that the contractor needs to take to mitigate them.

6.6.7.Information Disclosure

Public consultation and information disclosure activities will also be described in the SEP and will be conducted accordingly.
The draft site-specific safeguards documents will be disclosed prior to consultation meetings and after receiving the feedback of the stakeholders, the safeguard documents will be finalized and disclosed on the official webpage of GDCW. Prior to sub-project approval (by the World Bank), GDCW will submit Turkish versions of the final ESMPs and SEP documents of these subprojects to the World Bank .

6.6.8.E&S Monitoring, Supervision and Reporting

6.6.8.1. Monitoring and Supervision

GDCW will carry out regular supervision of subprojects during construction and operation to ensure that the ESMPs, SEPs, and LMPs are being duly implemented and that GMs are accessible and functional. When GDCW notices any problems in ESMP, SEP or LMP implementation it will inform the relevant construction contractors and agree with them on steps to rectify these problems. Specifically, for any significant environmental or social incidents (e.g. fatalities, lost time incidents, environmental spills etc.), the contractors will inform GDCW immediately and GDCW will notify the World Bank in 2 business days. The incident report including Root Cause Analysis (RCA), precautions and compensation measures taken, will be submitted to GDCW in 30 business days and GDCW will forward the incident report to the World Bank. GDCW will also report its findings to the World Bank in its biannual project progress report or more frequently, as needed to bring issues to the attention of the World Bank. The World Bank's Task Team for the project will, on occasion, and as required, also visit project sites as part of project supervision.

6.6.8.2. Reporting

6.6.8.2.1. Monthly Reports

Contractor EHSS Officers shall prepare and submit a monthly monitoring report to supervision consultant and the PIU EESE and HSE to document construction and compliance activities completed during the month, and to track the resolution of any issues that may have occurred. The reports should include the following information for the period:

- Summary of completed construction activities
- Estimate of remaining construction and schedule
- Summary of compliance activities with respect to the relevant project specific ESMPs as needed.
- Updated list of all EHSS incidents that occurred during the project
- Records of training provided to the contractor's workers
- Follow up information from any past issues that are still being resolved
- Photographs of project activities related to implementation of ESMP mitigation measures
- Daily compliance checklist each day that work occurs in the field.
- Outcomes of activities in line with the Environmental and Social Monitoring Plan

Supervision Consultant shall also prepare and submit a monthly monitoring report to PIU. The reports should include the following information for the period:

- Highlights of contractors' monthly report
- Output of supervision consultant's oversight activities

6.6.8.2.2. Biannual Progress Reports

The PIU shall prepare and submit a biannual progress report (this report will be a part of project biannual progress report that will cover all progresses such as procurement, finance etc. related to the project) to the World Bank to document construction and compliance activities completed during the period, monitoring results and to track the resolution of any issues that may have occurred, for all sub-projects under implementation. The PIU will use daily compliance checklists and monthly compliance reports prepared by the construction contractors to develop the biannual report.

The biannual report should include the following information for the period:

- Summary of completed construction activities
- Estimate of remaining construction and schedule
- Summary of compliance activities
- Environmental and Social Monitoring Report
- Environmental social and Health and Safety Key Performance Indicators (KPIs)
- PIU's and supervision consultants oversight activities (i.e., site visits)
- Updated list of all EHS incidents that occurred during the project, including attached notices of non-compliance that were issued
- Follow up information from any past issues that are still being resolved

- Photographs of project activities

The detailed list of all reporting requirements is presented in Table 10

Table 10. **Summary of Reporting Requirements for E&S Implementation**

Responsible Party	Reporting Requirement
PIU	• Preparation of the Project Progress Report (PPR) biannually to demonstrate the progress made during the reporting period against the results framework developed and target values identified in a clear and tangible manner. • MoEU will notify the World Bank about any significant incident (accidents, spills, fatalities, etc.) in 2 business days, and will send an incident investigation report together with the corrective action plan in 30 business days to the World Bank.
World Bank	• Preparation of the Implementation Status and Results (ISR) Report during project implementation. • Preparation of the Implementation Completion and Results (ICR) Report including ESF Environmental and Social Standards implementation in order to satisfy accountability needs and provide lessons from completed operations, within six months of project completion. • Preparation of the Environmental and Social Incident Response Toolkit (ESIRT) Report to report and manage incidents should they occur.
Construction Contractor Supervision Consultants	• Environmental and Social monthly monitoring report that provides assessment of the commitments given in sub-project specific ESMPs/LMPs/SEPs. • Incident Reports

6.6.8.3. Training for the PIU Environmental and Social Experts

PIU will provide its respective environmental and social staff with training as a part of PIU capacity building on aspects of ESF requirements and relevant instruments including:

- OHS, environmental and social assessments
- Risks screening and ESMP preparation
- Specific aspects of environmental and social risk management implementation and monitoring including waste management, OHS management
- Stakeholder engagement and grievance mechanism (GM)
- Codes of conduct
- Monitoring and reporting
- Other relevant topics

6.6.8.4. Training for Supervision Consultants and Other Relevant Staff

PIU will provide in-depth training to Supervision Consultants' environmental expert, social expert, and Health and Safety Expert as well as to all other staff responsible for ensuring full compliance with the ESF, including those in provincial offices, and relevant instruments on:

- The World Bank Environmental and Social Framework
- Project specific instruments namely, ESMF, LMP, SEF, SEPOHS, environmental and social assessments,
- ESMP preparation,
- Community health and safety,
- Stakeholder engagement and grievance redress,
- Codes of conduct
- Monitoring and reporting, and
- SEA /SH and GBV and COVID 19 prevention measures
- Other relevant topics.

6.6.8.5. Contractor Training

Health, Safety, Environmental and Social Responsibilities

Contractors are required to ensure their workers are adequately trained prior to beginning work on the sub-project. In addition to applicable worker safety laws, mitigation measures identify specific health and safety requirements that each contractor must comply with. Those requirements should be in line with the World Bank's ESF, WBG EHS General Guidelines, including specific guidelines related to Energy Conservation.

Contractors are required to train workers on the environmental and social requirements for the sub-project as a whole, as well as how to comply with applicable mitigation measure requirements when performing their work. In addition to H&S training, other environmental and social training shall be identified in the respective ESMP of the sub-project (e.g. SEA /SH and GBV, waste management and housekeeping).

Incidents

Incident Reports:

Contractor EHSS Officers are responsible for preparing and submitting incidents reports to the PIU EE, SE and HSE experts within 48 hours from discovery of the incident. EHSS Officers shall maintain a complete project record of incidents associated with their contract scope of work. The record shall be regularly updated and included with monthly compliance reports submitted to the PIU. Examples of EHSS incidents include:

- Fires
- Accidents or "near miss" events
- Hazardous material spills that contaminate soil or water resources
- Improvement orders or notices issued by supervisory body
- Non-compliance with mitigation measures
- Construction workers injuries
- Sexual exploitation and harassment / sexual abuse
- Physical or verbal conflicts with local community

At a minimum, EHSS incident reports should include:

- Dates the incident occurred and was discovered, if different
- Description of the incident
- Mitigation measures /environmental/social laws that were violated
- Parties present during the event
- Corrective actions taken to remedy the issue and prevent it from recurring
- Any remaining actions that are required to correct the situation, such as rehabilitation

Notices of Non-Compliance

If any issues with compliance are discovered by the PIU EE, SE, HSE and supervision consultants the observing party shall submit a written notice of non-compliance to the alternate party and contractors that documents the issue and presents preliminary corrective actions, if applicable. Notices of non-compliance shall include the following information:

- Dates the issue occurred and was discovered, if different
- Description of the issue
- Mitigation measures/ environmental/social laws and WB ESF requirements that were violated
- Parties present during the event
- Description of corrective actions taken
- Description of any necessary follow up actions or longer-term rehabilitation requirements if environmental damage occurred

Corrective Actions

Contractors are responsible for responding to and addressing notices of non-compliance in a timely manner and to the satisfaction of the PIU EE, SE and HSE. Contractors will be responsible for the rehabilitation costs and work effort associated with any environmental/health and safety/social damage that may occur due to non-compliance with mitigation measures/ environmental/social laws.

7. STAKEHOLDER ENGAGEMENT AND GRIEVANCE MECHANISM

7.1. Stakeholder Engagement Framework

As part of Project implementation, it is required to engage with multiple and varied set of stakeholders for different activities under the Project components. The Project Environment and Social risk category is assessed as “Moderate”. Stakeholder Engagement Framework (SEF) is prepared to provide the framework for preparation of Stakeholder Engagement Plans (SEPs) by supervision consultant. SEF outlines the general principles and collaborative strategy to identify stakeholders for all components under the Project, identify appropriate modes of engagement and prepare plans for engagement and meaningful consultation throughout the project cycle while ensuring transparency. This includes identification of disadvantaged and vulnerable groups who can be disproportionately affected by the project activities and appropriate modes of engagement with these groups. The goal of SEF is to improve and facilitate decision making and create an atmosphere of understanding that actively involves project-affected persons and other stakeholders in a timely manner and that these groups are provided sufficient opportunity to voice their opinions and concerns. The “Stakeholder Engagement Plan” (SEP) will be prepared based on the Stakeholder Engagement Framework in accordance with ESS10 of Environmental and Social Framework (ESF). The framework provides for SEP to take into account the existing institutional and regulatory framework within the context of national legal instruments as well as the requirements of ESS10. SEF and SEP are dynamic documents and shall be updated at various stages of project life cycle. Updating and inclusion of new stakeholder will be done as a continued process. The SEF outlines the process of identification of stakeholders duly considering all stakeholders relevant to the overall Project including its components and sub-components. The stakeholders include those currently associated with the Project and those who will be associated with the Project at a later stage during implementation. Stakeholders are identified and categorized into i) beneficiaries ii) project affected parties, iii) other interested parties and iv) disadvantaged and vulnerable groups. The framework provides for systematic consultation with all those interproject beneficiaries, project affected persons, women, vulnerable and poor members of the of the community and other stakeholders to understand their interests and influence over the project.

7.2. Stakeholder Engagement Plan (SEP)

Stakeholder Engagement Plan for each subproject will be prepared by supervision consultants. The PIU will review, approve and disclose Stakeholder Engagement Plans (SEPs) for public review that will outline how stakeholders will be engaged throughout the course of the project and which methods will be used as part of the process. It will outline the responsibilities of MoEU, construction supervisor, and contractors in the implementation of stakeholder engagement activities. Details on ESMF stakeholder consultation will be also presented in the SEP. The SEP is considered a living document that will be updated throughout the ESMF process and will continue to evolve as the project proceeds through the construction, operation implementation phases.

Stakeholder engagement activities will be targeted at project affected persons as well as at other interested parties (PIU, MoEU and government agencies, NGOs, business, and media, public, among others). The SEP will outline special considerations that will be given to ensure outreach to and engagement of disadvantaged and vulnerable groups. The SEP will include establishment and management of a project-wide grievance redress mechanism, public meetings, trainings and workshops, media and social media communication, disclosure of written materials, involvement of project liaison officers, as well as a survey among affected persons to gauge satisfaction with the quality of citizen engagement and share additional concerns.

Stakeholder Engagement Plans (SEP) will be publicly disclosed. The PIU will be responsible for regular communication with stakeholders through the following mechanisms:

Visibility and Community engagement in line with the different project stages by use of:

- Social media (Website, Facebook, on-line newspapers, E-mail (MailChimp)
- Printed newspaper
- Radio and Television advertising and interviews
- Physical information sessions and meetings (one information session per grant cycle)
- Brochures and flyers
- Registration and evaluation forms
- Beneficiary surveys (see reporting and monitoring)
- On-site visits

7.2.1.Principles of Stakeholder Engagement

Project stakeholders are defined as individuals, groups or other entities who:

- are impacted or likely to be impacted directly or indirectly, positively or adversely, by the Project (also known as 'affected parties'); and
- may have an interest in the Project ('interested parties'). They include individuals or groups whose interests may be affected by the Project and who have the potential to influence the Project outcomes in any way.

In order to meet best practice approaches, the project will apply the following principles for stakeholder engagement:

- **Openness and life-cycle approach**: public consultations for the project(s) will be arranged during the whole life-cycle, carried out in an open manner, free of external manipulation, interference, coercion or intimidation;

- **Informed participation and feedback**: information will be provided to and widely distributed among all stakeholders in an appropriate format; opportunities are provided for communicating stakeholders' feedback, for analyzing and addressing comments and concerns;

- **Inclusiveness and sensitivity**: stakeholder identification is undertaken to support better communications and build effective relationships. The participation process for the projects is inclusive. All stakeholders are encouraged to be involved in the consultation process, to the extent the current circumstances permit. Equal access to information is provided to all stakeholders. Sensitivity to stakeholders' needs is the key principle underlying the selection of engagement methods. Special attention is given to vulnerable groups, in particular women, youth, elderly and the cultural sensitivities of diverse ethnic groups.

When deciding the frequency and the appropriate engagement technique used to consult a particular stakeholder group, three criteria must be considered:

- The extent of impact of the project on the stakeholder group;
- The extent of influence of the stakeholder group on the project; and
- The culturally acceptable engagement and information dissemination methods.

In general, engagement is directly proportional to *impact* and *influence*, and as the extent of impact of a project on a stakeholder group increases, or the extent of influence of a particular stakeholder on a project increases, engagement with that particular stakeholder group should intensify and deepen in terms of the frequency and the intensity of the engagement method used.

7.2.2. Stakeholder Consultation

Meaningful consultation will be carried out on an ongoing basis as the nature of issues, impacts, and opportunities evolves.

Meaningful consultation is a two-way process, that:

- Begins early in the project planning process to gather initial views on the project proposal and inform project design;
- Encourages stakeholder feedback, particularly as a way of informing project design and engagement by stakeholders in the identification and mitigation of environmental and social risks and impacts;
- continues on an ongoing basis, as risks and impacts arise;
- Is based on the prior disclosure and dissemination of relevant, transparent, objective, meaningful, and easily accessible information in a time frame that enables meaningful consultations with stakeholders in a culturally appropriate format, in relevant local language(s), and is understandable to stakeholders;
- Considers and responds to feedback;
- Supports active and inclusive engagement with project-affected parties;
- Is free of external manipulation, interference, coercion, discrimination, and intimidation; and
- Is documented and disclosed by the Borrower.

PIU will conduct several consultation methods (current condition of COVID-19 pandemic will be considered when selecting the consultation method)19 to communicate information regarding the Project and collect suggestion, observation, options, grievances of stakeholders about the sub-projects. Following consultation methods may be applied by PIU:

- face-to-face meetings such as town halls or workshops,
- focus groups,
- written consultations,
- online consultations
- grievance mechanism

7.2.3.Outline of Stakeholder Engagement Plan

1. Project Description
2. Nature of the proposed project interventions
    a. Structural interventions
    b. Non-structural interventions
    c. Revenue generation (Tourism, Water recreation, floating solar)
3. Purpose of the Stakeholder Engagement Plan
4. Applicable legal and regulatory framework and World Bank ESF
5. Brief Summary of previous stakeholder Engagement activities
6. Stakeholder identification in X dam
7. Stakeholder Engagement and Project cycle
8. Timelines for Information disclosure and Feedback
9. Future phases of project
10. Implementation arrangements
11. Grievance redressal mechanism
12. Budget for implementation
13. Monitoring and Reporting (including Annual reporting back)
14. Training

7.3. Grievance Mechanism (GM)

The Grievance Mechanism (GM) is an arrangement that provides channels for project stakeholders to provide feedback and/or express their concerns and grievances related to project activities. Through this, the GM allows also for the identification and resolution of issues affecting the project. By increasing transparency and accountability, the GM aims to reduce the risk of the project inadvertently affecting citizens/beneficiaries and serves as an important feedback and learning mechanism that can help improve project impact.

The SREEPB Project will be managed by the PIU which has already been established for another World Bank financed Project; Energy Efficiency in Public Buildings Project (EEPBP) that aims to reduce energy use in central government buildings and develop a transition plan to develop and scale-up suitable sustainable financing and institutional mechanisms. The SREEPB Project will use the same communication channels and grievance mechanism with the EEPBP and will ensure transparency and accountability and meet the requirements of ESS-10 of the WB's ESF. The GM will also serve for the project employees including PIU construction supervisors and contractors as it addressed in Labor Management Procedures (LMP) of the Project. The construction contractors will prepare their Labor Management Plans before the start of civil works, which will also include detailed description of the workers' grievance mechanism.

The MoEU currently has a call center that can be accessed via both phone and website. This call center is used for all site-related issues that are being carried out by the MoEU. The MoEU/GDCW operates a website for SREEPB Project where all relevant information is being disclosed for review. Moreover, through the complaint submissions section and an e-mail address, the PIU is able to collect concerns and grievances from all stakeholders (Annex 5 and 6 provides grievance opening and close out forms). The principle of confidentiality and the right to make anonymous complaints will be enabled. The details of the communication channels for the EEPB Project, which will be temporarily used for the SREEPB Project till establishment of Project specific communication channels, are given below:

E-mail	*yigmenerji@csb.gov.tr*
Project	**Webpage**
Energy Efficiency in Public Buildings Project	*https://kamuenerji.csb.gov.tr*
MoEU Call Center	Alo181
Grievance Submission	*https://kabevanket.csb.gov.tr/sikayet.jsp*

Within the scope of SREEPB Project, concerns and grievances will be handled at four levels: (a) contractor level; (b) construction supervision level; (c) MoEU Provincial Directorates level; (d) national level (MoEU Project Implementation Unit).

a) **Contractor Level:** Each contractor appointed for conducting the civil works will be responsible for receiving, recording and if possible, resolving the concerns and grievances raised by any stakeholder (public building management, building users, visitors, host communities, or beneficiaries, project workers etc.) due to the civil works executed within the scope of the SREEPB Project. The PIU will also require contractors to develop and implement a grievance mechanism for their workforce including sub-contractors, prior to the start of works. If the Contractor is not able to resolve the concerns and grievances, they are obliged to direct them to the relevant person/institutions. Contractors will also submit the records including solved and unsolved concerns and grievances to the MoEU on weekly basis.

b) **Construction Supervision Level:** The concerns and grievances that cannot be addressed at contractor level will be dealt by the Project Manager who is appointed as Construction Controller. The Project Manager will remind the responsibilities of the contractor by issuing a status report and ensure that necessary measures are/will be taken to solve the problem and ensure implementation of required corrective actions. If the Project Manager is not able to resolve the concerns and grievances, he/she is obliged to direct them to the MoEU.

c) **Provincial Directorates of Environment and Urbanization Level:** Provincial Directorates of Environment and Urbanization will be responsible for taking the necessary measures to address received concerns and grievances regarding the activities carried out within the scope of the SREEPB Project to the extent possible. The Directorates will also immediately forward all received concerns and grievances to the Administration, whether the issues are addressed or not.

d) **MoEU Level:** Within the scope of SREEPB Project, MoEU is responsible to collect, record, and resolve all concerns and grievances raised by stakeholders through the above-mentioned levels. MoEU is responsible for resolving the collected concerns and grievances within 30 days and informing the owner of the concerns and grievances about the result.

In addition to the above-mentioned communication channels, the stakeholders may also utilize the Presidency's Communication Center (CİMER) to submit their concerns and grievances about the project implementation. The communication channels of CİMER are given below.

Webpage	*https://www.cimer.gov.tr* *https://giris.turkiye.gov.tr/*
Hotline	Alo 150
Mail Address	T.C. Cumhurbaşkanlığı Külliyesi 06560 Beştepe – Ankara
Phone	+90 312 590 2000
Fax	+90 312 473 6494

8. ESMF IMPLEMENTATION BUDGET

The project budget allows for the deployment of expertise and resources needed to ensure that project implementation is in line with the ESMF requirements. Table 11 provides budget items for ESMF implementation and associated estimated cost.

Table 11. ESMF Implementation Budget Items and Cost

Budget Items	Estimated cost
Individual Environmental, Social, Health and Safety Consultants	Environmental Expert and Social Expert 180.000 +VAT OHS Expert: $95.000+VAT
Monitoring Activities	
Preparation of site-specific ESMPs, SEPs and LMPs	All Costs Incurred by Consultants: $147.000+VAT
Social and Environmental Trainings, Awareness, Information Disseminations	
Capacity building	
Implementation of SEPs, LMPs ESMPs' measures	All Costs Incurred by both Consultants & Contractors: $690.000+VAT
COVID-19 measures	
Total	**1.122.000 + VAT** **0,5% of The Project Budget**

9. ENVIRONMENTAL AND SOCIAL MONITORING

Although the environmental and social impacts of the Project are expected to be moderate; an environmental and social monitoring system, which will be active from the construction phase to operational phase of the Project, will prevent negative impacts of the Project and monitor the effectiveness of the mitigation measures. This system helps the WB and MoEU to evaluate the success of mitigation as part of project supervision and allows taking an action when needed. Both the environmental and social issues covered within the mitigation measures will be monitored and supervised by the appointed specialists through MoEU.

The monitoring system provides,

- Technical assistance and supervision when needed,
- Early detection of conditions related to mitigation measures,
- Follow up on mitigation results, and
- Provide information of the project progress.

The PIU will regularly collect data for results indicators from the field through its provincial directorates and by making routine site visits. The PIU will also be responsible of monitoring the quality of data collected and will evaluate the achieved outputs/outcomes vis-à-vis those set by the Project's Results Framework.

PIU will also monitor of the implementation of the ESMF throughout key environmental and social and Health and Safety performance indicators such as:

- number of prepared sub-management plans to address mitigation measures of site-specific E&S and occupational and community Health and Safety risks and impacts,
- number of E&S and Health and Safety related trainings provided to construction workers,
- number of consultation meetings held with PAP, local community, NGOs etc.,
- number of near misses, accidents/incidents and injuries, sick leaves
- number of site audits held by PIU and Supervision Consultants
- number of received and resolved complaints

Monthly Monitoring Reports will be prepared by Construction Contractors and reviewed by Supervision Consultant. The supervisor consultants will also prepare reports based on the information provided by the contractors and integrate own assessment and observations to the PIU. The PIU will also integrate Monthly Monitoring Report and observations of conducted site visits in Biannual Progress Report.

Project's Environmental and Social Monitoring Plan is provided in Table 12.

Table 12. **Environmental and Social Monitoring of the Renovation/Demolishment /Re-construction Works**

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Responsibility**	
					Construction	Operations
Project stage: Preparatory activities for reconstruction of public building for energy efficiency and seismic resilience improvement						
The community safety regulation and protection measures applied	Around the project site	Visual checks	At the beginning of the renovation/ reconstruction work (first day) Every working day during the project activities	To ensure minimization of health and safety risks – mechanical injuries to the members of the local community	• Supervision consultants • Construction Contractors	
The OHS protection measures applied for the workers at the sites	On the project site	Visual checks	Every working day during the project activities	To minimize the risks on occupational health and safety of the workers especially protective equipment and clothes for workers who will remove asbestos containing roof sheets	• Supervision consultants • Construction Contractors	
Avoid and minimize safety and health risks for the PAP	In the building and at the construction site	Visual checks	At the beginning the retrofitting/reconstruction work and continuously every working day	To avoid injuries of the PAP from inhalation of the asbestos fibers or other construction dust	• Supervision consultants • Construction Contractors	

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Responsibility**	
					Construction	Operations
Time for beginning and end of renovation/reconstruction work and especially time for removal of existing containing asbestos	On the project site	Visual checks and documents (time schedule) review	Every day	To avoid the environmental, health and safety risks	• Supervision consultants • Construction Contractors	
Existence of the broken glass, dust generated during the renovation	In the rooms, corridors and construction site	Visual checks Implementation of Waste Management Plan and Pollution Prevention Plan	For dust generation every day after completion of work	To avoid and minimize injuries and dust inhalation	• Supervision consultants • Construction Contractors	
Project stage: Retrofitting/Reconstruction/demolishing works at public building for energy efficiency and seismic resilience improvement						
The OHS protection measures applied for the workers at the site, (during e.g. Working at	On the project site	Check the documentation for relevant OHS Certificates and trained workers.	Prior to starting the demolition works Every working day during the project activities	To minimize the risks on occupational health and safety of the workers	• Supervision consultants • Construction Contractors	

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Responsibility**	
					Construction	Operations
height, working with hazardous substances, working with rotating equipment, working with electrified devices etc)		Visual checks for using the protective equipment Implementation of OHS Plan and site-specific H&S instructions				
Health and Safety records	On the construction sites	H&S site documentation check	Weekly	To ensure necessary Occupational Health and Safety records are kept at construction sites	• Construction Contractors • Supervision consultants	
Dust	On the construction sites, throughout access roads	Visual check to control implementation of identified dust mitigation measures including respected method statements	Every working day during the project activities	To minimize dust generation to prevent adverse impact on local communities and environment	• Construction Contractors • Supervision consultants	

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Responsibility**	
					Construction	Operations
Noise	On the construction sites,	Visual check to control implementation of identified noise mitigation measures including respected method statements	Every working day during the construction activities	To minimize noise generation to prevent adverse impact on local communities and environment	• Construction Contractors • Supervision consultants	
Housekeeping	On the construction sites	Visual check to control implementation of identified pollution prevention measures in line with ESMP including Pollution Prevention Plan Implementation Asbestos management measures	Every working day during the construction activities	To prevent pollution to protect, construction workers beneficiaries' employees, local communities, and environment	• Construction Contractors • Supervision consultants	

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Responsibility**	
					Construction	Operations
Primary selection of the waste streams at the project sites	On the construction sites	Review the documentation – identification of the waste type according to the List of waste	At the beginning of work	To separate hazardous (packaging waste from glue, paints, insulation material) from the non-hazardous waste as well as inert from biodegradable waste	• PIU • Supervision consultants • Construction Contractors	
Identification of the asbestos containing waste, proper packaging, labeling as a hazardous waste	On the construction sites	Review the documentation – identification of the asbestos containing waste according to the List of waste	At the beginning of work	The asbestos containing waste is a hazardous waste with adverse environmental and health impacts	• PIU • Supervision consultants • Construction Contractors	
Temporary storage of the removed waste/ proper packaged and labeled	At separate room/basement of the buildings or in the construction sites	Visual checks	On daily basis	To minimize injuries To ensure keeping proper inventory	• Supervision consultants • Construction Contractors	
Asbestos contacting waste management	On the project sites Before the removal/dism	Implementing Waste Management Plan/ Managing	During the collection and transportation of the removed	To be sure that the asbestos containing waste will be treated according to the	• Supervision consultants • Construction Contractors	

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Responsibility**	
					Construction	Operations
	antle works start	asbestos containing materials with the authorized waste disposal company.	asbestos containing materials Before the final disposal of removal	national legislation, international conventions, good practice	Contractor who needs manage the asbestos containing materials with licensed companies for acceptance and final disposal of the asbestos containing waste. Landfills will have a License for acceptance and final disposal of asbestos waste issued by the Ministry of Environment and Urbanization	
Construction debris management	On the construction sites	Visual control of Implementation of Waste Management Plan	Following all hazardous material containing parts of buildings have been removed	To be ensure that disposal of the construction debris in line with applicable national regulation and Demolishment plan of the Project	• Construction Contractors is responsible to transfer all construction debris to licensed construction debris landfill of the municipalities. • Supervision consultants • Construction Contractors	
Construction vehicle traffic	Construction sites and access roads	Visual control of Implementation of Community Safety and Traffic Management Plan	On daily basis	To protect to construction workers beneficiaries' employees, local communities from traffic accidents related injuries, fatalities	• Supervision consultants • Construction Contractors	

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Responsibility**	
					Construction	Operations
		Using appropriate signs and signals				
Grievance Mechanism	Construction site	Implementation of Project Grievance Mechanism through opening and closure forms and complaints records	Weekly	To make sure all construction-related complaints (including workers complaints) are addressed properly and records are kept	• Supervision consultants • Construction Contractors • PIU	
Project stage: Operation of the Retrofitted /Reconstructed public building for energy efficiency and seismic resilience improvement						
Waste streams	Renovated/constructed buildings	Implementation of the onsite waste management requirements	Regularly	To ensure proper waste collection and disposal according to the national regulatory requirements		Administration of beneficiary institutions
Health and Safety	Renovated/constructed buildings	Regular checks and maintenance of the roof, windows, doors,	Regularly	To ensure the health and safety of occupants/ users		Administration of beneficiary institutions

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Responsibility**	
					Construction	Operations
		any leakages, etc.)				

10. ESMF AND SEF DISCLOSURE

The present draft ESMF and SEF will be publicly disclosed and the consultation virtual meeting with line-ministries will be carried out on 05 April 2021. The comments and suggestions made during the consultation meeting will be taken into account in the final version of the ESMF and the SEF. Minutes of stakeholder consultation meeting will be developed (including questions raised and responses provided) and included in the final version of ESMF and SEF. The site-specific EMSPs, SEPs will be publicly disclosed, and beneficiary, local communities, and NGOs will be consulted on the environmental and social implications of the individual project activities prior to tendering of works.

The final ESMF will be disclosed on the MoEU website in Turkish and English language. MoEU will officially submit the final ESMF to the World Bank for disclosure in English and Turkish on the WB external webpage. The final version of this document will be used by respective government agencies and other Project stakeholders and partners during the project implementation.

Feedback regarding the disclosed documents will be collected through official correspondences, online feedback forms, e-mails to support the effectiveness of the digital meetings. The ESF documents to be prepared specific for the Project or the sub-projects are living documents which can be updated in accordance with any change on the project and its sub-projects**.**

ANNEX- 1. SCREENING OF CATEGORIES OF PROPOSED TYPES OF SUBPROJECTS

	Project activity	**Risk**	**Remarks**	**Proposed ESA instrument**
1.	Implementation of Energy Efficiency measures and seismic resilience measures (renovation works only)	Moderate	The PIU E&S, OHS experts will conduct the screening of sub-projects using the environmental and social screening checklist provided in Annex 2	The supervision consultant will prepare the site-specific ESMPs/LMP/SEP for the buildings to be renovated. The contractors should ensure all environmental, social and labor safety requirements as per the ESMP are described and provided.
2.	Implementation of Energy Efficiency measures and seismic resilience measures (demolishing and reconstruction)	Moderate	The PIU E&S, OHS experts will conduct the screening of sub-projects using the environmental and social screening checklist provided in Annex 2.	The supervision consultant will prepare site-specific ESMPs for the demolition and reconstruction activities. The contractors will prepare his C-ESMP before starting the civil works. The C-ESMP should ensure all environmental, social and labor safety requirements as per the ESMP are described and provided. The contractors should ensure labor safety issues and provide EHS training before starting the civil works l and throughout the duration of the construction activities.

ANNEX- 2. ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST FOR SUBPROJECTS

Sub-project title	
Sub-project beneficiaries	
Proposed date of start of work	
Technical drawing/ Specifications (describe status of sub-project, existing studies, etc.)	

Brief description of sub-project

Nature of the sub-project

Physical size

Site area, location

Property ownership

Existence of on-going operations, plans for expansion and how it will contribute to achieve the comfort level

Description of main planed sub-project activities and impacts

Sub-project cost

Number of beneficiaries (gender desegregated)

Number of participants to public disclosure (gender desegregated)

A) Environmental and Social impacts related to proposed sub-project – existing situation

Environmental Social issues/concerns	**Predicted Effect/Impact (to be described in words in suggested column)**			
	No Impact	**Minor**	**Moderate**	**Major**
Will the sub-project affect have declared protected areas or any natural habitats				
Will the sub-project be located in or near Environmentally sensitive or protected area (in accordance with national legislation)				
Will the sub-project affect critical habitats such as forest ecosystem, wetlands, marshlands, aquatic ecosystems?				
Will the sub-project affect endangered plant and animal species?				
Will the sub-project affect archaeological sites, historic monuments and settlements?				
Other physical and environmental issues and concerns – its nature and impact				
Will the sub-project affect the daily operation of the building and people?				

Is the building protected under Law for protection of cultural heritage?				
Is the building of special significance to any vulnerable group (i.e. disabled people, minorities, youth etc.)				

B) Environmental social/impacts related to sub-project construction				
Environmental issues/concerns	Predicted Effects/Impacts (describe in words in suggested column)			
	No Impact	**Minor**	**Moderate**	**Major**
Will the sub-project involve the use of forest trees or other natural resources as building materials?				
Will the sub-project emit greenhouse gases (CO_2, NOx, O_3) or ozone-depleting substances (CFC, methyl bromide etc.)?				
Will the sub-project use, produce or discharge hazardous and toxic materials (e.g., hospital waste, industrial waste or other?)				
Will the sub-project produce or cause occupational hazards?				
Will the sub-project cause dust and noise pollution?				
Will the sub-project cause water pollution?				
Will the sub-project require relocation or disruption of work for government staff and other building occupants?				
Will the sub-project result in temporary disruption to the livelihoods of any worker in the buildings?				
Will the sub-project cause community safety related hazards?				
Will the sub-project cause additional traffic load?				
Will the sub-project cause any adverse impact on closest sensitive receptors (if there is any)?				
Will the sub-project include any land acquisition?		Not eligible	Not eligible	Not eligible
Will the sub-project involve any permanent or temporary restrictions in building use?		Not eligible	Not eligible	Not eligible
Will the sub-project cause any temporary economical displacement due to land acquisition?		Not eligible	Not eligible	Not eligible

B) Environmental social/impacts related to sub-project construction	
Will the sub-project disproportionately adversely impact any disadvantaged and vulnerable groups (such as persons with disabilities, persons with limited mobility)?	
Other environmental or social impact (describe nature and severity of its impact)	*Preparatory phase* *Construction phase* *Operation phase*

OFFICIAL ASSESMENT OF THE PIU/SCREENING OFFICER ON THE IMPACTS OF SUB-PROJECT

	Minor	Moderate	Major	Remarks
What is the overall assessment of the PIU and supervision consultant on the environment and social impacts of the sub-project (positive/negative)?				
Does the sub-project belong to area as determined in ESMF, and to which one (refer to table and page of ESMF)				
Other comments and information				

Name of Environmental Specialist:

Name of Social Specialist:

Date of Screening

Cleared for approval by: _____ Yes _____ No _____

Name of sub-Project Coordinator:

Signature _____ Date

Notes: Approval from WB will be required

Annex- 3. ENVIRONMENTAL AND SOCIA MANAGEMENT PLAN (ESMP) CONTENT AND FORMAT

Environmental and Social Management Plan (ESMP) for subprojects should outline the mitigation, monitoring and administrative measures to be taken during project implementation to avoid or eliminate negative environmental impacts. For projects of intermediate environmental risk (Moderate), ESMP may also be an effective way of summarizing the activities needed to achieve effective mitigation of negative environmental impacts (description of Environmental and Social Management Plan is provided below).

For each phase, the PIU and supervision consultant identify any significant environmental impacts that are anticipated based on the analysis done in the context of preparing an environmental assessment.

For each impact, mitigation measures are to be identified and listed. Estimates are made of the cost of mitigation actions broken down by estimates for installation (investment cost) and operation (recurrent cost). The ESMP format also provides forth identification of institutional responsibilities for operation of mitigation devices and methods.

To keep track of the requirements, responsibilities and costs for monitoring the implementation of environmental mitigation identified in the analysis included in an environmental assessment for Moderate Risk projects, a monitoring plan may be useful. Like the ESMP, the project cycle is broken down into two phases (construction and operation). The format also includes a row for baseline information that is critical to achieving reliable and credible monitoring. The ESMPs will be prepared based on the bidding structure of the MoEU. If the bidding will be conducted on provincial basis (i.e. covering all the buildings to be renovated within a province), the site specific ESMP will be a comprehensive one responding to potential environmental and social impacts in all kinds of buildings to be renovated, and separate site-specific ESMPs will be prepared buildings for demolished and reconstructed, and the mitigation measures will be applied and monitored respecting to the corresponding impacts specific to that building. The monitoring and progress reports for implementation of the ESMPs will cover all the buildings to be renovated, demolished, and reconstructed, where necessary (e.g. monitoring of waste management). If the structure of the bidding will change, the basis of the ESMPs will be modified accordingly.

Full ESMP will be prepared as a stand-alone[15] document for each sub-project. The content of the ESMPs will include the following:

a) Executive summary

- Concisely discusses significant findings and recommended actions.

b) Legal and institutional framework

- Analyzes the legal and institutional framework for the project, within which the environmental and social assessment is carried out, including the issues set out in ESS1, paragraph 26.46

c) Project description

- Concisely describes the proposed project, its components and activities to be conducted, and the project's geographic, environmental, social, and temporal context, including any offsite investments that may be required (e.g., dedicated pipelines, access roads, power supply, water supply, and raw material and product storage facilities) as well as the project's primary suppliers.
- Through consideration of the details of the project, indicates the need for any plan to meet the requirements of ESS1 through 10.

- Includes a map of sufficient detail, showing the project site and the area that may be affected by the project's direct, indirect, and cumulative impacts.

d) Baseline data

- Sets out in detail the baseline data that is relevant to decisions about project location, design, operation, or mitigation measures. This should include a discussion of the accuracy, reliability, and sources of the data, as well as information about dates surrounding project identification, planning, and implementation.
- Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions.
- Based on current information, assesses the scope of the area to be studied and describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences.
- Takes into account current and proposed development activities within the project area but not directly connected to the project.
- Considers sensitive receptors that may be adversely affected from the project activities

e) Environmental and social risks and impacts assessment.

- Takes into account all relevant environmental and social risks and impacts of the project. This will include the environmental and social risks and impacts specifically identified in ESSs2–8, and any other environmental and social risks and impacts arising as a consequence of the specific nature and context of the project, including the risks and impacts identified in ESS1, paragraph 28.

f) Mitigation measures

- Identifies mitigation measures and significant residual negative impacts that cannot be mitigated and, to the extent possible, assess the acceptability of those residual negative impacts.
- Identifies differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable.
- Assesses the feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of proposed mitigation measures, and their suitability under local conditions; the institutional, training, and monitoring requirements for the proposed mitigation measures.
- Specifies issues that do not require further attention, providing the basis for this determination.

g) Monitoring

ESMPs will identify monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social risks and impacts and the mitigation measures described in the ESMP. Specifically, the monitoring section of the ESMP provides (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

h) Appendices

- List of the individuals or organizations that prepared or contributed to the environmental and social assessment.
- References—set out the written materials, both published and unpublished, that have been used.
- Record of meetings, consultations, and surveys with stakeholders, including those with affected people and other interested parties. The record specifies the means of such stakeholder engagement that were used to obtain the views of affected people and other interested parties.
- Tables presenting the relevant data referred to or summarized in the main text. List of associated reports or plans.

The ESMP attempts to cover typical core mitigation approaches to civil works contracts with small, localized impacts. It is accepted that above format provides the key elements of the ESMP to meet World Bank Environmental and Social Assessment requirements under ESS1.

The PIU will provide the construction supervisor with detailed public designs that consider gender friendly spaces, safe bathroom and sanitary facilities and spaces for community activities and considering the special needs of disabled. Additionally, during civil works, the PIU and the construction supervisor will ensure that contractors take required health and safety measures.

Annex- 4. LAND ACQUISITION AND RESTRICTION ON LAND USE CHECKLIST

GENERAL INFORMATION			
Location of the Subject Plot			
Province			
District			
Quarter			
Plot/Parcel Number			
Ownership Status			
State Treasury □	**Other Public** □	**State Treasury + Other Public** □	
Other Information			
Type of land (indicated on master plan)			
Already in use for educational purposes	□ **Yes** □ **No**		
If yes;			
Active school facility	□ **Yes** □ **No**		
Number of students			
Any decision for demolishing existing education facilities	□ **Yes** □ **No**		
Are there any users of land who will be economically displaced as a result of land acquisition?	□ **Yes** □ **No**		

APPENDICES	
1	Copy of title deed
2	Satellite image (if any)
3	Photo of plot and surroundings
4	Other documents (if there is any demolishing decision for existing education facilities, etc.)

Annex- 5. SAMPLE OF GRIEVANCE FORM

Reference No	
Full Name	
Please mark how you wish to be contacted (mail, telephone, e-mail).	
Province/Town/Settlement	
Date	

Category of the Grievance	
1. On abandonment (public)	
2. On assets/properties impacted by the project	
3. On infrastructure	
4. On decrease or complete loss of sources of income	
5. On environmental issues (ex. pollution)	
6. On employment	
7. On traffic, transportation and other risks	
9-Other (Please specify):	

Description of the Grievance What did happen? When did it happen? Where did it happen? What is the result of the problem?
What would you like to see happen to resolve the problem?
Although giving name and address is not compulsory, it should be kept in mind that during the feedback process regarding the grievance some problems may occur due to lack of information.

Signature: **Date:**

Annex- 6. SAMPLE OF GRIEVANCE CLOSEOUT FORM

Grievance closeout number:		
Define immediate action required:		
Define long term action required (if necessary):		
Compensation Required?	[ ] YES	[ ] NO

CONTROL OF THE REMEDIATE ACTION AND THE DECISION	
Stages of the Remediate Action	Deadline and Responsible Institutions
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

COMPENSATION AND FINAL STAGES

This part will be filled and signed by the complainant after s/he receives the compensation fees and his/her complaint has been remediated.

Notes:

[Name-Surname and Signature]

Date: ___ / ___ / _____

Of the Complainant:

Representative of the Responsible Institution/Company
[Title-Name-Surname and Signature]

Annex- 7. ESF/SAFEGUARDS INTERIM NOTE COVID-19 CONSIDERATIONS IN CONSTRUCTION/CIVIL WORKS PROJECTS

This note was issued on April 7, 2020 and includes links to the latest guidance as of this date (e.g. from WHO). Given the COVID-19 situation is rapidly evolving, when using this note it is important to check whether any updates to these external resources have been issued.

INTRODUCTION

The COVID-19 pandemic presents Governments with unprecedented challenges. Addressing COVID-19 related issues in both existing and new operations starts with recognizing that this is not business as usual and that circumstances require a highly adaptive responsive management design to avoid, minimize and manage what may be a rapidly evolving situation. In many cases, we will ask Borrowers to use reasonable efforts in the circumstances, recognizing that what may be possible today may be different next week (both positively, because more supplies and guidance may be available, and negatively, because the spread of the virus may have accelerated).

This interim note is intended to provide guidance to teams on how to support Borrowers in addressing key issues associated with COVID-19, and consolidates the advice that has already been provided over the past month. As such, it should be used in place of other guidance that has been provided to date. This note will be developed as the global situation and the Bank's learning (and that of others) develops. This is not a time when 'one size fits all'. More than ever, teams will need to work with Borrowers and projects to understand the activities being carried out and the risks that these activities may entail. Support will be needed in designing mitigation measures that are implementable in the context of the project. These measures will need to take into account capacity of the Government agencies, availability of supplies and the practical challenges of operations on-the-ground, including stakeholder engagement, supervision and monitoring. In many circumstances, communication itself may be challenging, where face-to-face meetings are restricted or prohibited, and where IT solutions are limited or unreliable.

This note emphasizes the importance of careful scenario planning, clear procedures and protocols, management systems, effective communication and coordination, and the need for high levels of responsiveness in a changing environment. It recommends assessing the current situation of the project, putting in place mitigation measures to avoid or minimize the chance of infection, and planning what to do if either project workers become infected or the work force includes workers from proximate communities affected by COVID-19. In many projects, measures to avoid or minimize will need to be implemented at the same time as dealing with sick workers and relations with the community, some of whom may also be ill or concerned about infection. Borrowers should understand the obligations that contractors have under their existing contracts (see Section 3), require contractors to put in place appropriate organizational structures (see Section 4) and develop procedures to address different aspects of COVID-19 (see Section 5).

CHALLENGES WITH CONSTRUCTION/CIVIL WORKS

Projects involving construction/civil works frequently involve a large work force, together with suppliers and supporting functions and services. The work force may comprise workers from international, national, regional, and local labor markets. They may need to live in on-site accommodation, lodge within communities close to work sites or return to their homes after work. There may be different contractors permanently present on site, carrying out different activities, each with their own dedicated workers. Supply chains may involve international, regional and national suppliers facilitating the regular flow of goods and services to the project (including supplies essential to the project such as fuel, food, and water). As such there will also be regular flow of parties entering and exiting the site; support services, such as catering,

cleaning services, equipment, material and supply deliveries, and specialist sub-contractors, brought in to deliver specific elements of the works.

Given the complexity and the concentrated number of workers, the potential for the spread of infectious disease in projects involving construction is extremely serious, as are the implications of such a spread. Projects may experience large numbers of the work force becoming ill, which will strain the project's health facilities, have implications for local emergency and health services and may jeopardize the progress of the construction work and the schedule of the project. Such impacts will be exacerbated where a work force is large and/or the project is in remote or under-serviced areas. In such circumstances, relationships with the community can be strained or difficult and conflict can arise, particularly if people feel they are being exposed to disease by the project or are having to compete for scarce resources. The project must also exercise appropriate precautions against introducing the infection to local communities.

DOES THE CONSTRUCTION CONTRACT COVER THIS SITUATION?

Given the unprecedented nature of the COVID-19 pandemic, it is unlikely that the existing construction/civil works contracts will cover all the things that a prudent contractor will need to do. Nevertheless, the first place for a Borrower to start is with the contract, determining what a contractor's existing obligations are, and how these relate to the current situation.

The obligations on health and safety will depend on what kind of contract exists (between the Borrower and the main contractor; between the main contractors and the sub-contractors). It will differ if the Borrower used the World Bank's standard procurement documents (SPDs) or used national bidding documents. If a FIDIC document has been used, there will be general provisions relating to health and safety. For example, the standard FIDIC, Conditions of Contract for Construction (Second Edition 2017), which contains no 'ESF enhancements', states (in the General Conditions, clause 6.7) that the Contractor will be required:

- to take all necessary precautions to maintain the health and safety of the Contractor's Personnel
- to appoint a health and safety officer at site, who will have the authority to issue directives for the purpose of maintaining the health and safety of all personnel authorized to enter and or work on the site and to take protective measures to prevent accidents
- to ensure, in collaboration with local health authorities, that medical staff, first aid facilities, sick bay, ambulance services and any other medical services specified are available at all times at the site and at any accommodation
- to ensure suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics

These requirements have been enhanced through the introduction of the ESF into the SPDs(edition dated July 2019). The general FIDIC clause referred to above has been strengthened to reflect the requirements of the ESF. Beyond FIDIC's general requirements discussed above, the Bank's Particular Conditions include a number of relevant requirements on the Contractor, including

- to provide health and safety training for Contractor's Personnel (which include project workers and all personnel that the Contractor uses on site, including staff and other employees of the Contractor and Subcontractors and any other personnel assisting the Contractor in carrying out project activities)
- to put in place workplace processes for Contractor's Personnel to report work situations that are not safe or healthy
- gives Contractor's Personnel the right to report work situations which they believe are not safe or healthy, and to remove themselves from a work situation which they have a reasonable justification to believe presents an imminent and serious danger to their life or health (with no reprisal for reporting or

removing themselves)
- requires measures to be in place to avoid or minimize the spread of diseases including measures to avoid or minimize the transmission of communicable diseases that may be associated with the influx of temporary or permanent contract-related labor
- to provide an easily accessible grievance mechanism to raise workplace concerns

Where the contract form used is FIDIC, the Borrower (as the Employer) will be represented by the Engineer (also referred to in this note as the Supervising Engineer). The Engineer will be authorized to exercise authority specified in or necessarily implied from the construction contract. In such cases, the Engineer (through its staff on site) will be the interface between the PIU and the Contractor. It is important therefore to understand the scope of the Engineer's responsibilities. It is also important to recognize that in the case of infectious diseases such as COVID-19, project management – through the Contractor/subcontractor hierarchy – is only as effective as the weakest link. A thorough review of management procedures/plans as they will be implemented through the entire contractor hierarchy is important. Existing contracts provide the outline of this structure; they form the basis for the Borrower to understand how proposed mitigation measures will be designed and how adaptive management will be implemented, and to start a conversation with the Contractor on measures to address COVID-19 in the project.

WHAT PLANNING SHOULD THE BORROWER BE DOING?

Task teams should work with Borrowers (PIUs) to confirm that projects (i) are taking adequate precautions to prevent or minimize an outbreak of COVID-19, and (ii) have identified what to do in the event of an outbreak. Suggestions on how to do this are set out below:

- The PIU, either directly or through the Supervising Engineer, should request details in writing from the main Contractor of the measures being taken to address the risks. As stated in Section 3, the construction contract should include health and safety requirements, and these can be used as the basis for identification of, and requirements to implement, COVID-19 specific measures. The measures may be presented as a contingency plan, as an extension of the existing project emergency and preparedness plan or as standalone procedures. The measures may be reflected in revisions to the project's health and safety manual. This request should be made in writing (following any relevant procedure set out in the contract between the Borrower and the contractor).
- In making the request, it may be helpful for the PIU to specify the areas that should be covered. This should include the items set out in Section 5 below and take into account current and relevant guidance provided by national authorities, WHO and other organizations. See the list of references in the Annex to this note.
- The PIU should require the Contractor to convene regular meetings with the project health and safety specialists and medical staff (and where appropriate the local health authorities), and to take their advice in designing and implementing the agreed measures.
- Where possible, a senior person should be identified as a focal point to deal with COVID-19 issues. This can be a work supervisor or a health and safety specialist. This person can be responsible for coordinating preparation of the site and making sure that the measures taken are communicated to the workers, those entering the site and the local community. It is also advisable to designate at least one back-up person, in case the focal point becomes ill; that person should be aware of the arrangements that are in place.
- On sites where there are a number of contractors and therefore (in effect) different work forces, the request should emphasize the importance of coordination and communication between the different parties. Where necessary, the PIU should request the main contractor to put in place a protocol for

regular meetings of the different contractors, requiring each to appoint a designated staff member (with back up) to attend such meetings. If meetings cannot be held in person, they should be conducted using whatever IT is available. The effectiveness of mitigation measures will depend on the weakest implementation, and therefore it is important that all contractors and sub-contractors understand the risks and the procedure to be followed.

- The PIU, either directly or through the Supervising Engineer, may provide support to projects in identifying appropriate mitigation measures, particularly where these will involve interface with local services, in particular health and emergency services. In many cases, the PIU can play a valuable role in connecting project representatives with local Government agencies, and helping coordinate a strategic response, which takes into account the availability of resources. To be most effective, projects should consult and coordinate with relevant Government agencies and other projects in the vicinity. • Workers should be encouraged to use the existing project grievance mechanism to report concerns relating to COVID-19, preparations being made by the project to address COVID-19 related issues, how procedures are being implemented, and concerns about the health of their co-workers and other staff.

WHAT SHOULD THE CONTRACTOR COVER?

The Contractor should identify measures to address the COVID-19 situation. What will be possible will depend on the context of the project: the location, existing project resources, availability of supplies, capacity of local emergency/health services, the extent to which the virus already exist in the area. A systematic approach to planning, recognizing the challenges associated with rapidly changing circumstances, will help the project put in place the best measures possible to address the situation. As discussed above, measures to address COVID-19 may be presented in different ways (as a contingency plan, as an extension of the existing project emergency and preparedness plan or as standalone procedures). PIUs and contractors should refer to guidance issued by relevant authorities, both national and international (e.g. WHO), which is regularly updated (see sample References and links provided in the Annex).

Addressing COVID-19 at a project site goes beyond occupational health and safety and is a broader project issue which will require the involvement of different members of a project management team. In many cases, the most effective approach will be to establish procedures to address the issues, and then to ensure that these procedures are implemented systematically. Where appropriate given the project context, a designated team should be established to address COVID-19 issues, including PIU representatives, the Supervising Engineer, management (e.g. the project manager) of the contractor and sub-contractors, security, and medical and OHS professionals. Procedures should be clear and straightforward, improved as necessary, and supervised and monitored by the COVID-19 focal point(s). Procedures should be documented, distributed to all contractors, and discussed at regular meetings to facilitate adaptive management. The issues set out below include a number that represent expected good workplace management but are especially pertinent in preparing the project response to COVID-19.

ASSESSING WORKFORCE CHARACTERISTICS

Many construction sites will have a mix of workers e.g. workers from the local communities; workers from a different part of the country; workers from another country. Workers will be employed under different terms and conditions and be accommodated in different ways. Assessing these different aspects of the workforce will help in identifying appropriate mitigation measures:

The Contractor should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations (e.g. 4 weeks on, 4 weeks off).

- This should include a breakdown of workers who reside at home (i.e. workers from the community),

workers who lodge within the local community and workers in on-site accommodation. Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk.

- Consideration should be given to ways in which to minimize movement in and out of site. This could include lengthening the term of existing contracts, to avoid workers returning home to affected areas, or returning to site from affected areas.
- Workers accommodated on site should be required to minimize contact with people near the site, and in certain cases be prohibited from leaving the site for the duration of their contract, so that contact with local communities is avoided.
- Consideration should be given to requiring workers lodging in the local community to move to site accommodation (subject to availability) where they would be subject to the same restrictions.
- Workers from local communities, who return home daily, weekly or monthly, will be more difficult to manage. They should be subject to health checks at entry to the site (as set out above) and at some point, circumstances may make it necessary to require them to either use accommodation on site or not to come to work.

ENTRY/EXIT TO THE WORK SITE AND CHECKS ON COMMENCEMENT OF WORK

Entry/exit to the work site should be controlled and documented for both workers and other parties, including support staff and suppliers. Possible measures may include:

- Establishing a system for controlling entry/exit to the site, securing the boundaries of the site, and establishing designating entry/exit points (if they do not already exist). Entry/exit to the site should be documented.
- Training security staff on the (enhanced) system that has been put in place for securing the site and controlling entry and exit, the behaviors required of them in enforcing such system and any COVID - 19 specific considerations.
- Training staff who will be monitoring entry to the site, providing them with the resources they need to document entry of workers, conducting temperature checks and recording details of any worker that is denied entry.
- Confirming that workers are fit for work before they enter the site or start work. While procedures should already be in place for this, special attention should be paid to workers with underlying health issues or who may be otherwise at risk. Consideration should be given to demobilization of staff with underlying health issues.
- Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site.
- Providing daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods.
- During the daily briefings, reminding workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell.
- Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days.
- Preventing a sick worker from entering the site, referring them to local health facilities if necessary or requiring them to isolate at home for 14 days.

GENERAL HYGIENE

Requirements on general hygiene should be communicated and monitored, to include:

- Training workers and staff on site on the signs and symptoms of COVID-19, how it is spread, how to protect themselves (including regular handwashing and social distancing) and what to do if they or other people have symptoms (for further information see WHO COVID-19 advice for the public).
- Placing posters and signs around the site, with images and text in local languages.
- Ensuring handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at key places throughout site, including at entrances/exits to work areas; where there is a toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces. Where handwashing facilities do not exist or are not adequate, arrangements should be made to set them up. Alcohol based sanitizer (if available, 60-95% alcohol) can also be used.
- Review worker accommodations and assess them in light of the requirements set out in IFC/EBRD guidance on Workers' Accommodation: processes and standards, which provides valuable guidance as to good practice for accommodation.
- Setting aside part of worker accommodation for precautionary self-quarantine as well as more formal isolation of staff who may be infected (see paragraph (f)).

CLEANING AND WASTE DISPOSAL

Conduct regular and thorough cleaning of all site facilities, including offices, accommodation, canteens, common spaces. Review cleaning protocols for key construction equipment (particularly if it is being operated by different workers). This should include:

- Providing cleaning staff with adequate cleaning equipment, materials and disinfectant. •
- Review general cleaning systems, training cleaning staff on appropriate cleaning procedures and appropriate frequency in high use or high-risk areas.
- Where it is anticipated that cleaners will be required to clean areas that have been or are suspected to have been contaminated with COVID-19, providing them with appropriate PPE: gowns or aprons, gloves, eye protection (masks, goggles or face screens) and boots or closed work shoes. If appropriate PPE is not available, cleaners should be provided with best available alternatives.
- Training cleaners in proper hygiene (including handwashing) prior to, during and after conducting cleaning activities; how to safely use PPE (where required); in waste control (including for used PPE and cleaning materials).
- Any medical waste produced during the care of ill workers should be collected safely in designated containers or bags and treated and disposed of following relevant requirements (e.g., national, WHO). If open burning and incineration of medical wastes is necessary, this should be for as limited a duration as possible. Waste should be reduced and segregated, so that only the smallest amount of waste is incinerated (for further information see WHO interim guidance on water, sanitation, and waste management for COVID-19).

ADJUSTING WORK PRACTICES

- Consider changes to work processes and timings to reduce or minimize contact between workers, recognizing that this is likely to impact the project schedule. Such measures could include:
- Decreasing the size of work teams.
- Limiting the number of workers on site at any one time.
- Changing to a 24-hour work rotation.
- Adapting or redesigning work processes for specific work activities and tasks to enable social distancing, and training workers on these processes.

- Continuing with the usual safety trainings, adding COVID-19 specific considerations. Training should include proper use of normal PPE. While as of the date of this note, general advice is that construction workers do not require COVID-19 specific PPE, this should be kept under review (for further information see WHO interim guidance on rational use of personal protective equipment (PPE) for COVID-19).
- Reviewing work methods to reduce use of construction PPE, in case supplies become scarce or the PPE is needed for medical workers or cleaners. This could include, e.g. trying to reduce the need for dust masks by checking that water sprinkling systems are in good working order and are maintained or reducing the speed limit for haul trucks.
- Arranging (where possible) for work breaks to be taken in outdoor areas within the site.
- Consider changing canteen layouts and phasing mealtimes to allow for social distancing and phasing access to and/or temporarily restricting access to leisure facilities that may exist on site, including gyms.
- At some point, it may be necessary to review the overall project schedule, to assess the extent to which it needs to be adjusted (or work stopped completely) to reflect prudent work practices, potential exposure of both workers and the community and availability of supplies, taking into account Government advice and instructions.

PROJECT MEDICAL SERVICES

Consider whether existing project medical services are adequate, taking into account existing infrastructure (size of clinic/medical post, number of beds, isolation facilities), medical staff, equipment and supplies, procedures and training. Where these are not adequate, consider upgrading services where possible, including:

- Expanding medical infrastructure and preparing areas where patients can be isolated. Guidance on setting up isolation facilities is set out in WHO interim guidance on considerations for quarantine of individuals in the context of containment for COVID-19). Isolation facilities should be located away from worker accommodation and ongoing work activities. Where possible, workers should be provided with a single well-ventilated room (open windows and door). Where this is not possible, isolation facilities should allow at least 1 meter between workers in the same room, separating workers with curtains, if possible. Sick workers should limit their movements, avoiding common areas and facilities and not be allowed visitors until they have been clear of symptoms for 14 days. If they need to use common areas and facilities (e.g. kitchens or canteens), they should only do so when unaffected workers are not present, and the area/facilities should be cleaned prior to and after such use.
- Training medical staff, which should include current WHO advice on COVID-19 and recommendations on the specifics of COVID-19. Where COVID-19 infection is suspected, medical providers on site should follow WHO interim guidance on infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected.
- Training medical staff in testing, if testing is available.
- Assessing the current stock of equipment, supplies and medicines on site, and obtaining additional stock, where required and possible. This could include medical PPE, such as gowns, aprons, medical masks, gloves, and eye protection. Refer to WHO guidance as to what is advised (for further information see WHO interim guidance on rational use of personal protective equipment (PPE) for COVID-19).
- If PPE items are unavailable due to world-wide shortages, medical staff on the project should agree on alternatives and try to procure them. Alternatives that may commonly be found on constructions sites include dust masks, construction gloves and eye goggles. While these items are not recommended, they should be used as a last resort if no medical PPE is available.
- Ventilators will not normally be available on work sites, and in any event, intubation should only be conducted by experienced medical staff. If a worker is extremely ill and unable to breathe properly on his or her own, they should be referred immediately to the local hospital (see (g) below).

- Review existing methods for dealing with medical waste, including systems for storage and disposal (for further information see WHO interim guidance on water, sanitation and waste management for COVID-19, and WHO guidance on safe management of wastes from health-care activities).

LOCAL MEDICAL AND OTHER SERVICES

Given the limited scope of project medical services, the project may need to refer sick workers to local medical services. Preparation for this includes:

- Obtaining information as to the resources and capacity of local medical services (e.g. number of beds, availability of trained staff and essential supplies).
- Conducting preliminary discussions with specific medical facilities, to agree what should be done in the event of ill workers needing to be referred.
- Considering ways in which the project may be able to support local medical services in preparing for members of the community becoming ill, recognizing that the elderly or those with pre-existing medical conditions require additional support to access appropriate treatment if they become ill.
- Clarifying the way in which an ill worker will be transported to the medical facility and checking availability of such transportation.
- Establishing an agreed protocol for communications with local emergency/medical services.
- Agreeing with the local medical services/specific medical facilities the scope of services to be provided, the procedure for in-take of patients and (where relevant) any costs or payments that may be involved.
- A procedure should also be prepared so that project management knows what to do in the unfortunate event that a worker ill with COVID-19 dies. While normal project procedures will continue to apply, COVID-19 may raise other issues because of the infectious nature of the disease. The project should liaise with the relevant local authorities to coordinate what should be done, including any reporting or other requirements under national law.

INSTANCES OR SPREAD OF THE VIRUS

WHO provides detailed advice on what should be done to treat a person who becomes sick or displays symptoms that could be associated with the COVID-19 virus (for further information see WHO interim guidance on infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected). The project should set out risk-based procedures to be followed, with differentiated approaches based on case severity (mild, moderate, severe, critical) and risk factors (such as age, hypertension, diabetes) (for further information see WHO interim guidance on operational considerations for case management of COVID-19 in health facility and community). These may include the following:

- If a worker has symptoms of COVID-19 (e.g. fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on site. • If testing is available on site, the worker should be tested on site. If a test is not available at site, the worker should be transported to the local health facilities to be tested (if testing is available).
- If the test is positive for COVID-19 or no testing is available, the worker should continue to be isolated. This will either be at the work site or at home. If at home, the worker should be transported to their home in transportation provided by the project.
- Extensive cleaning procedures with high-alcohol content disinfectant should be undertaken in the area where the worker was present, prior to any further work being undertaken in that area. Tools used by the worker should be cleaned using disinfectant and PPE disposed of.
- Co-workers (i.e. workers with whom the sick worker was in close contact) should be required to stop work, and be required to quarantine themselves for 14 days, even if they have no symptoms.

- Family and other close contacts of the worker should be required to quarantine themselves for 14 days, even if they have no symptoms.
- If a case of COVID-19 is confirmed in a worker on the site, visitors should be restricted from entering the site and worker groups should be isolated from each other as much as possible.
- If workers live at home and has a family member who has a confirmed or suspected case of COVID19, the worker should quarantine themselves and not be allowed on the project site for 14 days, even if they have no symptoms.
- Workers should continue to be paid throughout periods of illness, isolation, or quarantine, or if they are required to stop work, in accordance with national law.
- Medical care (whether on site or in a local hospital or clinic) required by a worker should be paid for by the employer.

CONTINUITY OF SUPPLIES AND PROJECT ACTIVITIES

Where COVID-19 occurs, either in the project site or the community, access to the project site may be restricted, and movement of supplies may be affected.

- Identify back-up individuals, in case key people within the project management team (PIU, Supervising Engineer, Contractor, sub-contractors) become ill, and communicate who these are so that people are aware of the arrangements that have been put in place.
- Document procedures, so that people know what they are, and are not reliant on one person's knowledge.
- Understand the supply chain for necessary supplies of energy, water, food, medical supplies and cleaning equipment, consider how it could be impacted, and what alternatives are available. Early pro-active review of international, regional and national supply chains, especially for those supplies that are critical for the project, is important (e.g. fuel, food, medical, cleaning and other essential supplies). Planning for a 1-2-month interruption of critical goods may be appropriate for projects in more remote areas.
- Place orders for/procure critical supplies. If not available, consider alternatives (where feasible) Consider existing security arrangements, and whether these will be adequate in the event of interruption to normal project operations
- Consider at what point it may become necessary for the project to significantly reduce activities or to stop work completely, and what should be done to prepare for this, and to re-start work when it becomes possible or feasible.

TRAINING AND COMMUNICATION WITH WORKERS

Workers need to be provided with regular opportunities to understand their situation, and how they can best protect themselves, their families and the community. They should be made aware of the procedures that have been put in place by the project, and their own responsibilities in implementing them.

- It is important to be aware that in communities close to the site and amongst workers without access to project management, social media is likely to be a major source of information. This raises the importance of regular information and engagement with workers (e.g. through training, town halls, tool boxes) that emphasizes what management is doing to deal with the risks of COVID-19. Allaying fear is an important aspect of work force peace of mind and business continuity. Workers should be given an opportunity to ask questions, express their concerns, and make suggestions.
- Training of workers should be conducted regularly, as discussed in the sections above, providing workers with a clear understanding of how they are expected to behave and carry out their work duties.

- Training should address issues of discrimination or prejudice if a worker becomes ill and provide an understanding of the trajectory of the virus, where workers return to work.
- Training should cover all issues that would normally be required on the work site, including use of safety procedures, use of construction PPE, occupational health and safety issues, and code of conduct, taking into account that work practices may have been adjusted.
- Communications should be clear, based on fact and designed to be easily understood by workers, for example by displaying posters on handwashing and social distancing, and what to do if a worker displays symptoms.

COMMUNICATION AND CONTACT WITH THE COMMUNITY

Relations with the community should be carefully managed, with a focus on measures that are being implemented to safeguard both workers and the community. The community may be concerned about the presence of non-local workers, or the risks posed to the community by local workers presence on the project site. The project should set out risk-based procedures to be followed , which may reflect WHO guidance (for further information see WHO Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response). The following good practice should be considered:

- Communications should be clear, regular, based on fact and designed to be easily understood by community members.
- Communications should utilize available means. In most cases, face-to-face meetings with the community or community representatives will not be possible. Other forms of communication should be used; posters, pamphlets, radio, text message, electronic meetings. The means used should take into account the ability of different members of the community to access them, to make sure that communication reaches these groups.
- The community should be made aware of procedures put in place at site to address issues related to COVID-19. This should include all measures being implemented to limit or prohibit contact between workers and the community. These need to be communicated clearly, as some measures will have financial implications for the community (e.g. if workers are paying for lodging or using local facilities). The community should be made aware of the procedure for entry/exit to the site, the training being given to workers and the procedure that will be followed by the project if a worker becomes sick.
- If project representatives, contractors or workers are interacting with the community, they should practice social distancing and follow other COVID-19 guidance issued by relevant authorities, both national and international (e.g. WHO).

EMERGENCY POWERS AND LEGISLATION

Many Borrowers are enacting emergency legislation. The scope of such legislation, and the way it interacts with other legal requirements, will vary from country to country. Such legislation can cover a range of issues, for example:

- Declaring a public health emergency
- Authorizing the use of police or military in certain activities (e.g. enforcing curfews or restrictions on movement)
- Ordering certain categories of employees to work longer hours, not to take holiday or not to leave their job (e.g. health workers)
- Ordering non-essential workers to stay at home, for reduced pay or compulsory holiday Except in exceptional circumstances (after referral to the World Bank's Operations Environmental and Social Review Committee (OESRC)), projects will need to follow emergency legislation to the extent that these

are mandatory or advisable. It is important that the Borrower understands how mandatory requirements of the legislation will impact the project. Teams should require Borrowers (and in turn, Borrowers should request Contractors) to consider how the emergency legislation will impact the obligations of the Borrower set out in the legal agreement and the obligations set out in the construction contracts. Where the legislation requires a material departure from existing contractual obligations, this should be documented, setting out the relevant provisions.

ANNEX Advice for the public

- WHO advice for the public, including on social distancing, respiratory hygiene, self-quarantine, and seeking medical advice, can be consulted on this WHO website: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

Technical guidance

- Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected, issued on March 19, 2020
- Recommendations to Member States to Improve Hygiene Practices, issued on April 1, 2020
- Severe Acute Respiratory Infections Treatment Center, issued on March 28, 2020
- Infection prevention and control at health care facilities (with a focus on settings with limited resources), issued in 2018
- Laboratory biosafety guidance related to coronavirus disease 2019 (COVID-19), issued on March 18, 2020
- Laboratory Biosafety Manual, 3rd edition, issued in 2014
- Laboratory testing for COVID-19, including specimen collection and shipment, issued on March 19, 2020
- Prioritized Laboratory Testing Strategy According to 4Cs Transmission Scenarios, issued on March 21, 2020
- Infection Prevention and Control for the safe management of a dead body in the context of COVID-19, issued on March 24, 2020
- Key considerations for repatriation and quarantine of travelers in relation to the outbreak COVID-19, issued on February 11, 2020
- Preparedness, prevention and control of COVID-19 for refugees and migrants in non-camp settings, issued on April 17, 2020
- Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health, issued on March 18, 2020
- Oxygen sources and distribution for COVID-19 treatment centers, issued on April 4, 2020
- Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response, issued on March 16, 2020
- Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19), issued on March 19, 2020
- Operational considerations for case management of COVID-19 in health facility and community, issued on March 19, 2020
- Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19), issued on February 27, 2020
- Getting your workplace ready for COVID-19, issued on March 19, 2020
- Water, sanitation, hygiene and waste management for COVID-19, issued on March 19, 2020
- Safe management of wastes from health-care activities, issued in 2014
- Advice on the use of masks in the community, during home care and in healthcare settings in the context of the novel coronavirus (COVID-19) outbreak, issued on March 19, 2020
- Disability Considerations during the COVID-19 outbreak, issued on March 26, 2020

WORLD BANK GROUP GUIDANCE

- Technical Note: Public Consultations and Stakeholder Engagement in WB-supported operations when there are constraints on conducting public meetings, issued on March 20, 2020
- Technical Note: Use of Military Forces to Assist in COVID-19 Operations, issued on March 25, 2020
- ESF/Safeguards Interim Note: COVID-19 Considerations in Construction/Civil Works Projects, issued on April 7, 2020
- Technical Note on SEA/H for HNP COVID Response Operations, issued in March 2020
- Interim Advice for IFC Clients on Preventing and Managing Health Risks of COVID-19 in the Workplace, issued on April 6, 2020
- Interim Advice for IFC Clients on Supporting Workers in the Context of COVID-19, issued on April 6, 2020
- IFC Tip Sheet for Company Leadership on Crisis Response: Facing the COVID-19 Pandemic, issued on April 6, 2020
- WBG EHS Guidelines for Healthcare Facilities, issued on April 30, 2007

ILO GUIDANCE

- ILO Standards and COVID-19 FAQ, issued on March 23, 2020 (provides a compilation of answers to most frequently asked questions related to international labor standards and COVID-19)

MFI GUIDANCE

- ADB Managing Infectious Medical Waste during the COVID-19 Pandemic
- IDB Invest Guidance for Infrastructure Projects on COVID-19: A Rapid Risk Profile and Decision Framework
- KfW DEG COVID-19 Guidance for employers, issued on March 31, 2020
- CDC Group COVID-19 Guidance for Employers, issued on March 23, 2020

Annex- 8. REQUIREMENTS AND MEASURES WHEN HANDLING ASBESTOS

Health and Safety Measures in Working with Asbestos Regulation

Article 7 Dismantling, demolition, repair, maintenance and removal tasks

Employers need to take measures before demolition, repair, maintenance and removal work, regarding asbestos materials. Moreover, they should inspect the location of amenities, buildings, ships and similar structures and systems. Law No. 25406 dated from 18/3/2004 and published in the Official Gazette concerning the demolition is applicable to the relevant provisions concerning the excavation soil-, construction- and demolition waste control. This regulation applies if the employer suspects the existence of asbestos or materials containing asbestos at a construction or environment in which it operates. (2) The employer shall ensure that activities such as dismantling, demolition, repair, maintenance and removal of asbestos-containing materials are performed under the guidance of experts and by the same workers as referred to in Article 8. (3) Beside the measures from Article 11, the employer should take the following measures for the protection of workers in case that the airborne asbestos concentrations exceed the limits as described in Article 11 of this law; a) The determination of the respiratory and other personal protective equipment, the determination of the protection of workers and working hours. b) The warranty of warning signs in places which exceeding the limit values. c) Prevention of the spreading of the dust from asbestos or asbestos-containing materials at facilities of the work area. (4) Before starting the work as specified in this Article, measures need to be taken in respect of informing workers or their representatives and ask their views.

Asbestos removing and cleaning should be carried out under the supervision[16] of at least one Asbestos Removal Specialist, together with numbers of Asbestos Removal Employee that will be determined depending on the time and need. Seasonal conditions should be taken into consideration when planning the removal.

Actions to be taken and Legal Requirements Before Starting Removal

1. Determination of asbestos parts of buildings
2. Determining the type of asbestos
3. Preparation of action plan and organizational structure
4. Assigning of the Occupational Safety Specialist (construction sites are classified as very dangerous class according to the nace code)
5. Preparation of a risk assessment
6. Preparation of asbestos risk analysis
7. Photographing the current situation of the construction site
8. Determining the required number of workers with Asbestos Removal Certificate and their duties
9. Assigning of Asbestos Removal Specialist
10. Social Security Institution (SSI) entries, medical checks (including working at height and respiratory function tests), completion of occupational safety training and ensuring that these trainings are documented or checking the relevant documents.
11. Asbestos Removal Expert will prepare and review the documents and files.
12. Notifying the Provincial Directorate of Turkish Employment Agency and Ministry of Family, Labor and Social Services

Site Preparation Prior to Removal of Asbestos

A – Preparation of Sections where Asbestos Removals Perform

[16] Health and Safety Measures in Working with Asbestos Regulation, Official Gazette date: January 259, 2301385, No: 2

If there is a place where quarantine is needed, this area must be sealed. Establishment of purification cabinets: Purification cabinets should contain showers. Asbestos removal workers must be cleaned at every break.

Security signs and warning notices of the zone should be secured, isolated, only authorized workers should be allowed to enter the area.

B – Required Materials and Personal Protected Equipment

1. Sufficient number of sealed overalls (Tips 5-6)
2. Sufficient number of dust masks, FFP3 or full-face masks for personnel
3. Sufficient number of impermeable gloves for personnel
4. Special tapes
5. Special sealed foils and / or asbestos bags-waste bags (big-bags)
6. Filtered industrial dust vacuum cleaner
7. Chemical fluid and application device (special fiber bonding fluid)
8. Suitable safety shoes, hard hat and / or helmet
9. Seat belts
10. Special PPE's and equipment suitable for the environment/performed activity.
11. Security tapes and security plates
12. First aid equipment

Removal of Asbestos Containing Materials by Encapsulation and Separation

Separating a termites and/or contaminated materials properly without generating dust and breaking the parts as much as possible. In addition, before starting to cut, the chemical adhesive liquid must be sprayed on the relevant area in order to trap the dust. It is ensured that the cut and removal parts are placed in special sealed foils and/or asbestos sacks by squeezing the adhesive liquid (big-bag), packaged and labeled, and then placed in the intermediate storage area designated by the contractors before disposal.

Required Actions Following the Removal

1. When required, cleaning all areas with filtered industrial type cleaning machine indoors, moistening if not necessary,
2. Wet cleaning with chemicals and / or non-chemicals material
3. Spraying all surfaces with a special liquid material containing fiber adhesive

Regulation on Waste Management

Renovation, demolishing related asbestos waste would be resulted from building wastes containing asbestos. Asbestos containing wastes will be disposed in line with the Regulation on Waste Management

Annex 4. Waste List of Regulation on Waste Management

Waste Code		Waste Code Definition	Remark
	17 06	Insulation and construction materials containing asbestos	
	17 06 01	Insulating materials containing asbestos	M*
	17 06 05	construction materials containing asbestos	M

* M mark: The sign in the "Remark" column in line with the six-digit waste code indicates that the waste is a possible hazardous waste. In order to determine whether the wastes marked in this way are dangerous or not, a study is carried out to determine the hazardous properties of the waste stipulated in Article 11 of Waste Management Regulation.

Article 11 of Waste Management Regulation[17]

(1) The list of wastes within the scope of this Regulation is given in Annex-4. Wastes marked with (*) in the waste list are hazardous waste. Hazardous wastes are wastes having one or more of the features listed in Annex-3 / A. Wastes marked (A) in the waste list are classified as hazardous waste regardless of the hazardous waste concentration included in Annex-3 / B. The hazardous properties of wastes marked with (M) must be determined. In studies to be carried out for this purpose, evaluations regarding H3[18]-H8 and H10 and H11, among the features listed in Annex-3 / A, are made based on the concentration values in Annex-3 / B.

(2) Wastes in the waste list are defined with six-digit waste codes and the relevant two-digit and four-digit section codes.

(3) It is obligatory to use the six-digit waste code corresponding to the definition of the waste in full in all studies related to waste.

(4) The waste list and guidelines for determining the hazardous properties of wastes are prepared by the Ministry.

(5) Material safety data sheet (MSDS), process inputs and information, analysis studies based on the guidelines published by the Ministry or the concentration values in Annex-3 / B are used in the studies to determine the hazardous properties of the wastes. If deemed necessary by the Ministry, analysis is made by the waste producer or waste owner based on the concentration values in Annex-3 / B. Analysis studies are carried out by laboratories that have been qualified for Annex-3 / B from the Ministry.

(6) The results of the analysis studies conducted to determine the hazardous properties of wastes are valid for 5 years if there is no change in the production process, raw materials or additives. However, if the Ministry deems necessary, the analysis work is renewed. In case of a change in the production process, raw materials or additives, the analysis is renewed within 3 months after the change.

Legal Disposal Requirements

According to the Regulation on Waste Management, the implementation of the disposal process should be controlled. The materials containing asbestos will be labeled and stacked appropriately. In the online programs of the Ministry of Environment and Urbanization, using the waste management application over the Integrated Environmental Information System, it will be ensured that hazardous materials containing asbestos are sent to licensed disposal facilities. .

Disposal of Asbestos Wastes

- Asbestos wastes must be wrapped and packed without breaking.
- Asbestos wastes should be labeled after being packed without breaking.
- Asbestos wastes should be sent to the licensed disposal facility following the completion of online registration
- Asbestos wastes should be sent to the disposal facility by licensed vehicles.

[17] https://cygm.csb.gov.tr/yonetmelikler-i-440

[18] **Properties of waste which render them hazardous**
H1 Explosive
H2 Oxidizing
H3-A Highly flammable
H3-B Flammable
H4 Irritant
H5 Harmful
H6 Toxic
H7 Carcinogenic
H8 Corrosive
H9 Infectious
H10 Teratogenic
H11 Mutagenic

- Asbestos wastes cannot be dumped into areas designated for excavation materials or dumping sites.
- Asbestos wastes cannot be dumped along streams.
- Asbestos waste cannot be burned.
- Asbestos wastes cannot be stored (disposal) in any area except in 1st class storage facilities (see related regulation on temporary storage).

Annex- 9. Waste Management Plan

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1. Purpose and Scope

The SREEPB Project has been initiated by the Directorate General of Construction Works (GDCW) of the Ministry of Environment and Urbanization (MoEU), in order to enhance the seismic safety and resilience, and to improve the energy efficiency performance, of central government buildings in Turkey. The project will be implemented in the provinces of İstanbul, İzmir, Tekirdağ, Koaceli, Kahramanmaraş, Tunceli, Ardahan, Hatay, Uşak, Burdur, Manisa, Muğla, Bingöl.

The Waste Management Plan is developed for the Project to set out the primary applicable requirements associated with waste management in compliance with related national legislation and World Bank Environmental and Social Framework and its associated Environmental and Social Standards (ESSs). The plan will be applied during construction phase of the Project.

Throughout the Project life, different types of wastes and materials will be generated from different sources and activities. The purpose of this plan is to guide and obtain the acceptable collection, segregation, storage, handling, transportation and disposal of non-hazardous and hazardous wastes generated from the Project activities in a way that minimizes the impacts on human health and environment, including minimization of loss of valuable reusable/recyclable materials.

The Plan is in compliance with national legislation, requirements of Resource Efficiency, Pollution Prevention and Management ESS3 and other applicable Good International Industry Practices (GIIPs). The plan will be applied systematically during the lifetime of the Project, in conjunction with the following related management plans and programs:

- Environmental and Social Management Plan (ESMP)
- Environmental and Social Commitment Plan (ESCP)
- Labor Management Procedure (LMP)
- Community Safety and Traffic Management Plan
- Method statement for environmental aspects
- Pollution prevention plan
- Occupational Health and Safety Plan; and
- Stakeholder Engagement Plan (incl. grievance mechanism);

This Plan is a living document, and the responsibilities, procedures and compliance actions should be updated as appropriate.

2. Legislative Requirements and Standards

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.

1.1.1. 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 and

- Urbanization 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).

1.1.2. 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.

The aim of this regulation is to set the principles and procedures to minimize excavation, construction and demolition waste at the source of generation, as well as to: collecting, temporarily storing, transferring, recycling, reusing and disposing waste, in an environmentally sound manner.

In accordance with 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 to 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 having precautions in order to

minimize noise impacts, visual impacts and dust emissions during removal of excavation material. The operation Area must also be enclosed. In addition, planning should be done in a way that the amount of excavated soil is equalto the filling volume. Excavated soils must be utilized within the operation Area to the extent possible.

1.1.3.Packaging Waste Control Regulation (PWCR)

PWCR was published in the Official Gazette No. 28035 dated August 24, 2011. The aim of the regulation is 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 generation of package waste by means of reuse, recycling and recovery methods.

PWCR states that the packaging wastes should be collected and stored separately from other wastes at source in order 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 is obliged to deliver the packaging wastes to the responsible municipalities or their contracted and licensed collection/separation entities.

1.1.4.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 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 engagedin 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 in excess of 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 w here batteries and accumulators will be stored,

1.1.5.Waste Oils Control Regulation (WOCR)

WOCR was published in the Official Gazette No. 26952 dated June 30, 2008. The purpose of the

WOCR 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 environment and human health;
- To set up necessary technical and administrative standards in management of waste oils;
- To determine the required principles and programs in order to establish temporarily storage, handling and disposal facilities and
- To manage these facilities in an environmental friendly manner.

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

Waste oil producers shall comply with the provisions of Hazardous Waste Control Regulation for disposal. All records including waste oil declaration forms and analyses reports are required to be kept for at least five years. In order to transport waste oils, the regulations that will be determined by Ministry of Environment and Urbanization shall be complied with.

Waste oil is required to be collected in red colored tanks/containers with a label of "Atık Yağ" ("Waste Oil") on it. The containers are placed in storage with provisions for protection from rain, as well as an impermeable ground (a thickness of at least 25 cm and covered by epoxy, geo membrane and similar insulation materials).

1.1.6. Regulation on Control of Waste Electrical and Electronic Equipment

Published in the Official Gazette No. 28300 dated May 22, 2008, one of the main purposes of the Regulation is to identify the methods and targets regarding minimization of electrical and electronic waste generation through reuse, recycling and recovery.

1.1.7. Communiqué on Recovery of Some Non-Hazardous Wastes

The Communiqué on Recovery of Some Non-Hazardous Wastes was published in Official Gazette No. 27967 dated June 17, 2011. According to this communiqué, the producers of the non-hazardous waste are obliged to minimize its generation, as well as preparing and implementing a waste management plan related to the recovery of these wastes.

Waste is required to be stored in leak proof (or similar) containers in an area of impermeable ground and roof. Non-hazardous wastes can be stored temporarily on site for one year until recovery. The producers are also obliged to send their non-hazardous waste to licensed collection and separation or licensed recovery facilities. In addition, it is obligatory to prepare and submit a three-year waste management plan to the Provincial Environment and Urbanization Directorate.

Furthermore, it is mandatory to fill the non-hazardous waste declaration form every year with the information of previous year and submit these forms digitally to the Ministry. It is also stated that the copy of the forms should be kept for 5 years.

3. Requirements of World Bank ESF

3.1. 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, and 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[19] prevention and management[20] 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 minimizing pollution from project activities.
- To avoid or minimize project-*related* emissions of short- and long-lived climate pollutants.3
- To avoid or minimize generation of hazardous and nonhazardous waste.
- To minimize and manage the risks and impacts associated with pesticide use.

3.2. 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 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).

In an effort to harmonize Turkish environmental protection standards with EU's Waste Framework Directive (2008/98/EC) and the European Commission Decision establishing a list of waste (2000/532/EC), the Turkish MoEU adopted a new regulation on waste management that will significantly affect companies that produce waste in Turkey. 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 with the European Waste Codes.

[19] 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.
[20] 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.

4. 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 Table1.

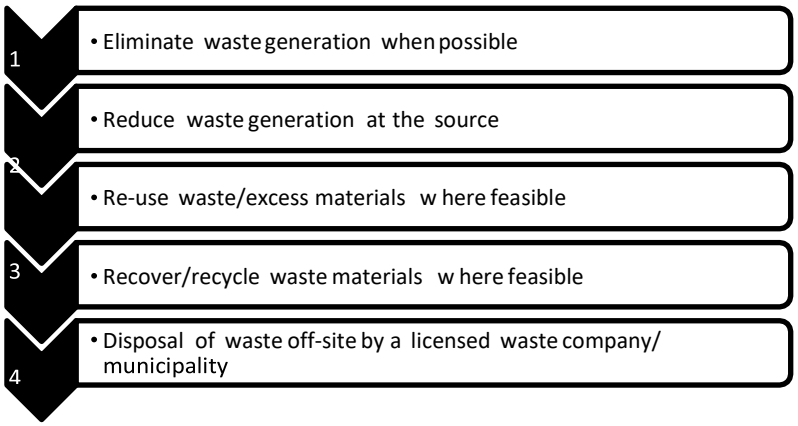
Table 1 Roles and Responsibilities

Roles	Responsibilities
Project Implementation Unit (PIU)	• Ensure adequate resources are provided for implementation of this Plan. • Ensure the the specific provisions of the plan is a part of all sub-project specific ESMPs.
Supervision Consultant	• As required, review and update the Plan • Ensure technical support is provided to Contractors for implementation of the Plan. • Ensure related trainings are provided by the contractors, through review of training records and related training documents. • Oversee contractors' HSE compliance with Project requirements through contractor monitoring and reports.
Construction Contractors	• Ensure this plan is implemented in line with Project standards • Main responsibility for ensuring the implementation of the Plan (including by the Sub-Contractors if any) and reporting of non-compliances and implementation performance of the Plan to the supervision consultant. • As required (e.g. in case incompliances are identified, a change in applicable legislation occurs, etc.), participate in development of corrective and/or enhancement actions. • Provide related trainings. • Conduct internal audits and daily inspections and record identified incompliances. • 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 monthly report to be submitted to PIU.
All personnel	• Participate in trainings required for waste management. • Ensure self-competency in terms of implementation of this plan.

5. Waste Management

5.1. Waste Management Approach

The Waste Framework Directive (Directive 2008/98/EC) provides a waste hierarchy, which lays down priorities for best overall environmental option in applicable waste legislation and policy. Within this scope, the EU waste hierarchy will also be the hierarchal approach of the Project. Within this scope, management of wastes will be based on the following, in the 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.
- Wastes to be sent to licensed recycling/recovery firms will be segregated by type.
- Effort will be made to minimize the quantity of hazardous materials used.
- Personnel that handles hazardous materials and wastes, will be trained for proper handling and management.
- Spills of hazardous materials will be prevented through careful and sensible management of the materials.
- 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, theywill 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 on-site.

5.2. Classification of Wastes

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

5.2.1. Non-Hazardous Wastes

Typical non-hazardous wastes are given below;

- Domestic waste,
- Recyclable wastes (e.g. paper, glass, metals, wooden waste, trees, tin cans, textile, etc.),
- Packaging waste,
- Waste tires, and
- Excavation waste.

5.2.2. Hazardous Wastes

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

- Waste batteries and accumulators,
- Waste vegetable oil,
- Medical waste,
- Waste oil (from maintenance of equipment and vehicles, transformers, etc.),
- Waste paint,
- Other hazardous waste related to operation and maintenance (O&M) activities , and
- Materials that came into contact with hazardous materials (including pesticide containers).

5.3. Implementation

5.3.1. Waste Collection, Storage, Transportation and Disposal

In line with the legal requirements, an industrial (hazardous and non-hazardous) waste management plan will be prepared and submitted to the Provincial Directorate of Environment and Urbanization. Also, it is mandatory to fill the waste declaration form every year in March with the information of previous year and submit these forms digitally to the Ministry of Environment and Urbanization.

5.3.2. Collection, Segregation and Storage

Wastes will be segregated and temporarily stored in designated secured storage areas separately defined for hazardous and non-hazardous wastes. Transport and ultimate disposal is covered in Section 4.3.1.2.

Non-Hazardous Wastes

Management of non-hazardous wastes will be as follows:

- Domestic wastes will be collected in special trash bins and temporarily stored onsite in compliance with Regulation on Waste Management.
- Recyclable wastes will be separated and stored temporarily onsite in reserved areas.
- Packaging wastes will be collected separately and temporarily stored onsite in reserved areas in compliance with Packaging Waste Control Regulation.
- Suitable waste containers will be provided at the places of waste generation to facilitate safe and environmentally sound temporary storage. All containers will be clearly marked according to contents.

Hazardous Wastes

Management of hazardous wastes will be as follows:

- In accordance with international standards and international common practice, hazardous wastes will be stored in containers that are non-damaged, leak-proof, safe and appropriate. In line with related legislation, a dedicated area with concrete floor will be used for storage.
- All waste containers that are being handled will have clear identification and accurate description of the type of waste. This will provide information to site and external personnel for safe handling and transfer of waste. Any unidentified wastes will be considered as hazardous waste. Waste labels will include information such as waste classification/category, volume of waste, MSDS and required PPEs. Any old labelling on the containers will be removed or covered to avoid confusion.
- The hazardous waste containers will be checked regularly, to determine whether they are damaged, or any spillage has occurred.
- Hazardous waste containers will be kept closed and wastes will be stored in a way that they will not have chemical reactions.
- Vehicles and construction machinery will be used during the land preparation, construction and closure phases of the Project. Maintenance (e.g., oil change, battery change, etc.) of machinery and equipment is planned to be performed outside of the Project Area, at qualified service providers. In case it is inevitable to perform oil change, battery change, tire change, etc. on site, reserved areas for this work (with appropriate drainage) will be used. An impermeable cover will be laid under vehicles to prevent soil contamination and this activity will be conducted away from the water resources. When any oil/fuel/lubricant spill or leakage occurs at site, the contamination will be controlled by using absorbents and the contaminated soil (if any) will be stripped to the adequate depth and stored also as hazardous waste.
- Absorbent material will be kept in all the vehicles used for transportation against any leakage or spill. Information will be given to workers on the use and disposal of materials. Filters or materials saturated with petroleum products will be drained into an appropriate container to remove any free product prior to disposal.
- Waste oils will be temporarily stored, handled, and disposed in separate containers, according to the categories referred to in the Waste Oil Control Regulation. Waste oil will be collected inside the containers placed on an impermeable surface. Different containers will be used for waste oils of different categories. Waste oil temporary storage containers will have “Waste Oil” sign on.
- Waste vegetable oils will be collected in special containers temporarily.
- Mercury containing light-bulbs
- Discharge of the waste oils to receiving environments or lavatories/sinks will not be allowed.
- Waste batteries and accumulators will be collected and stored separately in compliance with Waste Batteries and Accumulators Control Regulation.
- Project vehicle maintenance will be conducted off -site. However, in case tires of vehicles and the construction machines need to be changed, the changed tires will be kept in special reserved places in line with Waste Tires Control Regulation
- Medical wastes will be collected separately from other wastes in compliance with Medical Waste Control Regulation.
- The Project activities do not require use of explosives. However, if required, waste explosives will be stored in their original type of container but marked as explosive waste and will be transported by licensed firms.

Excavation, Construction and Demolition Wastes

The soil and rock material excavated during the land preparation and construction phase will be reused on-site to the extent possible. For management of the excess excavated material, as well as other construction and demolition wastes to be generated, the following practices will be implemented:

- Under no circumstances, excavation, construction and demolition wastes will be disposed on site.
- Only small branches, leaves, etc. (the portion of the cut trees and bushes that is not collected by the related forestry authority) will be left on site, since this material will contribute to enhancement of local flora growth through fertilization of the soil.
- Areas used for temporary storage of excavation waste will be restored to original conditions as soon as earth works/construction activities at each corresponding area finalized.
- Topsoil will be stripped separately from excavation material.

5.3.3.Transportation and Disposal

Non-Hazardous Waste

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

- A protocol will be signed with the related municipality for transfer of domestic wastes to the sanitary landfill.
- Agreements will be signed with licensed firms for transport of segregated recyclable and packaging wastes.
- The portion of excavation waste that cannot be reused on-site will be transported to excavation, construction and demolition disposal areas approved by respective municipality. This must be in compliance with the Excavation, Construction and Demolition Waste Control Regulation.
- Agreements of the Company with licensed waste facilities will be annexed to this MP.

Hazardous Wastes

The following management controls will be in place for transport and reuse, recovery, recycling and disposal of hazardous wastes:

- Hazardous wastes will be transported off site when the storage on site are nears maximum storage capacity levels. Hazardous waste will be securely packed and labelled prior to removal from site to ensure the waste can be transported safely to the approved disposal site without risk to those handling the waste or to the environment.
- Separately collected waste batteries and accumulators will be delivered to the collection points established by enterprises engaged in the recovery, distribution and sales of battery products; or by municipalities.
- Waste tires will be delivered to the licensed transportation, recycling or reuse (as fuel) companies.
- Medical wastes will be sent to a nearby healthcare facility or a medical waste disposal firm, under supervision of the workplace doctor.
- Waste oils will be transported by licensed transporters to the licensed processing and disposal facilities. National Transportation Form will be filled prior to transportation and waste oil declaration form will be submitted to relevant authorities annually.
- Waste vegetable oils collected in special containers will be sent to licensed companies for reuse/ recovery.
- Licensed disposal facilities will be used for transfer and disposal of other hazardous wastes.
- Agreements of the Company with licensed waste facilities will be annexed to this MP.

6. Monitoring and Reporting

The waste types, amount collected of each type and waste classifications, will be recorded on a monthly basis. Records for generated waste from time of generation to final destination will be maintained. A sample waste log form for this purpose is provided in Annex 1.

Annual waste declaration forms (online web-based system of the Ministry of Environment and Urbanization, http://online.cevre.gov.tr) and National Waste Transport Forms (template is provided in Annex 9-A of the Hazardous Waste Control Regulation which is cancelled in April 02, 2016.) will be kept for 5 years onsite.

Daily inspections regarding on-site management of wastes will be conducted during the construction and operation phase. A sample checklist for subjects to be covered during inspections is provided in Annex 2 In addition to these inspections, internal audits will be conducted quarterly during the construction phase. Results of inspections and monitoring will be provided to the supervision consultant, as well as to World Bank within the scope of biannual reporting.

Based on monitoring and audit results, corrective and/or enhancing actions will be designed and implemented. Performance of these actions will also be monitored and reported.

7. Training

Construction Contractors will ensure sufficient training is provided to all personnel (including sub-contractors' personnel if any). The scope of the training will ensure that workers are able to fulfil their waste management roles and functions through awareness on relevant aspects of this plan, related legislation and standards and general waste management practices (e.g. tidiness, waste segregation, etc.).

Training details (e.g. participants, subjects, training hours provided, etc.) will be recorded and the records will be kept on-site. Personnel working routinely with hazardous wastes and materials will receive additional specialized training detailing the specific handling, segregation, labeling, storage, spill response, and disposal requirements.

8. Review and Update

This Plan is a living document, and the responsibilities, procedures and compliance actions shall be updated as required (e.g. after a change in related legislation). It is the responsibility of supervision consultants and construction contractors to be fully aware of its contents. The Contractors is to provide relevant training to staff and to ensure that measures/commitments are being implemented to achieve compliance with this Plan.

ANNEX- 1. Waste Log Form

Month: Waste Log Form No:

No	Date	Type (Hazardous/ Non-hazardous)	Sub-type	Waste (ton or 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							

ANNEX- 2. Waste Management Inspection Checklist

Inspection Date:

Inspection Location:

Control Measure	Compliance (Yes/No)	Comment
Are all waste streams being properly separated andlabelled 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 being storedat separate locations?		
Has a map been produced showing the correct wastestorage locations which are visible to all workers		
Are all waste storage containers appropriately labelledto prevent cross contamination of waste materials?		
Are all waste labels complete with the appropriateinformation to include: - 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) - Personal protection equipment (PPE) required		
Are licenses of companies contracted for waste transport and waste disposal valid and up-to-date?		
Are copies of National Waste Transport Forms kept aspart of monthly waste log forms?		

Annex- 10. CHANCE FIND PROCEDURE

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1. INTRODUCTION

Increasing the capacity of the Seismic Resilience and Energy Efficiency in Public Building Project (SREEPBP) will enable a stronger transmission system and help expand the scope of automated controls, improve management and protect the stability of the building structure and prevent the widespread of sizable disruptions, which require protection systems. On the other hand, Natural and Archaeological Sites, Cultural and Historical Buildings will certainly not be included in the Project. However, during the project implementation, there will also the possibility to encounter certain chance finds –historical and cultural assets- that shall be registered.

1.1. SCOPE

The scope of this document is to provide a summary of chance find management actions, procedures and responsibilities in the event of encountering any such assets during project construction activities.
This procedure is for any and all project activities (such as renovation, resilience, rehabilitation, re-construction etc.) in the project impact zone as well as in other project-related areas.

1.2. DEFINITIONS

CHANCE FIND	*'Chance find' defines any potential objects, features or areas of cultural inheritance that have been defined as a result of regular monitoring of project-related construction works but extrinsically to an official site survey.*
MUSEUMS	
REGIONAL CONSERVATION BOARDS	
PROJECT	
WORK TO BE DONE	
AND MANDATED ACTIONS	
COMPULSORY WORK	

1.3. ABBREVIATIONS

Acronym	Definition
E&S	Environmental and social
GDCW	General Directorate of Construction Affairs

1.4. REFERENCES

STANDARDS, LEGISLATION AND LAWS
Ministry of Culture and Tourism, Law No. 2863 on the Protection of Cultural and Natural Assets
Ministry of Culture and Tourism, Decree No. 658, Archaeological Sites, Conditions for Protection and Use

2. ROLES AND RESPONSIBILITIES

Directorate General of Construction Works (GDCW) shall be responsible to prepare and implement management plans and procedures based on project-specific environmental and social impact analyses. Furthermore, GDCW shall also be liable, together with all its units and contractors, to act in observance of these procedures during project construction activities. All construction staff shall be trained in view of implementation of the procedure.

The Role of the Project	Responsibilities
Site Manager	To ensure that Environmental and Social (E & S) issues are handled sufficiently and as required by all units concerned. To support on-site support to E & S actions, to provide E & S monitoring and supervision and to allocate adequate resources thereto.

3. CHANCE FIND PROCESS

The step-by-step process to follow any chance finds in the project site and its area of impact is given in the Table below.

Table 1 Chance Find Procedural Septs to follow

<table>
<tr><td colspan="2">STAGE 1 - Following a chance find:

All works in the survey area shall cease.

A transitional buffer zones shall be established around the chance find area.

Site management and the museum archaeologist shall be contacted immediately.

The area of the finding shall be adequately secured by markings, signposts and banners, etc.

Protection of the site the chance finding shall not be transported lifted or damaged further.</td></tr>
<tr><td colspan="2">STAGE 2 – Registration

Chance Find Notification Form Section A shall be filled in and a copy shall be forwarded to the site manager in 24 hours.</td></tr>
<tr><td colspan="2">STAGE 3 - Communication with local authorities

The director of the respective museum shall be notified regarding the chance find.</td></tr>
<tr><td colspan="2">STAGE 4 - Museum Decision

The archaeologist of the museum concerned shall decide actions to follow in the chance find site.</td></tr>
<tr><td>STAGE 4A - Site or the find is of no significance
Museum archaeologist declares that the site/find is of no significance.

Site supervisor notifies respective authorities.</td><td>STAGE 4B - Site is significant.

Museum archaeologists declare that the site/find is significant.

Museum director or the archaeologist at the museum decide further action an notify the site supervisor.</td></tr>
<tr><td>Site supervisor retains a copy of the chance find for his/her own records.</td><td>Site supervisor notifies respective authorities.</td></tr>
<tr><td>No further action is required.

The chance find procedure is closed.

Construction activities can resume/continue.</td><td></td></tr>
</table>

STAGE 5 - **Site survey** Project staff follows the instructions of the archaeologist of the Archaeology Museum concerned.		
Following the site survey, the museum archaeologist declares that the site is of minor significance. Site supervisor notifies his/her superiors. Site supervisor retains a copy of the chance find for his/her own records. No further action is required. The chance find procedure is closed. Construction activities can resume/continue	Following the site survey, the museum archaeologist declares that the site/find is **moderately significant.** More advanced works such as the test pit/recovery excavation or remote sensory surveys shall be completed. Museum archaeologist shall instruct and/or supervise works. Site supervisor notifies his/her superiors. Project management shall provide an archaeological task force under the lead of the museum archaeologist. The task force shall be composed of qualified archaeologists as well as other specialists and workers. Upon completion of excavation the team shall report to the museum management. Museum management forwards the findings of the survey to the Regional Cultural Asset Conservation Board. The Regional Cultural Asset Conservation Board concerned shall officially approve such recovery and notifies the project management duly. Site supervisor retains a copy of the chance find for his/her own records. No further action is required. The chance find procedure is closed. ***Construction activities can resume/continue.***	Following the site survey, the museum archaeologist declares that the site/find is **highly significant.** Recovery excavation shall be completed. The site shall be handled in observance of the provisions of the LawNo.2863 on the Protection of Cultural and Natural As sets dated 21.07.1983. Museum Archaeologist provides instructions and/or supervision for the test pit/archaeological recovery excavation. Site supervisor notifies his/her superiors. Project management shall provide an archaeological task force under the lead of the museum archaeologist. The task force shall be composed of qualified archaeologists as well as other specialists and workers. Upon completion of excavation the team shall report to the museum management. The Regional Cultural Asset Conservation Board concerned shall officially approve such recovery and notifies the project management duly. The site shall be registered and placed under protection as per the Turkish legislation. Archaeology Supervisor(s) shall notify respective authorities. Site supervisor retains a copy of the chance find for his/her own records. No further action is required. The chance find procedure is closed.

In cases where human remains have been found, it is of utmost importance to note that the entire project team and local authorities shall be immediately notified.

4. MONITORING AND REPORTING

Site supervisor shall visually monitor any and all construction and other activities as proof of presence of cultural inheritance assets.
Chance Finds shall be recorded in the Chance Finds Notification Form (see. Annex 1). 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 be recorded in the Chance Finds Log (see. Annex. 2). This document shall be regularly checked.

Annex 1. Reporting of Chance Finds – Notification Form

PART A **BÖLÜM A**				
Sub-Project Location: *Proje Sahası*	District (İlçe): Village (Köy):	Date: *Tarih*	Form No:	*Project Information* Proje Bilgisi
Name of person reporting chance find: *Şans bulgusunu rapor eden kişinin ismi*				
Was work stopped in the immediate vicinity of the chance find? ☐ Yes ☐ No *Şans bulgusunun tam çevresinde iş durduruldu mu? Evet Hayır*				
Was a buffer zone created to protect the chance find? ☐ Yes ☐ No *Şans 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 –ep 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: *Şans bulgusunun 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 chance find procedure *Önemsiz Saha – Bulgu - daha fazla araştırma yapılmadan inşaat devam edilebilir – Şans 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			

Date started:
Başlangıç tarihi

Date completed:
Bitiriş 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

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

ANNEX- 2. CHANCE FIND RECORD

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

ANNEX- 3. CONTACT INFORMATION

Museum	Address	Telephone	Fax	E-

CONSERVATION BOARD	AREAS OF RESPONSIBILITY	ADDRESS	TELEPHONE	FAX	E-MAIL

Annex- 11. Construction Environmental Method Statements

Table of Contents for a sample Construction Environmental Method Statement

Executive Summary

1. Brief

1.1 Introduction

2. Legislation Planning Policy and Guidance

2.1 Legislation

2.2 Policy

2.3 Guidance

2.4 Standards to be adopted.

3. Description of Site Setting and Receptors

4. Description of the Works

4.1 Overview of Development

4.2 Demolition

4.3 Excavation and Basement Underpinning

4.4 Superstructure

5. Mitigation

5.1 Neighborhood Liaison

5.2 Baseline Monitoring

5.2.1 Air Quality and Dust Risk Assessment

5.3 Demolition and Construction Monitoring

5.4 Training

5.5 General Measures to be adopted

Appendix A Photographs

Annex- 12. Occupational Health and Safety Plan

The main objective of OHS Plan is to ensure safe and healthy working environment by careful planning, routine inspections, safety awareness, training of all personnel and safety meetings. All contractors shall apply *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 Planss are reviewed and updated. All workers and subcontractors involved in renovation, 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 environment.

The items listed below shall be addressed in OHS Plan:

- Policy, Leadership, Commitment
- Emergency Response Plan
    - The Emergency Response Plan shall outline how to response 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 well pads during drilling and testing
- Measures against coronavirus pandemic to be integrated into OHS Plan

Table of contents for a sample OHS Management Plan

1. Introduction
- 1.1. Non-fatal injuries
- 1.2. Roles and responsibilities-Project manager
- 1.3. Roles and responsibilities-Supervisor
- 1.4. Roles and responsibilities-Workers

2. General behavior on a construction site

3. Safety of workplace
- 3.1. Site layout and housekeeping

4. Debris and waste management
- 4.1. Debris management
- 4.2. Waste management

5. Hazardous substance
- 5.1. Cement
- 5.2. Asbestos

6. Fire precautions

7. Working at heights
- 7.1. Use of scaffolding
- 7.2. Use of ladders
- 7.3. Roof work

8. Demolition of buildings
- 8.1. Demolition of walls
- 8.2. Demolition of floors

9. Physical risk factors: working position and using tools
- 9.1. Working posture
- 9.2. Manual tool handling and weight lifting

9.3. Hand tools
9.4. Electrical tools
9.5. Wood working

10. Chemical risk factors
11. Biological risk factors
12. Personal protective equipment (PPE)
12.1. Head protection
12.2. Foot protection
12.3. Hand/arm protection
12.4. Skin protection
12.5. Eye protection
12.6. Hearing protection
12.7. Respiratory protection
12.8. Debris management
12.9. Waste management
12.10. Cement handling
12.11. Asbestos handling
12.12. Working at heights
12.13. Demolition of floors
12.14. Electrical tools
12.15. Wood working

13. Wellbeing and first aid
13.1. Wellbeing facilities
Potable water
Service water
13.2. Firs aid
First aid
First aid kit
First aid: how to react?

14. Training
14.1. Induction training
Key discipline on site
Key risks that site workers should be aware of PPE training
Emergencies-fire and first aid
14.2. Tool-box briefing or on the job training

Annex- 13. Community Safety and Traffic Management Plan

Major community health and safety issues in sub-projects involving renovation, demolition and reconstruction activities i) noise and dust; ii) work site safety; iii) emergency situations; and iv) traffic safety. This Appendix introduces general guidelines for the preparation of Community Safety and Traffic Management Plan. The main objective of the plan is to ensure safety and health of community by careful planning, routine inspections, awareness, training of 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. Renovation or demolition and reconstruction activities may require detailed planning depending on site-specific issues.

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 (coronavirus and other communicable 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 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 company-leased vehicle on company time
    - Designating safe areas while working around moving vehicles
    - Exposure to hazardous substances
    - Exposure to project-related emergency situations (accident, fire, explosion, etc.)
    - Improperly controlled or trained security guards
    - Unresolved problems due to absence of 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

1. PURPOSE AND SCOPE OF THE PLAN

1.1 Overlaps with other Management Plans

2. BACKGROUND POLICIES AND STANDARDS

2.1 National standards and regulations

2.2 International standards

2.3 Source documents

3. ROLES AND RESPONSIBILITIES

3.1 Construction Contractors

3.2 Supervision Consultant

3.3 PIU

4.MANAGEMENT METHODS AND MITIGATION MEASURES

5.MONITORING

6.AUDIT AND REVIEW

7.REPORTING 12

7.1 Audit reports (by Supervision Consultant)

7.2 Contractor Monitoring Reporting

Annex- 14. Pollution Prevention Plan

Pollution Prevention Plan will be prepared and implemented for sub-projects where appropriate based on the screening procedure conducted. Rehabilitation, demolition and reconstruction activities will cause noise and air pollution and also hazardous material risks such as chemical spill risks.
The main objectives of preparation of Pollution Prevention Plan are to:

- Define roles and responsibilities
- Define legal/institutional framework
- Describe and examine the project's potential negative environmental impacts
- Recommend measures needed to minimize, mitigate, or compensate for adverse impacts
- Improve environmental performance
- Ensure proper monitoring and response to failures of environmental management measures

The following aspects should be addressed in each Pollution Prevention Plan:

- Project summary
- Description of the relevant baseline conditions
- Summary of impacts
- Description of mitigation measures
- Description of monitoring program
- Institutional arrangements and outline of roles and responsibilities

The summary of impacts shall identify the predicted adverse environmental impacts for which mitigation is required. Each mitigation measure shall be briefly described with reference to the impact to which it relates. The suggested mitigation measures shall be supported by relevant references, designs, equipment descriptions and/or operating procedures. Monitoring is important to evaluate environmental performance. Thus, monitoring program shall be designed to ensure mitigation measures are undertaken in case the proposed measures are inadequate or if impacts were underestimated. The monitoring program shall be linked to the impacts identified and methods to be used.
Responsibilities for mitigation and monitoring shall be clearly defined and arrangements for coordination between various responsible actors shall be defined. This includes Beneficiaries, contractors, and administrative entities.