CLIMATE AND DISASTER RESILIENT CITIES PROJECT

Environmental & Social Management Framework

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# Definitions, Abbreviations & Acronyms

| Definition, Abbreviation or Acronym | Description |
| --- | --- |
| ARAAD | Afet Riski Altindaki Alanlarin Donusumu [Transformation of Areas Under Disaster Risk] |
| AFAD | Afet ve Acil Durum Yonetimi Baskanligi [Disaster and Emergency Management Presidency] |
| CERC | Contingent Emergency Response Component |
| CoC | Code of Conduct |
| E&S | Environmental and Social |
| EHS | Environmental, Health and Safety |
| EIA | Environmental Impact Assessment |
| ESAP | Environmental and Social Action Plan |
| ESF | Environmental and Social Framework |
| ESHS | Environmental, Social, Health and Safety |
| ESIA | Environmental and Social Impact Assessment |
| ESMF | Environmental and Social Management Framework |
| ESMP | Environmental and Social Management Plan |
| ESS | Environmental Social Standard |
| EU | European Union |
| FI | Financial Intermediary |
| GDIUTS | General Directorate of Infrastructure and Urban Transformation Services |
| GDP | Gross Domestic Product |
| GHG | Greenhouse Gas |
| GIIP | Good International Industry Practices |
| GM | Grievance Mechanism |
| GT | Government of Turkiye |
| GPS | Global Positioning System |
| IBA | Important Bird Area |
| IBRD | International Bank for Reconstruction and Development |
| ILBANK | Iller Bankasi Anonim Sirketi [Provincial Bank Trade Incorporation] |
| ILO | International Labor Organization |
| IT | Information Technology |
| KBA | Key Biodiversity Area |
| KPI | Key Performance Indicator |
| Law | Law No. 6306 |
| LMP | Labor Management Procedure |
| MoEUCC | Ministry of Environment, Urbanization and Climate Change |
| MoH | Ministry of Health |
| MoLSS | Ministry of Labor and Social Security |
| NDELV | Number of Days Exceeding the Limit Value |
| O.G. | Official Gazette |
| OHS | Occupational Health and Safety |
| PDO | Project Development Objective |
| PIF | Project Introduction File |
| PM10 | Particulate Matter (with diameter ≤ 10 µm) |
| PPE | Personal Protective Equipment |
| PMU | Project Management Unit |
| POM | Project Operations Manual |
| Project | Climate and Disaster Resilient Cities Project |
| RF | Resettlement Framework |
| RP | Resettlement Plan |
| SEP | Stakeholder Engagement Plan |
| TMMOB | Turkiye Mimarlar ve Muhendisler Odasi Birligi [Turkiye Union of the Chambers of Architects and Engineers] |
| TOKİ | Toplu Konut İdaresi Baskanligi [Directorate of Housing Development Administration] |
| ToR | Terms of Reference |
| TurkStat | Turkiye İstatistik Kurumu Baskanligi [Presidency of Turkish Statistical Institute] |
| UNCCD | United Nations Convention to Combat Desertification |
| WB | World Bank |
| WBG | World Bank Group |
| WHO | World Health Organization |

# Executive Summary

Turkiye has always been under the influence of and still prone to climate and disaster risks with about 70 percent of Turkiye’s population living in high and medium-high risk seismic zones. Moreover, many settlements are increasingly exposed to flooding and extreme weather events. In 2019 alone, 935 extreme events occurred, caused mainly by heavy rains/floods, windstorms, snow and hail. Climate models predict this trend to continue with increasing anomalies in precipitation patterns with more frequent extreme rain and flooding, as well as protracted drought and wildfires, and sea-level rise. Accordingly, climate and disaster risks pose a significant risk to lives and livelihoods; and housing & other assets in parallel.

Thus, Project Development Objective (PDO) of the proposed Climate and Disaster Resilient Cities Project (Project) is to increase access to seismic and climate resilient housing, urban infrastructure and services in selected provinces in Turkiye. This Project will support the Government of Turkiye (GT) in tackling the challenges related to climate and disaster resilient housing and infrastructure interventions, focusing on the provinces of Istanbul, Izmir, Kahramanmaras, Manisa, and Tekirdag. These provinces were selected as all are highly vulnerable to the impacts of natural hazards and climate change such as flooding, drought, and heat waves; and, most importantly, all are located in areas with high seismic risk.

**Project Components**

The Project includes five components:

* Component 1: Institutional strengthening to enable conditions for urban resilience (MoEUCC)

(EUR 6 million)

* Component 2: Expanding access to resilient housing (MoEUCC) (EUR 317 million)
* Component 3: Investments in climate and seismic resilient urban infrastructure (ILBANK)

(EUR 167 million)

* Component 4: Project Management, Monitoring and Evaluation

4a: For Component 1, 2 and 5 (MoEUCC) (EUR 7.5 million)

4b: For Component 3 (ILBANK) (EUR 2.5 million)

* Component 5: Contingent Emergency Response Component, CERC (EUR 0 million)

Components 1, 2, 4a and 5 will be implemented by the Ministry of Environment, Urbanization and Climate Change (MoEUCC), General Directorate of Infrastructure and Urban Transformation Services (GDIUTS). Components 3 and 4b will be implemented by ILBANK and municipalities, in parallel to components under the responsibility of the MoEUCC. This Environmental and Social Management Framework (ESMF) covers Components 1, 2, 4a, and 5, therefore, the term “Project” hereon refers to these components.

**Potential Sub-projects and Objective of the ESMF**

**Sub-projects under Component 1**

Component 1 of the Project aims to provide technical assistance to the MoEUCC and selected Project pilot provinces, to strengthen their capacity to develop, implement and monitor green and resilient urban transformation programs. Within that scope, the financing under this component will be used mainly for consulting and non-consulting services. Relevant potential sub-projects are presented below:

* **Consulting Services** to support preparation of Urban Transformation Strategy Plan/Documents in Selected Provinces: Via procurement of consulting services, it is planned to support 5 selected municipalities to develop their Urban Transformation Strategy Document. The Urban Transformation Strategy Documents will include information, documents and analyses regarding Urban Conditions Analysis (including city-wide risk assessment study), Data Collection and Prioritization of Urban Transformation Areas, Determination of Legal Basis, Stakeholder Engagement Plan, Determination of financial management model, Urban Transformation Implementation Timeline and Determination of Urban Design Principles. It will also include an assessment of multiple risk conditions, including death/injury risk, economic loss and environmental impacts, a roadmap of short, medium and long-term actions to mitigate risk; expectations and preferences of residents regarding risk reduction options; financing needs; and urban economic and social development, which is expected if urban transformation is undertaken in the field of work. It will be supported by analysis and related roadmap, maps and documentation.
* **Consulting Services** to Develop the Urban Transformation Platform/System for Acquisition and Processing of the Government of Turkiye (GT) Urban Transformation Data/Activities: Via procurement of consulting services from a certified / eligible Information Technology (IT) consulting company, an IT Platform / System will be developed to ensure sustainability of urban transformation, hence it is important to follow innovative technologies by constantly updating IT systems used in Urban Transformation Process such as demolition, construction, communication, waste management, energy efficiency, etc. This IT Infrastructure will be integrated into the current A.R.A.A.D. (kentseldonusum.csb.gov.tr) IT System.
* **Consulting Services** to Provide Legal Support to Homeowners for Resilient Housing Reconstruction/Retrofitting under Component 2: Via procurement of consulting services, it is planned to receive legal support for the contracts signed by beneficiaries with construction companies during the construction period of sub-projects under Component 2.
* Knowledge Exchange on Successful Urban Transformation Experiences in Turkiye as a **Non-Consulting Service:** Under this activity, it is aimed to share the outputs and experiences created through the Project and develop a dialogue. It would be helpful to evaluate successes and challenges linked to urban transformation processes. Comparison of the positive examples in the world and knowledge sharing will result in greater efficiency and better performance.

**Sub-projects under Component 4a**

Furthermore, Component 4a will finance consulting and non-consulting services, goods, training and operating costs as required by the MoEUCC to implement the Project as per the Bank’s policies and guidelines, including but not limited to monitoring and evaluation, reporting, procurement, financial management and disbursement, environmental and social management, grievance mechanisms, as well as communication and outreach activities, especially for Component 2. Relevant potential sub-projects are presented herewith below:

* **Consulting Services** as Hiring of Specialists to Support the Project Management Unit (PMU) regarding Procurement, Financial, Technical Oversight and Environmental & Social Issues: These individual specialists will be responsible from strengthening the capacity of the PMU and be hired full-time. Details within that scope are provided in Section 6.
* **Consulting Services** to Enable Project Visibility and Accessibility:Via procurement of consulting services, Project visibility and accessibility will be provided through preparation of a Communication Strategy, designing and printing advertisement-related booklets, publications and promotion brochures, and also media promotion.
* **Consulting Services** to Improve Existing Grievance Mechanism (GM) for Risky Building Transformation: A consulting firm will be hired to support the improvement of the existing grievance mechanism for the Project. The consulting firm will propose a design for reporting/grievance mechanism that complements the existing GM, which must be designed in a way to gather grievances from all possible channels. In addition, refresher trainings will be conducted on a quarterly basis for the PMU, representatives from the municipalities, provincial directorates, Contractors and their relevant personnel.
* **Consulting Services** for the supervision of the Environmental and Occupational Health and Safety issues associated with the implementation of the Project’s construction activities: A qualified supervision company will be hired before the commencement of construction works and maintained, as needed throughout the Project duration.
* Procurement of **goods** for Component 1 and Component 4a**:** Procurement of office equipment & programs including a budgeting software as an accounting system.

**Potential Sub-projects under Component 2**

The specific justification of Component 2 is the requirement for climate and disaster resilient housing, which will highly contribute to the overall resilience of the selected provinces against climate and disasters. Specifically, the GT faces several challenges in the implementation of the national regulatory framework supporting seismic and climate-resilient urban transformation. Key challenges include the need for greater affordability of retrofitting or demolishing and reconstructing risk-prone housing to meet resilient and energy-efficient standards, leveraging available resources and mobilizing finance for municipalities to increase investments in resilient urban infrastructure. Accordingly, the sub-project types relevant to the activity to be performed can be listed as follows:

* **Type-I:** *The sub-projects with demolition and reconstruction* - buildings were registered as risky buildings, however, no demolition activity has been performed at the time of loan application
* **Type-II:** *The sub-projects with retrofitting* - buildings were registered as risky buildings, however, loan application is made only for retrofitting rather than demolition and reconstruction
* **Type-III:** *The sub-projects with only reconstruction* - buildings were registered as risky buildings and demolished before loan application, and the application is only made for reconstruction.

**Potential Sub-projects under Component 5**

This Component is included in accordance with the World Bank Operational Policy (OP) /Bank Procedure (BP) 10.00 (Investment Project Financing), paragraphs 12 and 13, for contingent emergency response through the provision of immediate response to an Eligible Crisis or Emergency, as needed. As per paragraph 13 of the mentioned Bank Policy, *“Disaster prevention and preparedness and capacity-building activities may be supported by a stand-alone Project with a contingent financing feature or may be embedded in a regular Project through a contingent emergency response component that, once triggered, is subject to the exceptional policy requirements set out in paragraph 12”.* Within the context of the Project, Component 5 refers to the latter scenario defined in paragraph 13. Abovementioned exceptions are defined as follows in paragraph 12:

*“(a) The fiduciary and environmental and social requirements set out in OP/BP 4.01, OP/BP 4.10, OP/BP 4.11, OP/BP 4.12, the IPF Directive, and the Procurement Policy/Directive, that are applicable during the Project preparation stage may be deferred to the Project implementation stage. The environmental and social requirements exception for Category A Projects under OP 4.01 is only applicable to cases referred to in subparagraph 12(i) of Section III of this Policy.*

*(b) Such Projects are subject to special limits on the use of (i) PAs (see paragraphs 16-17 of Section III of this Policy) and, (ii) in the case of Projects supported by a Bank Loan, retroactive financing.*

*(c) When the beneficiary’s capacity to implement the needed activities is insufficient, the Bank may, at the request of the beneficiary, agree to the following alternative legal and operational Project implementation arrangements: (i) the Bank may enter into arrangements with relevant international agencies, including the United Nations, and national agencies, private entities, or other third parties; and (ii) where no viable implementation alternatives exist, the Bank may execute start-up activities financed under a grant from the Project Preparation Facility (see paragraphs 16-17 of Section III of this Policy) or a trust fund, following applicable internal Bank procurement rules.*

*(d) Alternative implementation arrangements referred to under subparagraph (c) above are limited to the time necessary to establish or restore the Borrower’s or the Implementing Entity’s capacity and, in all cases, are adopted in Projects that include capacity-building measures to enable a timely transfer of implementation responsibilities to the Borrower or the Implementing Entity. Proposals for Bank-executed start-up activities are limited to activities which involve the procurement of small contracts for goods and works, and the provision of technical assistance necessary to enable the Borrower or the Implementing Entity to undertake the execution of subsequent Project activities”*

However, as per the information obtained during the field works performed for this ESMF, the criteria implemented by the Disaster and Emergency Management Presidency’s (AFAD) Planning and Risk Reduction Department for “natural or human-made disaster or crisis” are very broad. Even a traffic accident resulting in the death of more than 10 people is classified as a man-made disaster according to AFAD’s criteria. Therefore, currently there is no available identification of specific sub-projects for this Component.

As can be seen from the details of the sub-projects of the Project, the ones to be financed through Component 2 has potential environmental and social risks and adverse impacts, while others have either positive or very limited (e.g., transportation of certain goods to be procured) environmental and social risks and impacts. Accordingly, this ESMF covers the components of the Project to be implemented by the MoEUCC, where, the environmental and social risks evaluation is mainly based on risks and impacts of Component 2. In other words, This ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts of activities under all Components, while placing specific emphasis on Component 2; and it contains measures and plans to reduce, mitigate and/or offset adverse risks and impacts to be applied through sub-project preparation and implementation to ensure that social and environmental issues are systematically addressed at the sub-project stage.

**Applicable Environmental and Social Standards of the World Bank**

The Environmental and Social Standards (ESSs) applicable to the Components of the Project evaluated in this ESMF, which are contained in World Bank’s (WB) Environmental and Social Framework (ESF), are 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,
* ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement,
* ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources,
* ESS8: Cultural Heritage,
* ESS9: Financial Intermediaries[[1]](#footnote-2), and
* ESS10: Stakeholder Engagement and Information Disclosure

The main differences between national legislation and WB ESSs can be separated into three groups in general as (i) categorization of projects, (ii) detail of impact assessment process, and (iii) public consultation implementations. Details of these differences and measures proposed to fill the gaps (if any) are elaborated further on inside this report. In cases where the Turkish legislation differ from the ESSs, the one that is more stringent will be applied to the Project implementation.

**Environmental and Social Risks and Impacts**

**Evaluation Regarding Component 1 and 4a**

Main environmental and social risks and impacts of the Components evaluated in this ESMF are related with the sub-projects under Component 2. In brief, Component 1 and 4a aim to strengthen institutional capacity to enable conditions for urban resilience and to support the managerial aspects of other components, especially Component 2.

Nevertheless, all kinds of sub-projects and activities detailed in Section 3 must be implemented in line with the WB ESF and relevant standards. Therefore,

* The development and implementation of the Urban Transformation Strategy Plans/Documents will be in line with the WB Environmental and Social Framework (ESF). Outcomes/actions of the plans will again be in line with WB ESF as well as the national legislation.
* Similarly, any other document to be prepared within the scope of the sub-project regarding Project Visibility and Accessibility, such as Communication Strategy, will be in line with the WB ESF.
* Regulatory framework of the design of the improvement of the existing Grievance Mechanism (GM) will include the WB ESF.
* WB ESS2 will apply to consultants whose services will be procured for all of the sub-projects and relevant activities under Component 1 and 4a.
* Consultants whose services will be procured and any kinds of plans/documents/procedures to be prepared under the sub-projects of Component 1 and 4a will be subject to the WB approval.

**Evaluation Regarding Component 2**

Potential environmental and social risks and impacts may arise during the implementation of sub-projects within the scope of Component 2. It must be noted at this point that a separate Resettlement Framework (RF) has also been prepared for Component 2. Accordingly, the risks and impacts relevant to the demolition, reconstruction or retrofitting of risky structures can be associated with the following:

* Social risks related to the temporary and permanent displacement of Project-affected people while rehabilitation/reconstruction of apartments/workspaces are being carried out through the Project-financed program,
* Noise and vibration generation during retrofitting/demolition/reconstruction activities,
* Air pollution specifically related to particulate matter, most likely to occur during demolition,
* Construction & demolition wastes that will be generated mainly during demolition activities and other wastes that will arise during demolition/retrofitting/reconstruction,
* Water and soil pollution that may occur in all processes,
* Environmental, public health and occupational health and safety effects related to asbestos if the building to be demolished contains asbestos,
* Labor risks, given the extensive civil works,
* Risks to public health due to the traffic to be created by the sub-project activities,
* General occupational health and safety risks that may apply to any demolition/ retrofitting/ reconstruction activity,
* Public health and safety risks which are directly or indirectly related to any of the items listed above,
* Inadequate outreach and stakeholder engagement,
* Lack of information about or access to grievance mechanisms for workers and/or Project-affected people,
* Risks of exclusion of poorer or vulnerable groups from Project benefits, subsidies, etc.
* Risk of impoverishment due to permanent or temporary physical or economic displacement, and
* Sexual exploitation and abuse/sexual harassments risks

**Evaluation Regarding Component 5**

As clarified in Section 3, identification of potential sub-projects under Component 5 is not available at the current status. Besides, specific scope of the component is also not available due to its nature. Accordingly, in order to manage potential environmental and social risks and impacts of Component 5 and to define the scope of application of ESSs thereto; an Operations Manual will be prepared by the MoEUCC. Environmental and social management of any possible eligible crises or emergencies will be performed in accordance with the Operations Manual to be prepared.

**Development of Environmental & Social Risk Management Instruments within the Scope of Component 2**

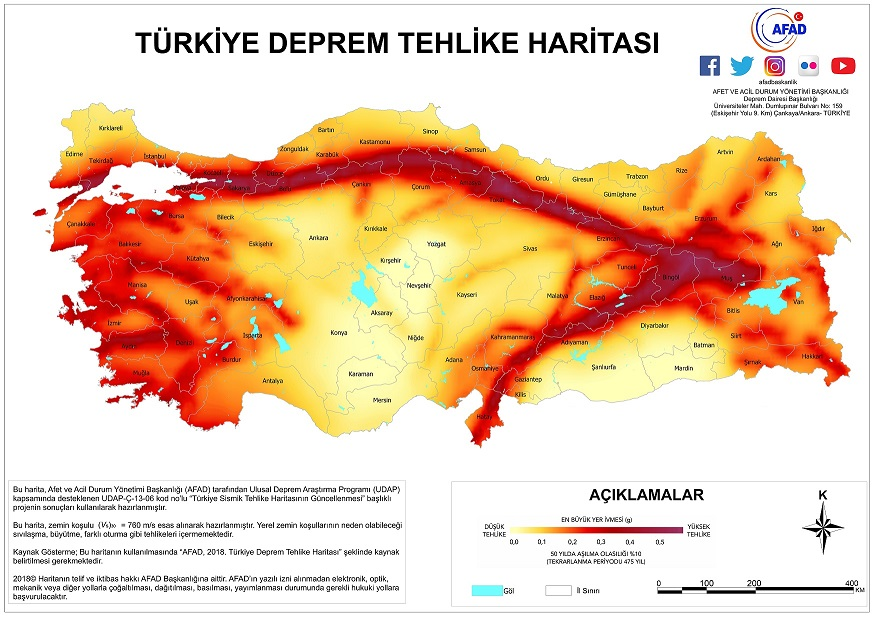
In order to develop tools for managing the impacts of sub-projects under Component 2, the following process will be performed. Specific implementations relevant to each sub-project type are also presented:

* As there will be a high number of sub-projects and consequently, as it will not be feasible to prepare a specific ESMP for each sub-project; before initialization of general implementation of Component 2, ESMPs for each province will be prepared by the PMU and will be issued for the approval of the WB (please See Section 6.2.1 for details). The process for preparing Resettlement Plans (RPs) is set out in the RF.
* When loan application is made for any sub-Proje, first of all, the PMU head office personnel will briefly evaluate whether the sub-project for which loan application has been made is in the list of non-eligible sub-project types presented in Annex 1 (please See Section 6.2.2 for details).
* Then, the PMU individual specialists deployed in each province will evaluate, on site, whether the sub-project in question is on the list of Non-Eligible Sub-Projects, in line with the screening list presented in Annex 2 and will determine the environmental and social risk category, if it is certain that the sub-project is not on the list of non-eligible sub-projects. After this, the PMU will approve the concerned screening assessment. It should be noted here that, first five checklists filled for sub-projects in each province will be sent to the WB for informative purposes.
* If the sub-project is found eligible for a loan in line with the two integrated processes above, the results will be announced to the stakeholders by applying the methods presented in the Stakeholder Engagement Plan (SEP) prepared.
* Subsequently;
  + For all three sub-project types under Component 2, in case of determination of “high risk” in terms of social risks and “substantial risk” in terms of environmental risks of more than 10 sub-projects to be initialized in same neighborhood within a one-month period, a neighborhood-level Environmental and Social Impact Assessment (ESIA) will be prepared by the PMU, which will cover the whole impact area (e.g., neighborhood) of the sub-projects; in accordance with the indicative outline provided in the ESF. It should be noted here that, probability of requirement of preparation of such ESIA is anticipated to be low. Nevertheless, in case of such a requirement, the neighborhood-level ESIA will be subject to the approval of the WB and no activity will be performed before obtaining said approval.
  + For all three sub-project types under Component 2, in case of determination of any other risk categorization, Contractors will prepare an ESMP Checklist by taking the risk category of the eligible sub-project and the extent and significance of its impacts, province-based ESMPs, and this ESMF into account. ESMP Checklists will be submitted to the PMU for review and approval.
  + As an additional action specific to the eligible Type-III sub-projects, realization of an Environmental & Social (E&S) Audit will be performed by the PMU individual specialists in the provinces. This requirement will be added to Terms of References of the PMU individual specialists. As per the results of this audit, an Environmental and Social Action Plan, which will be based on the findings of the E&S Audits, will be prepared if needed. The action plan will include relevant environmental and social corrective measures based on the findings of the E&S Audit, if any.
* After the approvals of the neighborhood-level ESIAs and ESMP Checklists in line with the responsibilities clarified above, the measures and practices mentioned in the statements will be implemented by contractors during demolition/retrofitting/reconstruction phases.
* The implementation of the sub-project specific ESMP Checklists and neighborhood-level ESIAs, including the evidence of implementation by contractor's OHS focal points, will be monitored through the field visits to be carried out at frequent intervals by the PMU individual specialists in the provinces, and through more general field visits by the PMU individual specialists of the head office.
* The corrective actions defined in the Environmental and Social Action Plans will be under overall responsibility of the PMU. In case of identification of the responsible parties (i.e., the party / contractor who performed the demolishing works), their legal obligations (if any) will be followed by the PMU.
* The reports, which will be the outputs of the mentioned monitoring activities and will include signs of progress on relevant Environmental and Social Action Plans’ items, will be included in the semi-annual reports to be submitted to the WB by the PMU in an integrated manner. It should be noted here that, neither the requirement of preparation nor the progress of Environmental and Social Action Plans will hinder loan application or getting the loan.

# Introduction

Turkiye is a disaster-prone country, faced with earthquakes, floods and landslides due to its seismic structure, high population in cities, unplanned urbanization and density of low-quality buildings. Turkiye ranks 45th among 191 high-risk countries. Between 1990 and 2017, approximately 210 earthquakes with damage occurred and according to the data of the Turkish Disaster and Emergency Management Presidency (AFAD), the country experiences at least one 5+ magnitude earthquake every year.

Approximately 95 percent of Turkiye's land, 70 percent of its population, 83 percent of its Gross Domestic Product (GDP) and 76 percent of its industrial facilities are located near active fault lines. Figure 1 below shows the most recent Turkiye Seismic Hazard Map prepared by AFAD. The top arc is the North Anatolian Fault Zone, extending from Van Lake to Saros Gulf, comprised of several fragmented faults. The East Anatolian Fault extends from Hatay to Bingol-Erzincan where it intersects with the North Anatolian Fault Zone. The third major fault zone of Turkiye is the West Anatolian Fault zone, made up of fragmented fault lines, generally perpendicular to the coastline.



Province Boundary

Lake

10% Possibility being Exceeded in 50 Years

(Repetition Interval of 475 Years)

Maximum Ground Acceleration (g)

HIGH THREAT

LOW THREAT

**N**

**EXPLANATIONS**

This map has been prepared by the Turkish Disaster and Emergency Management Presidency (AFAD) using the results of the Project titled “Updating the Seismic Hazard Map of Turkiye” No. UDAP-C-13-06 supported in the scope of the National Earthquake Research Programme (UDAP).

This map has been prepared by taking soil condition (Vs)30 = 760 m/s as basis. This does not include hazards such as liquefaction, expansion, differential settlement, etc. that might be caused by local soil conditions.

To show as reference, “AFAD, 2018. Turkiye Seismic Hazard Map” needs to be indicated to use this map.

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**Turkish Disaster and Emergency Management Presidency (AFAD)**

**Earthquake Department Presidency**

Universiteler Mah. Dumlupinar Bulvari No: 150

(Eskisehir Yolu 9. Km) Cankaya/ Ankara- TURKİYE

**TURKİYE SEISMIC HAZARD MAP**

Figure 1 Turkiye Seismic Hazard Map (AFAD, 2018)

Approximately 25,400 residences and public buildings were damaged in total due to two earthquakes in varying magnitude that occurred in January and February 2020. These earthquakes, which occurred in regions with low population, demonstrate the importance of disaster risk reduction and preparedness interventions in Turkiye.

Furthermore, climate change is expected to result in increased temperatures of 2.5 to 4°C (with up to 5°C in inner regions), generate more unstable weather precipitation and increase sea levels, with resultant disaster risks including more frequent and intense flooding, droughts and extreme heat days.

In the last decade, Turkiye has initiated various regulatory and institutional reforms to lessen and mitigate the effects of seismic risk. The enactment of new legislation on urban transformation and planning in areas with disaster risk has been the beginning of urban transformation efforts to reduce disaster risk. With Law No. 6306 on Transformation of Areas under Disaster Risk, enacted in 2012, urban transformation Projects of buildings and areas at risk of earthquakes were accelerated. Central government institutions such as the Ministry of Environment, Urbanization and Climate Change (MoEUCC) and the Directorate of Housing Development Administration (TOKİ) as well as public and private institutions associated with local authorities have acted as the main investment authorities in the planning and financing of large-scale land transformation. This law provides opportunities for a systematic approach to integrate resilience into urban planning and management and to increase the resilience of critical infrastructure and buildings, including housing.

The scale of financial and technical support required to increase the earthquake resistance of residences in Turkiye is quite large. According to the MoEUCC, 14 million residential units are classified as vulnerable to seismic risk. It is aimed to reconstruct approximately 6.7 million residences at a cost of about 465 billion USD in the next two decades.

The national government adapts approaches to support municipalities in developing their own urban resilience and transformation strategies according to national policy. In 2018, the MoEUCC published the Urban Transformation Strategy Guidelines for municipalities to prepare their own urban transformation strategies. The guidelines include the following elements: (i) Province-wide assessments; (ii) Priority areas; (iii) Investments (iv) Stakeholder consultations; (v) Feasibility studies and (vi) Financing mechanisms. These guidelines require a comprehensive analysis of urban transformation areas in each municipality to allow assessment of multiple hazard risk and prioritization of risks at provincial level. In September 2019, the MoEUCC launched a 5-year Urban Transformation Action Plan to implement the urban transformation strategy guidelines that prioritize the transformation of buildings and areas vulnerable to earthquake, flood and/or landslide risk, historic city centers and town squares, as well as industrial areas.

## Objectives of Climate and Disaster Resilient Cities Project

The proposed Project aims to support the GT in tackling the challenges related to climate and disaster resilient housing and infrastructure interventions, focusing on the provinces of Istanbul, Izmir, Kahramanmaras, Manisa, and Tekirdag. It will support GT to develop and establish an innovative approach for urban resilience with climate change and disaster risks and energy efficiency considerations that can be scaled up over time with various sources of financing.

The Project Development Objective (PDO) of the Project is to increase access to seismic and climate resilient housing,urban infrastructure and services in selected provinces in Türkiye.

## Project Description

The Project includes five components to achieve the objectives briefly provided in Section 1.1, which are; (i) Institutional strengthening to enable conditions for urban resilience; (ii) Expanding access to resilient housing; (iii) Investments in climate and seismic resilient urban infrastructure; (iv) Project management; and (v) Contingent emergency response component. These components are described in detail in the Section below.

### Project Components

**Component 1: Institutional strengthening to enable conditions for urban resilience**

Component 1 will provide technical assistance to the MoEUCC and selected local government institutions, including Project metropolitan municipalities as well as additional municipalities vulnerable to disaster risks, to strengthen their capacity to develop, implement and monitor green and resilient urban transformation programs. It will finance consulting and non-consulting services, training, and goods for, inter alia: (i) the preparation of municipal urban transformation strategies for selected municipalities vulnerable to climate and disaster hazards, jointly with local government officials, including city-wide climate and disaster risk assessments to inform spatial plans and investment prioritization, definition of financing modalities, implementation plans, and citizen engagement strategies for green and resilient urban transformation; (ii) the improvement of systems and procedures for managing, monitoring and evaluating urban transformation programs with the involvement of relevant stakeholders at national and local levels, including spatial hazard and climate risk datasets, modules for the demand-side financing mechanism for risky buildings, environmental and social aspects (e.g., gender, citizen engagement), and energy efficiency tracking; (iii) the preparation and execution of targeted capacity building programs (including training, study tours, etc.) for the MoEUCC and municipal staff on relevant topics such as conducting disaster and climate risk assessments, enhancing building code enforcement, integration of energy efficiency measures into resilient housing design, and use of green and nature-based solutions to mitigate climate and disaster risks in the urban environment; and (iv) the strengthening of the MoEUCC’s capacity, especially at its Provincial Directorates in Project provinces, to provide technical support to homeowners applying for the loans provided under Component 2 during all stages of the resilient housing retrofitting or reconstruction process, especially on technical, contractual and legal matters, and to carry out technical verification and inspections during housing reconstruction.

**Component 2: Expanding Access to Resilient Housing**

Component 2 will provide demand-side support for resilient housing in the Project provinces by financing loans (in Turkish lira) at below-market conditions for eligible homeowners to retrofit or reconstruct their risky housing units to meet resilient building code and energy efficiency standards. The objective of this new financial product is to address the issue of limited affordability and access to finance for a specific niche market segment that is not served through the existing mortgage market (i.e., owners of risky housing units who cannot afford seismic retrofitting or reconstruction of their property) with the aim to save lives. As such, it is not intended to be rolled out to a wider market segment nor to become an integral part of the mortgage industry in Turkiye. In addition, World Bank funding will not be made available directly to finance developers or for the direct construction of buildings. The loans funded by International Bank for Reconstruction and Development (IBRD) under this Component will be channeled through participating commercial banks[[2]](#footnote-3) and will be paired with the government’s existing rental subsidies (which will continue to be financed by the MoEUCC with their own funds) to support families to relocate temporarily during the retrofitting or reconstruction process[[3]](#footnote-4).

*Eligibility and targeting:* Owners of units[[4]](#footnote-5) in residential or mixed-use buildings located in the Project provinces that are assessed as “risky” according to the provisions of Law No. 6306 will be eligible to apply for the loans financed under this component.[[5]](#footnote-6) This includes owners of units in multi-family buildings (who are expected to be the majority) as well as owners of single-family houses. Owners of risky housing units are eligible to apply for the loans regardless of their income level; however, financial terms will be differentiated to provide incentives and ensure affordability of the loans for the vulnerable groups. In particular, middle to lower-income households (those whose household income are below a certain threshold, e.g., 4th or 3rd income quintile), those that only own one unit, and households that are women-headed or include persons with disabilities, deceased military/public servants, or retirees/elderly will be eligible for more favorable loan terms. A multidimensional vulnerability analysis using Statistics on Income and Living Conditions (SILC) 2019 cross-sectional data showed that in general, households in these target categories are relatively more vulnerable compared to the regional averages in Project provinces. In addition, within the scope of the Regulation on Energy Performance for Buildings, more favorable loan terms will be provided for upgrading to a higher energy efficiency standard (Class A or B Energy Performance Certificates) than required by the 2019 building code (Class C Energy Performance Certificate) to incentivize climate change mitigation and help reduce household energy bills. Communications and outreach activities, which will be financed under Component 4 to make potential beneficiaries in the Project provinces aware of and elicit demand for the new loans, will have a particular focus on more vulnerable groups, including lower income and women-headed households, and highlight the benefits of resilient housing retrofitting and reconstruction including energy efficiency measures.

*Loan terms:* A fixed, below-market interest rate (not tied to IBRD terms), determined based on affordability criteria, will be charged for the loans. There will be further (cumulative) interest rate deductions for eligible owners falling in the categories listed above and for upgrading to higher energy efficiency standards. The interest rates, maximum loan maturity, and maximum principal amounts will be agreed between the MoEUCC and the participating commercial banks considering affordability while at the same time ensuring that payment capacity of households is adequately leveraged. All such loan terms shall be reasonable and acceptable to the Bank and will be specified in the Project Operations Manual (POM), in addition to eligibility criteria and the application forms.

*Eligible expenditures*: The loan proceeds can only be used for civil works and consulting services required for the seismic and climate-resilient retrofitting or reconstruction of risky housing units, including energy efficiency measures. MoEUCC will continue to finance existing rental subsidies with their own funds.

**Component 3: Investments in Climate and Seismic Resilient Urban Infrastructure**

Component 3 will support ILBANK to on-lend loans with longer maturities and lower interest rates than the comparable domestic market to Project metropolitan municipalities and their affiliated utilities to undertake infrastructure investments that increase resilience against the impacts of climate-related and/or seismic hazards. ILBANK will be the Financial Intermediary (FI) for this component and Project metropolitan municipalities and affiliated utilities will be sub-borrowers. ILBANK will ensure the financial viability of the sub-borrowers per standard practice. The Component will finance works, goods, non-consulting and consulting services for: (i) demand-driven resilient and green municipal infrastructure investments in Project metropolitan municipalities, and (ii) technical assistance to sub-borrowers to strengthen their capacity to plan, prepare and implement infrastructure investments that mainstream climate and disaster risk considerations.

*Sub-project eligibility and prioritization.* Sub-projects eligible for financing under this Component include, inter alia: the construction or rehabilitation of storm water, drainage, and flood management systems, of water and wastewater systems and treatment plants, and of bridges and roads to climate and disaster-resilient standards; the creation of permeable public and/or green spaces and other nature-based solutions; as well as the resilient and energy-efficient retrofitting or construction of municipal buildings (e.g. fire stations, municipal service buildings, community centers, etc.). Additionally, sub-projects will need to fulfill the following eligibility criteria: (i) be in areas designated as hazard risk prone in the Project metropolitan municipalities or require improvements for climate and disaster resilience as per existing risk assessment studies[[6]](#footnote-7), (ii) be aligned with existing municipal plans and policy documents (such as city development plans, climate action plans, transport master plans, disaster risk reduction plans, etc.); and (iii) be complementary to other investments being financed in the Project metropolitan municipalities. Any municipal investment with high environmental or social risks will not be eligible for financing. Prioritization among eligible sub-projects will consider how sub-projects contribute to climate mitigation and adaptation, adopt innovative and integrated approaches to building resilience, create demonstrative impacts for increased inclusion, and have a high degree of readiness for implementation. The eligibility and prioritization approach for sub-projects will be elaborated in the POM, including a cap for borrowing per municipality taking into account their municipal borrowing limits and creditworthiness, population size, as well as equity considerations.

*Technical assistance to sub-borrowers.* This may include (i) sub-project management and implementation support, including sub-project design, procurement, contract management, construction supervision, environmental and social management, monitoring and evaluation, outreach and citizen engagement; and (ii) activities to strengthen the institutional and technical capacity of municipal authorities to mainstream climate and disaster risk considerations in planning, design, supervision, and implementation of investments.

As mentioned before, this Component will be implemented by ILBANK and is not covered by this ESMF. ILBANK has prepared a separate ESMF for this component.

**Component 4: Project Management, Monitoring and Evaluation**

**4a:** For Component 1, 2 and 5 (MoEUCC), **4b:** For Component 3 (ILBANK)

Component 4 will have two sub-components that finance consulting and non-consulting services, goods, training, and operating costs as required by ILBANK and the MoEUCC to implement the Project per Bank policies and guidelines, including but not limited to monitoring and evaluation, reporting, procurement, financial management, and disbursement, environmental and social management, grievance mechanisms, as well as communication and outreach activities especially for Component 2 to ensure potential beneficiaries, in particular women and lower-income households, are aware of the resilient housing program and its benefits. This Component will also support annual assessments of how the new mechanism to support resilient housing retrofitting or reconstruction is performing to identify adjustments and course-correction during implementation as needed.

**Component 5: Contingent Emergency Response Component (CERC)**

This Component is included in accordance with World Bank Operational Policy/Bank Procedure 10.00 (Investment Project Financing), paragraphs 12 and 13, for contingent emergency response through the provision of immediate response to an Eligible Crisis or Emergency, as needed. It will allow the GT to respond promptly and effectively to an eligible emergency or crisis, which is a natural or human-made disaster or crisis that has caused or is likely to imminently cause a major adverse economic and/or social impact, by requesting a rapid reallocation of Project funds. A POM for this Component will be prepared by the MoEUCC.

### Project Locations

The Project will focus on increasing urban resilience in the provinces of Istanbul, Izmir, Kahramanmaras, Manisa and Tekirdag. These provinces are at risk from disasters and the effects of climate change and have many areas that require urgent urban resilience investments. These provinces were selected based on their socio-economic profiles, poverty, vulnerable population and GDP per capita figures, different geographic areas, municipal capacities, exposure to different types of natural disasters (e.g., earthquakes) and on-site redevelopment potential. All five provinces are located on or very close to a fault zone, exposed to a series of natural disasters, especially earthquakes and river floods.

Istanbul is the most populated city in Turkiye, serving as the country's economic, cultural and historic hub. The city straddles the Bosporus strait, lying on both Europe and Asia. Its total area[[7]](#footnote-8) is 5,461 km2 and this metropolitan city has a population of over 15.8 million residents as per 2021 data[[8]](#footnote-9), comprising nearly 19% of the population of Turkiye. Istanbul is the most populous city in Europe and the world's 13th largest city. The per capita GDP[[9]](#footnote-10) of Istanbul was 97,950 ₺, taking first place in the country.

Izmir is located in the west of Turkiye and in the middle of the Aegean Region's coastline, with a total area of 11,891 km2 and a population of approximately 4.4 million in 2021 and per capita GDP of Izmir was 70.010 ₺ in 2020.

Kahramanmaras is located in the Mediterranean region with a total area of 14,520 km2 and a population of 1.2 million in 2021. Kahramanmaras ranks 48th among 81 provinces in Turkiye in terms of general welfare and ranks 63rd in terms of income and welfare. Per capita GDP of Kahramanmaras is below national average with 39,416 ₺.

Manisa located in the Aegean region, has an area of 13,339 km2 and a population of 1.5 million in 2021. Per capita GDP of Manisa was 59,442 ₺ in 2020, which was below the national average.

Tekirdag is located in the West Marmara region of Turkiye and has a total area of 6,190 km2 and a population of 1.1 million in 2021. Tekirdag ranks 30th among 81 provinces in terms of general welfare. Per capita GDP of Tekirdag was 84,522 ₺ in 2020, which was above the national average of 60.525 ₺.

Table 1. Gross Domestic Product per Capita by Provinces, 2018-2020

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Provinces** | **Per capita GDP (TRY)** | | | **Per capita GDP ($)** | | |
| 2018(r) | 2019(r) | 2020 | 2018(r) | 2019(r) | 2020 |
| **Turkiye** | **46,172** | **52,286** | **60,525** | **9,793** | **9 208** | **8,598** |
| Istanbul | 76,932 | 86,723 | 97,950 | 16,317 | 15,272 | 13,914 |
| Izmir | 54,905 | 60,505 | 70,010 | 11,645 | 10,655 | 9,945 |
| Kahramanmaras | 28,718 | 33,977 | 39,416 | 6,091 | 5,983 | 5,599 |
| Manisa | 44,458 | 49,407 | 59,442 | 9,429 | 8,700 | 8,444 |
| Tekirdag | 63,077 | 70,801 | 84,522 | 13,378 | 12,468 | 12,006 |

*Source*: TurkStat, Gross Domestic Product by Provinces, 2018-2020

*Note*: (r) Figures were revised for the years.

All five Project provinces are vulnerable to both disasters and climate change. However, since this RF is prepared for Component 2 and the activities under Component 2 consists of retrofitting/reconstruction of risky buildings which are defined according to Law no. 6306, this RF specifically focuses on the impacts of earthquakes. The most destructive earthquakes in the project provinces are summarized below.

Istanbul: In the earthquake of magnitude Mw 7.4 that took place on August 17, 1999, 1.823 residences and 326 workplaces were severely damaged in the Avcılar district alone, and approximately 4,000 buildings throughout Istanbul were severely damaged, and a total of 981 people lost their lives in the Avcılar and Bağcılar districts.[[10]](#footnote-11)

Izmir: In the earthquake with a magnitude of Mw 6.6 that occurred on October 30, 2020, 8 buildings were collapsed in Bayraklı district, and 752 collapsed / heavily damaged buildings were detected in 27 districts in total. 117 people died in the earthquake.[[11]](#footnote-12)

Kahramanmaras: On February 6, 2023, two very large earthquakes of magnitude (Mw) 7.8 and 7.5[[12]](#footnote-13),[[13]](#footnote-14) occurred nine hours apart on different fault lines in the southern region of Türkiye and northern Syria, which are referred to as the “Kahramanmaraş earthquakes”. 11,020 aftershocks, including fourteen over magnitude 5.5[[14]](#footnote-15) have occurred. The earthquakes affected 11 provinces, where around 14.01 million (16.5 percent) of Türkiye’s population live, including Adana, Adıyaman, Diyarbakır, Elazığ, Gaziantep, Hatay, Kahramanmaraş, Kilis, Malatya, Osmaniye and Şanlıurfa. As of March 1, 2023, 45,089 fatalities have been reported and 1,971,589 people displaced.[[15]](#footnote-16)

Manisa: In the earthquake with a magnitude of Mw 5.4 that occurred on January 22, 2020, although there were no deaths or injuries, minor damages occurred in 1,729 buildings, moderate damage in 159 buildings, and severe damage in 761 buildings.[[16]](#footnote-17)

Tekirdag: In the earthquake with a magnitude of Ms 7.4 that occurred in 1912, 24,980 buildings were collapsed and 2,836 people lost their lives.[[17]](#footnote-18)

### Implementing Organizations

The responsibility for general Project management and coordination belongs to the General Directorate for Infrastructure and Urban Transformation Services (GDIUTS) under the MoEUCC. Established in 2011 to manage the transformation of areas under disaster risk and of areas/lands where risky buildings present outside of the areas under disaster risk, GDIUTS carries out its activities in close cooperation with Directorate of Housing Development Administration (TOKİ), ILBANK and other subsidiaries of the MoEUCC, including local authorities. GDIUTS is also defined as the main institution responsible for the implementation of the Law on Transformation of Areas under Disaster Risk (Law No. 6306).

## Purpose & Scope of the Environmental and Social Management Framework

In accordance with the World Bank Environmental and Social Framework, this Environmental and Social Management Framework (ESMF) has been prepared for Components 1, 2, 4 and 5 of the Climate and Disaster Resilient Cities Project (Project). For Component 3, ILBANK is the implementing organization and is responsible for taking the necessary actions. Sub-projects to be financed under this Project will be identified and their location, number and design will be defined in more detail during implementation, so it is not possible to assess the full environmental and social footprint at the time of preparation of this document. The ESMF examines the overall risks and impacts of the Project and defines the scope of the comprehensive environmental and social management approach to be adopted to address the potential environmental and social impacts of the Project.

The ESMF will comply with the World Bank Environmental and Social Standards, World Bank Group Environmental, Health, and Safety Guidelines, and Good International Industry Practices (GIIPs), and national environmental, social, and Occupational Health and Safety (OHS) related legal framework relevant to the Project The ESMF is the main document that the General directorate for Infrastructure and Urban Transformation undertakes to comply with the national legislation and the World Bank Environmental and Social Framework and will be shared with stakeholders before the implementation begins. It should be noted here that; during the implementation phase, in cases where the Turkish legislation differs from the WB ESSs, the one that is more stringent will be applied to the Project implementation.

The ESMF forms the scope of the comprehensive environmental and social management approach adopted to identify and address the potential environmental and social impacts of the Project. The ESMF consolidates and facilitates the understanding of all policy and regulatory aspects in relation to the Project and required by the Turkish Government and the World Bank Environmental and Social Standards.

The ESMF establishes principles, rules, guidelines and procedures for screening and accordingly assessing environmental and social risks and impacts and includes measures and plans to reduce, mitigate and/or offset adverse risks and impacts to be implemented through sub-project preparation and implementation to ensure that social and environmental issues are systematically addressed during the sub-project phase. In this way, the implementation of the ESMF will guide the integration of environmental and social dimensions into the decision-making process at all stages related to the planning, design, execution, operation and maintenance of sub-projects.

# Policy, Regulatory & Institutional Framework for Environmental & Social Assessment

## Legal Framework for Environmental Protection & Conservation in Turkiye

Turkish environmental legislation has been developed in line with both nationally determined standards and international agreements, contracts, protocols and detailed standards, and has been revised especially in the recent years within the scope of pre-accession regulations under the framework of harmonization with the European Union (EU) Directives.

The Ministry of Environment, Urbanization and Climate Change (formerly the Ministry of Environment and Urbanization), with its changed name in line with the Presidential Decree No. 85 published in the Official Gazette No. 31643 of October 29, 2021, is the primary responsible organization for the protection and preservation of the environment, the development of sustainable cities and settlements and the natural environment and the implementation of the policies developed on the sustainable management of resources. The central organization of the MoEUCC is located in the capital Ankara, and there are Provincial Directorates in each province. The central organization consists of the following directorates and general directorates, with the last change in the name and structure of the MoEUCC:

* General Directorate of European Union and Foreign Relations
* General Directorate of Infrastructure and Urban Transformation
* General Directorate of Environmental Management
* General Directorate of Geographic Information Systems
* General Directorate of Environmental Impact Assessment, Permit and Inspection
* General Directorate of Spatial Planning
* General Directorate of Protection of Natural Assets
* General Directorate of National Real Estate
* General Directorate of Combating Desertification and Erosion
* Directorate of Turkish Environment Agency
* Directorate of Climate Change
* General Directorate of Construction Works
* General Directorate of Personnel
* Directorate of High Technics Board
* Directorate for Strategy Development
* General Directorate of Legal Services
* Department of Support Services
* General Directorate of Vocational Services
* Department of Training and Publication
* General Directorate of for Local Authorities
* Directorate of Revolving Fund Management

In line with the above-mentioned decree, the General Directorate for Combating Desertification and Erosion, which was previously affiliated to the Ministry of Agriculture and Forestry, is included among the central units of the MoEUCC and the Directorate of Climate Change was established as an affiliated institution of the MoEUCC.

The duties and responsibilities of the MoEUCC can be summarized as preparing the legislation on settlement, environment and development, carrying out urban transformation works, supervising the implementations, ensuring the development of professional services, preventing environmental pollution, protecting the environment and nature, and combating climate change.

The national Environmental Law (Law No. 2872), which first came into force in 1983, addresses environmental issues in a wide scope. Under the Environmental Law, environmental regulations have been developed in line with national and international policies and standards, and as mentioned earlier, some of these regulations have been recently revised to align with EU Directives as part of Turkiye's pre-accession efforts.

Apart from and as complementary to the Environmental Law and regulations, the laws listed below also contain provisions on the protection of the environment, the protection/management of natural resources and cultural and natural assets, the prevention & control of pollution and the implementation of measures to be taken for the prevention of pollution. The laws governing provisions relating to social impacts and provisions relating to health & safety and labor matters are also listed below:

* Expropriation Law (Law No. 2942)
* Forest Law (Law No. 6831)
* Law on Groundwaters (Law No. 167)
* Labor Law (Law No. 4857)
* Occupational Health and Safety Law (Law No. 6331)
* Law on the Protection of Cultural and Natural Assets (Law No. 2863)
* Law on Soil Preservation and Land Utilization (Law No. 5403)
* Mining Law (Law No. 3213)
* Municipality Law (Law No. 5393)
* Law on National Parks (Law No. 2873)
* Law on Pastures (Law No. 4342)
* Public Health Law (Law No. 1593)
* Settlement Law (Law No. 5543)
* Highway Traffic Law (Law No. 2918)
* Electricity Market Law (Law No. 6446)
* Energy Efficiency Law (Law No. 5627)

## National Environmental, Social & Occupational Health and Safety Legislation & Regulatory Requirements

Within the framework of the laws listed above, the regulations, bylaws and communiqués that have been enacted separately within the scope of environmental, social and occupational health and safety matters are listed below:

**Environmental Permits and Licenses**

* Regulation on Environmental Impact Assessment
* Regulation on Environmental Permits and License
* Regulation on Environmental Audit
* Regulation on Environmental Management Services

**Land Use and Soils**

* Regulation on Conservation, Use and Planning of Agricultural Land
* Regulation on the Implementation of Paragraph 3 of Article 17 and Article 18 of the Forest Law
* Regulation on Land Consolidation and On-farm Development Services Implementation
* Regulation on Pastures
* Regulation on Soil Contamination Control and Point Source Land Pollution

**Water**

* Regulation on Surface Water Quality
* Regulation on Water Pollution Control
* Regulation on Water Intended for Human Consumption
* Regulation on Urban Wastewater Treatment
* Regulation on the Protection of Groundwater against Pollution and Deterioration
* Regulation on Control of Pollution Caused by Dangerous Substances in Water and Its Environment
* Regulation on the Protection of Drinking-Potable Water Basins

**Waste**

* Regulation on Waste Management
* Regulation on Control of Packaging Waste
* Regulation on Control of Excavated Soil, Construction and Demolition Wastes
* Regulation on Control of Medical Wastes
* Regulation on the Management of Waste Oils
* Regulation on the Control of Vegetable Waste Oils
* Regulation on the Control of Waste Batteries and Accumulators
* Regulation on the Control of End-of-Life Tires
* Regulation on Landfilling of Wastes
* Regulation on the Control of Waste Electrical and Electronic Equipment
* Regulation on the Control of End-of-Life Vehicles
* Zero Waste Regulation
* Communiqué on Recovery of Some Non-Hazardous Wastes
* Regulation on the Demolition of Buildings

Since the waste management would be one of the crucial issues during the activities within the scope of Component 2, brief summaries of some of the specific regulations regarding waste management are presented below:

Regulation on Waste Management: Regulation on Waste Management can be regarded as the framework regulation regarding waste management requirements and applications in Turkiye. It defines duties / authorities / responsibilities of all relevant parties, which are, the MoEUCC, Provincial Directorates, Municipalities, Waste Generators / Producers and Waste Processing Facilities. Codes of all kinds of wastes, including both hazardous and non-hazardous ones, and specific requirements are also defined in the regulation. The purpose of the regulation is determining the borders of the waste management principles and also managing the waste practices. General principles of this regulation include less uses of natural sources, development of environment-friendly technologies, minimum damage to environment, reusable and recyclable producing, minimum energy use, acceptable waste management activities such as less waste producing, proper waste collecting, separating, transporting and disposing techniques (Reduce – Reuse – Recycle). Previous regulations on waste management (solid waste, hazardous waste, etc.) have been assembled together in this regulation with the new applicable instruction and suggestions according to the international environmental standards. According to the regulation, hazardous wastes, medical wastes, used batteries & accumulators and medical wastes, as well as used tires, recyclable wastes such as packaging wastes must be disposed of separately from residential wastes. Furthermore, generators or transporters are strictly prohibited to dump wastes into recipient media such as seas, lakes and the like as well as on to streets, in forests and any other spots where they would adversely affect the environment. According to the regulation, anyone generating hazardous waste is obligated to take measures so that waste generation would be minimized, to ensure waste management in order to minimize the effects of wastes on human health and environment in compliance with the provisions of this Regulation, to prepare a 3-year waste management plan and obtain Provincial Directorates’ approval therefor, and obtain authorization from Provincial Directorates likewise in case of temporary storage of wastes in their facilities in compliance with the provisions of this Regulation.

Regulation on Control of Excavated Soil, Construction and Demolition Wastes: This is the specific regulation which defines requirements regarding excavated soil and construction & demolition wastes. According to Article 9 of the regulation, anyone generating excavated soil and construction / demolition wastes is required to ensure waste management in order to minimize the negative effects of the wastes on the environment and human health in compliance with the provisions of the regulation. Waste generators cannot dump their wastes at any spots other than such recovery or storage sites exclusively permitted by a municipality.

Regulation on the Demolition of Buildings: This Regulation is prepared based on the Environment Law No. 2872 and the Zoning Law No. 3194 and it was actually published in the Official Gazette back in October 2021 but it was stipulated come into effect as of July 1, 2022. The purpose of this regulation is “*to regulate the procedures and principles pertaining to realizing the activities of building demolition in a manner that will not harm the environment, human health and safety.*” This regulation does associate itself with the Law No. 6306, stating that “*The provisions of the Law No. 6306 and the relevant legislation thereof shall remain reserved*”. However, this regulation precludes demolitions to be performed in the scope of the Law No. 7269 on the Aids to be Given and Measures to be Taken Due to Disasters Affecting Public Life.

The aim in the enactment of this regulation is to protect and preserve human/ community health, life and property safety, as well as the environment during demolition activities. In fact, the Regulation on Control of Excavated Soil, Construction and Demolition Wastes, the Regulation on Landfilling of Wastes, the Regulation on Waste Management and also the Regulation on Occupational Health and Safety in Construction Works are all referenced as legislation to be abided by. The regulation contains provisions on noise and vibration management, and control of dust emissions.

One of the novelties in this regulation is related to the prohibition brought by stating that, the main demolition can only be commenced after asbestos and similar hazardous chemical-containing fabrications are disassembled and removed, and after “selective demolition” is made. The demolition plan needs to contain a waste management plan as an annex that indicates the waste types, codes and amounts, and all this information will be recorded on the demolition license.

Selective Demolition is defined in the regulation as follows:

*“ARTICLE 15 – (1) In order to ensure high rate of recycling of demolition wastes, to ensure that the hazardous wastes are sorted and separated before the demolition, other materials are reused, and the demolition wastes are separated at the source and recycled in a controlled and phased manner, selective demolition will be applied according to the Regulation on Control of Excavated Soil, Construction and Demolition Wastes.*

*(2) Selective demolition covers the stages of separation/ sorting of asbestos and other hazardous wastes; doors and windows, sanitary ware such as sinks, bathtubs and similar materials, all metal-based materials, wood-based materials, gypsum-based materials, tiles, non-bearing walls (such as bricks, gas concrete, concrete) materials, glass materials, polyvinylchloride/polyurethane materials, all natural stone coatings, materials used for waterproofing that can be removed; thermal insulation materials such as glass wool, rock wool, expanded polystyrene, extruded polystyrene, polyurethane, etc.; crushed and/or sieved granular materials under in-parcel road or asphalt, concrete and wooden coating layers in other areas; scraping or separation of bitumen and derivative layers in areas covered with bitumen and derivative materials.*

*(3) With selective demolition, reusable materials are separated and waste generation is prevented. During the demolition activity, the wastes are separated and collected separately. Separately gathered wastes are collected without mixing with each other, the collected wastes are subjected to recovery and the wastes that cannot be recovered are disposed of in accordance with the provisions of the relevant legislation. The wastes are sent to the recycling and/or disposal facility, which has a license certificate within the scope of the Environmental Permit and License Regulation published in the Official Gazette dated no. 29115 of 10.9.2014.”*

**Air**

* Industrial Air Pollution Regulation
* Regulation on Air Quality Assessment and Management
* Regulation on Exhaust Gas Emission Control
* Regulation on the Control of Air Pollution Caused by Heating

**Chemicals**

* Regulation on Classification, Labelling and Packaging of Substances and Mixtures
* Regulation on Transport of Dangerous Goods by Rail
* Regulation on Transport of Dangerous Goods by Road
* Regulation on the Control of Polychlorinated Biphenyl and Polychlorinated Terphenyl

**Health, Safety and Work/Labor**

* Communiqué on Workplace Hazard Classes Related to Occupational Health and Safety
* Regulation on the Protection of Employees from Noise-Related Risks
* Regulation on Protection of Employees from Vibration-Related Risks
* Regulation on Health and Safety Requirements for the Use of Work Equipment
* Regulation on Occupational Health and Safety
* Regulation on Occupational Health and Safety in Construction Works
* Regulation on Occupational Health and Safety in Temporary or Fixed-Term Employment
* Regulations on Safety and Health in Working with Chemical Substances
* Regulation on Occupational Health and Safety Signs
* Regulation on the Fight Against Dust
* Regulation on Safety Data Sheets Regarding Harmful Substances and Mixtures
* Regulation on Occupational Health and Safety Risk Assessment
* Regulation on Personal Protective Equipment
* Regulation on the Vocational Training of Persons to be Employed in the Jobs in Dangerous and Extremely Dangerous Classes
* Regulation on Work Inspection Committee of Ministry of Labor and Social Security
* Bylaw on Work Inspections

**Noise**

* Regulation on Assessment and Management of Environmental Noise
* Noise Emission in the Environment by Equipment for Use Outdoors Regulations

**Social**

* Implementing Regulation on Settlement Law
* Regulation on the Implementation of the Law on Private Security Services

**Other / General**

* Road Traffic Regulation
* Railway Safety Regulation
* Regulation on Railway Safety Critical Tasks
* Regulation on Construction Managers

### Summary of National Construction Inspection Legislation

The national Law No. 4708 on Construction Inspection and Construction Inspection Implementation Regulation presents the scope of construction inspection regarding the buildings to be constructed in Turkiye. According to the legislation, the construction inspection is defined as “The process of ensuring that the buildings are built independent of the relevant administration (Municipalities) and contractor in order to obtain a safe, healthy and economical structure, in accordance with the current building regulations and latest standards during the design (Project) and construction stages.” The technical inspections regarding design and construction of the sub-projects within the scope of Component 2 will be performed as per this legislation.

In Turkiye, construction inspection processes are started before authorization of construction permits. This can be defined as an integrated and tight process. In this context, first of all, on behalf of the owner of the building, the “Project author/designer” (architectural Project author of the building to be constructed) enters information such as, the group of the building to be built, the total construction area, the building construction area and address information via the MoEUCC website or from the specific Building Audit System web-address established for this purpose. This information is checked by the relevant administration and, if necessary, corrections are made and approved. Afterwards, the Construction Inspection Institution that will perform the Construction Inspection Service is listed in the electronic environment, and the construction inspection institution that is at the top of the list for the building group in the city where the building is located at the time of approval is appointed to sign the contract (i.e., the inspection body cannot be selected by the Project author / contractor /owner of the building). The construction license is only granted after the relevant Project is technically examined by the construction inspection organization following the signature of the contract.

In the post-licensing construction inspection process, the parties have the following duties and responsibilities:

***The Construction Inspection Institution*** conducts the tests regarding the materials to be used in the building, checks the concrete formwork, iron equipment and other necessary installations, records them in the minutes, detects any deviations, warns the relevant administration and the building contractor, gives time for them to correct the deviations, and notifies the relevant administration if they are not complied with.

***The relevant administration*** does not allow unsupervised construction of buildings, requests the construction inspection service contract, commitment letters and the first installment receipt at the license stage, checks and approves the progress payments within the period, or notifies the organization of any deficiencies.

***The building contractor*** is obliged to construct the building in accordance with the plan and legislation, science, art and health rules, the license and the attached Projects and under the supervision of the architects, engineers and other experts.

***The construction manager (engineer, architect, technical teacher or technical personnel with a technician diploma)*** is obliged to ensure that the inspections are done under suitable conditions and to appear in person during the inspections.

In Construction Inspection Institutions, a Project and Implementation Inspector / Implementation Inspector and / or Assistant Controller must be assigned, depending on the total area of the construction site they will inspect. These personnel have to be civil engineers, architects, mechanical engineers, electrical engineers, technical teachers (construction, machine-electrical), technicians (construction, machinery, electricity, construction inspection) and technicists (construction, electrical, construction inspection) according to the total area of the structure they can inspect, and the area of the building they will inspect specifically.

It should be additionally stated that, although the main duty of the Construction Inspection Institutions is to inspect the building in accordance with the Law No. 4708, it is also the responsibility of the Construction Inspection Institutions to check that the work is carried out in accordance with the health and safety plan that should be prepared in accordance with the occupational health and safety legislation, to deliver a written warning to the contractor in case of a non-compliance with the plan, and to notify the relevant Provincial Directorate of Labor and Employment Agency if the warning is not complied with.

In addition, within the scope of the provisions of the Construction Inspection Implementation Regulation, Construction Inspection Institutions have the duty to control whether the necessary measures are taken to protect the occupational health and safety, and health and safety of the environment at the construction site during the construction phase.

On the other hand, any kind of activity under the scope of the legislation regarding Occupational Health and Safety (OHS) is also subjected to inspections. Within that scope, two general kinds of inspection can be listed as below:

* Labor Inspectors (officers of MoLSS) assigned by Counseling and Inspection Directorate of MoLSS perform scheduled and unscheduled inspections at work sites, including construction sites. During these inspections, inspectors review all relevant requirements within the scope of OHS, such as risk assessments, emergency prevention and preparedness, compliance status of work equipment and installation, provision of OHS trainings, presence/assignment of occupational physician & occupational safety specialist etc. In case of identification of a non-compliance regarding the legislative requirements, warnings and penalties can be given.
* Depending on the number of personnel and hazard classification of the work performed, it is stipulated to employ/assign licensed occupational physicians & occupational safety specialists for the work to be performed. Building retrofitting and reconstruction works are classified as “very hazardous”. Within that scope, occupational safety specialists and physicians should be employed/assigned by the Contractor 40 minutes and 15 minutes, respectively per month for each worker. Moreover, in workplaces that employ 750 or more workers, at least 1 workplace physician needs to be employed full time for every 750 workers; and in workplaces that employ 250 or more workers, at least 1 work safety expert has to be employed full time for every 250 workers.
* Occupational safety specialists and physicians are employed for management of OHS related issues of the work on behalf of the owner of the work. From the aspects of inspection, they are obliged to notify the owner of the work to correct non-compliances that they have detected. In case the relevant non-compliance is not corrected, they are obliged to notify relevant institutions. This application can also be regarded as an internal inspection.

Furthermore, as per the Regulation on Environmental Audit, Environmental Units established under the MoEUCC, and Provincial Directorates have Environmental Inspectors. Similar to the Labor Inspectors, conducting scheduled, unscheduled and upon complaint inspections are under the scope of the duties of Environmental Inspectors. It should be noted here that, as retrofitting and reconstruction activities mostly are not directly subjected to environmental permit & environmental impact assessment, most of the inspections performed by the Environmental Inspectors in Turkiye are being performed upon compliant.

Moreover, as per the Regulation on Construction Managers, construction managers have overall managerial responsibilities which are directly and indirectly relevant with OHS, environment and community health and safety, in addition to the ones related with the inspections (i.e., ensuring suitable conditions and appearing in person during inspections). These can be summarized as follows:

* Providing required construction & work organization for realization of the work in accordance with the construction license and its annexes (i.e., surveys and Projects) on behalf of the construction contractor,
* Taking, implementing, and ensuring implementation of all relevant legislation including OHS and environment related legislation, on behalf of the construction contractor,
* Employing personnel who has Professional Competence Certificate relevant to the construction and installation works to be performed,
* Ensuring usage of technically appropriate material, machine, and equipment during construction, installation, and demolition works,
* Having the authorization on ensuring OHS during the construction via making all kinds of prevention measures to be taken,
* Giving prompt notice to the relevant administration (i.e., “municipalities”) in case of causing damage or possibility of causing damage to other structures, and
* Giving prompt notice to authorities in case of an occupational accident.

### Summary of National Construction Material Inspection Implementations

The standards related to the construction materials used in Turkiye are determined by the Department of Construction Materials of the General Directorate of Vocational Services of the MoEUCC, and the follow-up and inspection regarding the concerned standards are carried out by the Market Surveillance and Inspection (MSI) Branch.

MSI is defined as the activities carried out and the measures taken by the authorized institutions in order to ensure that the products comply with the requirements specified in the relevant technical legislation or the general product safety legislation and to protect the public interest within the scope of this legislation.

The national legislation within the scope of MSI can be listed as follows:

* Product Safety Technical Regularizations Law, Law No:7223
* Regulation on Market Surveillance and Inspection of Products
* Construction Materials Regulation (305/2011/EU harmonized)
* Regulation on Criteria to be Used for Construction Materials

Construction Inspection Institutions have also duties within that scope. The purposes and scope of the audits can be briefly summarized as follows:

* C€ / G sign exists on the material and the material is in compliance with declared values – it is appropriate to use the material.
* C€ / G sign exists on the material; however, the material is not in compliance with declared values – it is not appropriate to use the material.
* C€ / G sign does not exist on the material – it is not appropriate to use the material
* C€ / G sign exists on the material and the material is in compliance with declared values, however the material causes suspicions – samples are taken from the material, analyzes are made by an accredited lab and lab report is compared with requested values of the Project.

## The Turkish Regulation on EIA

Environmental Impact Assessment (EIA) is a process to determine the positive and negative impacts of a particular Project on the environment. Although this process is not a decision-making process in itself, it is a process that proceeds in parallel with and supports the decision-making process. It is the analysis and evaluation of all potential direct or indirect, permanent or temporary impacts that may arise from new Projects and developments and may affect the environment, including the social consequences and alternative solutions.

The EIA is the investor's handbook. When the EIA report of an investment with a feasibility or design is prepared, all details of the Project and a clear roadmap for the investor come up. It is the healthiest way for the investor to act together with an EIA consultant when the investment idea is produced.

EIA studies gained legal status in Turkiye with the 10th Article of the Environmental Law No. 2872, which was entered into force upon its publication in the Official Gazette No. 18132 of 11/8/1983. The EIA Regulation was put into effect on February 7th, 1993, and has since been revised / amended twenty-two times in total, taking into account the harmonization with the EU Legislation and the EIA Directive of EU. Currently, the Regulation on Environmental Impact Assessment, which entered into force upon its publication in the Official Gazette No. 29186 of 25/11/2014, is in effect.

With the commissioning of the Online EIA Process Management System / e-CED (EIA), it is possible for the institutions and organizations authorized by the MoEUCC for the EIA process to apply for EIA through this system.

The EIA process consists of three stages:

i. Environmental baseline studies

ii. Environmental Impact Assessment (EIA) Studies

iii. Establishment of environmental and social management plans and monitoring studies

Following the environmental baseline studies, Environmental Impact Assessment (EIA) studies will begin. Within the scope of the current state studies, the following must be done:

* Identifying businesses and settlements on the Project area
* Identifying current environmental conditions
* Identifying methods and tools for the determination of environmental impacts and assessment of possible environmental impacts (direct and indirect)
* Identifying the standards related to environmental impacts and the periodic distribution of works to be performed (investment and operation periods)
* Identifying the analysis criteria in terms of quantity and quality
* Identifying and analyzing the existing transport system
* Taking necessary photos of both the Project area and the surroundings in the environment with a digital and an analogue camera,
* Identifying and analyzing the nearest protected areas and sensitive ecosystems to the Project area. In case there are National Parks, Nature Parks, Wetlands and Wildlife Protection Areas, Natural Areas, Nature Conservation Areas, Reserve Areas, Biogenetic Reserves, Natural Sites and Nature Monuments, Biosphere Archaeological, Historical, Cultural Sites, Special Environmental Protection Areas, Special Protection Areas, Tourism Documents etc. present at the site, a more detailed study must be done on this issue.

EIA studies in Turkiye are carried out differently for the activities included in Annex-I and Annex-II lists of the EIA Regulation.

While an Environmental Impact Assessment (EIA) Report must be prepared within the scope of the activities included in the list in Annex-I, a Project Information File (PIF) is prepared for the activities included the list in Annex-II. The EIA process in Turkiye can be summarized as follows:

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Figure 2 Environmental Impact Assessment Process within the Scope of National Legislation

When the National EIA Regulation is evaluated in terms of the Project, it is considered that possible sub-projects within the scope of Component 2 (one of the components evaluated within the scope of this ESMF) will not be covered by the scope of the regulation. When Annex-1 and Annex-2 of the Regulation are examined, it can be seen that only the activity on “Mass housing Projects (200 residences and above)” within the scope of housing Projects is in Annex-2 of the Regulation. Mass housing projects include multiple buildings and are mostly performed by TOKİ. Since Component 2 includes the demolition/retrofitting/reconstruction of risky buildings that are not located in a risky area or urban transformation area, it can be concluded that the sub-projects will not be in the scope of the national EIA legislation. As mentioned before, similar to all kinds of implementations and activities of the Project, more stringent standards, i.e., WB ESSs within that scope, will be applied for impact assessment aspects.

## National Laws on Social Impacts

### National Laws on Labor & Working Conditions

**Occupational Health and Safety**

In recent years, Turkiye has carried out a reform to improve the national OHS system by adapting a number of international and regional standards within the national level requirements for the prevention of occupational risks defined in the ILO Occupational Safety and Health Convention No. 155 of 1981. The Convention was ratified by Turkiye in 2005 together with the Occupational Health Services Convention No. 161 of 1985 and Turkiye has also been a party to the Labor Inspection Convention No. 81 of 1945 since 1951. Turkiye adopted the Occupational Health and Safety Improvement Framework No. 187 of 2006 in 2014.

In 2012, an independent OHS Law No. 6331 came into force (20 June 2012). OHS Law regulates workplace environments and sectors (both public and private) as well as all classes of workers, including part-time employees, interns and apprentices. The legislation is comprehensive and generally applies to all sectors and many industries.

**Labor and Working Conditions**

Turkiye is a party to numerous conventions of International Labor Organization (ILO) including, but not limited to, equal treatment of employees, gender equality, child labor, forced labor, OHS, the right to organize and minimum wage. Accordingly, Labor Law No. 4857 in force in Turkiye is largely in line with the requirements of ESS2.

There is also secondary legislation that may be applicable to the Project, including regulations regarding annual leave, working hours, overtime, minimum wage, and female and child workers. The MoLSS has also published various communiqués and circulars that can be applied during the Project implementation, laying the groundwork for the implementation of the Labor Law.

### National Laws on Community Health and Safety

The main national laws covering ESS4 (Community Health and Safety) are as follows:

* General Health Protection Law No. 1593
* Law No. 5378 on the Disabled
* Law No. 5188 on Private Security Services
* Law No. 7269 on the Aids to be Given and Measures to be Taken Due to Disasters Affecting Public Life
  + Building Earthquake Regulation in Turkiye (O.G. No. 30364 of 18.03.2018)
  + Disaster Regulation for Infrastructure (O.G. No. 26435 of 15.02.2007)
* Law No. 4708 on Building Auditing (Construction and Usage Permits)
* Zoning Law No. 3194 (Construction and Usage Permits)
* Law No. 6306 on Transformation of Areas Under Disaster Risk

**Building Earthquake Regulation in Turkiye**

The purpose of this Regulation is “*to identify the required rules and minimum conditions in order to design and construct, under seismic effect, official and private building and building-like structures, partly or completely, which are planned to be re-built, modified or expanded, and to assess and reinforce the performance of the existing buildings under seismic effect*”. The main principle of earthquake resistant design of new buildings according to this Regulation is to limit the formation of permanent structural damage in order to ensure that the structural and non-structural system elements in the buildings are not damaged in mild earthquakes, the damage that may occur in structural and non-structural elements in moderate earthquakes is limited and repairable, and to ensure life safety in severe earthquakes.

*“Definition of Irregular Buildings*

*Regarding the definition of irregular buildings, the design and construction of which should be avoided due to their negative behavior against earthquakes, the situations that cause irregularities in the plan and in the vertical direction are given in Table 2.1, and the conditions related to them are given in 2.3.2.*

*2.3.2. Conditions Regarding Irregular Buildings: The conditions for irregularity conditions defined in Table 2.1 are given below:*

*2.3.2.1 – A1 and B2 type irregularities are the irregularities that are effective in the selection of the earthquake calculation method, as specified in 2.6.*

*2.3.2.2 – In buildings with A2 and A3 type irregularities, in first and second degree seismic zones, it shall be verified by calculation that floor slabs can safely transfer seismic forces within their own planes between vertical structural system elements.*

*2.3.2.3 – In buildings with B1 type irregularity, if the sum of the infill wall areas on the ith floor is more than the one on the upper floor, the infill walls will not be taken into account in the calculation of ηci. In the range of 0.60 ≤ (ηci)min < 0.80, the structural system response coefficient given in Table 2.5 will be multiplied by the value of 1.25 (ηci)min and applied to the entire building in both earthquake directions. But it will never be ηci < 0.60. Otherwise, the earthquake calculation will be repeated by increasing the strength and stiffness of the weak floor.*

*2.3.2.4 – Conditions for buildings with type B3 irregularity are as follows to be applied in all seismic zones: (a) It is never allowed to place columns on top or end of cantilever beams or gussets formed in the lower columns at any floor of the building.”*

**Legal Framework and Practices Regarding Risky Buildings in Turkiye**

The process related to the retrofitting/demolition/reconstruction of the risky buildings against disaster risk in Turkiye is regulated by the “Law No. 6306 on Transformation of Areas Under Disaster Risk” (hereinafter referred to as the “Law No. 6306” or simply the “Law”) and the “Regulation of the Implementation of Law No. 6306” (hereinafter referred to as the "Implementing Regulation").

According to the Law, "risky area" is defined as "an area determined by the President, which carries the risk of causing loss of life and property due to the ground structure or the construction on it", and "risky building" is defined as a structure that is *inside or outside* the risky area, has completed its economic life, or has a risk of collapse or severe damage, which is determined based on scientific and technical data. Besides, it should be noted here that, application of the owners for risky building identification is a priority and relevant process is almost always being performed by this way (i.e., through application of the owners).

In the first Article of the Law, the purpose of the Law is defined as “to determine the procedures and principles regarding the improvement, evacuation and renewal of the areas under disaster risk and the lands where there are *risky structures outside these areas*, in order to establish healthy and safe living environments in accordance with the norms and standards of science and art." In this respect, the Law and the Implementing Regulation are the applicable national legislation components for “risky buildings outside the areas officially defined as risky areas and/or urban transformation areas” within the scope of the Project.

**Risky Building Process**

*Risk Identification*

Identification of risky buildings is done principally by the building owners or their legal representatives, at their own expense, within the framework of the procedures and principles set forth in the Implementation Regulation.

Within the scope of the law, the risky building detection process starts with the application of any of the building owners to the relevant licensed institution, and upon the acceptance of the application by the relevant licensed institution, the building record is created by obtaining the "Building Identity Number" through the GDIUTS’, ARAAD information system for the building, and subsequently, the report for the said structure prepared by technical examinations in accordance with the procedures and principles specified in the "Principles Regarding the Risky Building Detection" presented in Annex-2 of the Implementation Regulation, signed with electronic signature by the relevant licensed institution and sent to the relevant Administration through the ARAAD information system.

*Risky Building Identification*

According to Annex-2 Principles Regarding the Risky Building Detection, the reports regarding the buildings which are determined as risky by the Licensed Institution/Organization through application of the owners, are submitted to the relevant Governorate (Provincial Directorate of Environment, Urbanization and Climate Change) by the Licensed Institution/Organization, or to the Administration (“Municipality”) in case the MoEUCC transfers its authority.[[18]](#footnote-19) The reports are reviewed by the relevant Governorate (Provincial Directorate of Environment, Urbanization and Climate Change) or the Municipality, and if any deficiencies are detected, they are sent back to the Licensed Institution/Organization for necessary corrections. In the event that no deficiencies are detected, or the deficiencies are corrected, risky buildings are reported to the Directorate of Land Registry within ten working days at the latest.

*Informing the Owners*

After identification of a "risky building" within the scope of Law No. 6306 and approval of risky building identification by the relevant Governorate (Provincial Directorate of Environment, Urbanization and Climate Change) or by the Administration in case of transfer of authority; the relevant land registry directorate puts a "risky building annotation" in the declarations section of the land registry of the immovable and the necessary notifications are made to the real and personal right holders of the building has been determined as a “risky building”. In this way, with the risky building annotation being placed in the declarations section of the land registry of the building that was determined as a risky building; it is ensured that the structure in question poses a risk in terms of life and property safety in transactions such as buying-selling and leasing. In addition, it is highly probable that the tenants residing in the risky building or the holders of limited real rights are aware of the risky building determination procedures made about the building in the ordinary course of life.

Notifications made to the owners of the buildings about the buildings that are determined as risky buildings within the scope of the Law No. 6306 are made in accordance with the Notification Law No. 7201. It notifies the owners of the building that is determined as a risky building that a "risky building annotation" has been placed in the declarations section of the land registry of the relevant land registry office. In this notification, it is also stated that within fifteen days from the date of notification, an objection can be made to the Directorate[[19]](#footnote-20) in the place where the risky building is located or to the relevant Municipality in case the MoEUCC transfers its authority, and otherwise the risky building must be demolished within the period to be specified by the Municipality as of the notification date. The notification made by the Directorate of Land Registry is also notified to the Provincial Directorate or to the Municipality in case the MoEUCC transfers its authority.

*Objection to the Risky Building Detection*

An objection can be made against the risky building detection by the building owners or their legal representatives to the Directorate (Provincial Directorate of Environment, Urbanization and Climate Change) of the place where the building is located, or to the Administration in case of transfer of authority by the MoEUCC. It is checked by the Directorate (Provincial Directorate of Environment, Urbanization and Climate Change) or by the Administration whether the objection is made within the time limit and by the building owner or its legal representatives. Objections not made in due time and not made by the owner of the building or, in case of death, by the heirs of the owner, will not be processed. Objection petitions and reports regarding the objectionable identification are sent to the Directorate in the province where the technical committee authorized for that province is located, by the Directorate or the Administration at the location of the building. In cases where the checked objections do not comply with the above-mentioned conditions, the objections are not processed.

In order to evaluate the possible objections to be made against the risky building identifications, sufficient number of technical committees are formed where deemed necessary by the MoEUCC. The technical committee is comprised of seven members, with the participation of four members from universities and three members, two of whom are civil engineers and one of them a geology or geophysics engineer, working in the organization of the MoEUCC, and their substitutes.

In the event of an objection to the identification of a risky structure, the Technical Committee examines whether the risky structure identification report has been prepared in accordance with the Annex-2: Principles Regarding the Detection of Risky Structures, regardless of the reason for the objection shown in the objection petition. In case of technical deficiencies in the risky building identification report, it is decided to send the report to the licensed institution or organization for necessary corrections, and after all the deficiencies in the report are corrected, the final decision is made as to whether the building is risky or not risky. If deemed necessary, the technical committee may personally inspect the building of objection on site, or may request an on-site inspection of the structure from the Directorate or, in case of delegation of authority by the MoEUCC, from the Administration. However, the final decision on whether the building is risky or not is made according to the state and characteristics of the building at the time of the risky structure identification. Decisions taken by the technical committee are written by stating their technical reasons; signed by the chairman and members. All decisions taken by the technical committee are notified to the Administration that makes or has made the determination, and only the final decision is notified to the objecting owner. In case the risk status of the building changes according to the final decision taken by the technical committee, the decision is also sent to the MoEUCC. Due to the provision that states “A re-examination cannot be carried out upon an objection made by another owner against the risky structure determination report, which was decided by the technical committee.” the risky building detection reports are examined and finalized by the Technical Committee with all their elements (whether they are prepared in accordance with the Principles Regarding the Detection of Risky Buildings) and the final decision is made as to whether the building is risky or not-risky.

If the risky building detection decision changes as a result of the consideration of the Technical Committee, this is reported to the relevant Directorate of Land Registry.

At this point, it should be noted that in case of objection to the risky structure detection explained in the Law and Implementing Regulation, or in case it is assessed that the acts and actions taken have caused an unjust treatment or loss of right, it is also possible to seek for judicial remedies.

*Demolition of Risky Buildings*

In the event that a risky building is detected, the Directorate requests the relevant Municipality to send necessary notifications and demolish the risky building. The owners of the immovable properties registered in the land registry as risky buildings by the Municipality are granted a period of not less than sixty days to demolish the risky buildings. In the notification sent to the owners in this context, it is informed that the owners who use the risky building as tenants or limited real rights holders must be notified by the owner for evacuation.

The Municipality performs an on-site control to determine whether the risky buildings are demolished by their owners within the given period (that is at least sixty days), and if it is detected that the risky building has not been demolished, a notification is sent, stating that the building will be demolished by the administrative authorities, granting an additional period of less than thirty days.

At the end of this period, if the risky buildings are not demolished by the owners, the relevant institutions and organizations are requested to cut off the supply of electricity, water and natural gas to the risky buildings and to stop the services provided, by also taking the opinion of the right holders. Upon the request of the Municipality, it is obligatory for the relevant institutions and organizations to stop services such as electricity, water and natural gas provided to risky buildings. In such cases, evacuation of people and commodities from the risky buildings and demolition processes are handled or procured to be handled by the Municipality with the support of the law enforcement to be provided by the local authorities. At this stage, the risky buildings that cannot be demolished are reported to the Directorate by the Municipality in two-month periods, and the buildings that cannot be demolished are demolished or procured to be demolished by the MoEUCC or the Directorate. Owners are responsible for the costs of evacuation and demolition made or procured to be made by the MoEUCC or the Municipality in proportion to their shares.[[20]](#footnote-21) .

*Post Demolition Process and Implementation*

In the parcels where risky buildings are located, without seeking the requirement of demolition of the buildings and regardless of whether they are a stakeholder of the risky building or not, the decision on their allotment, division, abandonment, creation and registration to the land registry processes, re-construction of a new building, sale of shares, re-utilization in return for flat or revenue sharing and/or other methods is taken by at least two-thirds majority of the stakeholders in proportion to their shares. This decision, together with the proposal including the terms of the agreement, is notified to those who disagree with the decision. In this notification, it is stated that if the decision and the offer are not accepted within fifteen days, the land shares will be sold by auction method to other stakeholders who have reached an agreement, not less than the fair value to be determined or to be made to be determined by the MoEUCC and if they are not sold to the stakeholders they will be sold to other stakeholders who agreed or third parties on the condition that they agree on processing pursuant to the concluded agreement. Afterwards, in line with the procedure determined in the Implementing Regulation, the sale of the land shares of the owners who do not agree with the decision taken with at least two-thirds of the stakeholders in proportion to their shares is carried out by the Directorate or, if the authority has been transferred, by the Municipality. When the sales transactions are completed, the implementation starts.

**Specific Provisions and Practices Regarding Risky Building Process**

*Structures and Buildings Where the Process Can Be Applied*

There is no obligation for a building license in order to perform a risk identification for any building by following the Principles Regarding the Risky Building Detection, through application of the owners and to proceed with the relevant process.

However, abandoned and unfinished buildings cannot be considered within the scope of the Law. Risky building detection as specified in the Implementing Regulation can be carried out for the structures that can be used on their own, that are covered and that people can enter and that can be used by people to reside, work, entertain, rest or worship, and structures that serve to protect animals and goods. Buildings that are under construction but are not inhabited and structures whose structural integrity has been disrupted due to being abandoned or partially demolished cannot be subject to risky building detection.

*Provisions on Blocking the Process*

According to the Law, a criminal complaint can be filed with the Office of the Chief Public Prosecutor, in accordance with the relevant provisions of the Turkish Penal Code No. 5237, depending on the action and state of the situation, against those who prevent the detection, evacuation, demolition and other operations (e.g., valuation) of risky buildings. In addition, criminal and disciplinary provisions are applied to public officials who do not fulfil the requirements of their duties regarding the detection, the evacuation and demolition of risky buildings.

*Retrofitting Rather than Demolition of Risky Buildings*

In the event that the risky building is to be retrofitting instead of demolished, within the given periods of not less than sixty days for the risky building to be demolished, it is necessary for the owners to have technical possibility of the retrofitting determined, to take a retrofitting decision as specified in the Condominium Law, to have a retrofitting Project prepared and to obtain a license within the framework of the Zoning Legislation. After the retrofitting work is completed within the period to be determined by the administration issuing the license according to the nature of the retrofitting, an application is made to the Directorate to remove the risky building indication in the land registry.

*Guarantees and Termination Processes*

If real and private law legal entities are performing an application on the parcels where the risky building(s) are located, a guarantee of 10% of the estimated cost of the building must be submitted to the Administration before the construction license is obtained by the construction contractor who will undertake the construction work.

If a contract has been signed between the owners and the contractor company, but the construction work of the new building has not been started, it is possible to terminate the contracts in accordance with the provisions of the fourteenth paragraph of Article 6 of the Law. However, in order to carry out the termination procedures, first of all; the construction works of the new building should not have been commenced owing to reasons attributable to the contractor and also, the owners need to reach a decision for termination of the contracts with at least two thirds majority pro rata their shares (this decision taking is not bound by any condition of form whatsoever) despite the fact that the right holders have fulfilled their obligations in accordance with the provisions of the contract to start the construction work within one year from the date of the contract signed with the last contracted owner, and that there is no judicial or administrative decision or similar valid reason to prevent the construction work. In this case, if an application is made to the relevant Provincial Directorate together with the decision taken with at least two-thirds of the owners for the termination of the contracts and the information and documents indicating that the construction work has not started due to the reasons arising from the contractor company, it can be examined whether the termination conditions are fulfilled.

*Rental Assistance and Other Supports*

According to the Law and Implementing Regulation, the following parties may be supported as described below:

* Rental assistance can be provided to the owners of the buildings evacuated by agreement. The duration of assistance is 18 months in *risky buildings outside the risky area.*
* According to the Decision Regarding Assistance to Those Who Use the Risky Buildings Within the Coverage of Law No. 6306 Without Being Owner, Tenant or Having Limited Real Rights, which was enacted by the Council of Ministers Decision No. 2016/8663 within the scope of the Law, it is possible following rental assistances in risky buildings:
* 18 months for *those who are entitled,*
* Twice the monthly rental assistance for slum owners.
* Rental assistance can be given to those residing in risky buildings or operating workplaces as limited real rights holders, five times the determined monthly rent, and to those residing or operating workplaces as tenants twice determined monthly rent amount in lumpsum.
* Five times the monthly rent assistance can be paid to the supers of the risky building who are residing in the supers’ flat of the risky building in question.
* Interest support can be given to those whose building is determined to be risky and who will use loans from banks to build or acquire their residence or workplace with their own means. Principles regarding interest support are determined by Presidential Decree.
* Tenants who want to buy a house can benefit from the interest support, provided that they have lived in the risky structure for at least 1 year.
* After the risky building process, municipalities do not charge any fees for the new construction area up to one and a half times the existing construction area, regardless of the change in function, in the event that real persons and private entities makes implementations to the parcels where the risky buildings are located.
* Instead of rental assistance, temporary housing or workplace can be allocated from the date of evacuation until the completion date of residences and workplaces, to the owners of the buildings evacuated by agreement, if possible.

As a final note, it should be noted here that, only one of the applications (i.e., interest support or rental assistance) is utilizable within the scope of Law and Implementing Regulation provisions. In other words, relevant party cannot benefit from both rental assistance and interest support[[21]](#footnote-22).

*Some Provisions Related to the Rights and Practices after the Demolition of Risky Buildings*

After the demolition of risky buildings, the real and personal rights contained in the register of these real estates as well as any annotation restricting or prohibiting the right of alienation, remain on the shares. These rights and annotations do not hinder the execution of transactions regarding amalgamation, allotment, division, abandonment, registration, construction servitude and condominium ownership in title deed and consent is not sought for these transactions. The rights and annotations specified at the stage of new construction servitude and condominium establishment are maintained only on the independent sections that will fall to the owner who is liable for the said rights and annotations, without seeking consent.

In a parcel:

* In case there is more than one risky building and all of these buildings are identified as risky buildings, the transactions to be carried out after demolition are decided by at least two-thirds majority of all owners in proportion to their shares, regardless of whether they are a stakeholder in the building.
* If there is more than one building and some of these buildings have been detected as risky buildings:
* The transactions to be carried out are decided by at least two-thirds majority of all owners of the buildings detected as risky in proportion to their shares.
* The construction permit to be issued for the reconstruction of the buildings that are detected to be risky, on the condition that the rights of the other owners are not adversely affected, will be issued upon the request and consent of only the owners of the risky buildings, not all the owners.
* For the construction servitude to be established for the reconstruction of risky buildings, only the request and consent of the owners of the risky buildings are sought, provided that it does not affect the land share of the other owners.
* If it is possible to allot the area where the buildings detected as risky are located, from the area where the risk-free or risky buildings have not been detected, allotment, division, abandonment, creation and registration to the land registry are done or procured to be done ex officio.

**Evaluation of Regulations Regarding the Registration of Illegal Buildings in the Scope of Preparedness for Disaster Risks**

In the urbanization process in Turkiye, rapid migration from rural to urban has brought along some problems, including irregular urbanization. In this process, illegal construction, which increased in the cities, emerged as one of these problems.

In the urbanization process of Turkiye, which has been going on since 1950 and accelerated after 1980, illegal settlements have emerged in the areas inside the cities, which concentrated on the peripheries of the cities and with the growth of the cities over time. The slums built by the people who migrated to the vacant areas of the cities, treasury lands or municipal lands without permission have become the neighborhoods and districts of the cities, and the areas with dense population.

The buildings in these areas contain many risks, especially in the cities that are prone to disasters and in disaster situations, due to their poor material quality and poor physical conditions.

Arrangements made in order to reduce the risks posed by these buildings, which have increased in Turkish cities until today and can become more risky by adding additional floors, to register the structures, to identify and transform unqualified and irregular housing, have come to the fore.

Slum Law No. 775

The Slum Law No. 775 is a law that has been prepared and put into effect in order to enable the transformation of slums, most of which are seen as risky structures, especially in provinces with disaster risk. In accordance with the Law No. 6306 on the Transformation of Areas Under Disaster Risk, with the decision of the Council of Ministers "on Providing Aid to Those Who Occupy Risky Buildings Without being Owners, Tenants or Limited Real Rights within the Scope of Law No. 6306", those living in slums will be able to benefit from rental assistance and will be able to benefit from the housing or property they will acquire under the law. It has become possible for businesses to benefit from low-interest loan support.

The scope and description of the law are given as follows;

Article 1 – The provisions of this law will apply to the rehabilitation and liquidation of existing slums, prevention of re-construction and measures to be taken for these purposes.

Article 2 – The term (slum) mentioned in this law refers to unauthorized constructions built on land or plots that do not belong to them without the consent of the owner, regardless of the legislation and general provisions regulating zoning and construction works.

Article 4 – Foundation immovable properties with and without buildings, which are located within the rehabilitation, liquidation and prevention zones of slums, outside the scope of the second paragraph of Article 3, become the property of the relevant municipalities to be used for the purposes specified in this law, under the following conditions and by paying the price in accordance with the general provisions: a) The cost of land and plots; It is determined by agreement between the relevant municipality and the Foundations Administration, taking into account the characteristics of the city, town and region where it is located, the state of the public services and facilities that have been made or to be made, and other issues. b) If there is any building belonging to the Foundations Administration on these lands and plots, the cost of this building is also taken into account. c) Disputes regarding the price are settled by the local courts of first instance with a simple procedure. These disputes cannot prevent the registration of title deed. The Foundations Administration and the title deed offices are obliged to notify the relevant municipalities within 2 months at the latest, upon their request, the lists clearly stating the type, quantity, location and other characteristics of the foundation immovable properties. Municipalities may request the registration of these immovable properties in whole or in stages, according to their own financial strengths and programs. Foundation immovable properties necessary for public services and facilities to be built by the State or other public legal entities in the aforementioned regions are also transferred to these Administrations in accordance with the above principles. Article 5 – If necessary, privately owned lands and plots located within the municipalities' slum rehabilitation and liquidation areas or coinciding with the prevention zones to be re-established in accordance with the provisions of this law, and if there is a building or any other facility in them, these structures and facilities, as specified in this law. With the permission of the Housing Development Administration, they can purchase or expropriate in agreement with their owners, to use them for other purposes.

### National Laws on Land Acquisition

Within the scope of the legal framework in Turkiye, land acquisition/expropriation issues are regulated by the Expropriation Law No. 2942.

More detailed information on National Laws on Land Acquisition can be found in the Resettlement Framework prepared for this Project.

## International Agreements & Conventions

Turkiye has become a party to a number of international agreements and conventions/protocols to contribute to the management of environmental resources, biodiversity, occupational health and safety (OHS) and cultural heritage on a global and regional scale. The most basic of these agreements and conventions/protocols are listed herewith below:

**Environment**

* Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer, (Official Gazette [O.G.] No. 20629 of 8-9.9.1990)
* UN Framework Convention on Climate Change (O.G No. 25266 of 21.10.2003)
* Kyoto Protocol to the UN Framework Convention on Climate Change (O.G. No. 27144 of 17.02.2009)
* United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa. (UNCCD) (O.G. No. 23258 of 14.2.1998)
* Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) (O.G. No. 17150 of 14.11.1980)
* Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea (The Dumping Protocol) (O.G. No. 24854 of 22.8.2002).
* Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (Hazardous wastes protocol) (O.G. No 25346 of 14.1.2002)
* Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources, Athens 1980 (Turkiye: O.G. No. 19404 of 18.3.1987)
* Protocol on Specially Protected Areas in the Mediterranean, Geneva 1982, (signed on 6.11.1986) (O.G. No. 19968 of 23.10.1988)
* Convention on the Protection of the Black Sea against Pollution and other related Conventions (Bucharest Convention) (O.G. No. 21869 of 06.03.1994)
* Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention) (O.G. No. 21804 of 30.12.1993)
* Stockholm Convention on Persistent Organic Pollutants
* Convention on Long-Range Transboundary Air Pollution (CLRTAP) (Turkiye: O.G. No. 17996 of 23.3.1983)

**Biodiversity**

* Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (Turkiye: O.G. No. 18318 of 20.2.1984)
* The Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar) (O.G. No. 21937 of 17.5.1994)
* Convention on Biological Diversity (O.G. No. 22860 of 27.12.1996)
* Cartagena Protocol on Biosafety to the Convention on Biological Diversity (O.G. No. 25148 of 24.06.2003)
* The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (O.G. No. 22672 of 20.06.1996)
* International Convention for the Protection of Birds, Paris 1959 (Turkiye O.G. No.12480 of 17.12.1966)

**Cultural Heritage**

* European Convention on the Protection of the Archaeological Heritage (O.G. No. 23780 of 08.08.1999)
* Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris 1972 (O.G. No. 17959 of 14.2.1983)
* European Cultural Convention on 19.12.1954 (O.G. No. 9635 of 17.6.1957)
* Convention for the Protection of the Architectural Heritage of Europe (O.G. No. 20229 of 22.07.1989)
* UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property
* UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage
* UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions

**Occupational Health and Safety**

* International Labor Organization Safety and Health in Construction Convention (O.G. No. 29190 of 29.11.2014)
* International Labor Organization Occupational Health and Safety and Working Environment Convention (O.G. No. 25345 of 13.01.2004)
* ILO Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labor (O.G. No. 24307 of 03.02.2001)
* International Labor Organization Forced Labor Convention (O.G. No. 23243 of 27.01.1998)
* International Labor Organization Minimum Age Convention (O.G. No. 10220 of 02.06.1959)
* International Labor Organization Freedom of Association and Protection of the Right to Organize Convention (O.G. No. 21432 of 22.12.1992)
* ILO Convention on Workers' Representatives (O.G. No. 21432 of 11.12.1992)
* International Labor Organization Human Resources Development Convention (O.G. No. 21433 of 12.12.1992)
* International Labor Organization Employment Policy Convention (O.G. No. 15769 of 20.11.1976)
* International Labor Organization Social Security (Minimum Standards) Convention (O.G. No. 13922 of 10.08.1971)
* International Labor Organization Equal Remuneration Convention (O.G. No. 12484 of 22.12.1966)
* International Labor Organization Discrimination (Employment and Occupation) Convention (O.G. No. 12484 of 22.12.1966)
* International Labor Organization Abolition of Forced Labor Convention (O.G. No. 10686 of 21.12.1960)
* International Labor Organization Right to Organize and Collective Bargaining Convention (O.G. No. 7884 of 14.08.1951)

## World Bank Environmental & Social Standards

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

This Standard sets out the requirements for assessing, managing and monitoring environmental and social risks and impacts associated with each phase of World Bank sponsored Projects.

ESS1 must be addressed in the assessment process, including the environmental and social impact/risks specified in Article 26 and presented below.

* Environmental Risks and Impacts covering the following:
* Projects defined in the Environmental Health and Safety Directive
* Community safety
* Climate change and other cross-border or global risks and impacts
* Materials that threaten the conservation, maintenance and restoration of natural habitats and biodiversity
* Ecosystem services and use of living natural resources (fishing, forests, etc.)
* Social Risks and Impacts covering the following:
* Threats to human health and safety, security
* Situations where Project impacts pose a risk to individuals or groups who may be disadvantaged due to their particular circumstances,
* Impacts on the livelihoods of the households, communities or individuals,
* Impacts on the continuation and accessibility of daily life
* Cultural Heritage risks include:
* The emergence of negative effects that may prevent continuity in tangible and intangible cultural structure, heritage or forms between the past, present and future,
* Protecting the cultural heritage from the negative effects of Project activities,
* The emergence of effects that will hinder the sustainability of cultural heritage.

**ESS2: Labor and Working Conditions**

Environmental and Social Standard 2 emphasizes the importance of employment and income generation for comprehensive financial development and poverty reduction. Healthy working conditions must be created by treating workers fairly.

**ESS3: Resource Efficiency, Pollution Prevention and Management**

This standard points to the requirements of resource efficiency and pollution prevention and management with a holistic approach in practice. The aim is to minimize the pollution caused by the Project with the sustainable use of resources.

**ESS4: Community Health and Safety**

ESS4 highlights issues of health, safety and security risks and their impact on communities due to Project activities. Particular attention must be paid to communities and individuals who may be vulnerable due to the impacts and risks of the Project.

**ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement**

This standard emphasizes that involuntary resettlement must be avoided. If unavoidable, necessary measures must be taken to reduce the negative impacts on displaced people.

**ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources**

Biodiversity conservation and the sustainability of natural resources are the main components of sustainable development. Biodiversity, supported by all ecological functions, including forests, must be preserved.

This standard also addresses the sustainable management of primary natural production and living natural resources and recognizes the need to consider the livelihoods of Project-affected parties, including those with access to or use of biodiversity or living natural resources.

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

This standard does not apply to the Project.

**ESS8: Cultural Heritage**

This standard indicates that cultural heritage provides continuity between the past, present and future in tangible and intangible forms. Necessary measures must be taken for the protection of cultural heritage in practices.

**ESS9: Financial Intermediaries** ILBANK, acting as a Financial Intermediary, will be implementing Component 3 and 4b of the Project. They have prepared an ESCP, ESMF, RF and SEP. They are also establishing an Environmental and Social Management System.

**ESS10: Stakeholder Engagement and Information Disclosure**

The importance of open and transparent participation among stakeholders is emphasized as it is a necessary element of good international practice. It contributes to Projects in terms of effective stakeholder engagement, improving environmental and social sustainability, increasing the acceptance of practices and successful Project design.

## WBG EHS Guidelines

In addition; there are WBG (World Bank Group) EHS Guidelines[[22]](#footnote-23) which are technical reference documents with general and industry-specific examples of GIIP. When one or more members of the WBG are involved in a Project, these EHS Guidelines are applied as required by their respective policies and standards.

The WBG General EHS Guidelines contain information on environmental, health, and safety issues potentially applicable to all industry sectors. The WBG General EHS Guidelines cover:

*Environmental*

* Air Emissions and Ambient Air Quality
* Energy Conservation
* Wastewater and Ambient Water Quality
* Water Conservation
* Hazardous Materials Management
* Waste Management
* Noise
* Contaminated Land

*Occupational Health and Safety*

* General Facility Design and Operation
* Communication and Training
* Physical Hazards
* Chemical Hazards
* Biological Hazards
* Radiological Hazards
* Personal Protective Equipment (PPE)
* Special Hazard Environments
* Monitoring

*Community Health and Safety*

* Water Quality and Availability
* Structural Safety of Project Infrastructure
* Life and Fire Safety (L&FS)
* Traffic Safety
* Transport of Hazardous Materials
* Disease Prevention
* Emergency Preparedness and Response

*Construction and Decommissioning*

* Environment
* Occupational Health and Safety
* Community Health and Safety

## Comparison between Turkish Regulations and the World Bank Standards & Related Key Gaps

The main differences between national legislation and WB ESSs can be separated into three groups in general as (1) categorization of Projects, (2) detail of impact assessment process, and (3) public consultation implementations.

**Identifying the Categories of Projects**

According to the World Bank Environmental and Social Policy, Projects are classified into one of four risk classes: Related potential risks and impacts, such as the type, location, sensitivity and scale of the Project can be summarized as High Risk, Substantial Risk, Medium Risk or Low Risk, taking into account the nature and magnitude of potential environmental and social risks and impacts, and other risk areas that may be relevant to the provision of environmental and social mitigation measures and results.

Unlike the national EIA Regulation (where the Projects are classified in two categories as Annex I and Annex II Projects), there are no clear limit values distinguishing the Project classes from each other or, there is no ready-made list of Project types for classification; instead, Projects are screened on a case-by-case basis in the World Bank's environmental and social risk classification.

**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.

Comparison of the indicative outline required by the WB for ESIA, which is provided in the ESF, with the general format of a Turkish EIA indicates a number of key differences as follows:

* 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);
* 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, and limited assessment regarding use of resources and greenhouse gas (GHG) emissions in the Turkish EIA);
* social impact assessment 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 and vulnerable groups and gender related issues;
* there are a limited requirements in the Turkish EIA to cover risks and impacts related to (i) community health and safety; (ii) occupational health and safety; and (iii) labor and working conditions;
* limited or no requirement in the Turkish EIA to assess and mitigate cumulative impacts; and
* limited emphasis on the associated facilities in the Turkish EIA.

**Public Consultation and Disclosure**

Stakeholder engagement pursuant to ESS1 is an integral part of environmental and social assessment and must be conducted in accordance with ESS10. In this context, the Borrower must identify the different stakeholders (Project-affected parties and other interested parties, including disadvantaged or vulnerable people) and, in consultation with the Bank, must develop and implement a Stakeholder Engagement Plan (SEP) commensurate with both the nature and scale of the Project and its potential risks and impacts. The SEP must describe the timing and methods of interacting with stakeholders throughout the lifecycle of the Project, as well as explain the extent and timing of information to be communicated to parties as well as the type of information that will be requested from them. The Borrower must disclose Project information within a time frame that allows for meaningful consultation with stakeholders on Project design to allow stakeholders to understand the risks and impacts and potential opportunities of the Project.

The national EIA Regulation obliges "preliminary scoping" for Projects that only require an EIA and only the environmental assessment to be announced with the justification. However, the ESS10 standard does not specify a precise number and method for public consultation and information disclosure, but rather requires an ongoing approach to stakeholder engagement that will be decided throughout the Project lifecycle, commensurate with the nature, scale and impact size of the Project. It must also be noted at this point that possible sub-projects within the scope of Component 2 will not be subject to the national EIA Regulation.

In general, it is envisaged to close the gap comprised of the main differences between WB ESSs and national environmental and social legislation as follows:

**For ESS1**: Environmental and social assessment activities specific to sub-projects will be performed as follows:

* Preparation of province-based ESMPs (for details please see Section 6.2.1 and Annex 3)
* Evaluation of eligibility of the proposed sub-projects (for details please see Section 6.2.2 and Annex 1),
* Implementation of environmental and social screening, integrated with the above assessment (for details please see Section 6.2.2 and Annex 2),
* Subsequently, identification and preparation of relevant environmental and social assessment & management tool. This can be a neighborhood-level ESIA / sub-project specific ESMP Checklist/ Type-III sub-project specific Environmental and Social Action Plan (ESAP), which will be prepared as per the outcomes of the E&S Audit and/or combination of them (please see Section 6.2.3 for details), and
* Implementation of relevant environmental and social assessment and management tool(s) during the relevant demolition/retrofitting/reconstruction stage.

**For ESS2**: The Labor Management Procedure (LMP) has been developed as part of the Environmental and Social Framework documents. The LMP provides guidance on necessary mitigation or management practices, such as the worker grievance mechanism, code of conduct, as envisaged in ESS2 and related World Bank EHS guidelines. The LMP developed for the Project will be implemented site specifically and minimum requirements will always be met.

In accordance with the LMP developed, each contractor who will undertake any retrofitting/reconstruction work will be responsible for collecting, evaluating and if possible, resolving complaints/concerns/ opinions/suggestions expressed by any stakeholder including workers. Besides, the LMP includes the Code of Conduct (CoC) which will be applicable to all kinds of personnel working within the scope of the Project, including contractors’ workers. Contractors are responsible for raising awareness and educating all workers about the procedures and principles in the CoC and grievance mechanism.

**For ESS3**: Risks and impacts related to ESS3 will be addressed primarily through ESMPs that will be integrated into each sub-project by implementing the process described for ESS1. Sub-management plans such as Pollution Prevention and Waste Management will also be prepared for each province and integrated in a way that is specific to sub-projects.

**For ESS4**: Risks and impacts related to ESS4 will be addressed primarily through ESMPs and sub-management plans that will be integrated into each sub-project by implementing the process described for ESS1. Sub-management plans (e.g. Community Health and Traffic Management Plan etc.) will be developed as part of the ESMPs, depending on the level of risks/impacts to be identified for each situation.

**For ESS5**: The Resettlement Framework (RF) is developed as part of the Environmental and Social Framework documents. For each sub-Proje, it will be implemented in line with the sub-project requirements.

**For ESS6**: The sub-projects that have significant adverse impacts on Critical Habitat or key biodiversity areas will be non-eligible for the Project support. This assessment will be made through the screening process described for ESS1. However, it should be noted that the management of issues such as air emissions and waste disposal that indirectly affect biodiversity and the ecosystem will be carried out through the implementation of the relevant ESMPs and other environmental and social documents.

**For ESS7**: This standard does not apply to the Project.

**For ESS8**: The Project will not finance any activities on the registered objects of cultural heritage or in their immediate vicinity from where Project activities may cause physical damage of cultural heritage objects or have adverse aesthetic impacts on them. However, impacts on the unknown elements of cultural heritage may not be excluded. Therefore, the Chance Find Procedure (see Annex 13) will be implemented for all sub-projects for possible issues during construction.

**For ESS9:** Commercial bank(s) will be administering funds on behalf of the MoEUCC, rather than acting as formal Financial Intermediaries. Therefore, ESS9 does not apply to Components 1, 2, 4a and 5 of the Project. For Component 3, ILBANK has prepared an ESCP, ESMF, RF and SEP. They are also preparing an Environmental and Social Management System.

**For ESS10:** The Stakeholder Engagement Plan (SEP) prepared for the Project will be used throughout Project implementation, including general information disclosure on sub-projects and grievance mechanism.

# Potential Sub-projects

## Potential Sub-projects under Component 1

Component 1 of the Project aims to provide technical assistance to the MoEUCC and selected local government institutions vulnerable to disaster risks, to strengthen their capacity to develop, implement, and monitor green and resilient urban transformation programs. Within that scope, the financing under this component will be used mainly for consulting and non-consulting services. Relevant potential sub-projects are presented below:

* **Consulting Services** to support preparation of Urban Transformation Strategy Plan/Documents in Selected Municipalities: Via procurement of consulting services, it is planned to support 5 selected municipalities to develop their Urban Transformation Strategy Document. The Urban Transformation Strategy Documents will include information, documents and analyses regarding Urban Conditions Analysis (including city-wide risk assessment study), Data Collection and Prioritization of Urban Transformation Areas, Determination of Legal Basis, Stakeholder Engagement Plan, Determination of financial management model, Urban Transformation Implementation Timeline and Determination of Urban Design Principles. It will also include an assessment of multiple risk conditions, including death/injury risk, economic loss and environmental impacts, a roadmap of short, medium and long-term actions to mitigate risk; expectations and preferences of residents regarding risk reduction options; financing needs; and urban economic and social development, which is expected if urban transformation is undertaken in the field of work. It will be supported by analysis and an associated roadmap, maps and documentation.
* **Consulting Services** to Develop the Urban Transformation Platform / System for Acquisition and Processing of Government of Turkiye (GT) Urban Transformation Data / Activities: Via procurement of consulting services from a certified / eligible IT consulting company, an IT Platform / System will be developed to ensure sustainability of urban transformation, hence it is important to follow innovative technologies by constantly updating information technology systems used in Urban Transformation Process such as demolition, construction, communication, waste management, energy efficiency, etc. This IT Infrastructure will be integrated to the current A.R.A.A.D. (kentseldonusum.csb.gov.tr) IT System.
* **Consulting Services** to Provide Legal Support to Homeowners for Resilient Housing Reconstruction/Retrofitting under Component 2: Via procurement of consulting services, it is planned to receive legal support for the contracts made by beneficiaries with construction companies during construction period of sub-projects under Component 2.
* Knowledge Exchange on Successful Urban Transformation Experiences in Turkiye as a **Non-Consulting Service:** Under this activity it is aimed to share the Project outputs, experiences created through the Project and develop a dialogue. It would be helpful to evaluate successes and challenges linked to urban transformation processes. Comparison of the positive examples in the world and knowledge sharing will result in greater efficiency and better performance.

## Potential Sub-projects under Component 2

The specific reasoning of the Component 2 is the requirement for climate and disaster resilient housing units which, which will highly contribute to the resilience of the scoped cities against climate and disasters. Specifically, the Government of Turkiye faces several challenges in the implementation of the national regulatory framework supporting seismic and climate-resilient urban transformation. Key challenges include the need for greater affordability of retrofitting or demolishing and reconstructing risk-prone housing to meet resilient and energy efficient standards and leveraging available resources and mobilizing finance for municipalities to increase investments in resilient urban infrastructure. Accordingly, the sub-project types in accordance to the activity to be performed can be listed as below:

* **Type-I:** *The sub-projects with demolition and reconstruction* - buildings were registered as risky building, however, no demolition activity has been performed at the time of loan application
* **Type-II:** *The sub-projects with retrofitting* - buildings were registered as risky building, however, loan application is made for only retrofitting rather than demolition and reconstruction
* **Type-III:** *The sub-projects with only reconstruction* - buildings were registered as risky building and demolished before loan application, and the application is only made for reconstruction.

## Potential Sub-projects under Component 4a

Component 4a will finance consultant and non-consulting services, goods, training, and operating costs as required by the MoEUCC to implement the Project in conformance to the Bank policies and guidelines, including but not limited to monitoring and evaluation, reporting, procurement, financial management, and disbursement, environmental and social management, grievance mechanisms, as well as communication and outreach activities especially for Component 2. Relevant potential sub-projects are presented below:

* **Consulting Services** in the form of Hiring of Specialists to Support the Project Management Unit regarding Procurement, Financial, Technical Oversight, and Environmental and Social Issues: These individual specialists will be responsible from strengthening the capacity of PMU and be hired full-time. Details of this scope are elaborated under Section 6.
* **Consulting Services** to Supply Project Visibility and Accessibility:Via procurement of consulting services, Project visibility and accessibility will be ensured through preparation of a Communication Strategy, designing and printing advertisement related booklets, publications, and promotion brochures, and media promotion.
* **Consulting Services** to Improve Existing Grievance Mechanism for Risky Building Transformation: A consulting firm will be hired to support the improvement of the existing grievance mechanism for the Project. The consulting firm will propose a design for reporting/grievance mechanism that complements the existing GM, which must be designed in a way to gather grievances from all possible channels. In addition, refresher trainings will be conducted for the PMU, also representatives from municipalities, provincial directorates and Contractors & their relevant personnel on a quarterly basis.
* **Consulting Services** for the supervision of the Environmental and Occupational Health and Safety issues associated with the implementation of the Project’s construction activities: A qualified supervision company will be hired before the commencement of construction works and maintained, as needed throughout the Project duration.
* Procurement of **goods** for Component 1 and Component 4a: Procurement of office equipment & programs including a budgeting software as an accounting system.

## Potential Sub-projects under Component 5

This Component is included in accordance with the World Bank Operational Policy (OP) /Bank Procedure (BP) 10.00 (Investment Project Financing), paragraphs 12 and 13, for contingent emergency response through the provision of immediate response to an Eligible Crisis or Emergency, as needed. As per paragraph 13 of the mentioned Bank Policy, “*Disaster prevention and preparedness and capacity-building activities may be supported by a stand-alone Project with a contingent financing feature or may be embedded in a regular Project through a contingent emergency response component that, once triggered, is subject to the exceptional policy requirements set out in paragraph 12…”.* Within the context of the Project, Component 5 refers to the latter scenario defined in paragraph 13. Abovementioned exceptions are defined as follows in paragraph 12:

*“(a) The fiduciary and environmental and social requirements set out in OP/BP 4.01, OP/BP 4.10, OP/BP 4.11, OP/BP 4.12, the IPF Directive, and the Procurement Policy/Directive, that are applicable during the Project preparation stage may be deferred to the Project implementation stage. The environmental and social requirements exception for Category A Projects under OP 4.01 is only applicable to cases referred to in subparagraph 12(i) of Section III of this Policy.*

*(b) Such Projects are subject to special limits on the use of (i) PAs (see paragraphs 16-17 of Section III of this Policy) and, (ii) in the case of Projects supported by a Bank Loan, retroactive financing.*

*(c) When the beneficiary’s capacity to implement the needed activities is insufficient, the Bank may, at the request of the beneficiary, agree to the following alternative legal and operational Project implementation arrangements: (i) the Bank may enter into arrangements with relevant international agencies, including the United Nations, and national agencies, private entities, or other third parties; and (ii) where no viable implementation alternatives exist, the Bank may execute start-up activities financed under a grant from the Project Preparation Facility (see paragraphs 16-17 of Section III of this Policy) or a trust fund, following applicable internal Bank procurement rules.*

*(d) Alternative implementation arrangements referred to under subparagraph (c) above are limited to the time necessary to establish or restore the Borrower’s or the Implementing Entity’s capacity and, in all cases, are adopted in Projects that include capacity-building measures to enable a timely transfer of implementation responsibilities to the Borrower or the Implementing Entity. Proposals for Bank-executed start-up activities are limited to activities which involve the procurement of small contracts for goods and works, and the provision of technical assistance necessary to enable the Borrower or the Implementing Entity to undertake the execution of subsequent Project activities”*

However, as per the information obtained during the field works performed for this ESMF, the criteria implemented by the Disaster and Emergency Management Presidency’s (AFAD) Planning and Risk Reduction Department for “natural or human-made disaster or crisis” are very broad. Even a traffic accident resulting in the death of more than 10 people is classified as man-made disaster according to AFAD’s criteria. Therefore currently there is no available identification of specific sub-projects for this component.

# Environmental & Social Baseline Conditions

In this section, a general baseline of the environmental and social/socioeconomic conditions of Project provinces (Istanbul, Izmir, Kahramanmaras, Manisa and Tekirdag) are given. While preparing the section,

* information obtained during the fieldwork,
* online accessible resources,
* data obtained from the GDIUTS and various institutions, and
* literature studies were used.

Specifically for the field study stakeholders in five provinces were determined and visited. In depth interviews and focus group meetings were carried out.

Site visits and stakeholder engagements were carried out on the following dates.

* Istanbul: 19-21 July 2022
* Izmir: 9-11 November 2021
* Kahramanmaras: 18-19 November 2021
* Manisa: 11-12 November 2021
* Tekirdag: 18-19 November 2021

The interviews conducted within the scope of the field studies are summarized in Table 2. In general

* General information was provided about the Project
* Opinions and suggestions about the Project and the transformation of risky buildings were obtained, and
* Socio-economic information on the related province/district/neighborhood was obtained.

Table 2 List of stakeholder engagements conducted for the preparation of ESF documents

| **Date** | **Province** | **Stakeholder** |
| --- | --- | --- |
| 24.11.2021 | Ankara | * MoEUCC * World Bank * ILBANK * Istanbul Provincial Directorate of Infrastructure and Urban Transformation * Izmir PDoEUCC * Tekirdag PDoEUCC * Manisa PDoEUCC * Kahramanmaras MM * Manisa MM * Tekirdag MM |
| 26.11.2021 | Ankara | Ministry of Culture and Tourism, General Directorate of Cultural Heritage and Museums, Department of Boards |
| 26.11.2021 | Ankara | AFAD - Disaster and Emergency Management Presidency Planning and Risk Reduction Department |
| 27.11.2021 | Ankara | TMMOB Chamber of City Planners |
| 09.11.2021-11.11.2021 | Izmir | Izmir Development Agency |
| 09.11.2021-11.11.2021 | Izmir | Izmir Provincial Directorate of Environment, Urbanization and Climate Change |
| 09.11.2021-11.11.2021 | Izmir | Izmir Provincial Directorate of Disaster and Emergency |
| 09.11.2021-11.11.2021 | Izmir | Izmir Metropolitan Municipality Urban Transformation Directorate |
| 09.11.2021-11.11.2021 | Izmir | Kemalpasa Municipality License and Inspection Directorate |
| 09.11.2021-11.11.2021 | Izmir | Bayrakli Municipality Building Control Directorate-Bayrakli Municipality Plan Project Directorate |
| 09.11.2021-11.11.2021 | Izmir | Menemen Municipality Urban Transformation Directorate |
| 09.11.2021-11.11.2021 | Izmir | Karabaglar Municipality |
| 09.11.2021-11.11.2021 | Izmir / Bornova District | Rafet Pasa Neighborhood, Office of the Mukhtar |
| 09.11.2021-11.11.2021 | Izmir / Karsiyaka District | Ornekkoy Neighborhood, Office of the Mukhtar |
| 09.11.2021-11.11.2021 | Izmir / Karsiyaka District | Semikler Neighborhood, Office of the Mukhtar |
| 09.11.2021-11.11.2021 | Izmir | TMMOB Chamber of Geological Engineers |
| 11.11.2021-12.11.2021 | Manisa | Manisa Provincial Directorate of Environment, Urbanization and Climate Change – Section of Infrastructure and Urban Transformation |
| 11.11.2021-12.11.2021 | Manisa / Yunus Emre District | Yeni Neighborhood, Office of the Mukhtar |
| 11.11.2021-12.11.2021 | Manisa / Salihli District | Kocacesme Neighborhood, Office of the Mukhtar |
| 11.11.2021-12.11.2021 | Manisa | KADEM Manisa Representative Office |
| 18.11.2021-19.11.2021 | Kahramanmaras | Kahramanmaras Metropolitan Municipality, Department of Reconstruction and Urbanization, Section of Reconstruction and Urban Transformation-Planning |
| 18.11.2021-19.11.2021 | Kahramanmaras | ASAM- (Association of Solidarity with Asylum Seekers and Migrants) |
| 18.11.2021-19.11.2021 | Kahramanmaras | TMMOB Chamber of Civil Engineers |
| 18.11.2021-19.11.2021 | Kahramanmaras | TMMOB Chamber of Geological Engineers |
| 18.11.2021-19.11.2021 | Tekirdag | Tekirdag Metropolitan Municipality – Section of Infrastructure Coordination |
| 18.11.2021-19.11.2021 | Tekirdag | Suleymanpasa Municipality Urban Transformation Branch, Infrastructure Branch Directorate |
| 18.11.2021-19.11.2021 | Tekirdag / Suleymanpasa District | Aydogdu Neighborhood, Office of the Mukhtar |
| 18.11.2021-19.11.2021 | Tekirdag | Corlu Municipality Section of Reconstruction and Urbanization, Directorate of Plans and Projects, Section of Building Control |
| 09.12.2021 | Ankara | Municipalities, provincial directorates, water and sewerage administrations, ILBANK and World Bank representatives of the cities within the scope of the Project |
| 19.07.2022 | Istanbul | Istanbul Directorate of Infrastructure and Urban Transformation |
| 19.07.2022 | Istanbul | Kadikoy Municipality |
| 19.07.2022 | Istanbul | Uskudar Municipality |
| 19.07.2022 | Istanbul / Kagithane District | Hamidiye Neighborhood, Office of the Mukhtar |
| 20.07.2022 | Istanbul | Istanbul Provincial Directorate of Environment, Urbanization and Climate Change |
| 20.07.2022 | Istanbul | Istanbul Metropolitan Municipality, Earthquake Risk Management and Urban Improvement Department |
| 20.07.2022 | Istanbul | Esenler Municipality |
| 20.07.2022 | Istanbul / Zeytinburnu District | Sumer Neighborhood, Office of the Mukhtar |
| 20.07.2022 | Istanbul | Kadikoy Roma Community Coordinator |
| 21.07.2022 | Istanbul | Earthquake Strengthening Association |
| 21.07.2022 | Istanbul / Cekmekoy District | Camlik Neighborhood, Office of the Mukhtar |
| 21.07.2022 | Istanbul / Kartal District | Orhantepe Neighborhood, Office of the Mukhtar |

## Environmental Baseline Conditions

### Excavation and Construction/Demolition Waste Management Capacity and Details

During the implementation of the sub-projects, the most significant type of waste that will emerge in terms of amount and therefore in terms of its impact on the existing management capacity is excavation and construction & demolition wastes. In this context, prior to the description of the baseline conditions of each province, some important specific implementations carried in all Metropolitan Municipalities are presented herewith below:

* Activities such as identifying the illegal dumping sites in the province, ensuring that the wastes are removed and sent to the legal dumping sites to those who dump illegal excavated soil and construction/demolition wastes, ensuring communication with the relevant units, institutions and organizations in order to take the necessary measures to prevent illegal dumping, checking whether the detected malfunctions are eliminated or not, are run by District Municipalities through coordination of Metropolitan Municipalities.
* In the event that those who dump the waste illegally are detected, they are reported to the Municipal Police Department or to the relevant governorate (Provincial Directorate of Environment, Urbanization and Climate Change) to be penalized, and the wastes are removed and sent to the legal dumping areas by those who dump the waste; if it cannot be identified, the relevant District Municipalities are notified in order to remove the wastes and take measures to prevent waste dumping by Metropolitan Municipalities.
* Web-based Excavation Management Automation Systems were created in order to control the excavated soil and construction & demolition wastes from the point where they are produced until they are delivered to the facility where they will be disposed of by vehicles, and to prevent illegal dumping.

In addition, national legislation obliges "selective demolition" practices in demolition processes. Selective demolition (as described in Section 2.2) is a process where hazardous wastes contained in a structure to be demolished and that do not have any option other than disposal, and as-is reusable and recyclable wastes are identified with pre-planning, then separated from wastes that can be defined as coarse inert wastes (e.g. concrete, bricks, etc.), and in this way, the destruction is performed in a gradual manner. With the implementation of the “Selective Demolition” process, the mixing of these wastes with each other is prevented and the amount that must be disposed of is reduced as much as possible.

**Istanbul**

In Istanbul Province, the Metropolitan Municipality has assigned ISTAC A.S. (Istanbul Environmental Management Industry and Trade Incorporated Company) as the main responsible authority for the management of wastes in general. Founded in 1994, ISTAC is an affiliated company of Istanbul Metropolitan Municipality that performs several environmental and waste management activities such as establishment and operation of landfill sites, residential and hospital wastes disposal, leachate treatment, power generation from waste gas, compost production, packaging waste recovery, construction and excavated soil wastes management, fuel generation from waste and industrial wastes disposal & recovery.

With the ever-growing construction sector in the province, mostly as a result of the urban transformation activities, about 5-8 million tons of excavation waste is generated every month in total. Nearly 50 million tons/year excavated soil is being stored at the excavated soil landfill sites of ISTAC. In order to prevent uncontrolled dumping of these wastes, and the resultant environmental and visual pollution, ISTAC performs conversion and rehabilitation of unused mining fields with such wastes. After these areas are filled with excavated soil conforming to the natural topography, they are rehabilitated to a natural habitat with forestation.

Currently there are 11 active excavation waste rehabilitation lots at 4 sites in Istanbul (1 site in Asian side and 3 sites in European side), operated by ISTAC.

Table 3 Excavated Soil Fields for Istanbul Province

| **Name of The Facility** | **Lot No.** | **Type** | **Total Capacity (m3)** |
| --- | --- | --- | --- |
| Sile Sahilkoy | 277, 285, 286, 287 | Excavation Waste Rehabilitation Site | 2,612,919 |
| Ciftalan | 14, 20, 21 | Excavation Waste Rehabilitation Site | 2,079,965,750 |
| Silivri Bekirli | 366, 367, 375 | Excavation Waste Rehabilitation Site | 1,579,932 |
| Silivri Ecemoba | 457 | Excavation Waste Rehabilitation Site | 5,287,750 |

Back in the beginning of 2017, there were a total of 14 sites (comprised of 32 lots) with a total capacity of nearly 120 million m3. However many of these sites have reached their full capacity and are no longer active.

According to the annual reports of ISTAC, 44,397,504 tons of excavation waste was received by its rehabilitation sites in 2021. This value was 41,580,711 tons in 2020 and 30,762,781 tons in 2019.

There are 2 sites of ISTAC and 284 privately owned sites that accept at least one type of construction/ demolition waste (Waste Code starting with 17) in Istanbul as summarized below.

Table 4 Construction / Demolition Waste Facilities for Istanbul Province

| **Type of Activity** | **Quantity of Facilities** |
| --- | --- |
| Hazardous Waste Recovery | 2 |
| Hazardous & Non-Hazardous Waste Recovery | 37 |
| Hazardous Waste Recovery, Electronic & Electrical Goods Processing | 1 |
| Hazardous & Non-Hazardous Waste Recovery, Packaging Waste Recovery | 2 |
| Hazardous & Non-Hazardous Waste Recovery, Packaging Waste Recovery, Scrap Metal Processing | 2 |
| Hazardous & Non-Hazardous Waste Recovery, Electronic & Electrical Goods Processing | 1 |
| Hazardous & Non-Hazardous Waste Recovery, Scrap Metal Processing | 1 |
| Hazardous & Non-Hazardous Waste Recovery, Electronic & Electrical Goods Processing, Scrap Metal Processing | 2 |
| Hazardous & Non-Hazardous Waste Recovery,  Class 1 Landfill Site (Hazardous Waste Landfill),  Class 2 Landfill Site (Municipal & Non-Hazardous Waste Landfill), Waste Interim Storage | 1 (ISTAC Komurcuoda Facilities, Sile/ Istanbul) |
| Non-Hazardous Waste Recovery | 163 |
| Non-Hazardous Waste Recovery, Electronic & Electrical Goods Processing | 3 |
| Non-Hazardous Waste Recovery, Packaging Waste Recovery | 70 |
| Non-Hazardous Waste Recovery, Waste Derived Fuel Preparation, Biodegradable Waste Processing-Compost, Energy from Waste Plant | 1 (ISTAC Isiklar Facilities, Eyup/ Istanbul) |

However, several illegal dumping activities are also encountered, especially at Basaksehir and Arnavutkoy districts. Approximately 233 million TL was fined as penalty for illegal dumping activities in the period from January 2020 to June 2021.

In order to prevent these illegal actions, the trucks are obliged to obtain “Excavated Soil, Construction/Demolition Waste Transport Permit Certificate” from the Metropolitan Municipality and install a GPS device that can be tracked with Vehicle Tracking System used by the Municipality. As of 2021 nearly 6 thousand excavated soil trucks have been installed with GPS and are being tracked with vehicle tracking system.

As can be seen, Istanbul seems self-sufficient in terms of excavated soil, construction and demolition waste disposal and recovery options. Nevertheless, considering the fact that there are many ongoing and planned construction activities, as well as many risky buildings in need of demolition or retrofitting, a detailed planning has to be made to take into account the available capacities of the related dumping/ disposal/ recovery sites and to ensure that not too many construction activities are commenced simultaneously.

**Izmir**

Within the scope of excavation and construction & demolition waste management, information on the excavated soil landfill sites and excavated soil recovery and construction & demolition waste recovery facilities in Izmir is given in Table 5.

Table 5 Excavated Soil Fields and Construction / Demolition Waste Recovery Facilities for Izmir Province

| **Name of The Facility** | **Activities** | **Location** | **Operated by** |
| --- | --- | --- | --- |
| Guzelbahce-Yelki-2 | Dumping / Excavated Soil Recovery / Construction & Demolition Waste Recovery | Guzelbahce District | Izmir Metropolitan Municipality |
| Kuner | Dumping | Menderes District | Izmir Metropolitan Municipality |
| Poyracik | Dumping / Excavated Soil Recovery / Construction & Demolition Waste Recovery | Kinik District | Izmir Metropolitan Municipality |
| Koyundere | Dumping | Menemen District | İZBETON A.S. |
| Varan Madencilik | Dumping / Excavated Soil Recovery / Construction & Demolition Waste Recovery | Aliaga District | Varan Madencilik A.S. |
| Abbas Gidici | Dumping | Aliaga District | Abbas GİDİCİ |
| Seka Beton | Dumping | Aliaga District | SEKA Beton Ltd. Sti. |
| Baztas | Dumping | Aliaga District | BAZTAS Madencilik A.S. |
| Kaya Madencilik | Dumping | Aliaga District | KAYA Madencilik A.S. |
| Cakaltepe-Menderes | Rehabilitation (Vegetable soil and excavated soil) | Menderes District | Menderes Municipality |
| Torbali | Rehabilitation (Vegetable soil and excavated soil) | Torbali District | Torbali Municipality |
| Namik Kemal Aydogdu | Dumping | Cesme District | Namik Kemal Aydogdu |
| Haydar Madencilik | Excavated Soil Recovery / Construction & Demolition Waste Recovery | Guzelbahce District | Haydar Madencilik Ltd. Sti. |
| Haydar Madencilik | Excavated Soil Recovery Construction & Demolition Waste | Buca District | Haydar Madencilik Ltd. Sti. |
| Özcan Sunay | Excavated Soil Recovery / Construction & Demolition Waste Recovery | Cesme District | Özcan SUNAY Madencilik |
| Aliaga | Excavated Soil Recovery / Construction & Demolition Waste Recovery | Aliaga District | Aliaga Belediyesi Petrol A.S |

It can be considered that there is sufficient capacity and implementation in Izmir, especially regarding the recovery of inert construction and demolition wastes. In 2020, Haydar Madencilik Construction/Demolition Waste Recovery Facility located in Guzelbahce District accepted 898,987 tons of waste within that scope, made 386,179 tons of sales and transferred 512,756 tons of waste to the next year. 110,820 tons of waste were accepted to the Özcan Sunay Mining Facility located in Cesme District, 37,400 tons of sales were made and 73,420 tons of materials were transferred to the next year. Varan Mining Facility located in Aliaga District accepted 176,060 tons of waste to the site.

When the excavated soil and construction/demolition waste capacity of the province is evaluated in terms of area, it can be said that especially the central districts are sufficient, based on both the information obtained during the field visits and the data given in Table 5. However, it must be noted that the possible demolition and construction works are quite uncertain in terms of quantity and location.

Besides in 2020, 56,925 tons of construction/demolition waste was removed from illegal dumping sites and transported to legal dumping sites.

**Kahramanmaras**

In Kahramanmaras province, Erkenez Dump Site in the city center is used as the excavated soil dump site and also as inert construction & demolition waste storage area in practice. Besides, even though not officially registered as dump sites & storage areas, district municipalities designate suitable areas to store excavated soil and construction & demolition wastes. However, there is no construction/demolition waste recovery facility in the province.

**Manisa**

In this context, there are 9 excavation and construction & demolition waste storage facilities in total in Manisa. As of 2020, a mobile crushing and screening facility was put into operation for the recovery of inert construction & demolition wastes at the facility located in Yunusemre District, Emlakdere District. It is aimed that the facility will operate in all districts of the province. According to the 2020 Environmental Status Report by Manisa Province, which contains data for 2020, the facility worked for 51 hours as of the date of publication, and approximately 9,180 tons of inert construction & demolition wastes were recovered in the site. It is planned that the said area will serve all of the 17 districts in Manisa, depending on the construction situation. Other information on facilities of the Manisa province is given in Table 6.

Table 6 Excavated Soil Fields and Construction / Demolition Waste Recovery Facilities for Manisa Province

| **Name of The Facility** | **Type** | **Location** | **Usable Cubage as of 2020 (m3)** |
| --- | --- | --- | --- |
| Emlakdere | Excavated Soil & Construction/Demolition Waste Recovery Facility | Yunusemre District | 220,354 |
| Irlamaz-1 | Excavated Soil and Construction / Demolition Waste Landfill | Turgutlu District | 20,000 |
| Irlamaz-2 | Excavated Soil and Construction / Demolition Waste Landfill | Turgutlu District | 200,445 |
| Yesilova | Excavated Soil and Construction / Demolition Waste Landfill | Salihli District | 250,012 |
| Rahmiye | Excavated Soil and Construction / Demolition Waste Landfill | Akhisar District | 264,369 |
| Yirca | Excavated Soil and Construction / Demolition Waste Landfill | Soma District | 19,827 |
| Ataturk | Excavated Soil and Construction / Demolition Waste Landfill | Kirkagac District | 21,550 |
| Saricam | Excavated Soil and Construction / Demolition Waste Landfill | Saruhanli District | 64,000 |
| Ataturk-Gordes | Excavated Soil and Construction / Demolition Waste Landfill | Gordes District | 539,350 |

As mentioned above for Manisa, the recovery facility has just been established in this context and it is planned to serve all 17 districts.

**Tekirdag**

In Tekirdag, there are 3 excavated soil dump sites at the current situation. Inert construction and demolition wastes are being directed to one of the three Class 3 Sanitary Landfills. Information on these sites are presented below:

Table 7 Excavated Soil Fields and Construction / Demolition Waste Recovery Facilities for Tekirdag Province

| **Name of The Facility** | **Type** | **Location** | **Operated by** |
| --- | --- | --- | --- |
| Kumyol | Dump Site | Corlu District | Kumyol Yapi ve Plastik San. Tic. A.S. |
| Cevat Diril | Dump Site | Corlu District | Cevat Diril |
| Kardesogullari | Dump Site | Corlu District | Kardesogullari Hafriyat İns. Tic. Ltd. Sti. |
| Trakya | Class 3 Sanitary Landfill | Corlu District | Trakya Atik Bertaraf Teknolojileri San. Tic. Ltd. Sti |
| İmpaz | Class 3 Sanitary Landfill | Corlu District | İmpaz A.S. |
| İbrice | Class 3 Sanitary Landfill | Malkara District | İbrice A.S. Malkara Branch |

The most important point to be noted within the scope of the management of construction and demolition wastes is that there is no central construction / demolition waste recovery facility in Tekirdag at present.

It should also be noted that, according to Corlu Municipality, which is the largest district of Tekirdag province, in 2020, a total of 24 individuals and organizations that made illegal dumping were fined. This shows that the monitoring systems mentioned at the beginning of the section are also being implemented in Tekirdag.

### Hazardous Waste Management Capacity

First of all, it should be noted here that, details on waste management aspects of asbestos are given in the section below. In this section, general capacity of the cities regarding hazardous waste management are presented.

In brief, hazardous wastes generated should be transferred via licensed firms and be disposed & recovered (if possible) again with licensed firms. The hazardous waste generators are responsible from delivering the wastes to these companies. This practice is also applicable to the activities within the scope of the Project.

**Istanbul**

In Istanbul, there are 3 licensed waste incineration/co-incineration plants (all owned by İSTAC), 97 licensed hazardous waste recovery facilities (1 owned by İSTAC), 3 licensed interim storage facilities (1 owned by İSTAC) and 1 licensed refuse-derived fuel facility (owned by İSTAC).

There are 8 Organized Industrial Zones and 1 free zone in Istanbul.

**Izmir**

In Izmir, there are totally 39 licensed hazardous waste recovery, 5 licensed waste incineration, 1 licensed refused-derived fuel, 1 hazardous waste sanitary landfill, and 3 hazardous waste interim storage facilities.

In addition to the quantitative information presented above, as being one of the industrial centers of Turkiye together with developed Organized Industrial Zones, general experience and ongoing practices regarding hazardous waste management in Izmir can be regarded as quite sufficient.

**Kahramanmaras**

In Kahramanmaras, there are totally 5 licensed hazardous waste recovery, 2 licensed waste incineration, and 1 licensed refuse-derived fuel facilities. There is no hazardous waste sanitary landfill in Kahramanmaras. On the other hand, the closest hazardous waste sanitary landfill is located in Adana province, which is one of the neighboring provinces of Kahramanmaras.

**Manisa**

In Manisa, there are totally 13 licensed hazardous waste recovery, 3 licensed waste incineration, 3 licensed refuse-derived fuel, 2 hazardous waste sanitary landfill, and 2 hazardous waste interim storage facilities.

As being one of the major adjacent provinces to Izmir and together with seven Organized Industrial Zones, general experience and ongoing practices regarding hazardous waste management in Manisa can also be regarded as quite sufficient.

**Tekirdag**

In Tekirdag, there are totally 16 licensed hazardous waste recovery, 3 licensed waste incineration, 1 licensed refuse-derived fuel, 1 hazardous waste sanitary landfill, and 2 hazardous waste interim storage facilities.

Corlu District, which is one of the biggest districts in Turkiye, is an important industrial center. In addition, there are totally 13 Organized Industrial Zones and 1 free zone in Tekirdag. Over than 1000 industrial facilities are present in these areas. Accordingly, general experience and ongoing practices regarding hazardous waste management in Tekirdag can also be regarded as quite sufficient.

Locations of the excavated soil, construction & demolition waste, and hazardous waste sanitary landfills detailed in Section 4.1.1 and 4.1.2 are presented in Figure 3 and Figure 4 below:

|  |  |
| --- | --- |
| harita içeren bir resim  Açıklama otomatik olarak oluşturuldu | harita içeren bir resim  Açıklama otomatik olarak oluşturuldu |
| harita içeren bir resim  Açıklama otomatik olarak oluşturuldu |

Figure 3 Locations of Waste Management Facilities in Kahramanmaras, Manisa and Tekirdag



Figure 4 Locations of Waste Management Facilities in Istanbul (Municipality Facilities)

### Asbestos

Asbestos is another issue to be considered in terms of both environmental / public health and occupational health and safety. However, it should be noted here that it is not possible to make a quantitative or spatial assessment of the asbestos status of the building stock of the provinces. However, it will be obliged to perform asbestos inventory studies before the demolition of any building within the scope of sub-projects. Currently, some municipalities, for instance Izmir Metropolitan Municipality, obliges asbestos inventory studies to be conducted prior to any demolition. Furthermore, the Regulation on Demolition of Buildings has entered into force as of July 1, 2022, which stipulates asbestos inventory studies to be conducted at national level. The asbestos inventory studies can only be performed by an accredited company with a license on asbestos identification in solid sample as per the national legislation. According to the list of certified organizations of the MoLSS, General Directorate of Occupational Health and Safety, there are a total of 10 laboratories authorized in this context in Turkiye[[23]](#footnote-24) and all of them are located in the province of Istanbul (7 in the Asian side and 3 in the European side). For this reason, it will be necessary to obtain services from these companies in Istanbul before any demolition activity to be carried out.

*Waste Management Aspects of Asbestos*

Asbestos must be managed as hazardous waste after removal. Current status of the provinces within that scope is provided below:

**Istanbul**

Three licensed interim storage and hazardous waste landfills in Istanbul, one in Silivri, one in Tuzla and the third (İSTAC Komurcuoda facility) in Sile, are certified within the scope of waste codes 17 06 01 (insulation materials containing asbestos) and 17 06 05 (construction materials containing asbestos).

Significant part of the asbestos-containing wastes originating from Istanbul as construction wastes is sent to the facilities of IZAYDAS (Izmit Wastes and Residues Treatment Incineration and Utilisation Inc. Co.) located in Izmit. The amounts of asbestos-containing wastes (with waste code 17 06 01 and 17 06 05) coming from Istanbul province to IZAYDAS facilities in the last decade are given in Table 8.

Table 8 Asbestos-Containing Wastes with Waste Code 17 06 01 and 17 06 05 from Istanbul province to IZAYDAS (kg)

| **YEAR** | **Waste Code: 17 06 01 (kg)** | **Waste Code: 17 06 05 (kg)** | **Total Asbestos-Containing Wastes (kg)** |
| --- | --- | --- | --- |
| 2012 | 72,531 | 44,850 | 117,381 |
| 2013 | 98,426 | 0 | 98,426 |
| 2014 | 44,480 | 36,449 | 80,929 |
| 2015 | 98,740 | 8,160 | 106,900 |
| 2016 | 30,642 | 3,061 | 33,703 |
| 2017 | 10,226 | 73,460 | 83,686 |
| 2018 | 524,209 | 418,502 | 942,711 |
| 2019 | 150,215 | 337,715 | 487,930 |
| 2020 | 263,772 | 373,869 | 637,641 |
| 2021 | 48,768 | 705,359 | 754,127 |

As can be seen Table 8, although it is varying, the asbestos-containing wastes sent from Istanbul province to IZAYDAS in the years 2012-2017 was at the level of 50,000-100,000 kg. However, this amount skyrocketed to nearly 1 million kg in 2018 and continued at the level of 500 to 700 thousand kg during 2019-2021. It can be deduced from these values that, increased building demolition activities in Istanbul due to the escalated urban transformation activities as of 2017-2018 have contributed to the fast rise in Table 8 after 2018.

**Izmir**

Three licensed interim storage and hazardous waste landfills in Izmir, two in Torbali and one in Aliaga, are certified within the scope of waste codes 17 06 01 (insulation materials containing asbestos) and 17 06 05 (construction materials containing asbestos).

**Kahramanmaras**

There are no licensed facilities in Kahramanmaras. The closest licensed facility is located in Adana Province, which is one of the provinces bordering Kahramanmaras. The mentioned facility’s license within the scope of asbestos related wastes, with codes 17 06 01(insulation materials containing asbestos) and 17 06 05 (construction materials containing asbestos), covers interim storage.

**Manisa**

Five licensed interim storage and hazardous waste landfills in Manisa, four of which are in Yunusemre and one in Kula, are certified within the scope of waste codes 17 06 01 (insulation materials containing asbestos) and 17 06 05 (construction materials containing asbestos).

**Tekirdag**

Three licensed interim storage and hazardous waste regular storage facilities in Tekirdag, one in Corlu District, one in Kapakli District and the other in Ergene District, are also certified within the scope of waste codes 17 06 01(insulation materials containing asbestos) and 17 06 05 (construction materials containing asbestos).

### Air Quality

The most obvious parameter that will affect the air quality within the scope of demolition and construction activities can be considered as particulate matter emission. In the following sub-titles, the situation of the provinces in this context has been evaluated based on the data of the Continuous Monitoring Centre[[24]](#footnote-25) of the MoEUCC. At this point, it must be noted that in some of the provinces, new stations were established in 2021 in addition to 2020, but since 2021 annual averages are missing for some of these newly established stations, which may cause an improper assessment of the current situation, the year 2020 was used in the evaluation.

According to national legislation, the annual average of PM10 value must meet the limit of 40 µg/m3 for the protection of human health, and the 24-hour average must not exceed the limit of 50 µg/m3 more than 35 times a year. These limits were in line with the internationally accepted World Health Organization (WHO) reference values until September 2021. However, the new reference values published by WHO in September 2021 indicate a value of 45 µg/m3 on a 24-hour average and 15 µg/m3 on an annual average for PM10.

**Istanbul**

Monitoring of the particulate matter parameter (as PM10) in Istanbul was carried out with a total of 11 fixed measurement stations in 2020. The data showing the summary of the measurement results of these stations are given in the table below:

Table 9 Summary of PM10 Results According to 24-Hour Measurements in Istanbul in 2020

| **Station** | **Minimum Value Measured (µg/m3)** | **Maximum Value Measured (µg/m3)** | **Date of Minimum Value Measured** | **Date of Maximum Value Measured** | **Annual Average (µg/m3)** | **NDELV\*** | **Percentage of Valid Data (%)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Basaksehir | 7.53 | 147.08 | 01.12.2020 | 27.03.2020 | 40.52 | 79 | 95.07 |
| Esenyurt | 22.02 | 165.14 | 04.05.2020 | 09.03.2020 | 51.43 | 121 | 95.07 |
| Kandilli | 8.56 | 125.08 | 21.11.2020 | 27.03.2020 | 28.34 | 31 | 96.16 |
| Mecidiyekoy | 18.69 | 183.89 | 06.01.2020 | 27.03.2020 | 50.98 | 132 | 90.41 |
| Silivri | 8.18 | 154.75 | 07.01.2020 | 27.03.2020 | 26.96 | 26 | 98.63 |
| Sultanbeyli | 8.11 | 143.41 | 02.01.2020 | 11.01.2020 | 32.43 | 45 | 93.97 |
| Sultangazi | 11.86 | 162.31 | 06.01.2020 | 09.03.2020 | 54.48 | 188 | 95.34 |
| Sile | 7.59 | 90.33 | 03.01.2020 | 27.03.2020 | 24.25 | 10 | 97.53 |
| Sirinevler | 15.86 | 130.49 | 26.05.2020 | 27.03.2020 | 42.03 | 83 | 97.53 |
| Umraniye | 9.94 | 115.71 | 06.01.2020 | 25.10.2020 | 32.75 | 48 | 97.81 |
| Uskudar | 9.61 | 115.40 | 02.01.2020 | 27.03.2020 | 29.38 | 34 | 95.89 |

*Source: Calculated from the data provided in https://sim.csb.gov.tr/*

*\*Number of days exceeding the 50 µg/m3 limit value to be complied with according to national legislation*

When the data given in the above table and national legislation limits/WHO reference values are examined together; it can be seen that

* the annual averages of the measurements performed at Basaksehir, Esenyurt, Mecidiyekoy, Sultangazi and Sirinevler stations for 2020 exceed both the national legislation limit value (40 µg/m3) and the WHO's reference value (15 µg/m3),
* the annual averages of the measurements of all stations exceed the WHO reference value (15 µg/m3), and
* The 24-hour limit value (50 µg/m3) given in the national legislation was exceeded more than 35 times a year at 7 of the 11 stations listed above.

**Izmir**

Monitoring of the particulate matter parameter in Izmir was carried out with a total of 9 fixed measurement stations in 2020. The data showing the summary of the measurement results of these stations are given in the table below:

Table 10 Summary of PM10 Results According to 24-Hour Measurements in Izmir in 2020

| **Station** | **Minimum Value Measured (µg/m3)** | **Maximum Value Measured (µg/m3)** | **Date of Minimum Value Measured** | **Date of Maximum Value Measured** | **Annual Average (****µg/m3)** | **NDELV\*** | **Percentage of Valid Data (%)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Izmir Aliaga | 10.05 | 157.22 | 15.12.2020 | 18.05.2020 | 52.28 | 153 | 92.05 |
| Izmir Alsancak, Izmir MM (Izmir Metropolitan Municipality) | 4.27 | 172.37 | 07.01.2020 | 03.12.2020 | 37.83 | 75 | 94.52 |
| Izmir Bayrakli, Izmir MM | 7.00 | 125.09 | 27.05.2020 | 15.01.2020 | 37.43 | 80 | 95.62 |
| Izmir Bornova, Izmir MM | 9.00 | 136.34 | 29.02.2020 | 20.05.2020 | 37.19 | 67 | 92.05 |
| Izmir Cigli, Izmir MM | 4.57 | 131.42 | 20.11.2020 | 18.11.2020 | 34.61 | 55 | 96.71 |
| Izmir Gaziemir | 13.17 | 120.19 | 07.01.2020 | 18.05.2020 | 45.57 | 121 | 95.62 |
| Izmir Guzelyali, Izmir MM | 7.81 | 131.56 | 11.01.2020 | 15.01.2020 | 31.43 | 48 | 97.81 |
| Izmir Karsiyaka, Izmir MM | 5.43 | 111.51 | 07.01.2020 | 28.11.2020 | 32.34 | 49 | 96.44 |
| Izmir Sirinyer, Izmir MM | 4.00 | 106.95 | 07.01.2020 | 03.12.2020 | 33.61 | 46 | 97.26 |

*Source: Calculated from the data provided in https://sim.csb.gov.tr/*

*\*Number of days exceeding the 50 µg/m3 limit value to be complied with according to national legislation*

When the data given in the above table and national legislation limits/WHO reference values are examined together; it can be seen that

* the annual averages of the measurements performed at Izmir Aliaga and Izmir Gaziemir stations for 2020 exceed both the national legislation limit value (40 µg/m3) and the WHO's reference value (15 µg/m3),
* the annual averages of the measurements of all stations exceed the WHO reference value (15 µg/m3), and
* as a result of the measurements of all stations, the 24-hour limit value (50 µg/m3) given in the national legislation was exceeded more than 35 times a year.

**Kahramanmaras**

Monitoring of the particulate matter parameter in Kahramanmaras was carried out with a total of 2 fixed measurement stations in 2020. The data showing the summary of the measurement results of these stations are given in the table below:

Table 11 Summary of PM10 Results According to Daily Measurements in Kahramanmaras Province in 2020

| **Station** | **Minimum Value Measured (µg/m3)** | **Maximum Value Measured (µg/m3)** | **Date of Minimum Value Measured** | **Date of Maximum Value Measured** | **Annual Average (µg/m3)** | **NDELV\*** | **Percentage of Valid Data (%)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Kahramanmaras Elbistan | 6.65 | 223.09 | 06.11.2020 | 12.01.2020 | 63.53 | 137 | 75.07 |
| Kahramanmaras Onikisubat | 9.02 | 195.42 | 09.02.2020 | 19.12.2020 | 67.75 | 109 | 51.51 |

*Source: Calculated from the data provided in https://sim.csb.gov.tr/*

*\*Number of days exceeding the 50 µg/m3 limit value to be complied with according to national legislation*

When the data presented in the table and national legislation limits / WHO reference values are examined together, it can be seen that,

* the annual averages of the measurements performed at both stations for 2020 exceed both the national legislation limit value (40 µg/m3) and the WHO's reference value (15 µg/m3), and
* as a result of the measurements of both stations, the 24-hour limit value (50 µg/m3) given in the national legislation was exceeded more than 35 times a year.

At this point, it must also be noted that the valid data percentages at Kahramanmaras Elbistan and Kahramanmaras Onikisubat stations are 75.07% and 51.51%, that is, 274 and 188 days of proper measurements were carried out in a 365-day period, and 137 and 109 of these measurements, respectively, exceeded the 24-hour limit value of 50 µg/m3 according to the national legislation.

**Manisa**

Monitoring of the particulate matter parameter in Manisa was carried out with a total of 2 fixed measurement stations in 2020. The data showing the summary of the measurement results of these stations are given in the table below:

Table 12 Summary of PM10 Results According to Daily Measurements in Manisa Province in 2020

| **Station** | **Minimum Value Measured (µg/m3)** | **Maximum Value Measured (µg/m3)** | **Date of Minimum Value Measured** | **Date of Maximum Value Measured** | **Annual Average (µg/m3)** | **NDELV\*** | **Percentage of Valid Data (%)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Manisa / Central | 18.96 | 171.86 | 16.12.2020 | 15.01.2020 | 51.24 | 154 | 90.41 |
| Manisa Soma | 14.37 | 165.48 | 24.05.2020 | 15.01.2020 | 56.32 | 127 | 75.89 |

*Source: Calculated from the data provided in https://sim.csb.gov.tr/*

*\*Number of days exceeding the 50 µg/m3 limit value to be complied with according to national legislation*

When the data presented in the table and national legislation limits / WHO reference values are examined together, it can be seen that,

* the annual averages of the measurements performed at both stations for 2020 exceed both the national legislation limit value (40 µg/m3) and the WHO's reference value (15 µg/m3), and
* as a result of the measurements of both stations, the 24-hour limit value (50 µg/m3) given in the national legislation was exceeded more than 35 times a year.

At this point, it must also be noted that the valid data percentage at Manisa Soma station is 75.89%, that is, 277 days of proper measurements were carried out in a 365-day period, and 127 of these measurements exceeded the 24-hour limit value of 50 µg/m3 according to the national legislation.

**Tekirdag**

Monitoring of the particulate matter parameter in Tekirdag was carried out with a total of 4 fixed measurement stations in 2020. The data showing the summary of the measurement results of these stations are given in the table below:

Table 13 Summary of PM10 Results According to Daily Measurements in Tekirdag Province in 2020

| **Station** | **Minimum Value Measured (µg/m3)** | **Maximum Value Measured (µg/m3)** | **Date of Minimum Value Measured** | **Date of Maximum Value Measured** | **Annual Average (µg/m3)** | **NDELV\*** | **Percentage of Valid Data (%)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Tekirdag / Central | 3.50 | 174.99 | 03.08.2020 | 27.03.2020 | 26.08 | 29 | 94.79 |
| Tekirdag Cerkezkoy MCAC (Marmara Clean Air Centre) | 6.09 | 187.24 | 14.12.2020 | 27.03.2020 | 41.23 | 94 | 96.99 |
| Tekirdag Corlu MCAC | 8.11 | 147.46 | 01.10.2020 | 27.03.2020 | 38.90 | 69 | 92.88 |
| Tekirdag Merkez MCAC | 8.98 | 134.24 | 24.05.2020 | 27.03.2020 | 38.75 | 80 | 95.62 |

*Source: Calculated from the data provided in https://sim.csb.gov.tr/*

*\*Number of days exceeding the 50 µg/m3 limit value to be complied with according to national legislation*

When the data given in the table and national legislation limits / WHO reference values are examined together, it can be seen that

* the annual average of the measurements performed at Tekirdag Cerkezkoy station for 2020 exceeds both the national legislation limit value (40 µg/m3) and the WHO's reference value (15 µg/m3),
* the annual averages of the measurements of all stations exceed the WHO reference value (15 µg/m3), and
* as a result of the measurements of all stations, the 24-hour limit value (50 µg/m3) given in the national legislation was exceeded more than 35 times a year.

**General Assessment**

It can be stated that the province with the best air quality in terms of particulate matter is Tekirdag, and the province with the worst is Kahramanmaras. However, as a result of the measurements at all stations (for all provinces) except for Tekirdag Central Station and 4 stations in Istanbul (Kandilli, Silivri, Sile and Uskudar), it was determined that the 24-hour limit value (50 µg/m3) given in the national legislation in 2020 was exceeded more than 35 times a year. The reasons for the said particulate matter pollution can be summarized as follows in line with the information obtained during both desk studies and field visits:

* Industrial activities that continue with the intense urbanization in the province of Izmir (e.g., the iron and steel industry, which is densely located in Aliaga, and small-scale industrial activities with the airport in Gaziemir),
* Industrial activities and power plants in Manisa (e.g. Soma thermal power plant, new thermal power plants under construction and some of them opened),
* The use of coal for heating purposes in Kahramanmaras (due to the fact that old heating systems continue to be used even though the natural gas infrastructure has been established) and
* The pollution caused by heating and traffic in Tekirdag province and the pollution created by the organized industrial zones in the province (e.g. industrial activities in and around the Cerkezkoy Organized Industrial Zone)
* Irregular urbanization and use of coal for heating purposes resulting in high pollution (Esenyurt, Sultangazi), high traffic from mass transportation routes (Mecidiyekoy).

### General Information on Biodiversity and Protected Areas

Information related with internationally recognized areas together with province and relevant triggering species’ information is presented below:

Table 14 Internationally Recognized Areas within Provinces and Relevant Triggering Species

| **Province** | **Internationally Recognized Area** | **Triggering Species** |
| --- | --- | --- |
| Tekirdag | Meric Delta KBA (IBA) | Migratory birds, fish, mammals, reptiles |
| Tekirdag | Saros Bay KBA (IBA) | Birds, mammals, reptiles |
| Izmir | Bakircay Delta KBA (IBA) | Fish, reptiles |
| Izmir | Foca Peninsula KBA (IBA) | Marine mammals (Mediterranean Monk Seal), reptiles |
| Izmir | Gediz Delta KBA (IBA) | Migratory birds, fish, marine mammals (Mediterranean Monk Seal), reptiles (marine & terrestrial) |
| Izmir | Cicek Islands KBA (IBA) | Marine mammals (Mediterranean Monk Seal) |
| Izmir | Karaburun and Ildir Strait Islands KBA (IBA) | Migratory birds, marine mammals (Mediterranean Monk Seal) |
| Izmir | Alacati KBA (IBA) | Migratory birds, marine mammals (Mediterranean Monk Seal) |
| Izmir | Kizildag Izmir KBA (IBA) | Marine mammals (Mediterranean Monk Seal) |
| Izmir | Mahal Hills KBA | Fish, marine mammals (Mediterranean Monk Seal), reptiles |
| Izmir | Lesser Menderes Delta KBA (IBA) | Fish, mammals, plants, reptiles |
| Izmir | Yamanlar Mountain KBA | Fish, mammals, reptiles |
| Izmir | Nif Mountain KBA | Plants |
| Izmir | Boz Mountains KBA | Fish, invertebrates, plants |
| Izmir/Manisa | Spil Mountain KBA | Plants |
| Manisa | Marmara Lake KBA (IBA) | Migratory birds, fish |
| Kahramanmaras | Binboga Mountain KBA | Plants, reptiles |
| Kahramanmaras | Berit Mountain KBA | Plants, reptiles |
| Kahramanmaras | Andirin | Fish, plants |
| Kahramanmaras | Ahir Mountain KBA | Invertebrates, plants |
| Kahramanmaras | Amanos Mountains KBA (IBA) | Migratory birds, invertebrates, mammals, plants, reptiles |
| Istanbul | Buyukcekmece Lake KBA (IBA) | Birds, Reptiles |
| Istanbul | Bosphorus KBA (IBA) | Birds, Plants, Reptiles |
| Istanbul | Kucukcekmece Lake (IBA) | Birds |
| Istanbul | Sile Islands (IBA) | Birds |
| Istanbul | Terkos Basin KBA | Birds |

*Source:* [*https://www.ibat-alliance.org/*](https://www.ibat-alliance.org/)*;* [*https://www.keybiodiversityareas.org/kba-data*](https://www.keybiodiversityareas.org/kba-data)

7 of Turkiye’s Important Plant Areas are located within the provincial boundaries of Istanbul. These are, Terkos-Kasatura Coastline, Agacli Dunes, Kilyos Dunes, Northern Bosphorus, Western Istanbul Heathlands, Sahilkoy-Sile Coastline and Ömerli Basin as shown below:

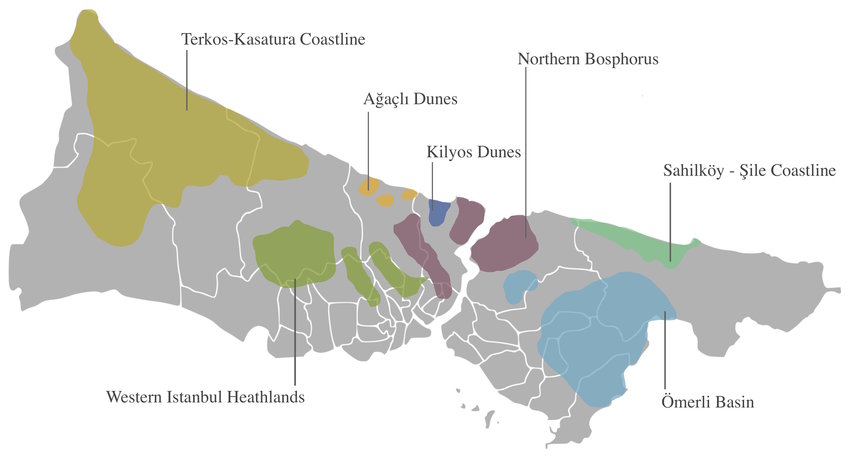


Figure 5 Important Plant Areas in Istanbul

Source: Tuncay, Onur & Akalin, Emine. (2018). Endemism in Istanbul Plants. European Journal of Biology. 77.

### Urban Protected Sites

As the sub-projects will be realized in urban areas, baseline cultural heritage aspects are mostly evaluated within that manner. Accordingly, as per the information obtained from website of Ministry of Culture and Tourism, there are 49 Urban Protected Areas, 6 Urban Archaeological Sites, and 5 mixed (both archaeological and urban) Area within the Izmir province. In Manisa Province, there are 8 Urban Protected Areas and 1 Urban Archaeological Sites, and in Kahramanmaras there are two Urban Protected Areas. Specific number of Urban Protected Areas and/or Urban Archaeological sites could not be achieved for Tekirdag province, on the other hand, there are also more than 160 Archaeological Protection Zones including urban ones in Tekirdag. Being the pilot province in this Project with the richest historical background, Istanbul Province contains 25 Urban Protected Areas, 50 Urban Archeological Sites, 7 Historical Protected Areas and 24 Mixed Protected Areas. Specific information regarding Urban Protected Areas of each city are provided below:

* The areas where the ancient cities are located in and around Izmir are determined as Archaeological Sites. There are Urban Protected Areas in Buca, Bornova, Urla, Cesme, Alacati, Seferihisar, Selcuk, Sirince, Menemen, Foca, Yenifoca and Candarli.
* To the east of Tekirdag, there are a number of archaeological sites along the coast, notably Degirmenalti and Dereagzi, both of which are Archaeological Sites. In addition, the historical center of Tekirdag is a protected area due to the historical structure of its urban form and the density of heritage buildings.
* Largest Urban Protected Area of the Manisa is named as Manisa Urban Protected Area, which covers almost 17 ha of area. The area is within Sehzadeler District.
* Both Urban Protected Areas located in Kahramanmaras are in city center.
* Istanbul has 6 Regional Cultural Asset Protection Regional Board Directorates:
  + 1st Region: This Regional Directorate is responsible from a total of 18 districts. 80% of the Urban Archeological Sites under the responsibility of this Regional Directorate are located in Silivri district.
  + 2nd Region: This Regional Directorate is responsible from Beyoglu and Sisli districts.
  + 3rd Region: This Regional Directorate is responsible from Besiktas and Sariyer districts.
  + 4th Region: This Regional Directorate is responsible from Fatih district.
  + 5th Region: This Regional Directorate is responsible from Maltepe & Pendik Archeological Sites, Kadikoy & Kartal Urban Protected Areas, several forested Natural Protected Areas along-Kadikoy-Kartal coastline and Mixed Areas at Istanbul Islands.
  + 6th Region: This Regional Directorate is responsible from Bosphorus (Bogazici) Historical Sites, Uskudar Urban Protected Areas and Sile-Agva Archeological Sites.

### Information on Disaster Risk Status of Provinces

**Izmir**

Due to the geological structure, topographic and climatic characteristics, Izmir is located in a region with high disaster risks, such as earthquakes, landslides, rockfalls, and meteorological and climatic disasters.

In the disaster events that occurred in the province during 2009-2020; 131 earthquakes and a total of 200 disaster events occurred. Within that scope, a total of 118 citizens lost their lives and a total of 1,546 housings were affected.

As per Turkiye Seismic Hazard Map (please see Figure 1), which is prepared by AFAD and published in 2019, earthquake hazard risk classification of the Izmir can be regarded as generally “high”, while Bayindir, Beydag, Kiraz, Ödemis, and Tire Districts’ relevant classification can be regarded as “medium/high”.

**Manisa**

The Manisa Fault Zone is an active structural discontinuity, which is geomorphologically expressed as a trace of north-facing Quaternary broken steps, bounding the southern edge of the Manisa basin connected to the Gediz Graben. It is known that the current fault trace is over 50 km from the city of Manisa in the northwest to the town of Turgutlu in the southeast. The Manisa Fault Zone (MFZ) is an active, large-scale normal fault system in this area.

Similar to Izmir, as per Turkiye Seismic Hazard Map (please see Figure 1), earthquake hazard risk classification of Manisa can be regarded as generally “high” while northeastern districts’ relevant classification can be regarded as “medium/high”.

**Tekirdag**

According to the *“Disaster and Climate Risk Assessment for Urban Transformation Areas in Tekirdag (Final Version)”* prepared by AECOM within the scope of “Technical Assistance: Support to Municipalities in Conducting City-Wide Disaster and Climate Risk Assessments Project”, which is submitted to WB in September 2020, core hazards identified for the study area -which covers 11 districts of Tekirdag including the city center- are:

* Fluvial (river) and pluvial (rainfall) flooding due to the presence of lots of creeks especially in rural areas and neighborhoods surround the city. Besides, tsunami risks due to possible escalation of Marmara Sea which have potential to cause more severe impacts.
* High seismic risk across the whole area that could result in a severe earthquake and cause catastrophic damage. In addition, numerous liquefaction, landslide, and erosion areas exist.
* Hot summers with low rainfall causing drought and wildfires, to become even more critical with climate change. Other weather hazards include a prevalence of storms.

**Kahramanmaras**

According to the *“Disaster and Climate Risk Assessment for Resilient Infrastructure and Urban Transformation in Kahramanmaras (Final Version)”* prepared by AECOM within the scope of “Technical Assistance: Support to Municipalities in Conducting City-Wide Disaster and Climate Risk Assessments Project”, which is submitted to WB in October 2020, core hazards identified for the study area -which covers the main central districts of Kahramanmaras; Onikisubat and Dulkadiroglu- are:

* Fluvial (river) flooding linked to the large Ceyhan River and Menzelet Dam in the North/West, as well as Azapli Lake, Erkenez Stream, and Aksu Stream in the East/Southeast.
* Pluvial (rainfall) flooding typically in North-South direction from Ahir Mountain through the city center.
* High seismic risk across the whole area that could result in a severe earthquake and cause catastrophic damage. In addition, numerous liquefaction, landslide, and erosion areas exist.
* Hot summers with low rainfall causing drought and wildfires, to become even more critical with climate change. Other weather hazards include a prevalence of storms.

**Istanbul**

Neighboring the Black Sea in the north and Marmara Sea in the south; with the south coastline laying along the North Anatolian Fault line; and significantly prone to climate change effects due to fast and irregular urbanization, Istanbul is open to various disaster risks including earthquakes, flooding, landslides, meteorological and climatic disasters.

According to the “Project for Updating Possible Earthquake Loss Estimates in Istanbul Province” prepared in 2019 by Bogazici University, Kandilli Observatory and Earthquake Research Institute, 15 earthquake scenarios of magnitude Mw = 7.5 were simulated for 72, 475 and 2475 recurrence periods to obtain possible building damage, life loss, injuries and infrastructural damage estimations were formulated. The distribution of the site-dependent Peak Ground Acceleration (PGA) calculated for this scenario earthquake is shown below:



Figure 6 Distribution of Site-Dependent PGA calculated for a Scenario Earthquake at Mw= 7.5

Source: “Project for Updating Possible Earthquake Loss Estimates in Istanbul Province” Bogazici University, Kandilli Observatory and Earthquake Research Institute, 2019.

As expected owing to the location of the North Anatolian Fault Zone, the districts and neighborhoods having a coast to Marmara (Buyukcekmece, Beylikduzu, Avcilar, Kucukcekmece and Bakirkoy in the European side; Maltepe, Kartal and Tuzla in the Asian side), and especially the Prince Islands located in the Marmara Sea are foreseen to receive the highest impact.

The estimations in this report point out that, as a result of the scenario earthquake at a magnitude of Mw=7.5, it is expected that about 57% of the buildings, in average, will not have significant damage. However, 26% are foreseen to receive mild damage, 13% medium damage, 3% heavy damage and 1% to receive very serious damage. The total number of buildings analyzed in Istanbul is 1,166,330, which means that nearly 194 thousand buildings are estimated receive medium and above damage in the said scenario earthquake. As per the calculations made, about 25 million tons of wreckage is expected to accumulate as a result of this earthquake. The number of life loss expectancy is about 12 thousand people if the earthquake occurs during the day, and over 14 thousand if it occurs at night.

## Social Baseline Conditions

The socio-economic status of the provinces where the Project will be implemented has been evaluated under two headings:

* Socio-economic baseline,
  + Population and migration,
  + Socio-economic development, and
* Vulnerable and disadvantaged groups.

The **socio-economic baseline** of provinces presented under two subsections (i) population and migration, and (ii) socio-economic development. Under population and migration subsection, information related to population, annual growth rate of population, change in the population pyramid and education level are given.

Under socio-economic development subsection, the results of the Socio-Economic Development Ranking of Provinces and Regions Research which was carried out by the General Directorate of Development Agencies of the Ministry of Industry and Technology is presented. In this research, the districts are classified in six development levels. In the first development-tier, which covers the most developed districts, there are districts from Marmara, Central Anatolia, Aegean and Mediterranean regions in general. These districts are ranked in the top 56. Majority of these districts are in the most developed provinces of Turkiye. It is understood that the net migration rate of these districts is generally positive in direct proportion to their socio-economic development, and they receive in-migration from other settlements. These districts are districts with strong industrial infrastructure, attraction centers in terms of tourism, whose basic infrastructures have been completed, and which have higher education, health and life quality values compared to other districts.

Second-tier developed districts are mostly the districts of metropolitan provinces, touristic districts and central districts of non-metropolitan provinces that are not included in the first-tier. It can be stated that there are districts that have developed with the effect of being close to the developed districts, the socio-economic advantages provided by tourism and the opportunities in the central districts. Although there are districts with high agricultural production among the districts at this tier, it is seen that employment is concentrated in the manufacturing industry and service sectors. However, the share of employment in these sectors lags behind the districts in the first tier. In these districts, the education variables related to socio-economic development and representing human capital are above the country average.

When the distribution of the 3rd tier districts within Turkiye is examined, it is seen that the employment shares in the manufacturing industry and service sectors have started to decrease, starting with the third tier developed districts. Approximately 10 percent of the manufacturing industry employment in Turkiye belongs to the districts at this level.

Despite the decrease in the share of employment in the manufacturing industry and services sector in Turkiye, the high level of agricultural production in the districts at this level draws attention. Approximately 30 percent of the total agricultural production value is in these districts. Izmir-Ödemis is in this category.

Districts in the 4th tier constitute 6.2 percent of the country's population. As a result of their socio-economic development levels, it is seen that the net migration values of 163 of 205 districts in this level are negative and they give net migration to other settlements in total. The share of the districts in this level, where the employment share in the manufacturing industry and services sectors is low, in the total agricultural production is around 17 percent.

Section of **vulnerable groups** presents categories of vulnerable groups and information on Roma population, and migrants and Syrians under temporary protection in the Project provinces obtained through reports or site visits.

**Istanbul**

Istanbul is the city with the highest population in Turkiye. With its population of 15,840,900 in 2021, it inhabits 19 percent of the Turkiye’s total population. It has 39 districts. Figure 7 shows the change in population in years with annual growth rate of population of Istanbul and Turkiye. As shown in the chart, the population of Istanbul has continuously increased from 12,573,836 in 2007 to 15,840,900 in 2021 albeit a slight decrease in 2020. 50.1% of the population is male and 49.9% is female.

When the annual growth rate of population of Istanbul is compared to annual growth rate of population of Türkiye, it is seen that while between 2009 and 2015 the growth rate of population of Istanbul was higher than the growth rate of population of Türkiye, after 2015, it showed variances among years—it peaked in 2019 with the highest rate of 29.53‰ of the past 10 years which is followed by a great decrease of -3,67‰ in 2020. Although, there is no official report for the decrease in 2020, deaths and changes in residences related to COVID-19 might be among the reasons—some people lost their jobs and some people preferred to live in less densely populated areas, using the opportunities in online education and work.

Figure 7. Population Trends of Istanbul

*Source:* TurkStat, The results of Address Based Population Registration System, 2007-2021

When the population structure of Istanbul is analyzed, it is seen that while the total age dependency ratio is lower than the average of Turkiye, the average household size is same for both Istanbul and Turkiye (see Table 15).

Table 15 Total Age Dependency Ratio and Average Size of Households in Istanbul

|  |  |  |
| --- | --- | --- |
| **Population** | **Turkiye** | **Istanbul** |
| Total age dependency ratio (%) | 47.4 | 39,7 |
| Average size of households (number) | 3.2 | 3.2 |

*Source:* TurkStat, The results of Address Based Population Registration System, 2021

The age pyramid of Istanbul is given in Figure 8. When the population pyramids of 2007 and 2021 is compared, it is seen that both the fertility and the death rates were decreased. Related with the change in the structure of the population pyramid, the median age of Istanbul was increased from 29.2 in 2007 to 33.4 in 2021. The respective figures for Turkiye are 28.3 and 33.1[[25]](#footnote-26).

Figure 8. The Change in the Population Pyramid of Istanbul

|  |  |
| --- | --- |
|  |  |

*Source:* TurkStat, The results of Address Based Population Registration System, 2007 and 2021

The percentage of adults at working age of 25 to 64 among the total population in Istanbul is also increased from 53.2 percent to 56.8 percent between 2007 and 2021.

Educational attainment which is the highest level of education that an individual has completed is given in Figure 9 for Istanbul. Although there is a gap between the education levels of male and female at primary or secondary education level, this gap disappears at tertiary education level.

Figure 9. Adult Education Level in Istanbul

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refer to ages between 25 and 64.

Higher education level is an important factor contributing to individual’s employability or income. In general, the percentage of adults attained higher education levels in Istanbul is higher than Turkiye as shown in Figure 10. While 30 % of adults in Istanbul completed tertiary education, in Turkiye this figure drops to 25 percent.

Figure 10. Percentage of Adult Education Levels in Istanbul and Turkiye

|  |  |
| --- | --- |
| Istanbul | Turkiye |
| Chart, pie chart  Description automatically generated | Chart, pie chart  Description automatically generated |

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refers to ages between 25 and 64.

**Socio-economic development**

According to the Socio-Economic Development Ranking of Provinces and Regions Research conducted by the Ministry of Industry and Technology, in 2017, Istanbul is the most developed province of Turkiye being the center of industry, production and finance. While 52 percent of Turkiye's exports are carried out from Istanbul, approximately 36 percent of manufacturing industry workplaces and half of the parcels produced in OIZs across the country are located in Istanbul. In addition, 42.5 percent of total bank loans and nearly 40 percent of total savings deposits in Turkiye are located in Istanbul, and 46.8 percent of tax revenues in Turkiye are collected from Istanbul.

In a similar study conducted at district level in 2022, out of 39 districts of Istanbul, 29 of them were categorized in the first group and 10 of them were categorized at the second group (See Table 16).[[26]](#footnote-27)

Table 16. Socio-economic Development Rankings of the Districts of Istanbul

| District | Overall rank | | | Rank within the Province | | | Tier | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2004 | 2017 | 2022 | 2004 | 2017 | 2022 | 2004 | 2017 | 2022 |
| Sisli | - | 1 | 1 | - | 1 | 1 | - | 1 | 1 |
| Besiktas | - | 2 | 3 | - | 2 | 2 | - | 1 | 1 |
| Kadikoy | - | 4 | 4 | - | 3 | 3 | - | 1 | 1 |
| Bakirkoy | - | 5 | 6 | - | 4 | 4 | - | 1 | 1 |
| Fatih | - | 8 | 7 | - | 5 | 5 | - | 1 | 1 |
| Atasehir | - | 21 | 9 | - | 11 | 6 | - | 1 | 1 |
| Basaksehir | - | 16 | 10 | - | 7 | 7 | - | 1 | 1 |
| Beyoglu | - | 18 | 12 | - | 9 | 8 | - | 1 | 1 |
| Umraniye | - | 17 | 13 | - | 8 | 9 | - | 1 | 1 |
| Sariyer | - | 28 | 14 | - | 13 | 10 | - | 1 | 1 |
| Uskudar | - | 19 | 16 | - | 10 | 11 | - | 1 | 1 |
| Tuzla | - | 13 | 19 | - | 6 | 12 | - | 1 | 1 |
| Maltepe | - | 41 | 20 | - | 20 | 13 | - | 1 | 1 |
| Beylikduzu | - | 29 | 23 | - | 14 | 14 | - | 1 | 1 |
| Pendik | - | 42 | 24 | - | 21 | 15 | - | 1 | 1 |
| Esenyurt | - | 33 | 26 | - | 15 | 16 | - | 1 | 1 |
| Bahcelievler | - | 34 | 28 | - | 16 | 17 | - | 1 | 1 |
| Zeytinburnu | - | 35 | 29 | - | 17 | 18 | - | 1 | 1 |
| Bagcilar | - | 37 | 33 | - | 18 | 19 | - | 1 | 1 |
| Kartal | - | 52 | 35 | - | 24 | 20 | - | 1 | 1 |
| Bayrampasa | - | 48 | 36 | - | 22 | 21 | - | 1 | 1 |
| Kagithane | - | 57 | 38 | - | 25 | 22 | - | 2 | 1 |
| Kucukcekmece | - | 39 | 39 | - | 19 | 23 | - | 1 | 1 |
| Gungoren | - | 62 | 50 | - | 27 | 24 | - | 2 | 1 |
| Buyukcekmece | 12 | 25 | 51 | 1 | 12 | 25 | 1 | 1 | 1 |
| Eyupsultan | - | 64 | 54 | - | 28 | 26 | - | 2 | 1 |
| Adalar | - | 58 | 55 | - | 26 | 27 | - | 2 | 1 |
| Beykoz | - | 51 | 61 | - | 23 | 28 | - | 1 | 1 |
| Avcilar | - | 78 | 66 | - | 30 | 29 | - | 2 | 1 |
| Gaziosmanpasa | - | 82 | 85 | - | 31 | 30 | - | 2 | 2 |
| Cekmekoy | - | 108 | 86 | - | 33 | 31 | - | 2 | 2 |
| Esenler | - | 152 | 90 | - | 36 | 32 | - | 2 | 2 |
| Silivri | 60 | 71 | 94 | 3 | 29 | 33 | 2 | 2 | 2 |
| Sancaktepe | - | 132 | 95 | - | 35 | 34 | - | 2 | 2 |
| Sultangazi | - | 218 | 161 | - | 38 | 35 | - | 2 | 2 |
| Arnavutkoy | - | 238 | 167 | - | 39 | 36 | - | 3 | 2 |
| Catalca | 107 | 128 | 169 | 4 | 34 | 37 | 2 | 2 | 2 |
| Sile | 110 | 100 | 176 | 5 | 32 | 38 | 2 | 2 | 2 |
| Sultanbeyli | 50 | 204 | 183 | 2 | 37 | 39 | 2 | 2 | 2 |

*Source*: Ministry of Industry and Technology; General Directorate of Development Agencies, Research for the Socio-Economic Development Ordering of Districts, 2004, 2017 and 2022

Note: In 2004, the districts that were within the borders of Istanbul Metropolitan Municipality at that time were accepted as developed centers and were excluded from the scope of the research. Since the border of Istanbul Metropolitan Municipality was changed to the provincial border in 2012, all districts were included in the research in the reports prepared in the following years.

**Izmir**

Izmir is the third largest city in Turkiye with its population reaching 4.4 million as end of 2021. The population of Izmir, which has 30 districts in total, has increased regularly every year since 2007. Izmir's population, which was 3,739,353 in 2007, increased to 4.425.789 in 2021. 49.7% of the population is male and 50.3% is female. The population trends of Izmir is shown in Figure 11. Annual population growth rate of Izmir is below the average of Turkiye.

Figure 11. Population Trends of Izmir

*Source:* TurkStat, The results of Address Based Population Registration System, 2007-2021

When the population structure of Izmir is analyzed, it is seen that the total age dependency ratio and average household size are lower than the average of Turkiye as seen in Table 17.

Table 17 Total Age Dependency Ratio and Average Size of Households in Izmir

|  |  |  |
| --- | --- | --- |
| **Population** | **Turkiye** | **Izmir** |
| Total age dependency ratio (%) | 47.4 | 43.5 |
| Average size of households (number) | 3.2 | 2.9 |

*Source:* TurkStat, The results of Address Based Population Registration System, 2021

The distribution of the population of Izmir, which has a high active population and a low age dependency ratio, by age groups is given in Figure12.

Figure 12: The Change in the Population Pyramid of Izmir

|  |  |
| --- | --- |
|  |  |

*Source:* TurkStat, The results of Address Based Population Registration System, 2007 and 2021

Education data of Izmir shows that, literacy and education level of Izmir is higher than the average ratio of Turkiye. Educational attainment which is the highest level of education that an individual has completed is given in Figure 13 and Figure 14. Although there is a gap between the education levels of male and female at primary or secondary education level, this gap disappears at tertiary education level.

Figure 13. Adult Education Level in Izmir

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refers to ages between 25 and 64.

Higher education level is an important factor contributing to individual’s employability or income. In general, the percentage of adults attained higher education levels in Izmir is higher than Turkiye as shown in Figure 14. While 29 % of adults in Izmir completed tertiary education, in Turkiye this figure drops to 25 percent.

Figure 14: Percentage of Adult Education Levels in Izmir and Turkiye

|  |  |
| --- | --- |
| Izmir | Turkiye |
|  | Chart, pie chart  Description automatically generated |

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refers to ages between 25 and 64.

**Socio-economic development**

According to the Socio-Economic Development Ranking of Provinces and Regions Research conducted by the Ministry of Industry and Technology, General Directorate of Development Agencies in 2017, Izmir ranked third among the first-tier developed provinces and maintained its ranking in 2003 and 2011.

It is seen that the provinces in first-tier, which include the most developed provinces, generally increase the welfare levels of other provinces around them.

The socioeconomic development level within the scope of the districts of Izmir is provided in Table 18, on the basis of following three criteria:

* Socioeconomic development rankings of the districts of Izmir at national level
* Socioeconomic development rankings of the districts of Izmir at provincial level, and
* Development levels of the districts of Izmir.

Table 18 Socioeconomic Development Rankings of Izmir Districts

| **District** | **National Development Ranking** | | **Development Ranking in Izmir Province** | | **Level of Development** | |
| --- | --- | --- | --- | --- | --- | --- |
| **2004** | **2017** | **2004** | **2017** | **2004** | **2017** |
| **Konak** | - | 6/970 | - | 1/30 | - | 1 |
| **Balcova** | - | 12/970 | - | 2/30 | - | 1 |
| **Bornova** | - | 20/970 | - | 3/30 | - | 1 |
| **Cesme** | 19/872 | 22/970 | 2/19 | 4/30 | 2 | 1 |
| **Cigli** | - | 43/970 | - | 5/30 | - | 1 |
| **Karsiyaka** | - | 44/970 | - | 6/30 | - | 1 |
| **Gaziemir** | - | 45/970 | - | 7/30 | - | 1 |
| **Aliaga** | 5/872 | 54/970 | 1/19 | 8/30 | 1 | 1 |
| **Guzelbahce** | - | 77/970 | - | 9/30 | - | 2 |
| **Narlidere** | - | 80/970 | - | 10/30 | - | 2 |
| **Bayrakli** | - | 92/970 | - | 11/30 | - | 2 |
| **Urla** | 43/872 | 93/970 | 3/19 | 12/30 | 2 | 2 |
| **Foca** | 79/872 | 115/970 | 8/19 | 13/30 | 2 | 2 |
| **Buca** | - | 121/970 | - | 14/30 | - | 2 |
| **Seferihisar** | 61/872 | 130/970 | 5/19 | 15/30 | 2 | 2 |
| **Karabaglar** | - | 133/970 | - | 16/30 | - | 2 |
| **Selcuk** | 75/872 | 146/970 | 7/19 | 17/30 | 2 | 2 |
| **Kemalpasa** | 62/872 | 153/970 | 6/19 | 18/30 | 2 | 2 |
| **Torbali** | 54/872 | 156/970 | 4/19 | 19/30 | 2 | 2 |
| **Karaburun** | 84/872 | 172/970 | 9/19 | 20/30 | 2 | 2 |
| **Menemen** | 142/872 | 178/970 | 12/19 | 21/30 | 2 | 2 |
| **Menderes** | 124/872 | 181/970 | 10/19 | 22/30 | 2 | 2 |
| **Dikili** | 130/872 | 182/970 | 11/19 | 23/30 | 2 | 2 |
| **Tire** | 174/872 | 192/970 | 13/19 | 24/30 | 3 | 2 |
| **Bergama** | 180/872 | 209/970 | 14/19 | 25/30 | 3 | 2 |
| **Ödemis** | 199/872 | 236/970 | 15/19 | 26/30 | 3 | 3 |
| **Kinik** | 418/872 | 417/970 | 17/19 | 27/30 | 3 | 3 |
| **Bayindir** | 392/872 | 477/970 | 16/19 | 28/30 | 3 | 4 |
| **Beydag** | 450/872 | 562/970 | 18/19 | 29/30 | 3 | 4 |
| **Kiraz** | 644/872 | 623/970 | 19/19 | 30/30 | 4 | 4 |

*Source*: Ministry of Industry and Technology; General Directorate of Development Agencies, Research for the Socio-Economic Development Ordering of Districts, 2004, 20017 and 2022

Note: In 2004, the districts that were within the borders of Izmir Metropolitan Municipality at that time were accepted as developed centers and were excluded from the scope of the research. Since the border of Izmir Metropolitan was changed to the provincial border in 2012, all districts were included in the research in the reports prepared in the following years.

The development level of districts where industry is concentrated, such as Aliaga, has decreased.

Approximately 40% of the building stock of Izmir Province and 70% of the total population are located in 11 central districts (Balçova, Bayrakli, Bornova, Buca, Cigli, Gaziemir, Guzelbahce, Karabaglar, Karsiyaka, Konak and Narlidere). According to the findings obtained from the field study and the information received from the stakeholders, only 12% of the buildings in these 11 central districts were built according to the post-1998 legislation. Considering these conditions; it can be stated that most of the risky buildings are located in the central districts.

**Kahramanmaras[[27]](#footnote-28)**

Kahramanmaras is the eighteenth largest province in Turkiye. The population of Kahramanmaras which was 1.004.414 in 2007 increased regularly and reached 1.171.298 in 2021. 50.8% of the population is male and 49.2% is female. The annual growth rate of population of Kahramanmaras is generally higher than the annual growth rate of population of Turkiye. The population trends of Kahramanmaras are shown in Figure 15.

Figure 15. Population Trends of Kahramanmaras

*Source:* TurkStat, The results of Address Based Population Registration System, 2007-2021

When the population is assessed, it is seen that the total age dependency ratio is 55,2 and average household size is 3,7 in Kahramanmaras and these are higher than the average of Turkiye.

Table 19 Total Age Dependency Ratio and Average Size of Households in Kahramanmaras

|  |  |  |
| --- | --- | --- |
| **Population** | **Turkiye** | **Kahramanmaras** |
| Total age dependency ratio (%) | 47.4 | 55.2 |
| Average household size | 3.2 | 3.7 |

*Source:* TurkStat, The results of Address Based Population Registration System, 2021

The distribution of Kahramanmaras population by age groups is given in Figure 16.

Figure 16. The Change in the Population Pyramid of Kahramanmaras

|  |  |
| --- | --- |
|  |  |

*Source:* TurkStat, The results of Address Based Population Registration System, 2007 and 2021

Educational attainment which is the highest level of education that an individual has completed is given in Figure 17 for Kahramanmaras. As seen from the figure there are gaps between male and female at all education levels.

Figure 17. Adult Education Level in Kahramanmaras

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refers to ages between 25 and 64.

Higher education level is an important factor contributing to individual’s employability or income. In general, the percentage of adults attained higher education levels in Kahramanmaras is lower than Turkiye as shown in Figure18. While 25 percent of adults in Turkiye completed tertiary education, in Kahramanmaras this figure drops to 20 percent.

Figure 18: Percentage of Adult Education Levels in Kahramanmaras and Turkiye

|  |  |
| --- | --- |
| Kahramanmaras | Turkiye |
|  | Chart, pie chart  Description automatically generated |

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refers to ages between 25 and 64.

**Socio-economic development**

According to the Socio-Economic Development Ranking of Provinces and Regions Research conducted by the Turkish Ministry of Industry and Technology, General directorate of Development Agencies in 2017, Kahramanmaras province is among the fifth-tier developed provinces and ranks 58th among all provinces. At this point, it must be noted that the index value of all provinces at this level is negative, that is, they were negatively affected by the parameters used in determining the level of development. In 2003 and 2011, when the study was carried out, Kahramanmaras was determined as the 48th and 60th provinces, respectively, within the scope of socioeconomic development level.

The socioeconomic development level of the districts of Kahramanmaras is provided in Table 20, on the basis of following three criteria:

* Socioeconomic development rankings of the districts of Kahramanmaras at national level
* Socioeconomic development rankings of the districts of Kahramanmaras at provincial level, and
* Development levels of the districts of Kahramanmaras.

Table 20 Socioeconomic Development Rankings of Kahramanmaras Districts

| **District** | **National Development Ranking** | | **Development Ranking in Kahramanmaras Province** | | **Level of Development** | |
| --- | --- | --- | --- | --- | --- | --- |
| **2004** | **2017** | **2004** | **2017** | **2004** | **2017** |
| Dulkadiroglu | - | 145/970 | - | 1/11 |  | 2 |
| Onikisubat | - | 233/970 | - | 2/11 |  | 3 |
| Elbistan | 236/872 | 339/970 | 1/9 | 3/11 | 3 | 3 |
| Afsin | 476/872 | 549/970 | 2/9 | 4/11 | 3 | 4 |
| Pazarcik | 593/872 | 627/970 | 4/9 | 5/11 | 4 | 4 |
| Turkoglu | 613/872 | 729/970 | 5/9 | 6/11 | 4 | 5 |
| Goksun | 572/872 | 744/970 | 3/9 | 7/11 | 4 | 5 |
| Nurhak | 671/872 | 745/970 | 6/9 | 8/11 | 5 | 5 |
| Andirin | 707/872 | 760/970 | 7/9 | 9/11 | 5 | 5 |
| Ekinozu | 788/872 | 849/970 | 9/9 | 10/11 | 6 | 5 |
| Caglayancerit | 768/872 | 853/970 | 8/9 | 11/11 | 6 | 5 |

*Source*: Ministry of Industry and Technology; General Directorate of Development Agencies, Research for the Socio-Economic Development Ordering of Districts, 2004, 20017 and 2022

Note: The center district of Kahramanmaras was divided into two districts, namely Dulkadiroglu and Onikisubat in 2012.

Dulkadiroglu and Onikisubat districts, which were formed after the division of Kahramanmaras central district into two in 2012, are the two highest in terms of socioeconomic development in the study conducted in 2017.

**Manisa**

Manisa is the second largest province of the Aegean Region and the fourteenth province of Turkiye in terms of population. The population of Manisa, which was 1,319,920 in 2007, approached 1,456,626 million by the end of 2021. 50.2% of the population is male and 49.8% is female. The annual growth rate of population of Manisa is similar to annual growth rate of population in Turkiye except the fluctuations between 2008 and 2011. The population trend of Manisa is shown in Figure 19.

Figure 19. Population Trends of Manisa

*Source:* TurkStat, The results of Address Based Population Registration System, 2007-2021

Total Age Dependency Ratio and Average Size of Households in Manisa is given in Table 21. While age dependency ratio of Manisa is the same, average household size of Manisa is below the average of Turkiye.

Table 21. Total Age Dependency Ratio and Average Size of Households in Manisa

|  |  |  |
| --- | --- | --- |
| **Population** | **Turkiye** | **Manisa** |
| Total age dependency ratio (%) | 47,4 | 47,4 |
| Average household size | 3,2 | 3,0 |

*Source:* TurkStat, The results of Address Based Population Registration System, 2021

The percentage of adults at working age of 25 to 64 among the total population in Manisa was increased from 51.7 percent to 54.3 percent between 2007 and 2021. Detailed data of the distribution by age groups are given in Figure 20.

Figure 20. The Change in the Population Pyramid of Manisa

|  |  |
| --- | --- |
|  |  |

*Source:* TurkStat, The results of Address Based Population Registration System, 2007 and 2021

Educational attainment which is the highest level of education that an individual has completed is given in Figure 21 for Manisa. As the figure reveals, there are gaps between male and female at all education levels.

Figure 21. Adult Education Level in Manisa

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refers to ages between 25 and 64.

Higher education level is an important factor contributing to individual’s employability or income. In general, the percentage of adults attained higher education levels in Manisa is lower than Turkiye as shown in Figure 22. While 25 percent of adults in Turkiye completed tertiary education, in Manisa this figure drops to 19 percent.

Figure 22. Percentage of Adult Education Levels in Manisa and Turkiye

|  |  |
| --- | --- |
| Manisa | Turkiye |
|  | Chart, pie chart  Description automatically generated |

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refers to ages between 25 and 64.

**Socio-economic development**

According to the Socio-Economic Development Ranking of Provinces and Regions Research conducted by the Turkish Ministry of Industry and Technology, General directorate of Development Agencies in 2017, Manisa province is among the second-tier developed provinces and ranks 23rd among all provinces. In 2003 and 2011, Manisa was ranked as 25th and 23rd respectively, within the scope of socioeconomic development level.

Manisa, has 17 districts in total. The socioeconomic development levels of the districts of Manisa are provided in Table 22, on the basis of following three criteria:

* Socioeconomic development rankings of the districts of Manisa at national level
* Socioeconomic development rankings of the districts of Manisa at provincial level, and
* Development levels of the districts of Manisa.

Although socio-economic development level of Manisa is in the 2nd-tier when evaluated at the district level, it is seen that the central districts are at the 2nd level, and the surrounding districts are at the 3rd and 4th level.

Table 22. Socioeconomic Development Rankings of Manisa Districts

| **District** | **National Development Ranking** | | **Development Ranking in Manisa Province** | | **Level of Development** | |
| --- | --- | --- | --- | --- | --- | --- |
| **2004** | **2017** | **2004** | **2017** | **2004** | **2017** |
| Yunusemre | - | 63/970 | - | 1/17 |  | 2 |
| Soma | 117/872 | 150/970 | 2/15 | 2/17 | 2 | 2 |
| Sehzadeler | - | 171/970 | - | 3/17 |  | 2 |
| Akhisar | 178/872 | 184/970 | 4/15 | 4/17 | 3 | 2 |
| Turgutlu | 82/872 | 189/970 | 1/15 | 5/17 | 2 | 2 |
| Salihli | 136/872 | 202/970 | 3/15 | 6/17 | 2 | 2 |
| Demirci | 439/872 | 316/970 | 11/15 | 7/17 | 3 | 3 |
| Alasehir | 284/872 | 362/970 | 5/15 | 8/17 | 3 | 3 |
| Kula | 366/872 | 415/970 | 9/15 | 9/17 | 3 | 3 |
| Sarigol | 446/872 | 429/970 | 12/15 | 10/17 | 3 | 3 |
| Gordes | 594/872 | 434/970 | 14/15 | 11/17 | 4 | 3 |
| Kirkagac | 398/872 | 445/970 | 10/15 | 12/17 | 3 | 3 |
| Saruhanli | 363/872 | 481/970 | 8/15 | 13/17 | 3 | 4 |
| Koprubasi | 539/872 | 495/970 | 13/15 | 14/17 | 4 | 4 |
| Ahmetli | 300/872 | 527/970 | 6/15 | 15/17 | 3 | 4 |
| Golmarmara | 354/872 | 584/970 | 7/15 | 16/17 | 3 | 4 |
| Selendi | 689/872 | 621/970 | 15/15 | 17/17 | 5 | 4 |

*Source*: Ministry of Industry and Technology; General Directorate of Development Agencies, Research for the Socio-Economic Development Ordering of Districts, 2004, 20017 and 2022

Note: The center district of Manisa was divided into two districts, namely Yunusemre and Sehzadeler in 2012.

As can be seen from the table, the socioeconomic development levels of Yunusemre and Sehzadeler districts, which were formed through the division of central district of Manisa in 2012 are high. In Golmarmara and Ahmetli Districts, whose socioeconomic development level has declined, the main source of income is agricultural activities. The faculties of Celal Bayar University have been established in Demirci, one of the districts whose socioeconomic level has risen, and cherry production and sales have emerged as a new agricultural activity area in recent years.

Based on the findings obtained from the field studies, risky structures are concentrated in the central districts of Sehzadeler, Turgutlu and Yunusemre and in the district of Saruhanli. The high concentration of old buildings in these districts is one of the factors that pose the risk.

**Tekirdag**

Tekirdag is Turkiye's twenty-first populous city in Turkiye. Despite the significant drop in 2009, the annual growth rate of population of Tekirdag is higher than the annual growth rate of population of Türkiye and Tekirdag ranks second among 81 provinces in the annual growth rate of population ranking. The population of Tekirdag, which was 728,396 in 2007, increased to 1.113.400 at the end of 2021, 51.2% of the population is male and 48.8% is female. The population trends of Tekirdag are shown in Figure 23.

Figure 23. Population Trends of Tekirdag

*Source:* TurkStat, The results of Address Based Population Registration System, 2007-2021

Age dependency ratio and average household size of Tekirdag is below the average of Turkiye average as shown in Table 23.

Table 23 Total Age Dependency Ratio and Average Size of Households in Tekirdag

|  |  |  |
| --- | --- | --- |
| **Population** | **Turkiye** | **Tekirdag** |
| Total age dependency ratio (%) | 47.4 | 43.4 |
| Average household size | 3.2 | 3.1 |

*Source:* TurkStat, The results of Address Based Population Registration System, 2021

Distribution of the population of Tekirdag by age groups is given in Figure 24. The active population is higher in the industrially dense districts of Tekirdag such as Corlu, and the elderly population ratio is higher in the central districts. For this reason, the total age dependency ratio in Tekirdag is lower in industrial districts where the active population is concentrated.

Figure 24. The Change in the Population Pyramid of Tekirdag

|  |  |
| --- | --- |
|  |  |

Source: TurkStat, The results of Address Based Population Registration System, 2007 and 2021

Educational attainment which is the highest level of education that an individual has completed is given in Figure 25 for Tekirdag. As the figure reveals, there are gaps between male and female especially below tertiary levels.

Figure 25. Adult Education Level in Tekirdag

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refer to ages between 25 and 64.

Higher education level is an important factor contributing to individual’s employability or income. In general, the percentage of adults attained higher education levels in Tekirdag is lower than Turkiye as shown in Figure 26. While 25 percent of adults in Turkiye completed tertiary education, in Tekirdag this figure drops to 22 percent, and the percentage of upper-secondary is higher than Turkiye probably related with the type of the employees required in industrial facilities.

Figure 26. Percentage of Adult Education Levels in Tekirdag and Turkiye

|  |  |
| --- | --- |
| Tekirdag | Turkiye |
|  | Chart, pie chart  Description automatically generated |

*Source:* TurkStat National Education Statistics, 2021

*Notes:* Adult refers to ages between 25 and 64.

**Socio-economic development**

According to the Socio-Economic Development Ranking of Provinces and Regions Research conducted by the Ministry of Industry and Technology, General Directorate of Development Agencies in 2017, Tekirdag is among the first-tier developed provinces, and Tekirdag ranks ninth in terms of socioeconomic development level in Turkiye. In 2003 and 2011 Tekirdag was 7th and 9th provinces, respectively.

The socioeconomic development level of the districts of Tekirdag is provided in Table 24, on the basis of following three criteria:

* Socioeconomic development rankings of the districts of Tekirdag at national level
* Socioeconomic development rankings of the districts of Tekirdag at provincial level, and
* Development levels of the districts of Tekirdag.

Table 24 Socioeconomic Development Rankings of Tekirdag Districts

| **District** | **National Development Ranking** | | **Development Ranking in Tekirdag Province** | | **Level of Development** | |
| --- | --- | --- | --- | --- | --- | --- |
| **2004** | **2017** | **2004** | **2017** | **2004** | **2017** |
| Corlu | 15/872 | 24/970 | 1/8 | 1/11 | 1 | 1 |
| Cerkezkoy | 29/872 | 26/970 | 3/8 | 2/11 | 2 | 1 |
| Suleymanpasa | - | 75/970 | - | 3/11 | - | 2 |
| Saray | 154/872 | 157/970 | 5/8 | 4/11 | 2 | 2 |
| Muratli | 111/872 | 199/970 | 4/8 | 5/11 | 2 | 2 |
| Malkara | 252/872 | 219/970 | 7/8 | 6/11 | 3 | 2 |
| Marmaraereglisi | 18/872 | 234/970 | 2/8 | 7/11 | 2 | 3 |
| Sarkoy | 166/872 | 254/970 | 6/8 | 8/11 | 2 | 3 |
| Hayrabolu | 267/872 | 310/970 | 8/8 | 9/11 | 3 | 3 |
| Ergene | - | 311/970 | - | 10/11 | - | 3 |
| Kapakli | - | 363/970 | - | 11/11 | - | 3 |

*Source*: Ministry of Industry and Technology; General Directorate of Development Agencies, Research for the Socio-Economic Development Ordering of Districts, 2004, 20017 and 2022

Note: The name of the center district of Tekirdag was changed into Suleymanpasa in 2012.

When the districts with the most risky structures are evaluated, Suleymanpasa central district and Corlu stand out.

**Vulnerable Groups**

Although the demographic structure and socio-economic conditions of the areas where the Project will be implemented differ, there are similar vulnerable groups in each province which are:

* Women-headed households
* Disabled people,
* Elderly persons,
* Poor households (including those with many children) & people without any social security insurance (including unemployed young population, households with child workers),
* Migrants / Syrians under temporary protection / Ethnic groups,
* Persons and groups whose livelihoods are dependent on the structures subject to the Project who will be permanently displaced, economically and physically (e.g., supers).

All vulnerable groups listed above whether they are owners, tenants or limited real rights holders, will be defined as beneficiaries within the scope of the Project. Detailed information on vulnerable groups is presented in Section 6.3.1.8 of the RF prepared for the Project. In addition, measures were defined for all vulnerable groups within the scope of the Project, and stakeholder engagement activities were planned.

In this section, baseline information will be presented on “Migrants / Syrians under temporary protection / Ethnic groups” under two headings as migrants and Syrians under temporary protection, and Roma population.

### **Migrants and Syrians under Temporary Protection**[[28]](#footnote-29)

Households with migrants and Syrians under temporary protection who are residing/working as owners or tenants in the project provinces will be able to benefit from supports or rental assistance when they meet the conditions for applying for credit or assistance.[[29]](#footnote-30)

As of October 2022, the number of Syrians under temporary protection in Turkiye is 3,622,486. While 1.5 percent of Syrians live in temporary shelters, 98.5 percent of them live in cities and villages. Istanbul, which is among the project provinces, is the province hosting the highest number of Syrians under temporary protection with 551,676. However, according to the percentage of Syrians in the provincial population, it ranks 16th among 81 provinces with 3.4 percent. The number and percentage of Syrians living in the project provinces and the ranking of the provinces in terms of both number and percentage of Syrians are given in Table 25.

Table 25. Population and Percentage of SuTP in Project Provinces

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Province** | **Population of Province** | **Population of SuTP** | **Percentage of SuTP** | **Rank of the province in terms of population of SuTP** | **Rank of the province in terms of percentage of SuTP** |
| Istanbul | 15.840.900 | 551.676 | 3,37% | 1 | 16 |
| Izmir | 4.425.789 | 148.655 | 3,25% | 8 | 18 |
| Kahramanmaras | 1.171.298 | 97.118 | 7,66% | 11 | 8 |
| Manisa | 1.456.626 | 14.389 | 0,98% | 22 | 37 |
| Tekirdag | 1.113.400 | 12.719 | 1,13% | 27 | 36 |

*Source*: <https://www.goc.gov.tr/gecici-koruma5638>. Date of Access: October 20, 2022.

49 percent of Syrians under temporary protection are under the age of 18 and 46 percent are women.

As of the end of 2021, the number of international protection applications made to Turkiye is 26,256[[30]](#footnote-31) and the number of irregular migrants apprehended in 2022 is 230,546 as of October 2022. The top three nationalities of the irregular migrants apprehended are Afghans with 42 percent, Syrians with 16 percent and Pakistanis with 6 percent, respectively.

According to the Comprehensive Vulnerability Monitoring Exercise,[[31]](#footnote-32) which aims to assess the socio-economic vulnerability of the migrant population, the most vulnerable migrant groups are female-headed households, Afghan households and newcomers.

* Women-headed households: The ratio of women-headed households among the total migrant households is 12 percent and half of these households are single-parent families. According to the survey conducted
  + Adult women are much less likely than men to speak Turkish or receive any formal education.
  + While 42 percent of women-headed households do not have a working member in the household, this rate is 15 percent in men-headed households.
  + While 60 percent of women-headed households are in multidimensional poverty, this rate is 39 percent in male-headed households.
  + While 9 percent of women-headed households consume food below acceptable standards, this rate is 2 percent in men-headed households.
* Afghan households: While Syrians make up 90 percent of the migrants in Turkiye, Iraqis make up 42 percent and Afghans make up 5 percent. [[32]](#footnote-33) Afghan refugees are more likely to experience registration problems, and Afghan and Iraqi men are less likely to join the workforce than Syrians. While 76 percent of Afghans are in multidimensional poverty, this rate is 54 percent for Iraqis and 38 percent for Syrians. Similarly, while 3 percent of migrants in Turkiye consume food below acceptable standards, this rate is 18 percent among Afghans.
* Newcomers: Newcomers to Turkiye are more vulnerable than those who came to Turkiye at least six months ago.

In the same study, the first four areas where refugees are deprived or vulnerable were identified as housing, food, education and child labor.

* Housing: 70 percent of refugees live in housing that does not meet minimum humanitarian standards such as privacy, natural light and ventilation, security and basic facilities.
* Food insecurity: 3 percent of migrants in Turkiye consume food below acceptable standards.
* Education: 28 percent of school-age children (6-17 years old) do not go to school because they work, do not have official records, cannot afford textbooks, transportation, stationery, etc., or face bullying, etc. This rate is higher in female-headed households.
* Child labor: 17 percent of male refugees under the age of 18 do work as child labor.

Additional information on the existing situation of migrants in some of the Project provinces obtained through field studies or desktop research are presented below.

**Istanbul:** According to a study conducted by International Organization for Migration in 2019, there are 1,660,395 migrants and Syrians under temporary protection living in Istanbul where 58% of them are Syrians, followed by Afghans (7.7%), Uzbeks (5.1%), Turkmens (4.6%) and other nationalities (24.6%)[[33]](#footnote-34). The top five districts ranked by the population of migrants and Syrians under temporary protection are Esenyurt, Fatih, Başakşehir, Bağcılar and Sultangazi respectively (see Figure 27).

Figure 27. Population of migrants and Syrians under temporary protection in Istanbul

Map

Description automatically generated

*Source:* Prepared by consultant using data in Baseline Assessment in Istanbul province: Analysis Report: May-July 2019. International Organization for Migration.

The socio-economic situations of migrants in top-most five districts where migrants and Syrians under temporary protection are intensely populated—and the Project activities will be carried—are summarized in the following paragraphs. [[34]](#footnote-35),[[35]](#footnote-36)

*Esenyurt:* There are 214,205 migrants and Syrians under temporary protection living in the district. Syrians constitute 60 percent of the migrant population. The main reasons that Esenyurt is the most preferred district by migrants and Syrians under temporary protection are (i) presence of people of various socioeconomic status, (ii) presence of relatives and friends who have settled in the district before, and (iii) diversity of employment sectors. Migrants and Syrians under temporary protection are mostly employed in service and industry sectors.

*Basaksehir:* There are 107,203 migrants and Syrians under temporary protection living in the district. Syrians constitute 62 percent of the migrant population. The important factors that make Esenler district preferred by migrants and Syrians under temporary protection are (i) multicultural structure of the district, (ii) feeling safe due to the existing building complexes (rather than standalone buildings on the streets), (iii) affordable rents, (iv) high potential of newly built houses in terms of social life, (v) presence of relatives and friends who have settled in the district before, (vi) ease of transportation to other districts, and (vii) employment opportunities provided by the organized industrial zone and other industrial facilities in the district. Most of the migrants and Syrians under temporary protection with low-income levels reside in squatters or illegal housings since the rents are more affordable and mostly work in industrial facilities as unregistered employees.

*Bagcilar:* There are 107, 055 migrants and Syrians under temporary protection living in the district. Syrians constitute 74 percent of the migrant population. Affordability of rents is the main factor that make Bagcilar district preferred by migrants and Syrians under temporary protection. There are also illegal hostels for workers in the district. Migrants and Syrians under temporary protection are mostly employed in textile and shoe-making sectors.

Sultangazi: There are 83, 521 migrants and Syrians under temporary protection living in the district. Syrians constitute 76 percent of the migrant population. Most of the migrants are irregular migrants. The important factors that make Sultangazi district preferred by migrants and Syrians under temporary protection are (i) strong social networks, (ii) ease of finding housing units to rent, (iii) job opportunities, (iv) low socioeconomic status of people living in the district, and (v) welcoming of host communities. While Syrians under temporary protection are mostly employed in textile manufacturing, construction and furniture manufacturing and painting, Afghan and Pakistani nationals work in paper and scrap collecting, and animal husbandry, and Uzbek and Turkmen nationals work in shoe and textile manufacturing.

Esenler: There are 76,228 migrants and Syrians under temporary protection living in the district. Syrians constitute 77 percent of the migrant population. The important factors that make Esenler district preferred by migrants and Syrians under temporary protection are (i) ease of finding housing units to rent, (ii) ease of transportation to other districts, and (iii) job opportunities. Migrants and Syrians under temporary protection are mostly employed in textile sector.

**Kahramanmaras:** Migrants and Syrians under temporary protection mostly live in areas where the old and low-quality structures of the cities are dense. These areas can also be considered as places where risky structures are concentrated. Neighborhoods where migrants and Syrians under temporary protection live and where risky structures are concentrated are also neighborhoods where the poor local population lives.

The number of migrants and Syrians under temporary protection in Kahramanmaras is around 98,000 according to official figures, but it is stated that the real number is around 100,000.

### Roma population

Within the scope of the project, the Roma were evaluated as the ethnic group that stands out in terms of vulnerability. Roma population, who is one of the beneficiaries of the Project as tenant, apartment worker, or building owner, will be able to participate in the process by benefiting from the rights and supports defined in Section 7.

Roma population generally lives in the most disadvantaged areas and in the poorest districts of cities. The main policy areas that Roma should receive support from, which are stated in the “Strategy Document for Roma Population” of the Ministry of Family and Social Policies, and the observations made during the preparation of the strategy document regarding these policy areas are as follows: [[36]](#footnote-37)

* Education: Roma children cannot benefit from education opportunities sufficiently and their absenteeism is high. Some Roma children are unable to continue their education because their families cannot afford to pay for their education or they have to work to support their families, while some of the children who attend school drop out because they think they are facing social exclusion.
* Employment: There is not enough data on the situation of Roma population in the labor market. However, the general opinion and observations are that Roma population mostly work in precarious, unqualified and low-status jobs. Thus, their income is not regular and is far from satisfying the needs of their families.
* Shelter: The houses they live in are physically inadequate. In fact, Roma population mostly live in makeshift barracks that they have built themselves, on public lands or private lands. In the urban transformation area projects carried out in the past to improve the living environment of the Roma, the problems of integration with the society and employment of the Roma population have increased, since the houses were built usually far from the city center and are multi-storey.
* Health: Both the general health literacy of Roma population and—although varies from region to region—the level of awareness of health services they can benefit from is generally low.
* Social services and social assistance: The low employment level of Roma population and the fact that they work in temporary/precarious jobs bring along the risk of poverty. Since they do not have the ability to pay premiums, they are generally not included in the social insurance system and are not supported through the social service and assistance system.

As a general opinion, it has been accepted that these observations do not differ between provinces. Additional findings obtained through field and office studies carried out within the scope of the preparation of this RF are given in the following paragraphs.

**Istanbul:** There are approximately 480 thousand Roma residing within Istanbul. Çatalca district has the highest share of Roma population (30.3%) with respect to total population. It is followed by Arnavutköy (8.1%), Gaziosmanpaşa (7.8%), Fatih (7.6%), Ataşehir (6.4%), Büyükçekmece (6.2%) and Esenyurt (5.2%). The share of Roma population in the rest of the districts of Istanbul is below 5% (See Figure 28).

Figure 28. Share of Roma Population in Districts of Istanbul

Chart

Description automatically generated with medium confidence

*Source*: İBB Kültür Varlıkları Daire Başkanlığı and Istanbul Planlama Ajansı. 2020. *Istanbul Roman Çalıştayı* *2019*. Istanbul: Istanbul Metropolitan Municipality. Page 14.

The main considerations of Roma regarding urban transformation are[[37]](#footnote-38):

* **Lack of zoning plans.** Some neighborhoods where Roma are densely populated do not have a zoning plan.
* **Poor physical condition of buildings.** Some Roma living in tents and barracks are vulnerable to natural disasters. In addition, although they do not live in tents and barracks, the buildings where some of the Roma live are in a very poor condition and should be reinforced in terms of earthquake risk.

**Risky building vs. risky areas.** Although there are different opinions on this subject, it is generally seen that it is more appropriate to reconstruct existing risky buildings on the basis of buildings instead of areas in the transformation of risky buildings. In the implementations made on the basis of risky-area, the increase in the value of the newly constructed buildings causes social segregation and Roma cannot live in these buildings. In addition, they cannot continue their previous social life, which they were accustomed to, in these restructured regions, and their social networks are interrupted.

**Izmir:** In the interviews held in Izmir within the scope of field studies, the neighborhoods in Bayraklı where the Roma population, working predominantly in the informal sector, live were given as an example. The Roma population living in the Ege neighborhood is in the middle of the newly built high business centers. Ornekkoy neighborhood is another district where Roma people are concentrated. According to the mukhtar of Ornekkoy, the Roma mostly work in basket weaving and scrap scavenging.

While the Roma population in Tire is mostly integrated with the urban structure and works intensively in agricultural activities, the Roma people in Menemen mostly reside in Ağadır and Kazımpaşa neighborhoods, which are urban protected areas. Among the Roma in Menemen, 60% are property owners and 40% live in treasury land or barracks.

**Manisa:** Roma population lives in the neighborhoods of the city with low structural quality. The living standards and building qualities of the houses in which the Roma live in Şehzadeler, Yunusemre, Saruhanlı, Kırkağaç and Soma districts are very low.

**Tekirdag:** The majority of Roma population lives in the Aydoğdu neighborhood of Suleymanpasa district and Kore neighborhood of Çorlu district. Their social networks are strong in themselves, and they do not have many relations with other segments of the society. Crowded families live in unqualified, small buildings.

# Potential Environmental & Social Risks and Application of ESSs to Project Components

## Evaluation Regarding Component 1 and 4a

Main environmental and social risks and impacts of the Components evaluated in this ESMF are related with the sub-projects under Component 2. In brief, Component 1 and 4a are defined to strengthen institutional capacity to enable conditions for urban resilience and to support the managerial aspects of the other components -especially Component 2- and, respectively.

On the other hand, all kinds of sub-projects and activities detailed in Section 3 must be implemented in line with WB ESF and relevant standards. Therefore,

* The development and implementation of the Urban Transformation Strategy Plans / Documents will be in line with WB ESF. Outcomes / actions of the plans will be in line with WB ESF in addition to the national legislation.
* Similarly, any other document to be prepared within the scope of the sub-project regarding Project Visibility and Accessibility, such as Communication Strategy, will be in line with WB ESF.
* Regulatory framework of the design of the improvement of the existing Grievance Mechanism will include WB ESF.
* WB ESS2 will apply to consultants whose services will be procured for all of the sub-projects and relevant activities under Component 1 and 4a.
* Consultants whose service to be taken and any kinds of plans/documents/procedures which will be prepared under the sub-projects of Component 1 and 4a will be subjected to WB approval.

## Evaluation Regarding Component 5

As clarified in Section 3, identification of potential sub-projects under Component 5 is not available at the current status. Besides, specific scope of the component is not also available due to its nature. Accordingly, in order to manage potential environmental and social risks and impacts of the Component 5 and to define scope of application of ESSs to it; CERC Manuals (as annexes to the Project Operations Manual) will be prepared by the MoEUCC. Environmental and social management of any possible eligible crises or emergency will be performed in accordance with the Operations Manual to be prepared. Furthermore, based on positive list of activities agreed in the CERC Manual and initial E&S analysis, a CERC section will be prepared and included in the ESMF. The main aspects that the specific CERC section should include is**:** a) list of activities that the CERC could finance (Positive list of goods, services and works; b) Analysis of related potential Environmental and Social Risks and Impacts; c) Environmental and Social Management Procedures; and d) Institutional Arrangement for the Emergency Action Plan (EAP) Implementation.

## Project Benefits and Positive Impacts

The main potential positive environmental and social benefits and impacts of the activities and sub-projects to be carried out can be listed as follows:

* The fact that risky buildings are generally built at an earlier date than non-risky buildings causes the energy efficiency of the former residences failing to meet current standards and practices. Within the scope of the Project, the reconstruction of buildings will reduce the use of energy for air conditioning and heating, with the construction of well-insulated houses.
* Emissions, which decrease directly with the decrease in the use of fuel for heating and indirectly with the decrease in the use of electricity for air conditioning, will have a positive impact on both air quality and climate change.
* Within the scope of Component 2, with the reconstruction of structures in provinces where coal is used extensively for heating purposes, such as Kahramanmaras, the heating systems will be operated with fuels with lower carbon emissions, thus positive effects will emerge in terms of both air quality and climate change.
* In the scope of national legislation, the Planned Areas Zoning Regulation was amended at the beginning of 2021 and a new obligation was introduced. Accordingly, the mechanical installation Projects of the buildings to be built on parcels larger than 2000 m² must include a rainwater collection system for the rain water to be collected from the roof surface, if necessary, to be filtered and collected in a tank and used in building toilet flushes. Within the scope of the Project, sub-projects that will be included in this scope will indirectly contribute to water efficiency.
* Risky structures will be reconstructed into disaster-resistant structures by demolishing the structures identified as risky and constructing or reinforcing safe structures in compliance with the standards.
* Low-income households or vulnerable groups living in risky structures will be able to obtain safe housing by taking advantage of appropriate loan opportunities and rent support.
* Awareness about risky structure and urban resilience will be raised by explaining the Project to the public within the scope of stakeholder engagement activities and making it public.
* In line with the activities within the scope of Component 1 and 4a the technical and organizational competence of the MOEUCC and the selected provinces will be increased to implement urban resilience practices.

## Risks and Adverse Impacts of Component 2

Potential environmental and social risks and impacts may arise during the implementation of sub-projects within the scope of Component 2. It must be noted at this point that a separate Resettlement Framework has been prepared for the Component 2 also. Accordingly, the risks and impacts relevant to the demolition, reconstruction or retrofitting of risky structures can be associated with the following:

* Social risks related to the temporary and permanent displacement of Project-affected people while rehabilitation/reconstruction of apartments/workspaces are being carried out through the Project-financed program,
* Noise and vibration generation during retrofitting/demolition/reconstruction activities,
* Air pollution specifically related to particulate matter, most likely to occur during demolition,
* Construction & demolition wastes that will generate during mainly demolition activities and other wastes that will arise during demolition/retrofitting/reconstruction,
* Water and soil pollution that may occur in all processes,
* Environmental, public health and occupational health and safety effects related to asbestos if the building to be demolished contains asbestos,
* Labor risks, given the extensive civil works,
* Risks to public health due to sub-project traffic,
* General occupational health and safety risks that may apply to any demolition/retrofitting/reconstruction activity,
* Public health and safety risks to which all of the above are directly or indirectly related,
* Inadequate outreach and stakeholder engagement,
* Lack of information about or access to grievance mechanisms for workers and/or Project-affected people,
* Risks of exclusion of poorer or vulnerable groups from Project benefits, subsidies etc.
* Risk of impoverishment due to permanent or temporary physical or economic displacement, and
* Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) risks

### Temporary and Physical Displacement

The Project could result in significant temporary relocation of household and business owners while structures are being retrofitted or newly constructed (which the MoEUCC is implementing under Component 2). In addition to the temporarily displaced Project-affected people (PAPs), many of the tenants will leave their current residences/workplaces permanently. Finally, a number of the PAPs will be affected not only by physical displacement, but economic displacement due to local disruptions caused by the civil works. At present, the estimated number of displaced persons is between 24,000 and 40,000 total individuals in the five cities – albeit staggered in different locations and at different times.

### Noise & Vibration

Proper management of noise and vibration during demolition/retrofitting/reconstruction of structures to be converted under Component 2 is critical. In this context, contractors who will carry out sub-project activities must comply with the relevant noise limit values in line with both national legislation and the WB Environmental and Social Framework, taking into account the sensitive receptors in the areas where the activities will be carried out.

### Air Pollution

Air pollution will occur especially during implementation of the sub-projects that include demolition. In addition, although the new buildings will be rebuilt on the basis of the existing risky building, there may be construction activities that will require additional excavation during the construction of the new building due to reasons such as the establishment of a parking lot, which has recently become a requirement within the scope of national legislation, and these excavation works may also affect the air quality. In addition, the exhaust emissions of vehicles and equipment to be used during demolition/retrofitting/reconstruction processes may also cause air pollution.

### Water & Soil Pollution

Sub-project activities within the scope of Component 2 will be carried out in urban areas open to development and on the lands of existing structures, and accordingly, they will not be carried out near water resources that are essential to protect for ecological and/or human consumption purposes. For this reason, it is expected that the sub-project activities will not have a serious impact on water and soil components, with the appropriate management of chemical leak & spill events that may cause soil pollution and thus possible groundwater pollution, and personnel-generated wastewater.

### Waste Management

The most basic waste that will be generated intensively within the scope of the Project will be construction & demolition wastes. In addition, packaging waste can be listed as other main non-hazardous waste stream.

Hazardous wastes that may arise from activities to be carried out within the scope of Component 2 can be listed as asbestos, wastes contaminated with hazardous materials (e.g., cans of chemicals such as paint, varnish, etc.), waste batteries and accumulators, waste oil, wastes that may arise from maintenance and repair activities, and waste paint. The Waste Management Plan, which contains the details of the management of all wastes, including the management of hazardous wastes, is given in Annex 9 and the Asbestos Management Plan in Annex 7.

### Asbestos Management

The use of asbestos-containing materials in new buildings is prohibited in Turkiye as well as in the rest of the world. However, existing risky structures that will be demolished under Component 2 may contain asbestos. In this respect, asbestos inventory will be performed, and the asbestos must be selectively separated before the demolition of any building -if it is detected within the scope of asbestos inventory studies that must be carried out-, its dismantling must be carried out by authorized experts in this regard, and asbestos will be managed as hazardous waste afterwards. All processes related to asbestos-containing waste will be managed within this scope, and in order to completely eliminate the risk, procedures will be implemented in line with the Asbestos Management Plan given in Annex 7, in all structures that will be demolished under Component 2, regardless of the date of their first construction.

### Resources Required

During the demolition of risky structures and construction of new structures main resources to be used are listed as below:

* basic retrofitting/reconstruction requirements (concrete, gravel, rebar, insulation material, etc.),
* water for personnel - the water to be needed will be supplied from the mains if possible, by tankers when it is not available. The concrete will be supplied as ready mixed concrete,
* fuel for vehicles and equipment - there will be no fuel storage in the construction areas and this need will be met from the nearby services, and
* Electricity – for all kinds of activities.

### Traffic

Traffic originating from sub-projects may increase the current traffic load in cities, cause traffic jams, cause temporary traffic restrictions and traffic accidents that may threaten life & health may occur. In this context, the measures are detailed in the Community Safety and Traffic Management Plan in Annex 12.

### Occupational Health & Safety (OHS)

OHS risks that may arise during demolition and construction phases can be listed as follows:

* Working at height,
* Manual handling,
* Personal exposure to noise, dust, vibration, chemicals, etc.,
* Ergonomic hazards,
* Biological hazards,
* Electrical works,
* Traffic within the scope of demolition and construction,
* Risks of thermal comfort,
* Exposure to asbestos and
* Insufficient lighting.

The management of these risks is detailed in the Occupational Health and Safety Management Plan given in Annex 11. At this point, it should be noted that the national legislation requirements regarding OHS are already very strict. For instance, according to the Regulation on Occupational Health and Safety in Construction Works, contractors are already obliged to prepare a “Health and Safety Plan”. The scope of the regulation involves demolition and retrofitting works together with construction works and therefore, mentioned obligation will be applicable for all types of sub-projects under Component 2. Through preparation of the legislatively obliged Health and Safety Plan in a way to comprise the scope of the Occupational Health and Safety Management Plan presented in Annex 11, there will not be a requirement to prepare an additional plan.

On the other hand, despite presence of strict OHS legislation, there are some deficiencies in implementation. Therefore, the scope of training for contractors and the careful selection and continuous supervision of contractors gain specific importance.

### Labor issues

The Project will comprise considerable civil works and various types of Project workers. Hence, the ESS2 on Labor and Working Conditions applies. Project workers will include: Direct workers, contracted workers, primary supply workers, and civil servants. Community workers are not expected to be engaged by the Project. ILBANK and the MoEUCC have prepared and consulted upon LMPs, specifying the types of workers in the Project. Where civil servants are involved, they will remain subject to the terms and conditions of their existing public sector employment agreement, unless they are legally transferred to the Project. Several OHS risks are likely to be associated with Project construction activities. These include exposure to dust, noise, injuries from exposure to chemicals, hazardous or flammable substances, and liquid, solid or gaseous wastes; accidents caused by confined spaces and excavations; working at heights, working with heavy and electrical machinery and equipment, and working in areas with unbarricaded/uncovered holes; traffic related risks, emergencies (fire, chemical spill, etc.); risks associated with COVID-19.

### Community Health & Safety

Community health and safety risks in sub-projects involving demolition and reconstruction activities are related to all risk and impact components listed above. For example, an impact that may arise from inadequate waste management or a risk that may arise from asbestos management may directly or indirectly affect public health & safety. In particular, emergencies related to all of the above components (e.g. the emergence of asbestos during the demolition process that could not be detected before demolition) will pose a risk to public health and safety if not managed properly. Further civil works entail the employment or bringing in of labor by contractors. Civil works happening in dense crowded areas can increase the risk of transmission of diseases from the workers such as COVID, Malaria and HIV to the communities and vice versa. In case there are security forces employed for the Project there could also be security related risks for the community.

### Stakeholder Engagement

The stakeholder engagement risk is substantial, given the challenges in reaching out to PAPs and ensuring they are engaged effectively in the Project; there is also the added challenge of engaging PAPs within the constraints of the COVID-19 pandemic. Project beneficiaries include residents of risky housing that upgrade their housing units and those who benefit from interventions in municipal infrastructure to reduce flooding and increase resilience to seismic hazards. For housing units, the process to secure interest in participating in the program, as well as ensuring that repayment of soft and low-interest loans does not create financial distress, will be critical. There is also a risk for tenants that rental prices in reconstructed buildings are increased following the upgrading of the housing units, and during implementation this risk will need to be carefully managed. From early on in sub-project preparation, stakeholder engagement will take place as an essential precondition for having open, transparent engagement between the Project proponents and affected people and all other stakeholders. Specialized measures that are culturally appropriate will be critical to help engage the vulnerable groups (such as Roma in Tekirdag, migrants and low income groups in Kahramanmaras). In addition, outreach, consultation and engagement will need to take into consideration COVID-19 requirements, such as masks, social distancing, etc.

### Grievance Mechanisms

There is a risk that grievance mechanisms may not be accessible to workers or people affected by or concerned about the Project’s environmental and social impacts, particularly vulnerable groups. This could be due to a lack of information/outreach, but also due to concerns by some people (i.e. migrants, Syrians under temporary protection, ethnic groups, very poor) about coming forward with complaints or concerns. In addition, while SEA/SH risks may be low in the Project, the risks to complainants could be significant if there is no channel for confidential and sensitive grievances, as well as available support services for survivors.

### Other Potential Impacts

There will be no risk, especially in terms of expropriation, in the process of potential sub-projects under Component 2. However;

* The fact that vulnerable groups residing as tenants in risky buildings to be demolished may have difficulties in getting to their new homes economically, and
* Negative impacts may arise due to auction of the owners’ shares, who can be evaluated as vulnerable groups and also may remain in 1/3 portion, which is the part include the shareholders that refuse the implementation agreement.

## Environmental Risk Classification

Firstly, it should be noted here that it is not possible to make an exact assessment regarding cumulative impacts of the sub-projects on environmental components currently. However, by taking possible scales of the sub-projects into account, no major cumulative impacts are expected. On the other hand, due to the issues presented below, the environmental risk rating of the Project has been evaluated as “substantial”:

* the fact that the buildings to be demolished / retrofitted are risky buildings and these risky buildings are generally between 20 and 50 years old increase the possibility of presence of asbestos.
* some of the sub-projects may include only reconstruction (please see Annex 2 for sub-project types). This situation poses risks within the scope of the compliance of the demolition works carried out before credit application with WB Standards
* the absence of inert construction & demolition waste material recovery central facility in Tekirdag and Kahramanmaras provinces will require strict selective demolition processes.
* the fact that the air quality in the provinces where these sub-projects will be performed is currently hazardous for human health, especially in terms of particulate matter concentrations, even in the current situation highlights the air quality as another factor that is required to be considered.

## Social Risk Classification

Social risk classification has been evaluated as “High” due to;

* exclusion from Project benefits risks - higher likelihood for vulnerable groups
* resettlement risks / adverse impacts of Component 2 and impoverishment - also higher likelihood for vulnerable groups
* exclusion from stakeholder consultations / insufficient stakeholder engagement etc. - also higher likelihood for vulnerable groups
* community health and safety risks while structures are being reconstructed/rehabilitated

## Overall Risk Classification

Considering the issues explained in above sections together, the general risk rating has also been evaluated as "High".

## Mitigation of the Environmental & Social Risks and Impacts of Component 2

Table 26 Mitigation Measures for Retrofitting/Demolition/Reconstruction Works’ Risks and Impacts

| **Project Phase** | **Potential Risk/Impact** | **Mitigation Measure** | **Responsibility** |
| --- | --- | --- | --- |
| Pre re-construction stage of the Type-III sub-projects | Risks related with E&S due to the possibility of conducted demolition works were performed non-compliant with WB and national standards. | An ESAP will be defined (if required) through performing an E&S Audit by PMU individual consultants in the provinces. Accordingly, identification of actions/measures to be performed to make the subproject compliant with Project standards before reconstruction. | PMU |
| Following the progress of findings and performing relevant correction measures as per the ESAP, which are to be defined (if any) by E&S Audit | PMU |
| Preparation for Demolition | Stakeholder Engagement/Citizen Engagement; Grievance Mechanism | The SEP will be planned and implemented by the contractors, paying special attention to vulnerable groups and in accordance with the SEP prepared as a framework document within the scope of this Project.  In this context, first of all, meetings/visits/written tools will be developed and distributed to inform local administrators/mukhtars, the public and workplaces in the Area of Influence (AoI) of the Project, sensitive areas, vulnerable groups verbally and in writing about the Project activities, schedule, measures taken and potential risks,  The GM will be implemented, all PAPs GM tools, process, workflow, communication addresses will be informed, written notifications will be made visible and posted in the relevant common areas (coffee house, office of the mukhtar, mosque, public common area, etc.). | PMU and Contractor |
| Preparation for Demolition | Temporary and permanent displacement of owners and tenants resulting from the rehabilitation/ reconstruction of housing units / workspaces | Preparation of RPs based on the scope provided in the RF  Within the scope of the Stakeholder Engagement Document, each sub-project will plan the stakeholder information to be made and provide the necessary information,  Provide information on the GM of the Project and inform PAPs about GM with an approved written brochure, poster etc.  Explaining and informing PAPs of their rights defined within the scope of the Project,  Identifying vulnerable groups affected by the structure to be transformed in the Project and defining their entitlement status,  Explaining and informing vulnerable groups about their rights defined within the scope of the Project. | PMU and Contractor |
| Preparation for Demolition | Labor issues | Preparation of subcontractor contracts in accordance with the Project's Labor Management Plan,  Signing of the code of conduct, covering the requirements under the LMP, by all employees of the subcontractors,  Include an annex in the contractor contract declaring the HR policies of the contractor involved in the sub-projects, declaring that it will follow a zero-tolerance policy on the right to fair treatment, the right to form workers' associations, forced labor, non-child labor, SEA/SH and violence,  OHS provisions, including the obligations that will ensure that the measures against SEA/SH risks are taken and applied in full in the contractor contract,  Ensuring sufficient distance and space in the meal, break, etc. areas of the workers,  Taking necessary precautions in line with the recommendations of the MoH,  Providing workers with necessary masks, disinfectants, etc. conditions against COVID-19,  Making spatial arrangements that will provide equal opportunities in the workplace for female employees,  Giving trainings that will increase the awareness of the workers, reveal the Project conditions, prohibited behaviors and the principle of equality before the work starts. | PMU and Contractor |
| Preparation for Demolition | Management of Project impacts on vulnerabilities | Identification of sensitive points such as schools, health facilities, nursing homes within the Project impact area.  Taking measures for screening for dust or noise effects that may occur on these areas and arranging working hours  Consultation of potential risks and measures with representatives or managers of vulnerabilities | PMU and Contractor |
| Preparation for Demolition | Management of Project impacts on traffic and community safety | Within the scope of the Project, defining the roads and streets that can be used by heavy vehicles and which are not suitable for use, and creating a route map  Preventing the use of roads that will endanger public health and safety by seeking the opinions of local authorities such as mukhtars and municipalities during the road risk analysis process.  Sharing the route information including the roads that will and cannot be used within the scope of the Project with the drivers and related subcontractors and providing the necessary information / awareness | Contractor |
| Preparation for Demolition | Community health and safety risks that may result from insufficient public informing practices of the people of the neighborhood where the structure to be demolished is located. | Informing the mukhtar of neighborhood in line with the Stakeholder Engagement Plan requirements. | PMU and Contractor |
| Ensuring the entrances and exits of the local people in a way to prevent unauthorized entrances and exits by enclosing with a mobile or fixed screen at a height to be determined by taking into account the boundaries of the area to be demolished, the height of the structure to be demolished, its distance to other structures and the parcel area, the selected demolition technique, and environmental construction, and making appropriate health and safety signs at the points where the local people can see them. | Contractor |
| Avoiding the commencement of the demolition work unless it is ensured that the local people are informed, and health and safety signs and entry and exit measures are applied. | PMU |
| Preparation for Demolition | Due to insufficient preliminary planning,   * Potential damages to other structures, infrastructure and installations around the structure and to the community health, and * Traffic jams and the effects that may be caused by this. | * Preparing a Demolition Plan before demolition according to national and international standards to determine which demolition method to be used, and what measures to be taken for the safety of other structures, infrastructure, installations, traffic and people that may be affected in and around the structure, as well as material and damage characteristics, if any, of the structure, and its bearing system, bearing capacity and all risk elements. * Obtaining all necessary permits, including a demolition permit. | Contractor |
| * Ensuring that demolition work is not started before the Demolition Plan is prepared and all necessary permits are obtained, including the demolition permit. * Auditing identified responsibilities of the contractors regarding impacts related with insufficient preliminary planning. | PMU |
| Preparation for Demolition | Asbestos | Implementation of the Asbestos Management Plan[[38]](#footnote-39) provided in Annex 7, at least performing the following actions:   * Carrying out the Asbestos Inventory Study by an accredited company, * Performing the asbestos removal work, before demolition, by persons or institutions that have a license for asbestos removal, if asbestos is found in the building, and * Managing the asbestos waste in agreement with the licensed waste transport and disposal company(s) within the scope of asbestos waste, if asbestos is found in the building and it is removed. | Contractor |
| * Ensuring proper implementation of Asbestos Management Plan and providing support and guidance by PMU individual specialists of the provinces to contractors within that scope. * Monitoring identified responsibilities of the contractors regarding impacts related with insufficient preliminary planning. | PMU |
| Preparation for Demolition (the sub-projects which will require demolition) | Occupational accidents, environmental accidents and non-compliance with national and international legislation that may result from insufficient pre-planning. | * Preparation of Health and Safety Plan and providing trainings to the demolition in line with the requirements of the Plan. * Giving the official assurance by the contractor that it will not harm the environment and neighboring settlements. * Providing the relevant demolition personnel with all Personal Protective Equipment prior to demolition within the scope of best practices and national legislation. * Giving the official assurance by the contractor that all demolition activities will be carried out in accordance with national legislation, the ESSs and the WBG EHS Guidelines. * Giving the assurance by the contractor that it will comply with the guidelines and circulars published by the Ministry of Health, MoLSS, MoEUCC and WHO regarding COVID-19. * Performing the works by the contractor in line with the ESF (Environmental and Social Framework)/Safeguards Interim Note: COVID-19 Considerations in Construction/Civil Works Projects in Annex 6. | Contractor |
| * Auditing identified responsibilities of the contractors regarding measures to be implemented to minimize risks related with occupational accidents, environmental accidents and non-compliance with national and international legislation due to insufficient preliminary planning. | PMU |
| Demolition Stage (the sub-projects which will require demolition) | Negative health effects on workers, service providers and society due to accidents and incidents that may occur during the asbestos inventory, removal, transportation and disposal process. | * In the event of an accident in this context, the Contractor will immediately inform the GDIUTS and individual OHS/environmental specialists hired for provinces. The GDIUTS will notify the WB of any accident/incident (if it occurs) related to asbestos immediately. An asbestos-related accident/incident investigation report will be sent to the World Bank along with the corrective action plan with the guidance and the audits of the PMU. * A regular site inspection will be conducted by the PMU to ensure and monitor that all demolition activities to be implemented are carried out in accordance with national laws and regulations and the requirements of World Bank standards. | Contractor and PMU |
| Demolition Stage (the sub-projects which will require demolition) | Demolished material is harmful to environment if it is not disposed of adequately. Especially if the material or waste is dangerous or might be dangerous. | * Implementing a controlled and progressive selective demolition process, in accordance with national legislation and international standards, in order to allow for recycling of demolition wastes at a high rate, and to ensure that hazardous wastes, if any, are sorted and separated before rough demolition, and that other materials can be reused and recycled at the source. * Implementing the Waste Management Plan (see Annex 9) in parallel to their responsibilities, and specifically: * Transporting the construction and demolition wastes by licensed transfer vehicles and sending them to licensed sites. * Transferring the inert construction & demolition wastes after selective demolition process to central waste material recovery facilities in available locations (Istanbul, Izmir ve Manisa) * Keeping all waste disposal records. * Storing the waste properly for reuse in the process of construction of a new structure, if possible. * Storing, in sealed containers, the hazardous wastes generated during the selective demolition process. | Contractor |
| * Supporting contractors for all sub-projects but especially for the subprojects in Kahramanmaras and Tekirdag for proper implementation of selective demolition. * Auditing identified responsibilities of the contractors regarding waste management. | PMU |
| Demolition Stage | Temporary and Permanent Displacement due to Project activities | * The RP has to be cleared by the MoEUCC and the WB, and implemented before civil works can commence * Informing the Project beneficiaries and right holders about their rights, supports, application methods, and conveying the steps to be taken to benefit from the supports. * Providing support to vulnerable groups in this process * Disclosure of grievance mechanism and GM tools, communication tools | PMU and Contractor |
| Demolition Stage | Livelihood loss | * Providing verbal and written notifications for the people and groups affected by the Project due to the resettlement, * Ensuring that the PAPs are aware as to how to benefit from livelihood supports and Project supports, * Preparation of brochures and promotional materials for PAPs, including support, what the beneficiaries should do, relevant contact numbers and addresses, complaint mechanism information, * Providing verbal and written notifications to all PAPs directly affected and entitled. | PMU and Contractor |
| Demolition Stage (the sub-projects which will require demolition) | Impacts on air quality, especially related with possible contribution on particulate matter concentrations, which are already high in the provinces. | * Giving the assurance by the contractor that it will apply the dust suppression processes in order to minimize the intense dust formation that will occur during the demolition work, and that it will implement these processes. * Preparing and implementing the ESMP Checklists covering at least the scope given in Annex 8. | Contractor |
| * Ensuring preparation of each ESMP checklist documents in compliance with province-based ESMPs to be prepared. * Auditing identified responsibilities of the contractors regarding air quality management. * Implementing GM for dust related grievances and closing them appropriately. Directing and auditing the contractor within that scope. | PMU |
| Demolition Stage (the sub-projects which will require demolition) | Blasting-Related Risks: The demolition phase can be carried out by blasting according to the demolition method. In this context, occupational and community health and safety risks will arise. -*However, it should be noted here that no blasting demolition has been performed in Turkiye since 2017 and the MoEUCC does not prefer this method. In any case, relevant mitigation measures are provided.-* | * The concrete strength and the reinforcement iron properties used on the columns and beams of the foundations of the buildings that are considered for blast demolition must be well determined, and a blasting pattern must be prepared accordingly. * Before, during and after blasting, the necessary permission must be obtained from all administrative units, and traffic and environmental safety must be ensured. The igniter to detonate must be licensed and must make the ignitions by hiding in closed areas. * In blast demolitions, the entire environment must be informed of it before blasting, and warning announcements must be made. * Watering must be performed in order to suppress the dust that will be formed in all demolition techniques, especially during demolition and crushing processes. * Suspended scaffolds and safety scaffolds must be installed and used in machine or mezzanine floor reduction methods. * In all building demolition works, the area where the building will be demolished, and stacking and loading works will be performed must be enclosed by barricades at a height of at least 2.00 meters, and a security area must be created and isolated from the outside. * The operators who will work on all heavy equipment must have a G-Class driver’s license and experience. * Firefighters or fire extinguishers, if any, must be available during the demolition work. * No demolition work must be done at night. * All personnel must have communication devices. * Emergency escape and emergency assembly area must be determined outside the area to be demolished, and the related trainings must be given. * In all demolition techniques, all personnel who will work in the demolition site must have and carry the Personal Protective Equipment listed below that comply with the CE brand and standards. The equipment includes the following: * Helmet (with chin protection) * Warning vest * Headphones or earplugs * Top boots with S3 steel toe and steel sole, and ankle-level boots * Dust mask * Occupational safety glasses * Glass visor mask * Welding and work gloves * Parachute-type seat belt and life ropes * Work safety clothes, coats and raincoats * Light signals, funnel caution signs and orange safety barriers * Audible sirens and loudspeakers * Work must not be started before performing a Risk Analysis and Assessment. * Blasting must be done under the supervision of qualified engineers, and the support, help and service from the occupational safety professionals must be obtained. * Before starting the demolition work, an ambulance and sufficient number of healthcare personnel must be kept ready. * It must be ensured that the electricity, water and natural gas lines of the structures to be demolished are completely closed and discharged, and the necessary procedures must be applied. * If there are living spaces or live houses around the structures that are planned to be demolished, people must be evacuated from these housings and living spaces and taken to safe places, according to the risk assessment to be performed, if necessary. | Contractor |
| * Auditing to ensure not starting blasting demolition without taking necessary requirements. | PMU |
| Demolition Stage (the sub-projects which will require demolition) | Noise generation (except from blasting, for blasting details provided above) | * Preparation of ESMP Checklist (see Annex 8) by taking impact level on the closest sensitive receptors into account. * Conducting demolition works as per the limited schedules to be defined in Environmental and Social Management Plan Checklist. | Contractor |
| * Supporting contractors on the preparation of ESMP Checklists. * Auditing identified responsibilities of the contractors regarding noise management. | PMU |
| Reconstruction or Retrofitting Stage | Risks related with improper Waste Management which may create additional pressure to waste management facilities of the provinces and may cause harm on environment. | * Implementing the Waste Management Plan (see Annex 9) in parallel to their responsibilities, and specifically; * Separating the waste (hazardous/non-hazardous, recyclable/non-recyclable) and storing them temporarily in the designated waste storage areas, * Ensuring that the waste storage areas meet the standards determined by the relevant national and international institutions: * Determining the adequate temporary waste storage areas conforming to the standards, and ensuring that the conditions such as container types, labels, classifications, etc. are suitable, * Providing impermeability on the grounds of the temporary waste storage areas against possible contamination of soil and groundwater, * Establishing a suitable drainage system against leaks, * Restricting physical access to the temporary waste storage areas (via gates, fences, etc.) and ensuring that only authorized persons enter these areas, * Placing the warning signs and the boards with the name and contact number of authorized personnel in the temporary waste storage areas, * Detecting any possible spills/leaks rapidly by performing periodic visual checks in the hazardous waste areas, * Ensuring that wastes are not spilled on the places other than the areas allocated for this purpose, and providing the necessary trainings and all necessary waste management trainings and repeating these trainings periodically, * Avoiding the incineration of any wastes. | Contractor |
| Auditing identified responsibilities of the contractors regarding waste management. | PMU |
| Reconstruction or Retrofitting Stage | Excessive Noise Generation which have possibility to impact human health and at least may cause disturbance | * Performing the construction activities only during daylight hours. * Selecting and using the machines, equipment and vehicle models with lower sound power level and attenuated sound in accordance with the Noise Emission in the Environment by Equipment for Use Outdoors Regulations and Directive 2005/88/EC. * Performing the regular maintenance of heavy equipment through a periodic equipment maintenance and repair schedule as recommended by the manufacturer. * Defining the speed limits for heavy equipment and complying with these limits. Giving the operators of heavy equipment the trainings and instructions on speed limits. * Preventing the heavy equipment from passing through residential areas where possible. * Using the designated site access routes. | Contractor |
| * Auditing identified responsibilities of the contractors regarding noise management. * Handling grievances regarding noise through implementation of SEP and directing contractors accordingly. | PMU |
| Reconstruction or Retrofitting Stage | Possible negative impacts on Water Quality | * Collection of the wastewater originating from the personnel to be generated during the retrofitting/reconstruction in sealed septic tanks, and then periodically transferring to the urban wastewater treatment plants through the protocol to be signed with the relevant municipality. * Implementation of the specific mitigation measures to be defined, if a sub-project is to be carried out in a location where there is a possibility of a non-wastewater related impact to any surface water or groundwater. * Preparing the ESMP Checklists by enlarging its scope to include the issues mentioned at the above. | Contractor |
| * Ensuring preparation of ESMP Checklists in parallel to sub-project specific impacts (if any, as explained above). * Auditing identified responsibilities of the contractors regarding water quality management. | PMU |
| Reconstruction or Retrofitting Stage | Impacts on local traffic load | * Signs, warning signs, barriers and traffic directions in the construction site will be clearly visible and the public will be warned of all potential hazards. * The traffic management system and staff training, especially for site access and heavy traffic near the construction site, will be provided. Safe crossings and passages will be provided for pedestrians at intersections with construction site traffic. * Adjusting the working hours to local traffic patterns, e.g., avoiding major transport activities during rush hour or animal handling times * Detailing the active traffic management practices in the province based ESMPs and Community Health and Safety and Traffic Management Plan to be prepared within the scope of the sub-project by trained and visible personnel at the sub-project site, if necessary, for safe and comfortable crossing of the public | Contractor |
| * Auditing identified responsibilities of the contractors regarding impacts on local traffic load. | PMU |
| Reconstruction or Retrofitting Stage | Livelihood loss | * Ensuring that people and groups affected by the Project due to resettlement have access to livelihood supports, * Monitoring the related complaints to the grievance mechanism and solving delays or problems that may cause livelihoods in a timely manner by ensuring that they are closed within the required time limit, | PMU and Contractor |

## Application of the ESSs to Sub-projects under Component 2

Table 27 Potential Impacts/Risks of the Sub-projects under Component 2 and Mitigation Measures

| **WB ESS** | **Potential Risk/Impact** | **Mitigation Measure** |
| --- | --- | --- |
| ESS1 | The common risks of sub-projects can be listed as follows:   * Asbestos, * Air pollution caused by the formation of particulate matter, * Noise generation, * Construction and demolition waste generation and * Other social risks detailed in the RF.   However, the level of impacts of above issues may change for each subproject, and even it is a low probability, additional specific impacts may emerge for each sub-project. | To manage subproject risks, province based ESMPs will be prepared by PMU beforehand. When a subproject is proposed, it will be evaluated through a screening process detailed in Section 6.2.2. If the sub-project is found eligible for loan the results will be announced to the stakeholders by applying the methods presented in the SEP prepared.  Subsequently:   * + For all three sub-project types under Component 2, in case of determination of “high risk” in terms of social risks and “substantial risk” in terms of environmental risks of more than 10 subprojects to be initialized in same neighborhood within a one-month period, a neighborhood-level ESIA will be prepared by PMU, which will cover all impact area (e.g., neighborhood) of the sub-projects; in accordance with the indicative outline provided in the ESF. It should be noted here that, probability of requirement of preparation of such ESIA is anticipated to be low. Nevertheless, in case of such requirement, the neighborhood-level ESIA will be subject to approval of WB and no activity will be performed before that.   + For all three sub-project types under Component 2, in case of determination of any other risk categorization, Contractors will prepare ESMP Checklists by taking the risk category of the eligible sub-project and the extent and significance of its impacts, Provincial-level ESMPs, and this ESMF into account. ESMP Checklists will be submitted to the PMU for review and approval. * As an additional action specific to the eligible Type-III sub-projects, an E&S Audit will be performed by PMU individual specialists at the provinces. This requirement will be added to the ToR of the individual specialists. As per the results of this audit, an ESAP, which will be based on findings of the E&S Audits, will be defined. The ESAP will include relevant environmental and social corrective measures; and social measures based on the findings of the E&S Audit, if any.   After the approvals of the neighborhood-level ESIAs and ESMP Checklists in line with the responsibilities clarified above, the measures and practices mentioned in the statements will be implemented by contractors during demolition/retrofitting/ reconstruction phases.  The implementation of the sub-project specific ESMP Checklists and neighborhood-level ESIAs, including the evidence of implementation by contractor's OHS focal points, will be monitored through the field visits to be carried out at frequent intervals by the PMU individual specialists in the provinces, and through more general field visits by the PMU individual specialists of the head office.  The corrective actions defined in ESAPs will be under overall responsibility of PMU. In case of identification of the responsible parties (i.e., the party/contractor who performed the demolishing works), legal obligations of them (if any) will be followed by PMU.  The reports, which will be the outputs of the mentioned monitoring activities will include signs of progress on relevant items of the ESAPs, will be included in the semi-annual reports to be submitted to the WB by the PMU in an integrated manner. It should be noted here that, neither the requirement of preparation nor the progress of ESAPs will hinder loan application or getting the loan.  Besides, a LMP including CoC, a mechanism for reporting cases of SEA/SH and training and awareness meetings for Project workers and affected communities has been prepared for all workers of the Project (including subprojects’ workers), and SEA/SH mitigation measures will be implemented accordingly. |
| ESS2 | Employees of sub-projects will include:   * PMU personnel, * Contractors and * Sub-contractors of contractors, if any.   It is not possible to estimate the number of employees to be employed as the number and location of sub-projects are currently unknown. At this point, it should be noted that the national legislation within the scope of labor and OHS is largely in line with the ESS2. However, in practice, some difficulties may arise, especially within the scope of the work of contractors.  The national laws prohibit those under the age of 18 from doing very dangerous work and works such as demolition/ reinforcement/construction are classified as very dangerous. Accordingly, it is forbidden for workers under the age of 18 to work within the scope of subprojects. Also, since GDIUTS is a government agency, no one under the legal age (18) is allowed to work in the institution. For these reasons, that risk of child labor is not expected within the scope of the Project and its sub-projects.  Direct or indirect involvement in any act of SEA/SH is strictly prohibited for Project workers, sub-contractors. Within the scope of the Project, the sub-contractor contracts and the Contractor's HR policy, which include the preconditions that may include the unconditional termination of the contract in case of any risk that may arise in this regard, will be revised. | The Project's LMP has been developed to meet the ESS2 requirements for all current and prospective employees. The procedure will also be applied by the contractors on a site-specific basis.  In this direction, contractors:   * will determine the OHS measures, ensure the implementation of these measures, monitor & supervise and develop the measures, if necessary, prevent work accidents and occupational diseases, provide first aid and emergency response to the employees and provide preventive health and safety services. * will be responsible for providing the necessary PPE to protect the health and safety of the employees and to prevent occupational risks, to run the relevant organizations and to take all kinds of precautions, including training and information. * will work continuously to improve the current situation and adapt health and safety measures to changing conditions. * will ensure that their work does not pose an additional risk in terms of public health and safety, and they will take all necessary measures for this. * will train all their employees on the CoC and GM. * will provide training to their employees on hazardous works, use of equipment and machines, use of PPE, etc. will prepare Health and Safety Plan that should be prepared in accordance with national legislation.   In addition, the risks within the scope of the pandemic will be reduced by applying the latest COVID-19 prevention guidelines and best practices.  Project contractors will be required to verify the age of all suppliers. This will require employees to provide official documents, which may include birth certificates, ID cards, passports or driver's licenses.  If a child under the minimum age (18) is found to be working in the Project, necessary measures will be taken immediately, taking into account the best interests of the child.  In order to prevent the risks of SEA/SH, zero tolerance policy will be implemented and declared to both the contractors and subcontractors.  Contractor's HR Policy will include site-specific risks of SEA/SH and mitigation measures.  Contracts and CoCs of Project employees/workers/ subcontractors will included zero tolerance policy on the SEA/SH,  Social induction trainings for the Project employees/workers/ subcontractors will include child labor, SEA/SH risks and policy. |
| ESS3 | Firstly, it must be noted that as a part of resource efficiency, sub-projects will have the potential positive impacts listed in Section 5.3.  However, there will be risks especially related to asbestos and air quality risks due to formation of particulate matter, noise, and large amount of construction & demolition waste. | * First of all, in order to minimize the risks related to asbestos, procedures will be implemented in line with the Asbestos Management Plan presented in Annex 7. * “Selective demolition” practices will be meticulously implemented to prevent construction and demolition waste from being created in excess or mixed with other wastes. * Managerial actions and practices regarding waste management will be implemented in line with the Waste Management Plan Presented in Annex 10 * Air quality, dust, and noise related impacts will be managed through ESMP Checklists whose general format is presented in Annex 8 * The Resource Efficiency and Pollution Prevention Plans to be prepared for each province by the PMU and sub-project specific ESMP Checklists will be implemented for each sub-project in line with the extent of its risks and impacts. |
| ESS4 | Community health and safety risks are based on the sub-project-related issues listed below:   * effects on noise level and air quality, * the possibility that the traffic load will increase due to the subproject * temporary road closures due to sub-project activities, * construction and demolition waste generation and * probability of asbestos in structures to be demolished | In order to minimize the risks and impacts within this scope, besides the implementation of the plans and procedures, such as Asbestos Management Plan, Waste Management Plan, ESMP Checklist, and Pollution Prevention Plan; in particular, within the framework of the SEP, the GM will be implemented effectively, and individual social specialists will be deployed in the provinces by the PMU within this scope. |
| ESS5 | Negative impacts may arise due to:   * Significant temporary and permanent displacement due to Project-financed program * PAPS, which works in the workplaces in the buildings included in the Project and who will experience travel expenses, transportation problems and their expenses will increase. | In this context, RF has been prepared especially for Component 2 and the relevant mitigation measures have been detailed. |
| ESS6 | The subprojects will be carried out in urban areas where there are existing buildings. Therefore, the impacts are expected to be minimal within the scope of biodiversity and sustainable management of living natural resources. Besides, any subproject that will have impacts on Natural Habitats/Critical Habitats and trigger an overall ESS6 such as alteration of environmentally important areas, including wetlands, native forests, grasslands, and other “critical” natural habitats and ecosystem services are defined as non-eligible ones. | Subprojects that have significant adverse impacts on biodiversity are in the category of non-eligible subprojects.  In addition, through implementation of this ESMF, the province-based ESMPs to be prepared, subproject specific ESMP Checklists and neighborhood-level ESIAs (if needed) to be prepared ; waste management, pollution control and management, and traffic & noise management will be carried out in accordance with the national legislation and international standards provided in Section 2. Accordingly, the management of issues that may indirectly affect biodiversity will also be ensured. |
| ESS7 | Non-applicable | Non-applicable |
| ESS8 | If the subproject which may cause impacts on tangible or intangible cultural heritage sites will be excluded from Project investments. Such as urban protected areas will not be included in the scope of this Project. However, even if the risk is low, there is a possibility of a chance find during the construction activities of the structures included in the Project but not in the mentioned areas. | If such a situation occurs, the Chance Find Procedure presented in Annex 13 will be applied. |
| ESS9 | Non-applicable | Non-applicable |
| ESS10 | The stakeholder groups of the Project can be listed as (i) national and local government institutions and organizations, (ii) the employees working in the GDIUTS within the scope of the Project, (iii) landlords and tenants living in risky buildings and workplace owners and (iv) vulnerable people/ groups who may be residing in a sub-project building within the scope of Component 2, and additionally (v) non-governmental organizations interested in the retrofitting/reconstruction of structures and seismic resilience, as well as (vi) media and press, (vii) news agencies, (viii) local newspapers and (ix) academic institutions. | Currently, there is an active grievance mechanism open to the use of citizens in the processes related to risky buildings, the details of which are explained in the SEP prepared within the scope of the Project. However, the SEP prepared under the Project has identified additional stakeholder engagement programs and methods. In the process, within the scope of each subproject, the SEP prepared for the Project will be updated in line with the feedback to provinces and the PMU. |

# Implementation Arrangements, Procedures for Environmental & Social Management, Responsibilities and Reporting

## Implementation Arrangements

### Institutional Framework

The Project will be carried out by the General Directorate of Infrastructure and Urban Transformation (GDIUTS) under the MoEUCC. GDIUTS has experienced and qualified personnel regarding the applications within the scope of the Law No. 6306. In addition, a Project Management Unit (PMU) has been set up within GDIUTS specifically for the Project.

### ESMF Implementation Capacity

PMU will be managed by the Project Director and be responsible for procurement, financial management, urban development, disaster risk management, environmental and social issues (including the issues in ESMF, and LMP, RF and SEP such as OHS, stakeholder engagement and grievance management), as well as for communication, monitoring and evaluation issues.

As mentioned before, the sub-projects’ activities (retrofitting/demolition/reconstruction) within the scope of Component 2 will be realized upon the application of the owners of the buildings in question, and the technical personnel to be tasked within the scope of the demolition, design & planning of the new building, building inspection and material inspection will be addressed in accordance with the relevant legislation detailed in Section 2.2.1 and Section 2.2.2. Besides, the sub-projects under other Components will mostly be performed through procurement of consulting services from experienced companies in their relevant areas. On the other hand, since a large number of sub-projects will be realized in selected cities under Component 2, the PMU must be supported by individual specialists to ensure compliance of the OHS, environment and social aspects of the retrofitting/demolition/reconstruction activities with the ESF. Currently, the PMU, which is established within GDIUTS, consists of (1) Project Director, (2) Implementing Regulations Specialist, (3) Procurement Specialist, (4) Social Specialist, (5) Environmental Specialist, (6) Financial Management Specialist, and (7) Financial Instruments Specialist. Due to the aforementioned reasons, individual specialists will be recruited by the PMU within the scope listed below:

* Four (4) personnel, i.e., one environmental specialist, one OHS specialist and two social specialists (one for community engagement and other for relocation related issues) to work in the PMU head office in GDIUTS,
* Two (2) personnel, i.e., one environmental specialist and one social specialist (specialized on community/stakeholder engagement), to work continuously only for the Project in the Project office to be established in Izmir PDoEUCC,
* Two (2) personnel, i.e., one environmental specialist and one social specialist (specialized on community/stakeholder engagement), to work continuously only for the Project in the Project office to be established in Manisa PDoEUCC,
* Two (2) personnel, i.e., one environmental specialist and one social specialist (specialized on community/stakeholder engagement), to work continuously only for the Project in the Project office to be established in Tekirdag PDoEUCC,
* Two (2) personnel, i.e., one environmental specialist and one social specialist (specialized on community/stakeholder engagement), to work continuously only for the Project in the Project office to be established in Kahramanmaras PDoEUCC,
* Two (2) personnel, i.e., one environmental specialist and one social specialist (specialized on community/stakeholder engagement), to work continuously only for the Project in the Project office to be established in Istanbul PDoEUCC at Asian side, and
* Two (2) personnel, i.e., one environmental specialist and one social specialist (specialized on community/stakeholder engagement), to work continuously only for the Project in the Project office to be established in Istanbul PDoEUCC at European side.

The recruitment of individual specialists listed above will be subject to the WB's approval. In this context, The MoEUCC will propose tasks and qualification criteria in a ToR, which will need to be reviewed by WB and to receive WB’s no-objection. The organizational structure of the PMU is presented below:

Figure 29 Structure of the Project Management Unit

## Environmental and Social Management Process

Development of environmental & social risk management instruments is crucial to ensure sub-projects’ compliance with the ESF, ESSs, and this ESMF. With that purpose, normally, a common process needs to be identified and to be followed to determine the environmental and social aspects of sub-projects’ and their relevant activities.

On the other hand, as mentioned in Section 5.1, main environmental and social risks and impacts of the Components evaluated in this ESMF are related with the sub-projects under Component 2. In brief, Component 1 and 4a are defined to strengthen institutional capacity to enable conditions for urban resilience and to support the managerial aspects of the other components -especially Component 2- and, respectively. Moreover, as indicated in Section 3, it is currently not possible to clearly identify the potential sub-projects in the scope of Component 5.

Therefore, for the potential sub-projects, other than the ones under Component 2, the eligibility criteria and specific requirements regarding prevention / management of possible environmental and social risks defined in relevant sub-sections of Section 3 and Section 5 should be followed. In this Section, relevant details of development of environmental & social risk management instruments of the potential sub-projects under Component 2 are presented.

### Preparation of Province-based ESMPs

In accordance with the outcomes of a screening process—which is detailed in below sections—the environmental and social risk categorization of a sub-project might require a detailed sub-project specific ESIA, an ESMP, and/or combination of these.

On the other hand, a slightly different process will be applied for the sub-projects under Component 2. As there will be a very high number of sub-projects, which makes preparation of site-specific ESMPs for each sub-project non-feasible, province based ESMPs will be prepared for each selected city before initialization of a general implementation of Component 2. In other words, province-based ESMPs, whose general format and outline are presented in Annex 3, will be prepared before any screening process.

It should also be noted here that, preparation of province based ESMPs does not rule out possible requirement (although it is considered as a low probability) of an ESIA. Besides, ESMP Checklists will be prepared in line with outcomes of the screenings of each subproject, which are aimed to be integrated into the relevant province based ESMP. Details on these are presented in Section 6.2.3.

### Sub-project Identification and Screening Process

Screening will be performed to determine the environmental and social risk category of the proposed sub-project. Moreover, the screening will also cover an ineligibility assessment. These two steps should go along in an integrated way, which starts initially with an ineligibility assessment.

Accordingly, non-eligible sub-projects which will not be financed by the WB, and therefore excluded from the scope, are listed below (and also listed in Annex 1):

* Any sub-project that is included in the World Bank Group / International Finance Corporation Exclusion List
* Any sub-project that includes the buildings registered as Cultural Heritage.
* Any sub-project that will have impacts on Natural Habitats/Critical Habitats such as alteration of environmentally important areas, including wetlands, native forests, grasslands, and other “critical” natural habitats and ecosystem services.
* Any sub-projects that in-situ transformation is not possible.
* The buildings which are not registered as risky building within the scope of Law no. 6306.
* Risky buildings within designated Disaster Exposed Areas.
* Any sub-project that would affect the quality and/or quantity of international waterways as defined in WB OP 7.50 and that would benefit from existing hydroelectric dams in a way, triggering any dam safety issues under the scope of ESS4.
* Any Type-III sub-project, whose demolishing works had been completed after October 1, 2020.
* Any sub-project which would be classified as “High Risk”[[39]](#footnote-40) in terms of environmental risks.

**Sub-project Screening Procedures**

Component 2 includes three kinds of sub-projects. As one of them, Type-III, is defined as “Sub-projects that have been demolished after being registered as a risky structure and only reconstruction activities will be carried out under Component 2”, which implies that some pre-works have been performed before loan application; screening procedures are defined separately as below:

Screening for Type-I and Type-II

* First step will be checking if the subproject is in the non-eligible subproject list (please see Annex 1) or not; except the criteria defined as “any sub-project which would be classified as “High Risk” in terms of environmental risks”.
* If the proposed sub-project is not determined as non-eligible as a result of the step performed as above, Section II of the checklist presented in Annex 2 will be applied in order to identify a preliminary baseline of the site and its surroundings.
* Afterwards, Section III of the checklist presented in Annex 2 will be applied to foreseen scale of the impacts.
* Finally, by taking the outcomes of the above two steps into account, environmental and social risk category of the sub-project will be determined. In case of determination of the sub-project category as “high risk” in terms of environmental risks; no loan will be provided. In case of others, process will continue as described in Section 6.2.3.

Screening for Type-III

* First step will be checking if the subproject is in the non-eligible subproject list (please see Annex 1) or not; except the criteria defined as “any sub-project which would be classified as “High Risk” in terms of environmental risks”. Specific attention will be given to the cut-off date criteria, as described in non-eligible sub-project list as “Any Type-III sub-Proje, whose demolishing works had been completed after October 1, 2020”.
* If the proposed sub-project is not determined as non-eligible as a result of the step performed as above, Section II of the checklist presented in Annex 2 will be applied in order to identify a preliminary baseline of the site and its surroundings.
* Afterwards, Section III of the checklist presented in Annex 2 will be applied to estimate the scale of the impacts.
* Subsequently, Type-III specific section of the checklist, which is Section IV, will be applied.
* Finally, by taking the outcomes of the above three steps into account, environmental and social risk category of the sub-project will be determined. In case of determination of the sub-project category as “high risk” in terms of environmental risks; no loan will be provided. In case of others, process will continue as described in Section 6.2.3

Informative on Risk Category Identification

The risk category of sub-projects will be determined according to four qualitative and quantitative criteria; “type and scale”, “location”, “sensitivity”, and “size” together with using the checklist presented in Annex 2. In order for a sub-project under Component II to be designated as “High Risk”, these criteria will be addressed as explained below. If the category of any sub-project is not determined as “high risk” as a result of this evaluation, such evaluation will be proportioned to the professional judgment of the PMU and PMU individual specialists to determine relevant risk categorization.

Within the scope of the “Type and Scale” criterion, the existence of the following conditions may place the subproject in the “High Risk” category;

* Irreversible alteration or impact of environmentally important areas such as wetlands, native forests, meadows and other critically important natural habitats and ecosystem services due to the sub-Proje,
  + Sub-project activities require discharges and emissions that will cause direct pollution and large enough to cause deterioration of environmental components such as air, water and soil,
  + Sub-project activities will consume or transform the ecosystem or its components,
  + Sub-project activities will change the hydrological cycle measurably,
  + Sub-project activities which could lead to significant livelihood loss or social conflict,
  + The sub-project activities will include the use or management of dangerous substances to a degree that cannot be managed with the prescribed management and capacity.

Within the scope of the “Location” criterion, the existence of the following conditions may place the Project in the “High Risk” category;

* The sub-project is located in sensitive and valuable ecosystems and habitats of high importance,
* The sub-project is located within areas designated as Cultural Heritage, such as urban sites (most likely within the scope of the Project),
* The sub-project is located in areas subject to intensive development activities or where there are conflicts over the allocation of natural resources and/or other significant social conflicts, and along watercourses, in aquifer recharge areas or in storage basins used for drinking water supply.

Within the scope “Sensitivity” criterion, the existence of the following conditions may place the Project in the “High Risk” category;

* The sub-project will affect endangered species and their habitats, as well as sensitive areas such as protected areas or sites,
* The sub-project will have an impact on international waterways,
* The sub-project will affect sensitive buyers who are currently under heavy environmental and social pressure (pollution, health and safety, security, etc.).

During the evaluation of the “size” criterion, in order for a subproject to be designated as “High Risk”, the relevant residual impacts must be high even when the mitigation measures given in Table 26 are anticipated to be implemented, considering also the other criteria in an integrated manner.

It should also be noted here that, as the whole Project is rated as “High Risk” in terms of social risks, sub-projects with “high risk” in terms of environmental risks will not be non-eligible. Therefore, professional judgement will be used to identify “high risk” categorization in terms of environmental aspects during screening phase.

### Development of Environmental and Social Management Instruments

In order to develop tools for managing the impacts of sub-projects under Component 2, the following process which includes a summary of the ones described in Section 6.2.1 and 6.2.2, will be performed. Specific implementations relevant to each sub-project type are also presented:

* As there will be a high number of sub-projects and accordingly as it will not be feasible to prepare a specific ESMP for each sub-project; before initialization of general implementation of Component 2, ESMPs for each province will be prepared by the PMU and will be issued to the WB approval (please See Section 6.2.1 for details). The process for preparing RPs is set out in the RF.
* When loan application is made for any sub-Proje, firstly, the PMU head office personnel will briefly evaluate whether the sub-project for which loan application has been made is in the list of Non-Eligible Sub-project types presented in Annex 1 (please See Section 6.2.2 for details).
* Then, the PMU individual specialists deployed in each province will evaluate, on site, whether the sub-project in question is on the list of non-eligible sub-Proje, in line with the screening list presented in Annex 2 and will determine environmental and social risk category, if it is certain that it is not on the list of non-eligible sub-projects, then, PMU will approve the concerned screening assessment. It should be noted here that, first five checklists filled for sub-projects in each province will be sent to the WB for informative purposes.
* If the sub-project is found eligible for loan in line with the two integrated processes above, the results will be announced to the stakeholders by applying the methods presented in the SEP prepared.
* Subsequently;
  + For all three sub-project types under Component 2, in case of determination of “high risk” in terms of social risks and “substantial risk” in terms of environmental risks of more than 10 sub-projects to be initialized in same neighborhood within a one month period, a neighborhood-level ESIA will be prepared by the PMU, which will cover all impact area (e.g., neighborhood) of the sub-projects; in accordance with the indicative outline provided in the ESF. It should be noted here that, probability of requirement of preparation of such ESIA is anticipated to be low. Nevertheless, in case of such requirement, the neighborhood-level ESIA will be subject to review and approval of the WB and no activity will be performed before that.
  + For all three sub-project types under Component 2, in case of determination of any other risk categorization, Contractors will prepare ESMP Checklists by taking the risk category of the eligible sub-project and the extent and significance of its impacts, province based ESMPs, and this ESMF into account. ESMP Checklists will be submitted to the PMU for review and approval.
  + As an additional action specific to the eligible Type-III sub-projects, an E&S Audit will be performed by the PMU individual specialists in the provinces. As per the results of this audit, an ESAP, which will be based on findings of the E&S Audits, will be defined, if needed. The ESAP will include relevant environmental and social corrective measures based on the findings of the E&S Audit, if any.
* After the approvals of the neighborhood-level ESIAs and ESMP Checklists in line with the responsibilities clarified above, the measures and practices mentioned in the statements will be implemented by contractors during demolition/retrofitting/reconstruction phases.
* The implementation of the sub-project specific ESMP Checklists and neighborhood-level ESIAs, including the evidence of implementation by contractor's OHS focal points, will be monitored through the field visits to be carried out at frequent intervals by the PMU individual specialists in the provinces, and through more general field visits by the PMU individual specialists of the head office.
* The corrective actions defined in the ESAPs will be under overall responsibility of the PMU. In case of identification of the responsible parties (i.e., the party/contractor who performed the demolishing works), legal obligations thereof (if any) will be followed by the PMU.
* The reports, which will be the outputs of the mentioned monitoring activities and will include signs of progress on relevant item of the ESAPs, will be included in the semi-annual reports to be submitted to the WB by the PMU in an integrated manner. It should be noted here that, neither the requirement of preparation nor the progress of the ESAPs will hinder loan application or getting the loan.

## Roles and Responsibilities

All of the sub-projects including the ones to be realized under Project Component 2 will be exempt from the requirements of the national Regulation on Environmental Impact Assessment. In addition, sub-projects under Component 2 have potential difficulties that have been mentioned before, such as uncertainty on the exact location of sub-projects within the provinces, possibility of implementation of several sub-projects at the same time and the fact that GDIUTS has no previous Project experience that were financed by World Bank. For this reason, GDIUTS and indirectly the MoEUCC will recruit individual Environmental, Social and OHS Specialists as specific to the Project to meet the requirements of the World Bank's ESF and related environmental and social standards. Additionally, the individual specialists to be recruited in each provinces as part of the PMU will especially be responsible for continuous monitoring of demolition/ retrofitting/ reconstruction works. Those who will be recruited at the head office of GDIUTS will prepare semi-annual E&S progress reports in line with the monthly reports of the specialists in the provinces and the field visits that they will carry out and send them to the WB.

The PMU will also be responsible for guiding the relevant contractors in the implementation of the ESMP Checklists to be prepared by Contractors and, province-based ESMPs and neighborhood-level ESIAs to be prepared by the PMU. The PMU will also be responsible for approval of the ESMP Checklists to be prepared by the Contractors.

Another responsibility of the PMU is to perform screening for each sub-project in line with the screening list, the details of which are presented in Annex 2, and in this way, to evaluate the scope of the non-eligible sub-project (see Annex 1), and to ensure that the ESMP Checklists are prepared in accordance with the specific risks and impacts to be identified by screening. Moreover, the PMU is also responsible from preparation of neighborhood-level ESIAs, and ensuring realization of E&S Audits, and implementation of ESAPs for Type-III sub-projects under Component II.

The contractors who will implement the sub-projects will be responsible for fulfillment of their responsibilities during the implementation of the SEP, RF and LMP prepared for the Project and province-based ESMPs to be prepared, neighborhood-level ESIAs to be prepared and preparation and implementation of the ESMP Checklists.

Lastly, it should be noted here that, details on the process for preparing RPs and relevant responsibilities are set out in the RF.

## Project Management Unit

The PMU, which has been established with the personnel of the GDIUTS, will be managed by the Project Director and be responsible for procurement, financial management, urban development, disaster risk management, environmental, OHS and social issues (including the issues in this ESMF, and those in the LMP, RF and SEP such as OHS, stakeholder engagement and grievance management), as well as for communication, monitoring and evaluation issues. The PMU will also be in the position of controller of the flow of funds within the scope of the Project.

In addition, individual specialists will be hired full-time to be based on GDIUTS PMU head office and to be based on each province. These specialists will work in coordination. Joint responsibilities of province-based individual specialists and PMU head office are presented below. Specific responsibilities of the concerned parties are presented in Table 28.

* Assessing the documents related to issues such as permits to be obtained, protocols to be made, personnel to be assigned within the scope of national environmental, social and OHS legislation,
* Conducting field visits to perform monitoring of the activities to be implemented in the scope of ESMF and province-based ESMPs to be prepared,
* Performing successive reporting activities as described in Table 28,
* Ensuring preparation of neighborhood-level ESIAs, if needed,
* Site-specific implementation of the actions in their responsibility in the prepared SEP, LMP, RF documents and supervision of the activities described in the ESMP Checklists to be prepared by Contractor for each sub-Proje,
* Site-specific implementation of the actions in their responsibility and supervision of the activities to be described in the neighborhood-level ESIAs to be prepared, if needed,
* Ensuring realization of E&S Audits and preparation/implementation of ESAPs for Type-III sub-projects, if needed, and following of the defined corrective actions,
* Notification of each accident/incident successively to the Project Director and WB
* Guiding and supporting during preparation and implementation processes of the ESMP Checklists to be prepared by the sub-project contractors in terms of quality of the said documents, and ensuring adequacy of the sub-project OHS focal point personnel of the Contractors who will continuously implement the ESMP Checklists at the sub-project site.

## Project Beneficiaries

The Project beneficiaries can be listed as follows:

* Owners of risky buildings, who will not only take precaution against disaster risk but also will own longer-lasting residences/workplaces reconstructed/retrofitted according to the latest standards, by using loans with appropriate interest rates under Component 2,
* Tenants[[40]](#footnote-41)/ limited real rights holders[[41]](#footnote-42) / supers who will reside and/or work in more resilient buildings that will be retrofitted/reconstructed under Component 2,
* Directly the MoEUCC and municipal administrations in the Project provinces in line with the technical support under Component 1, and indirectly the citizens who will benefit from the said technical support thorough benefiting/getting service from the MoEUCC, selected municipalities, and relevant institutions, and stakeholders of the relevant institutions, and
* Citizens who will be indirectly exposed to less pollution in the Project provinces, in line with the positive impacts of the Project listed in Section 5.3 (for example, changing heating system to natural gas through reconstruction of a risky building whose heating system is coal).

## Contractors

For the sub-projects under Component 2, the contractors and the risky building owners will sign a contract. However, the risks related to the use of the loan will be managed by the MoEUCC, and the MoEUCC will approve the applications of the beneficiaries deemed eligible for loan allocation. Within that scope, a Commitment Letter has been prepared by the MoEUCC to include as an annex to the contracts to be signed between right-holders and the Contractors. The sample of the Commitment Letter is provided in Annex 14.

Accordingly, the contractor will be responsible for implementation of the province-based ESMPs to be prepared by the PMU, preparation & implementation of the sub-project ESMP Checklists, implementation of neighborhood-level ESIAs (if required). Contractors will also assign one focal point for managing issues related to E&S and stakeholder engagement and grievance mechanism and another focal point for managing OHS risks of sub-projects through including this obligation into the contracts that owners of housing units / workplaces will sign with the contractors. Contractors will maintain these staff throughout the life of their contracts for on-site implementation of said documents. The occupational safety expert whose service must be taken in accordance with national legislation, will be hired and will be trained within the scope of environmental aspects as per the scope presented in Section 6.14 and to be detailed in province-based ESMPs. Besides, the PMU individual specialists in the provinces will continuously support contractors’ focal points regarding fulfillment of contractors’ responsibilities included in the SEP, RF, LMP, and GM.

Contractors and Contractor focal points will be responsible for;

* Along with the implementation of the mitigation measures defined in the province-based ESMPs, neighborhood-level ESIAs (if needed), and sub-project specific ESMP Checklists, reporting the implementation of these measures to the PMU individual specialists in the provinces each month,
* Ensuring that the trainings defined in the province-based ESMPs are given to the sub-project employees and informing them about their responsibilities,
* Inspecting the work sites of sub-projects daily in line with national legislation and the ESF requirements and presenting evidence of relevant inspections to the PMU individual specialists in the provinces; and
* Fulfilling their own responsibilities during the implementation of the SEP, RF and LMP prepared for the Project in a manner that is specific to the relevant sub-project (for example, an issue that can be resolved by a corrective action of the contractor during the implementation of the SEP and the grievance mechanism, or the resolution of any complaints of the contractor employees; will be the responsibility of the contractors with the support of the PMU individual specialists).

## Public Consultation

Public consultation and information dissemination will be performed in accordance with the SEP. The province-based ESMPs to be prepared, sub-project specific ESMP Checklists, and other environmental and social documents (such as neighborhood-level ESIAs and ESAPs, if they are required to be prepared) will be disclosed in the GDIUTS web-site to be created specifically for the Project. Stakeholders will be able to provide feedback on these documents.

## World Bank Clearance

The province-based ESMPs to be prepared and neighborhood-level ESIAs (if needed) will be subject to the WB prior approval. A subset of sub-project specific ESMP Checklists per province will be reviewed by the Bank initially (the first three moderate and the first three substantial risk sub-projects) to ensure that the level of detail is sufficient. Afterwards, sub-project ESMP Checklists are subjected to post review of the WB. The ESMP Checklists will be subject to PMU approval.

## Incorporation in Works Contracts

For the sub-projects under Component 2, the contractors and the risky building owners will sign a contract. However, the risks related to the use of the loan will be managed by the MoEUCC, and the MoEUCC will approve the applications of the beneficiaries deemed eligible for loan allocation. Within that scope, a Commitment Letter will be signed between the MoEUCC and the Contractors. A sample of the Commitment Letter is provided in Annex 14.

## Information Disclosure

The public consultation and information sharing activities will also be carried out according to the methods described in the SEP. The province-based ESMPs to be prepared, sub-project specific ESMP Checklists, and other environmental and social documents (such as neighborhood-level ESIAs and ESAPs, if they are required to be prepared) will be disclosed in the GDIUTS web-site to be created specifically for the Project. Stakeholders will be able to provide feedback on these documents.

## E&S Monitoring, Supervision and Reporting

### Monitoring and Supervision

The PMU will perform sub-project monitoring and control actions, as detailed previously, to ensure that the sub-project specific ESMP Checklists, neighborhood-level ESIAs (if needed) and the RF, SEP and LMP to be implemented specifically for the sub-project are properly implemented. The PMU will also hire a supervision consulting firm (with experience, qualifications, and terms of reference acceptable to the Bank) for the supervision of the environmental and OHS issues associated with the implementation of the Project’s construction activities. Specifically, within the scope of field visits, supervision consulting firm, and the PMU individual Environmental and Social Specialists, who will be located in the provinces, will supervise and monitor the contractors and notify the contractors and the contractor's focal points about the problems they have identified on-site and decide on the steps to correct these problems. At this point, it should be noted that in an important event or accident that may affect / threaten the environment, occupational health and safety & community health and safety - fatal work accident, environmental spills and accidents that will put community and environmental health at risk, a work accident that may cause disability etc. - contractors will immediately inform the GDIUTS and individual Environmental Specialists hired for provinces and the WB will be informed within 48 hours by the GDIUTS. In such a case, the incident report, which includes (1) Root Cause Analysis studies, (2) measures to prevent the accident / incident from happening again, and specific compensation actions / corrective actions, will be submitted to the GDIUTS by the contractor within 30 working days with the guidance and controls of the PMU individual specialists and the GDIUTS will forward the incident report to the WB. The GDIUTS will also report its findings in this context to the WB with their reporting (See Section 6.11.2). For the Project, the WB Project team will also visit Project sites from time to time and/or specifically as needed as part of Project supervision.

### Reporting

Within the scope of the Project and sub-projects, reporting will be performed in line with the following responsibilities, scope, frequency and requirements:

Table 28 Reporting Requirements Regarding the ESMF Implementation

| **Reporting party** | **Reporting requirements** | **Reporting frequency** | **Party to which reports will be submitted** |
| --- | --- | --- | --- |
| Contractor / Contractor's OHS Focal Point | * Summary of the progress of demolition/retrofitting/construction activities schedule. * Summary of the compliance activities according to the province-based ESMPs, neighborhood-level ESIAs (if needed) and sub-project-specific ESMP Checklists. * Up-to-date list of all accidents, incidents and near-misses that occur during the Project. * Records of E&S trainings provided to personnel. * Tracking information of all past issues still being resolved. * Photos of the Project activities related to the implementation of the ESMP Checklist mitigation measures. * Daily compliance checklist of the works that are performed every day on the site. * Outputs of the performed activities in line with the Environmental and Social Monitoring Plan presented in Section 8. | Once a month | The PMU individual specialists in the provinces. |
| PMU individual specialists in the provinces | * Important points in the monthly reports of the Contractors / Contractor's focal points * Outputs of the supervision, monitoring and auditing activities * Progress of E&S Audits and ESAPs to be prepared for the Type-III sub-projects, if needed | Once a month | The PMU head office |
| PMU head office | Using the reports of contractors and the PMU individual specialists in the provinces and their quarterly site monitoring outputs:   * Summary of the completed demolition/retrofitting/construction activities. * Estimated remaining demolition/retrofitting/construction works and their schedule. * Summary of the compliance activities. * Outputs of the activities in line with the province-based Environmental and Social Monitoring Plans, whose format is presented in Section 8. * Environmental Social, Health and Safety Key Performance Indicators (KPIs), such as: * Statuses of grievances resolved per province, * Properly prepared and approved ESMP Checklist per sub-project, * Occupational accidents / incidents per province, * Number of ESAPs (which are specific to Type-III sub-projects) whose actions are completed per Type-III sub-projects, and * Ration of recycled construction demolition waste per province (approximately). * Up-to-date list of Environmental, Social and Safety events. * Up-to-date list of all accidents, incidents and near-misses that occur during the Project. * Tracking information of all past issues still being resolved. * Photos of Project activities.   The Project Progress Report, which will include not only the sub-project activities under Component 2, but also the activities under other components | Quarterly | WB |

## Training for the PMU

The PMU will ensure that both GDIUTS personnel and the individual Environmental & OHS and social specialists to be recruited are provided with relevant trainings as part of Component 4, including the ESF requirements and, as a minimum, the following:

* OHS, environmental and social assessments
* Risk categorization and E&S impact screening, ESMP & ESIA preparation
* Specific aspects of the implementation and monitoring of environmental and social risk management, including waste management and OHS management
* Stakeholder engagement and grievance mechanism
* Measures on the SEA/SH and Gender-Based Violence
* Code of conduct and
* Monitoring and reporting

## Training for Other Staff

The PMU will ensure that the following trainings will be given and documents will be provided to the GDIUTS personnel, who are not specialists in Environment, OHS and social issues, as well as to the personnel of the units responsible for environmental, OHS and social issues in the relevant Provincial Directorates and, if necessary, to the personnel of the infrastructure and urban transformation units of the Provincial Directorates:

* The World Bank Environmental and Social Framework,
* The Project-specific tools, i.e., ESMF, LMP, SEP and RF,
* Environmental and social assessment methods,
* Community health and safety,
* Stakeholder engagement and close out of grievances,
* Code of conduct, and
* Measures on the SEA/SH and Gender-Based Violence

## Training for Contractors

In the process of retrofitting/demolishing/reconstruction of the risky buildings, which are potential sub-projects under Component 2, the trainings of the inspection companies within the scope of the applicable national Construction Inspection System legislation and the practices under this legislation are quite detailed within the framework of the processes such as design, architecture and construction techniques. In addition, the applicable occupational health and safety legislation has defined the detailed trainings for workers, occupational physicians and healthcare professionals, as well as occupational safety specialists, especially for the activities to be carried out within the scope of the sub-projects of the Project. However, the trainings to be provided to contractors must also be in line with the ESF and WBG EHS General Guidelines. Therefore, for contractors and their personnel, the trainings mentioned in Section 6.13 should also be given.

In addition to training on how to comply with environmental and social requirements for the sub-project as a whole, contractors should train their employees on how to comply with applicable mitigation requirements when performing their work. In addition to the Health and Safety training, other environmental and social training (e.g. Code of Conduct, waste management and sanitation) will be described in the province-based ESMPs to be prepared. The trainings will include;

* OHS, environmental and social assessments,
* ESMP,
* Community health and safety,
* Stakeholder engagement and grievance mechanism,
* Codes of conduct (CoC),
* Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH),
* Gender-Based Violence,
* Monitoring and reporting, and
* Other relevant topics.

Additionally, especially the contractor OHS focal point should be trained about the following subjects;

* reporting of environmental accidents, OHS accidents and accidents that may affect public health and safety, and
* reporting non-conformities to be identified through the implementation of ESMPs and ESMP Checklists.

The accident/incident reports of the OHS focal point must include, as a minimum, the following:

* The date on which the incident takes place and, the date on which it is found out if the latter is different
* Description of the incident
* The violated mitigation measures/environmental/social laws
* The parties that are present at the time of the incident
* The corrective actions taken to fix the problem and prevent its recurrence
* All necessary steps that need to be taken to remedy the situation, such as improvement

The non-conformity report must include, as a minimum, the following:

* The date on which the incident takes place and, the date on which it is found out if the latter is different
* Description of the problem
* The violated mitigation measures/environmental/social laws and the World Bank's ESF requirements
* The parties that are present at the time of the incident
* Description of the corrective steps taken
* If environmental damage occurs, a description of necessary follow-up steps or long-term improvement requirements

## Summary of Roles and Responsibilities

A summary of the roles and responsibilities for all processes described in Section 6 is detailed in the Table below:

At this point, it should be noted here that, even they are not directly involved in the implementation of the ESMF; municipalities have embedded roles and responsibilities during the activities to be carried out within the scope of sub-projects under Component 2. These are provided in relevant sections; such as Section 2, Section 4.1.1, Section 4.1.3, Section 7, and also summarized below:

* District municipalities and accordingly metropolitan municipalities will take necessary legislator actions in case of provision of an information from Construction Inspection Institution regarding damage to a surrounding building during demolition, retrofitting, or re-construction,
* Metropolitan municipalities and district municipalities will support if requested regarding stakeholder engagement activities within the scope of Project’s publicity, and
* District municipalities and metropolitan municipalities will continue their waste management related responsibilities regarding construction and demolition wastes, packaging wastes, and domestic wastes during sub-projects activities.

Table 29 A Summary of the Roles and Responsibilities under the ESMF Implementation

| **Responsible Party** | **Responsibilities** |
| --- | --- |
| Contractors | * Preparing/Implementing the sub-project specific ESMP Checklist in line with the province-based ESMPs to be prepared by PMU. * Meeting mitigation requirements and management actions to be defined neighborhood-level ESIAs, if needed * Ensuring that environmental, occupational health and safety, community health and safety measures are taken and implemented during the activities. * Implementing resolving activities for the grievances directed to them as per the GM. * Implementing their specific responsibilities regarding site specific issues of SEP, RF, and LMP. * Recruiting an OHS focal point whose competency meets the requirements described in Section 6.6, * Regularly carrying out the monitoring on the site, to be defined in province-based ESMPs, ESMP Checklists, and neighborhood-level ESIAs (if needed) through the Contractor’s OHS focal point, * Performing the monthly reporting activities described in Table 28 , * Carrying out the environmental and social monitoring activities described in Section 8 under its own responsibility. * Immediately notifying GDIUTS and individual Environmental Specialists and OHS Specialists hired for provinces in case of an accident that may affect / threaten the environment, occupational health and safety & community health and safety - fatal work accident, environmental spills and accidents that will put community and environmental health at risk, a work accident that may cause disability etc. In such a case, the incident report, which includes (1) Root Cause Analysis studies, (2) measures to prevent the accident / incident from happening again, and specific compensation actions / corrective actions, will be submitted to GDIUTS within 30 working days with the guidance and controls of PMU individual specialists |
| PMU | * Ensuring the recruitment of totally eleven (16) individual specialists including three (4) specialists to the head office and eight 12) specialists (three specialists for each province), as defined in Section 0 within the scope of the Project. * Following the progress of the Project and reporting it as described in Table 28 . * Preparing province-based ESMPs. * Preparing neighborhood-level ESIAs, if needed. * Taking part in the evaluation of the proposed sub-project within the scope of Non-Eligible Projects. * Managing Grievance Mechanism. * Examining, developing, consulting, accepting, disclosing and monitoring this Project ESMF and other Project SEP, RF and LMP documents. * Notifying the WB of accidents and incidents within 48 hours, and sending the incident investigation report to the WB within 30 working days. * Evaluating and approving the Environmental and Social Screening studies carried out on the site by the PMU individual specialists in the provinces. * Providing the results of the first five screening studies to the WB just for information. * Performing the monitoring and reporting activities by working in coordination with the PMU individual specialists in the provinces. * Monitoring the execution of the contractors' activities within the scope of province-based ESMPs, ESMP Checklists, neighborhood-level ESIAs (if needed), and relevant sub-plans, by working in coordination with the PMU individual specialists in the provinces. * Evaluating and approving the ESAPs, if needed, as described in Section 6.2.3. * Providing the detailed feedback to the WB when requested and required. |
| PMU Individual Specialists in the Provinces | * Performing the Environmental and Social Screening studies for the proposed sub-projects. * Performing the monitoring and reporting activities described in Table 28 . * Guiding and supporting during preparation and implementation processes of the ESMP Checklists to be prepared by the sub-project contractors in terms of quality of the said documents, and ensuring adequacy of the sub-project OHS focal point personnel of the Contractors who will continuously implement the ESMP Checklists at sub-project site. * Carrying out actively the monitoring activities within the scope of sub-projects that are activated. * Implementing SEP and Grievance Mechanism at provinces on sub-project basis. * Performing E&S Audits for Type-III sub-projects and following implementation of ESAPs to be prepared for Type-III sub-projects in accordance with the outcomes of the audit, if needed. |
| World Bank | * Reviewing and approving the ESMF and other SEP, RF and LMP documents of this Project, and announcing their final versions on the WB official website, * Reviewing and approving the province-based ESMP, * Reviewing and approving the neighborhood-level ESIAs, if needed, * Reviewing the semi-annual progress reports to be provided by GDIUTS * Carrying out the implementation support task to ensure that the Project runs in accordance with the ESF. |

# Stakeholder Engagement & Grievance Mechanism

## Stakeholder Engagement Framework

The main objective of the Stakeholder Engagement is to ensure that all relevant stakeholders (individuals, groups and organizations) affected by and/or interested in the Project are involved in the Project activities and the flow of information to and from these stakeholders is continuous throughout the Project. Stakeholder engagement is an important activity for such Projects; because it enables the stakeholders to be informed at every stage of the Project, to express their expectations and concerns, and to establish an open communication channel with the stakeholders in the activities carried out by the investor. The objectives of the stakeholder engagement are generally as follows:

* Identifying stakeholders directly or indirectly affected by the Project and/or are interested in the Project.
* Identification and planning of stakeholder engagement activities that will begin during Project preparation and planning and continue with the implementation of the Project.
* Determining the frequency, content, information sharing and level of participation of consultation activities
* Establishment of Grievance Mechanism that will create an open communication channel for stakeholders at every stage of the Project.
* Ensuring that concerns and expectations expressed by stakeholders are addressed during the decision-making and planning stages of the Project.

The Stakeholder Engagement Plan (SEP) has been prepared to meet the requirements set forth in the World Bank's Environmental and Social Standard (ESS) 10 on Stakeholder Engagement and Information Disclosure.

## Stakeholder Engagement Plan (SEP)

Stakeholder engagement is an ongoing process that begins before the development of the SEP and will continue throughout the life of the Project. The MoEUCC will be in active communication with the identified stakeholders throughout the life of the Project.

Tools and methods defined for stakeholder engagement enable all Stakeholders to access the Project by means of their own preference and most convenient access.

COVID-19, which started in the first months of 2020 and whose effects are still ongoing, necessitated a planning that prioritizes safety and health in the stakeholder engagement process. For this reason, stakeholder engagement activities will be carried out using appropriate methods in line with COVID-19 measures and restrictions.

The methods and tools of stakeholder engagement of the Project are described below. First of all, the methods and tools that are suitable for the restrictions and measures in the COVID-19 process are explained, then the methods and tools that are recommended to be used when the new normalization process is started and when the conditions are suitable, are defined.

The following methods and materials will be used within the scope of engagement from the scoping phase of the Project until the completion of the transformation of risky buildings.

**Consultation Meetings:** Consultation meetings will be held as needed throughout the Project process. Detailed information about the Project will be given and questions and opinions of stakeholders will be evaluated. Consultation meetings will be held as needed during periods or issues that require the Project's consultation with stakeholders. In cases where consultation is required, consultations will be carried out using online tools during the COVID-19 process, and stakeholder consultations can be made face-to-face with the conditions after the new normalization process. In these meetings, the current developments of the Project will be explained, information will be given about the resettlement / relocation process, and ideas and expectations will be discussed during these processes.

**In-Depth Interviewing:** In-depth interviewing is a qualitative research technique that involves intensive individual interviews with a small number of participants to examine their perspectives on a particular idea, program or situation. In this case, in-depth interviews will be conducted with stakeholders such as national and local government agencies/organizations, cooperatives etc. to analyze the potential impacts of the Project on management and businesses and to evaluate their expectations/advice through planning. In-depth interview interviews are planned to be held online through online tools during the COVID-19 process instead of face-to-face meetings.

**Focus Group Discussion (FGD)**: Focus group interviews can be conducted when there is a need for data collection and qualitative fieldwork during the monitoring process. Focus group studies, which are held in the form of face-to-face meetings, can be carried out online during the COVID-19 process or face-to-face if conditions allow after the new normalization process. FGD is an effective way to bring together people from similar experiences to discuss a specific topic related to the Project.

**Socio-Economic Research:** Economic and social conditions affect each other positively or negatively. There is a direct connection between economic factors such as livelihoods of the society, income level, job and unemployment and social life. Therefore, economic parameters determine social standards.

Within the scope of the Project, researches will be carried out in order to reveal the socio-economic status of stakeholder groups.

**Surveys:** Survey studies will be used when data collection is required during the Project process, and it is planned to be carried out online through online tools during the COVID-19 process.

**Presentations:** Visual material will also be used during the informing phase of the stakeholders. Presentations will be made containing summaries of written documents.

**Project Brochure:** At the first stage, brochures / flyers with communication channels, announcements and information about the Project will be left in the common public areas in the surrounding settlements, in the office of the mukhtars, in the municipalities, in the provincial directorates, and in the professional chambers.

**Grievance Mechanism:** The Grievance Mechanism will be open to all stakeholders throughout the duration of the Project, including recording grievances, taking action for resolution, and closing grievances by providing necessary information.

**Letter/mail:** Project brochures, postings, reports or announcements can be sent by mail, courier or letter when necessary, so that stakeholder groups or individuals who do not have access to the Internet, smart phones, social media or e-mail can gain access to the Project information.

**Hotline**: There will be a hotline that all stakeholders can use to voice their concerns and complaints. This method is important in terms of solving the urgent problems of the stakeholders and being fast.

**Corporate Website**: The corporate website provides announcements, Project documents, reports and contact information for further information requests.

**Social Media**: Within the scope of social media tools, the website (<https://csb.gov.tr/>) and the social media accounts (https://twitter.com/csbgovtr) of MoEUCC will be used as tools to disseminate the announcements of the Project. Moreover, following the initiation of the Project, if needed, social media accounts can be created to convey announcements and developments specific to the Project.

**COVID-19 Conditions:** The COVID-19 epidemic has affected the whole world and measures such as wearing masks and maintaining social distance in society have become the new normal of our daily lives. If the COVID-19 pandemic conditions continue during the operation phase of the Project and the implementation of this SEP, the stakeholder engagement plan and its activities will be aligned and implemented in accordance with the guidelines of relevant and responsible national and international organizations such as WHO, Ministry of Health and MoEUCC.

Within the scope of the SEP, face-to-face meetings will be held in accordance with mask and social distance rules of Ministry of Health (MoH) and World Health Organization (WHO). In cases where face-to-face meeting is not possible due to the COVID- 19 conditions, online interview methods can also be used. In addition, it will be ensured that the meetings to be held will be organized in open areas, in accordance with social distance and other regulations of MoH and WHO.

Apart from these measures, other practices outlined in the “Interim Advice for IFC Clients on Safe Stakeholder Engagement in the Context of COVID-19” and the World Bank ESF/Safeguards Interim Note: COVID-19 Considerations in Construction/Civil Works Projects note will also be used for planning stakeholder engagement activities.

The tables below give detailed information on the stakeholder engagement activities to be carried out at different stages of the Project and the methods that will be used.

Table 30 Stakeholder Engagement in Transforming Risky Structures

| **Timing of Stakeholder Engagement Activity** | **Type of Activity** | **Engagement Method** | **Location** | **Stakeholder Group** | **Practitioner - Responsible** |
| --- | --- | --- | --- | --- | --- |
| Within the first month of the launch of the Project | Project kick-off meeting and Grievance Mechanism Central stakeholder institutions introduction meeting | Online/ face-to-face meetings | Ankara (online) | • National and local government institutions and organizations,  • NGO and other interest groups | the MoEUCC GDIUT PMU |
| Within the first month of the launch of the Project | Project kick-off meeting and Grievance Mechanism Central stakeholder institutions introduction meeting | Online/ face-to-face meetings | Istanbul, Izmir, Kahramanmaras, Manisa and Tekirdag (online) | • Provincial level representations of national institutions,  • Professional chambers,  • Local government institutions and organizations,  • NGOs and other interest groups,  • Mukhtar | the MoEUCC Provincial Directorates PMU |
| Within the first month of starting the sub-project | Stakeholder Engagement and Grievance Mechanism Disclosure[[42]](#footnote-43)  Delivery of Project Disclosure notes[[43]](#footnote-44) via e-mail (information by phone when necessary) | Delivery of Project Information brochures by e-mail or mail | Neighborhoods of Istanbul, Izmir, Kahramanmaras, Manisa and Tekirdag where sub-projects will be implemented | • Mukhtar of the neighborhood affected by the sub-project  • The mukhtar of the immediate neighborhood affected by the sub-project (if necessary)  • Educational institution management in the impact area (if necessary) | the MoEUCC Provincial Directorates PMU |
| Within the first month of starting the sub-project | Stakeholder Engagement and Grievance Mechanism Disclosure  Delivery of Project Disclosure notes via e-mail (information by phone when necessary) | Distribution of Project Information brochures  Mukhtar information visit  Phone/ e-mail | Neighborhood affected by the Project | • Mukhtar of the affected neighborhoods,  • Business and residential managers in the impact area  • Owners, tenants, business owners living in risky buildings,  • Vulnerable people or groups | Contractor |
| Within the first month of the mobilization of the site staff | Preparing of the "Stakeholder Engagement in Transforming Risky Structures in the Province Level" with actual local NGOs and key stakeholders. | Online/ face-to-face meetings | Istanbul, Izmir, Kahramanmaras, Manisa and Tekirdag (online) | • Provincial level representations of national institutions,  • Professional chambers,  • Local government institutions and organizations,  • NGOs and other interest groups,  • Mukhtar | Province level social specialists (Site Social Specialists) |
| During the implementation of subprojects— when necessary (annual monitoring, intensity of complaints, etc.) | Project grievance mechanism register follow-up | In-depth interviews | Istanbul, Izmir, Kahramanmaras, Manisa and Tekirdag | Vulnerable people or groups living in risky buildings | the MoEUCC Provincial Directorates PMU Social Specialist |
| Project grievance mechanism register follow-up | Socio-Economic Researches | Istanbul, Izmir, Kahramanmaras, Manisa and Tekirdag | Owners, tenants, business owners, Vulnerable people or groups living in risky buildings | the MoEUCC Provincial Directorates PMU Social Specialist |
| Project grievance mechanism register follow-up | Focus Group Discussions | Istanbul, Izmir, Kahramanmaras, Manisa and Tekirdag | National and local government institutions and organizations, NGOs and other interest groups | the MoEUCC Provincial Directorates PMU Social Specialist |

More detail on stakeholder engagement is provided in the SEP prepared for this Project.

## Grievance Mechanism (GM)

The grievance mechanism (GM) is an arrangement that provides channels for Project stakeholders to provide feedback and/or voice their concerns and grievances about Project activities.

In accordance with the international requirements, a grievance mechanism has been established to receive, resolve and follow up the concerns and complaints of the Project-affected and relevant stakeholders within the scope of the Project.

The PMU, which will be established under the MoEUCC will be accessible to stakeholders and will respond to all complaints as soon as possible.

Stakeholders will be able to use ALO 181, CIMER, hotline, face-to-face meetings, grievance registration forms and the website contact form to voice their grievances.

The details of the Grievance Mechanism are provided in SEP.

# Environmental & Social Monitoring

Monitoring of sub-projects to be implemented under Component 2, for which potential environmental and social impacts and proposed mitigation measures are given in Section 5, including meeting the monitoring requirements to be identified in the province-based ESMPs and sub-project specific ESMP Checklists to be prepared; will ensure the monitoring to follow if the mitigation measures are being implemented properly or not. In addition, through implementation of the monitoring system, detection and correction of non-conformities will be ensured. Monitoring will be carried out gradually by the contractors' OHS focal point, PMU's individual environmental & OHS and social specialists in the provinces, and PMU head office staff and specialists.

Through implementation of the monitoring process, indicators by which the overall environmental and social performance of the Project can be evaluated, such as the number of complaints received and resolved from all sub-projects and the total number of meetings and information activities with stakeholders, would be able to be monitored. Besides the performance of sub-projects specifically, such as the number of non-compliances opened and closed in the environmental and social scope of each sub-Proje, and the number of work accidents / occupational diseases, indirectly and directly, will also be able to be monitored. These will be reported together with general Key Performance Indicators (KPIs), such as:

* Status of grievances resolved per province,
* Properly prepared and approved ESMP Checklist per sub-Proje,
* Occupational accidents / incidents per province,
* Number of ESAPs (which are specific to Type-III sub-projects) whose actions are completed per Type-III sub-projects, and
* Ratio of recycled construction demolition waste per province (approximately).

As stated before, and as explained at Table 28 , contractors/contractors' focal points will monthly report to the PMU's individual specialists in the provinces, PMU's individual specialists in the provinces will report to PMU head office on a monthly basis, and PMU head office will report to the WB semi-annually. It should be noted that, in an important event or accident that may affect / threaten the environment, occupational health and safety & community health and safety - fatal work accident, environmental spills and accidents that will put community and environmental health at risk, a work accident that may cause disability etc. -, contractors will immediately inform GDIUTS and individual Environmental Specialists and OHS Specialists hired for provinces and the WB will be informed within 48 hours by GDIUTS. In such a case, the incident report, which includes (1) Root Cause Analysis studies, (2) measures to prevent the accident/incident from happening again, and specific compensation actions / corrective actions, will be submitted to GDIUTS by the contractor within 30 working days with the guidance and controls of PMU individual specialists and GDIUTS will forward the incident report to the WB. GDIUTS will also report its findings in this context to the WB with their reporting.

In the table below, the basic requirements and components of the environmental and social monitoring framework are presented. The Environmental and Social Monitoring Plan presented below can be expanded during the screening activities to be implemented for the sub-projects.

Table 31 Environmental and Social Monitoring of Retrofitting/Demolition/Reconstruction Works

| **No** | **Parameter** | **Parameter Details / Mitigation** | **Monitoring Method and Location** | **Frequency** | **Responsibility** |
| --- | --- | --- | --- | --- | --- |
| ***Preparatory stage of the sub-projects whose demolition works are completed and only reconstruction works will be performed (the ones described as Type-3 in Annex 2 and Section 3)*** | | | | | |
| 1 | Waste Management | Reuse / recycle / disposal of hazardous & non-hazardous wastes which are present in and around demolition area (if any), whose management were not carried properly. | Visual observations on and around of the sub-project site. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Individual Specialists in the provinces |
| 2 | Dust and Noise | Implementation of Grievance Mechanism to the grievances (if any) had been informed against dust and noise during the performed demolition works. | Visual Inspection and review of the records of the Grievance Mechanism to be implemented on and impact area of the sub-project. | Weekly | Contractor / Contractor’s OHS Focal Point PMU Individual Specialists in the provinces |
| 3 | Community Health and Safety / Traffic | Resolving the traffic congestion problem (if any) which were caused by the demolition activities performed. | Visual observations on and around of the sub-project site. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Individual Specialists in the provinces |
| ***Preparatory stage of demolition/retrofitting/reconstruction sub-projects*** | | | | | |
| 4 | Plans, Procedures and Methods | Prior to initialization of activities;   * Province-based ESMPs including Waste Management Plan, Resource Efficiency and Pollution Prevention Plan, * ESMP Checklists, * additional documents that should be prepared as per the sub-project’s relevant implementation (e.g. preparation of the documents within the scope of building implosion, if this is the method), and * plans and procedures that should be prepared in accordance with national legislation | Visual observations at sub-project’s offices and site. | Once in three days | PMU Individual Specialists in the provinces |
| Inspection of documents at PMU Head Office | Bi-weekly | PMU Head Office |
| Preparation of ESMP Checklists before concerned activity in parallel with province-based ESMPs to be prepared and with the outcomes of the screening process. | Inspection of documents at PMU Head Office | Bi-weekly | PMU Head Office |
| 5 | Permits and Protocols | Receiving & signing permits & protocols (e.g., protocol with relevant municipality for personnel wastewater transfer to municipality’s WWTP) within the scope of national legislation before initialization of the activities. | Visual observations at sub-project’s offices and site. | Once in three days | PMU Individual Specialists in the provinces |
| Inspection of documents at PMU Head Office | Weekly | PMU Head Office |
| 6 | Community Health and Safety | Taking precautions regarding community health and safety (signing, provision of safety lines, informing locals etc.). | Visual observations on and around of the sub-project sites. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Individual Specialists in the provinces |
| 7 | OHS | Taking OHS precautions (e.g., performing risk assessments, provision of trainings to the construction personnel before works, provision of PPEs, taking structural and non-structural precautions regarding COVID-19 etc.) before initialization of the activities. | Visual observations at sub-project’s offices and sites. | Daily | Contractor / Contractor’s OHS Focal Point |
| Visual observations at sub-project’s offices and sites and inspection of relevant records. | Weekly | PMU Individual Specialists in the provinces |
| 8 | Asbestos | Performing asbestos inventory for all sub-projects include demolition and conducting removal and disposal works afterwards if needed. | Visual observations at sub-project site -*with the condition of obeying asbestos safety precautions-*. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Individual Specialists in the provinces |
| Inspection of relevant records | Weekly | PMU Head Office |
| 9 | Waste Management | Planning of selective demolition process for the sub-projects include demolition. | Visual observations at sub-project’s offices and sites | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Individual Specialists in the provinces |
| ***Demolition/Retrofitting/Reconstruction stage of sub-projects*** | | | | | |
| 10 | OHS | Taking OHS measures (e.g. measures to be taken within the scope of national legislation in construction works such as the use of PPE, summary instructions to the site, precautions for working at height, and measures identified in the sub-project Health and Safety Plans to be prepared by including WB ESF and WBG Sectoral Guidelines and in this ESMF. | Visual observations and document inspections at sub-project offices and sites. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Independent Specialists of the cities |
| 11 | Dust and Noise | Taking compulsory measures within the scope of national legislation and to be detailed in the ESMP Checklists and province-based ESMPs related to dust and noise. | Visual observations at sub-project sites and impact areas. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Independent Specialists of the cities |
| Performing air quality and noise measurements at nearest receptors upon complaint | Measurements | Upon compliant | Contractor / Contractor’s OHS Focal Point |
| 12 | Pollution Prevention | * Taking pollution prevention actions except the ones regarding dust and noise which will be detailed as per the screening process. * Keeping records of the generated wastewater | Visual observations at sub-project sites and impact areas. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Independent Specialists of the cities |
| Visual observations at sub-project sites and impact areas. | Quarterly | PMU Central Office |
| Performing soil and/or water sampling measurements in case of complaint and taking necessary measures if needed. | Sampling and analysis | Upon complaint | Contractor / Contractor’s OHS Focal Point |
| 13 | Waste Management | * Through implementation of selective demolition, separation of inert construction & demolition wastes from other waste types. * Re-use / recycle /recovery of the wastes generated through selective demolition process, except the hazardous ones which are obliged to be disposed. * Sending inert construction & demolition wastes to material recovery facilities where available and to sanitary landfills where not available. * Implementation of waste management activities in accordance with waste management hierarchy during other retrofitting and re-construction activities in compliance with WB ESF and WBG General/Sectoral Guidelines. * Tracking necessary records for above implementations. | Visual observations at sub-project sites and review of documents / records such as;   * Waste logs, * Waste receipts, * Waste transfer records etc. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Individual Specialists in the provinces |
| Quarterly | PMU Head Office |
| 14 | Sub-project Traffic | Implementation of mitigation measures to be defined in Community Safety and Traffic Plans which will be prepared for each province. | Visual observations on and around of the sub-project sites.  Review of documentation/records such as;   * training records, * speed limit violations, * traffic related grievances | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | Contractor / Contractor’s OHS Focal Point PMU Individual Specialists of the cities |
| 15 | Grievance Mechanism | Implementation of Grievance Mechanism during all activities for both internal and external complaints. | Review of grievance records whose grievances received from and around sub-project site. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Individual Specialists in the provinces |
| Monthly | PMU Head Office |
| ***For all Stages*** | | | | | |
| 16 | General | Closure of environmental, social, OHS and community health and safety related non-conformities including the ones identified through implementation of grievance mechanism. | Visual observations at sub-project sites and impact areas and documentation / record control | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Individual Specialists in the provinces |
| Quarterly | PMU Head Office |

# ESMF Implementation Budget

The implementation budget of the ESMF, by taking an implementation period of 6 years, is provided below together with relevant budget items and estimated costs:

Table 32 Budget Items and Estimated Costs

|  |  |
| --- | --- |
| **Budget Items** | **Estimated Costs** |
| Employment of PMU Individual Specialists (4 for Central Office, 12 for cities, totally for 72 months) | 3,000,000 $ |
| PMU Monitoring Activities (for 72 months) | 200,000 $ |
| Trainings to be provided for PMU, other staff, and Contractor’s OHS focal points | 200,000 $ |
| Total | 3,400,000 $ |

# ESMF Disclosure & Consultation

Final drafts of environmental and social documents were presented on:

* April 03, 2023, on the Anatolian side and April 04, 2023, on the European side of Istanbul province,
* April 10, 2023, in Izmir province,
* April 11, 2023, in Manisa province and
* April 5, 2023, in Tekirdag province

to stakeholders through consultation meetings. Consultation meetings on environmental and social documents could not be held in Kahramanmaras, as the province of Kahramanmaraş was greatly affected by the earthquake that occurred on February 6, 2023, and public institutions and non-governmental organizations were still working to eliminate the effects of the, and these institutions did not have suitable working conditions.

Before the meetings, the final drafts of the environmental and social documents were published on the Project website (kentseldirenclilik.csb.gov.tr/) on March 18, 2023. Meetings are scheduled to be online or face-to-face. Representatives of public institutions in the provinces, municipalities, mukhtars, professional chambers and non-governmental organizations were invited to the meetings with an official letter, stating that the documents were published on the website ready to be read before the meetings.

During the meetings, Ms. Banu Behram Kuran, the Head of the 4th Department of the Transformation Areas of the Directorate General of Infrastructure and Urban Transformation Services, made a presentation about the scope and components of the project, and then Candan Sağıroğlu on behalf of Çınar Mühendislik explained the possible environmental and social impacts and risks of the Project, the measures to be taken to eliminate or reduce these impacts and risks, the roles and responsibilities of the parties to be involved in the project implementation, and described the procedures to be followed for monitoring. A question-answer session after the presentation was held and in addition, participants were also notified that they can convey their questions or suggestions and complaints through writing e-mail to dayanikli@kdb.gov.tr within a week after the meeting. However, no grievance or concern received through [dayanikli@kdb.gov.tr](mailto:dayanikli@kdb.gov.tr) within the one week after the meetings.

In the meetings, generally, questions and comments regarding the scope of the Project and how it will be implemented, rather than the potential environmental and social risks and impacts of the Project, were conveyed.

Detailed information about the consultation meetings held in İstanbul, İzmir, Manisa and Tekirdağ provinces are given in Annex-6, Annex-7, Annex-8 and Annex-9 of SEP, respectively.

# Annex 1. List of Non-Eligible Types of Sub-projects

The list of non-eligible types of sub-projects are presented below:

* Any sub-project that is included in the World Bank Group/International Finance Corporation Exclusion List
* Any sub-project that includes the buildings registered as Cultural Heritage.
* Any sub-project that will have impacts on Natural Habitats/Critical Habitats and trigger an overall ESS6 such as alteration of environmentally important areas, including wetlands, native forests, grasslands, and other “critical” natural habitats and ecosystem services.
* Any sub-projects where in-situ transformation is not possible.
* The buildings which are not registered as risky building within the scope of Law and Implementation Regulation.
* Risky buildings within designated Disaster Exposed Areas.
* Any sub-project that would affect the quality and/or quantity of international waterways as defined in WB OP 7.50 and that would benefit from existing hydroelectric dams in a way, triggering any dam safety issues under the scope of ESS4.
* Any Type-III sub-Proje, whose demolishing works had been completed after October 1, 2020.
* Any sub-project which would be classified as “High Risk”[[44]](#footnote-45) in terms of environmental risks.

# Annex 2. Environmental & Social Screening Checklist for Subprojects

The sub-projects to be proposed within the scope of Component 2 can be divided into three types as per the activity to be performed as below:

* **Type-I:** The sub-projects with demolition and reconstruction - buildings were registered as risky building, however, no demolition activity has been performed at the time of loan application
* **Type-II:** The sub-projects with retrofitting - buildings were registered as risky building, however, loan application is made for only retrofitting rather than demolition and reconstruction
* **Type-III:** The sub-projects with only reconstruction - buildings were registered as risky building and demolished before loan application, and the application is only made for reconstruction.

The environmental and social screening process for the concerned sub-project types will be performed as described in Section 6.2.2 of the ESMF.

**ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST**

|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION-I** | | | |
| **Sub-project Type** | Type-I | Type-II | Type-III |
| **Name of the Sub-project** |  | | |
| **Proposed date of the Initialization of the Works** |  | | |
| **Address** |  | | |
| **Prepared by** |  | | |
| **Preparation date** |  | | |

| **SECTION-II: Environmental and Social Risks – Current Status** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Environmental and Social Issues** | **Foreseen Risk as per Baseline Conditions (please give details in columns)** | | | | |
| **No Risk** | **Low Risk** | **Medium Risk** | **Substantial Risk** | **High Risk** |
| What is the level of the risk of the subproject to damage a known cultural heritage in terms of sub-project area’s proximity? |  |  |  |  |  |
| What is the level of the risk of the subproject to pollute a water body in terms of sub-project area’s proximity? |  |  |  |  |  |
| What is the risk regarding impacts related with dust generation in terms of the sensitivity level of the receptors? |  |  |  |  |  |
| What is the risk level regarding impacts related with noise generation in terms of the sensitivity level of the receptors? |  |  |  |  |  |
| What is the risk level regarding vulnerability status of the population of the building to be demolished/reconstructed/ retrofitted (the vulnerable group population of the building to be demolished can be assessed)? |  |  |  |  |  |
| What is the risk level regarding livelihood impact for any worker working in the building (e.g., supers and other workers population)? |  |  |  |  |  |
| What is the risk of in-adequate waste management in terms of the waste management capacity of the region where the sub-project will be realized? |  |  |  |  |  |

| **SECTION-III: Environmental and Social Risks – Foreseen risks of sub-project activities** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Environmental and Social Impacts** | **Foreseen impact (please give details in columns)** | | | | |
| **No Risk** | **Low Risk** | **Medium Risk** | **Substantial Risk** | **High Risk** |
| What is the risk of presence of asbestos material at the building to be demolished/retrofitted in terms of the building’s age? (As a pre visual observation assessment)? |  |  |  |  |  |
| What is the risk regarding impacts related with dust generation in terms of the volume of building to be demolished and/or reconstructed? |  |  |  |  |  |
| What is the level of risk of the subproject in terms of possible increase on the traffic load, given the duration (depending on the size of the work, e.g., the size of the new building) and intensity of the activities |  |  |  |  |  |
| What is the risk regarding impacts related with construction & demolition waste generation of the sub-project (for instance, such criteria can be assessed: volume of the building to be demolished, nature of the activity to be performed (much less construction & demolition waste will be generated during retrofitting when compared to demolishing) etc.)? |  |  |  |  |  |
| What will be the extent of occupational exposure and other OHS risks of the subproject, other than asbestos (e.g., will there be work at height during retrofitting activities, or how much will the risk of working at height be when performing reconstruction activities, depending on the design of the new structure, etc.)? |  |  |  |  |  |
| What will be the level of the risk of the subproject within the scope of RF? |  |  |  |  |  |
| Other environmental and social risks (if any, please identify nature and level) |  | | | | |

| **SECTION-IV: Environmental and Social Risks – Current Status (only for Type-III sub-projects)** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Environmental and Social Issues** | **Risk based on Foreseen / Observed Conditions (please give details in columns)** | | | | | | |
| **No Risk** | **Low Risk** | **Medium Risk** | **Substantial Risk** | **High Risk** | |
| What is the risk in terms of presence of unmanageable amount of demolition waste, if they are still present at the site or areas close to the site, if any? |  |  |  |  |  |  |
| What is the risk of future grievance regarding dust generation, due to evidence of such grievance during demolition? (Was there a significant complaint(s) about dust during the demolition?) |  |  |  |  |  |  |
| What is the risk of future grievance regarding noise generation, due to evidence of such grievance during demolition? (Was there a complaint about noise during the demolition?) |  |  |  |  |  |  |
| What is the risk of meeting with nuisance with neighbors due to a damage to other buildings during the demolition process? |  |  |  |  |  |  |
| What is the risk of future issues due to lack of demolition plan during the demolition or insufficiency of it in terms of quality? |  |  |  |  |  |  |
| What is the risk in terms of asbestos presence at the demolition site as a pre visual observation assessment) |  |  |  |  |  |  |
| What is the risk in terms of legal / reputational / public discomfort due to any fatal accident or accident caused disability during the demolition process? |  | N/A | N/A | N/A | N/A |  |
| What is the risk in terms of presence of number of eligible people for more rental support (as a preliminary evaluation)? |  |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SECTION-V: Screening Summary** | | | | |
| **Identified Category** | **Environmental (High / Substantial / Medium / Low)\*** | | **Social (High / Substantial / Medium / Low)** | |
|  | |  | |
| **Details and Reasoning of the Identified Category** |  | | | |
| **Required Instruments** | Neighborhood-level ESIA\*\* | ESMP Checklist\*\*\* | | E&S Audit / ESAP\*\*\*\* |
|  |  | |  |

\* Sub-projects will be considered as High risk in terms of environment if one or more of the environmental issues in Annex 2 are answered as “High Risk”

\*\*Note to User: Neighborhood-level ESIAs will not be sub-project specific. In case of determination of “high risk” in terms of social risks and “substantial risk” in terms of environmental risks of more than 10 sub-projects to be initialized in same neighborhood within a one-month period, this box of each sub-project’s checklist will be filled and sent to PMU Head Office for their review.

\*\*\* Note to User: Will be required for all sub-projects in any case, however, the scope will be identified through the checklist

\*\*\*\* Note to User: E&S audit will for all Type-III sub-projects in any case. ESAP depends on the results, on the other hand, most probably will be required

# Annex 3. Environmental & Social Management Plan (ESMP) Content and Format

The Environmental and Social Management Plans (ESMPs) to be prepared for each province should outline the mitigation, monitoring and administrative measures to be taken during Project implementation to prevent or eliminate adverse environmental impacts.

For each stage, the PMU determines the expected significant environmental impacts based on the analysis made in the context of preparing an environmental assessment. For each impact, mitigation measures should be identified and listed. Estimates are based on the cost of mitigation actions, which is broken down into setup (investment cost) and operational (recurring cost) estimates. The ESMP format also provides for the definition of institutional responsibilities for operating mitigation tools and methods.

ESMP Checklists will be prepared by the contractor by taking the outcomes of the screening process to be implemented for each sub-project (please see Annex 2), the province ESMPs and the Project ESMF into account. Therefore, it would be beneficiary to include a basic monitoring plan for each type of sub-projects. This format also includes a line for essential information that is critical to achieving reliable and credible monitoring. The ESMPs will be a comprehensive tender responding to potential environmental and social impacts on any building to be retrofitted, demolished and reconstructed and sub-project specific ESMP Checklists will be prepared afterwards which will include more specific issues of the relevant sub-project.

The ESMPs will be prepared as a standalone document for each province. The content of the ESMPs will consist of:

1. Executive Summary

* Brief description of key findings and recommended actions – sub-project specific ones will be assessed in more detail in ESMP Checklists.

1. Legal and Institutional Framework

* Analyzing the legal and institutional framework including the issues outlined in paragraph 26.46 of ESS1 – the sub-project specific / applicable & not applicable legal and institutional framework including identification of required permits will be discussed during the integration process.

1. Project Description

* The geographical, environmental, social and temporal context of the Project possible sub-projects in accordance with the types explained in Annex 2, its components and activities to be undertaken, and any off-site investments that may be required (such as dedicated pipelines, access roads, power supply, water supply and raw material and product storage facilities) and the primary suppliers of the Project are briefly described on the basis of relevant province. Applicable context will be discussed during sub-project integration process.
* Considering the details of the possible sub-project types, any planning requirements including description of the organizational arrangements together with the roles and responsibilities are specified to meet the requirements of ESS 1 to 10 and provide information about any screening/scoping works undertaken for the Project.
* It contains explanation of the conditions of including the map with sufficient detail showing the sub-project site and the area that may be affected by the direct, indirect and cumulative impacts of the Project.

1. Mitigation Measures

* Through using the ESMF Table 26, identifies mitigation measures and significant residual adverse impacts that cannot be mitigated for each province. Consequently, during the sub-project integration, assesses the acceptability of these residual adverse impacts to the extent possible.
* Defines differentiated measures so that adverse impacts do not fall disproportionately on disadvantaged or vulnerable people.
* The feasibility of mitigating environmental and social impacts; the capital and recurring costs of proposed mitigation measures and their relevance under local conditions; assesses institutional, training and monitoring requirements for proposed mitigation measures.
* It forms the basis of this determination by specifying the issues that do not require further attention.

1. Monitoring

* The ESMPs will set the monitoring objectives and identify the type of monitoring and their link to the mitigation measures described in the ESMP. In particular, in the monitoring section of the ESMP (a) a specific description and technical details of the monitoring measures, including the parameters to be measured, the methods to be used, sampling locations, measurement frequency, detection limits (where applicable), and the definition of thresholds to indicate the need for corrective action; and Monitoring and reporting procedures are provided to (b) (i) enable early detection of conditions requiring specific mitigation measures, and (ii) provide information on mitigation progress and outcomes.

1. Appendices

* List of people or organizations that prepared or contributed to the environmental and social assessment.
* References – identifies published and unpublished written materials referenced in the document and used in the preparation of the document.
* Records of meetings, consultations and surveys with stakeholders, including those with affected persons and other interested parties. These records identify such stakeholder engagement tools used to solicit the views of those affected and other interested parties.
* Tables presenting relevant data referenced or summarized in the main text.
* List of associated reports or plans.
* List of permits taken or to be taken.

In addition, during the construction works, the PMU and the Contractor’s Site Manager will also ensure that the contractors take the necessary health and safety precautions.

# Annex 4. Sample Grievance Form

**İKLİME ve AFETE DİRENCLİ SEHİRLER PROJESİ /**

CLIMATE AND DISASTER RESILIENT CITIES PROJECT

**SİKÂYET KAYIT FORMU /** GRIEVANCE REGISTER FORM

|  |  |  |
| --- | --- | --- |
| **Sikayetin Alindigi Yer/**  Location of Complaints Received |  | **Tarih/**  Date |
| **Alan Yetkilisinin Adi/**  Name of Person in Charge |  | **Sikayet Kayit No/**  Complaint Register Number |
| **Sikayete Konu Alanin Koordinatlari/**  Coordinates of The Area Subject To Complaint |  | |
| **SİKÂYET SAHİBİ HAKKINDA BİLGİ / COMPLAINANT INFO**  **Sikâyet Sahibi kimlik bilgilerini vermeden anonim olarak doldurabilir, ancak kendisine geri donus seklini bu formda belirtmesi gerekmektedir. / The Complainant may submit application anonymously, however in this form the Complainant should indicate the feedback mechanism to respond.** | | |
| **Ad Soyad/**  Name Surname |  | **Sikâyetin Gelis Yolu /**  Form of Complaint: |
| **TC Kimlik No/**  Identification Number |  | **Telefon- Ucretsiz hat /**  Phone –Free phone line |
| **Telefon/ E-Posta**  Telephone/ E-mail |  | **İstisare Toplantisi/**  Consultation meeting |
| **Mahalle-Koy-İlçe-İl/**  Neighborhood-Village –District - Province |  | **Dilekçe** / Petition |
| **SİKÂYET DETAYLARI / DETAILS OF COMPLAINT** | | |
| **Sikâyet Konusu /**  Complaint | | |
| **Sikâyet sahibi tarafindan talep edilen çozum /**  Solution requested by the Complainant | | |
| **Sikâyeti Alan Yetkilinin Ad Soyad ve İmzasi / Sikâyet Sahibinin Ad Soyad ve İmzasi**  Name Surname and Signature of the Registerer / Name Surname and Signature of Complainant | | |

# Annex 5. Sample Grievance Closeout Form

**İKLİME ve AFETE DİRENCLİ SEHİRLER PROJESİ /**

CLIMATE AND DISASTER RESILIENT CITIES PROJECT

**SİKÂYET KAPATMA FORMU /** GRIEVANCE CLOSURE FORM

|  |  |
| --- | --- |
| **Sikayet Kapatma Numarasi:**  Grievance Closure No: |  |
| **Alinmasi Gereken Acil Önlemleri Tanimlayin:**  Identify the urgent actions |  |
| **Alinmasi Gereken Uzun Vadeli Önlemleri Tanimlayin (Gerekli Ise):**  Identify the long term actions (if necessary) | Dear ECA RSA team, |
| **Tazminat Talebi Bulunuyor Mu?**  Is there a claim for compensation? | **Evet/**Yes **Hayir/**No |
| **DUZELTICI FAALIYETIN KONTROLU VE KARARI /** CONTROL AND DECISION OF CORRECTIVE ACTION | |
| **Duzeltici Faaliyetin Asamalari**  Stages of Corrective Action | **Verilen Surenin Sona Erdigi Tarih Ve Yetkili Kuruluslar**  Date of Expiration of the Given Period and Authorized Institutions |
| 1. |  |
| 2. |  |
| 3. |  |
| 4. |  |
| 5. |  |
| 6. |  |
| 7. |  |
| 8. |  |
| 9. |  |
| 10. |  |

# Annex 6. 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 H&S 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 PMU 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 (PMUs) 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 PMU, 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 PMU 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 PMU 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 PMU 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 site manager (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 PMU, 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 PMU 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, and 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). PMUs 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 PMU 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 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 COVID, 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 (PMU, 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](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125), issued on March 19, 2020
* [Recommendations to Member States to Improve Hygiene Practices](https://www.who.int/publications-detail/recommendations-to-member-states-to-improve-hand-hygiene-practices-to-help-prevent-the-transmission-of-the-covid-19-virus), issued on April 1, 2020
* [Severe Acute Respiratory Infections Treatment Center](https://www.who.int/publications-detail/severe-acute-respiratory-infections-treatment-centre), issued on March 28, 2020
* [Infection prevention and control at health care facilities (with a focus on settings with limited resources)](https://www.who.int/infection-prevention/tools/core-components/facility-manual.pdf), issued in 2018
* [Laboratory biosafety guidance related to coronavirus disease 2019 (COVID-19)](https://www.who.int/publications-detail/laboratory-biosafety-guidance-related-to-coronavirus-disease-2019-(covid-19)), issued on March 18, 2020
* [Laboratory Biosafety Manual, 3rd edition](https://www.who.int/csr/resources/publications/biosafety/Biosafety7.pdf?ua=1), issued in 2014
* [Laboratory testing for COVID-19, including specimen collection and shipment](https://www.who.int/publications-detail/laboratory-testing-for-2019-novel-coronavirus-in-suspected-human-cases-20200117), issued on March 19, 2020
* [Prioritized Laboratory Testing Strategy According to 4Cs Transmission Scenarios](https://apps.who.int/iris/bitstream/handle/10665/331509/WHO-COVID-19-lab_testing-2020.1-eng.pdf), issued on March 21, 2020
* [Infection Prevention and Control for the safe management of a dead body in the context of COVID-19](https://apps.who.int/iris/bitstream/handle/10665/331538/WHO-COVID-19-lPC_DBMgmt-2020.1-eng.pdf), issued on March 24, 2020
* [Key considerations for repatriation and quarantine of travelers in relation to the outbreak COVID-19](https://www.who.int/news-room/articles-detail/key-considerations-for-repatriation-and-quarantine-of-travellers-in-relation-to-the-outbreak-of-novel-coronavirus-2019-ncov), issued on February 11, 2020
* [Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health](https://www.who.int/publications-detail/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](https://www.who.int/publications-detail/oxygen-sources-and-distribution-for-covid-19-treatment-centres), issued on April 4, 2020
* [Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response](https://www.who.int/publications-detail/risk-communication-and-community-engagement-(rcce)-action-plan-guidance), issued on March 16, 2020
* [Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19)](https://www.who.int/publications-detail/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](https://apps.who.int/iris/bitstream/handle/10665/331492/WHO-2019-nCoV-HCF_operations-2020.1-eng.pdf), issued on March 19, 2020
* [Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19)](https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IPCPPE_use-2020.1-eng.pdf), issued on February 27, 2020
* [Getting your workplace ready for COVID-19](https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf), issued on March 19, 2020
* [Water, sanitation, hygiene and waste management for COVID-19](https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19), issued on March 19, 2020
* [Safe management of wastes from health-care activities](https://apps.who.int/iris/bitstream/handle/10665/85349/9789241548564_eng.pdf?sequence=1), 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](https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak), issued on March 19, 2020
* [Disability Considerations during the COVID-19](https://www.who.int/who-documents-detail/disability-considerations-during-the-covid-19-outbreak) 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](https://worldbankgroup.sharepoint.com/sites/wbunits/opcs/Knowledge%20Base/Public%20Consultations%20in%20WB%20Operations.pdf), issued on March 20, 2020
* [Technical Note: Use of Military Forces to Assist in COVID-19 Operations](https://worldbankgroup.sharepoint.com/sites/wbunits/opcs/Knowledge%20Base/Security%20Forces%20EandS%20issues%20in%20COVID%20projects.pdf), issued on March 25, 2020
* [ESF/Safeguards Interim Note: COVID-19 Considerations in Construction/Civil Works Projects](https://worldbankgroup.sharepoint.com/sites/wbunits/opcs/Knowledge%20Base/ESF%20Safeguards%20Interim%20Note%20Construction%20Civil%20Works%20COVID.pdf), issued on April 7, 2020
* [Technical Note on SEA/H for HNP COVID Response Operations](https://worldbankgroup.sharepoint.com/sites/gsg/HealthySocieties/Documents/COVID-19/Technical%20Note%20on%20addressing%20SEAH%20in%20HNP%20COVID%20response%20operations.pdf), issued in March 2020
* [Interim Advice for IFC Clients on Preventing and Managing Health Risks of COVID-19 in the Workplace](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_tipsheet_covid-19-ohs), issued on April 6, 2020
* [Interim Advice for IFC Clients on Supporting Workers in the Context of COVID-19](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_tipsheet_covid-19_supportingworkers), issued on April 6, 2020
* [IFC Tip Sheet for Company Leadership on Crisis Response: Facing the COVID-19 Pandemic](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+cg/resources/guidelines_reviews+and+case+studies/tip+sheet+for+company+leadership+on+crisis+response+-+facing+the+covid-19+pandemic), issued on April 6, 2020
* [WBG EHS Guidelines for Healthcare Facilities](https://www.ifc.org/wps/wcm/connect/960ef524-1fa5-4696-8db3-82c60edf5367/Final%2B-%2BHealth%2BCare%2BFacilities.pdf?MOD=AJPERES&CVID=jqeCW2Q&id=1323161961169), issued on April 30, 2007

**ILO GUIDANCE**

* [ILO Standards and COVID-19 FAQ](https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---normes/documents/publication/wcms_739937.pdf), 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](https://www.adb.org/publications/managing-medical-waste-covid19)
* [IDB Invest](https://idbinvest.org/en/download/9625) [Guidance for Infrastructure Projects on COVID-19: A Rapid Risk Profile and Decision Framework](https://idbinvest.org/en/download/9625)
* [KfW DEG COVID-19 Guidance for employers](https://www.deginvest.de/Unsere-L%C3%B6sungen/COVID-19-DEG-information-for-customers-and-business-partners/), issued on March 31, 2020

[CDC Group COVID-19 Guidance for Employers](https://assets.cdcgroup.com/wp-content/uploads/2020/03/23093424/COVID-19-CDC-ESG-Guidance.pdf), issued on March 23, 2020

# Annex 7. Asbestos Management Plan

**1. Purpose and Scope**

This Asbestos Management Plan (AMP) explains how the risks arising from asbestos-containing materials should be managed in all subprojects. This AMP also specifies asbestos-related procedures within line the Climate and Disater Resilient Cities Project (Project) and is designed to effectively manage and minimize asbestos-related health risks to those working on the Project.

This plan is applied to the employees of the General Directorate of Infrastructure and Services of the Ministry of Environment, Urbanizastion and Climate Change, and all contractors who will work in deconstruction and construction works to be assigned within the Project.

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

**2. Legal Requirements & Standards**

**2.1. National Legislation**

The rules regarding the use of asbestos in Turkiye are regulated by the regulations, communiqués, and standards of different ministries.

In this context, the most important legislation is the Regulation on Health and Safety Precautions in Working with Asbestos, prepared by the Ministry of Labor and Social Security (MoLSS) and published in the Official Gazette (OG) dated 25/01/2013 and numbered 28539. With this legislation, regulations were made on the prevention of exposure of employees to asbestos dust in asbestos removal, deconstruction, repair, maintenance, and removal works, and protection from health risks arising from this exposure, and also on determination of limit values and other special precautions.

With the Dust Fighting Regulation (Date of OG: 02/04/2015, No:29314), prepared by the MoLSS and published in the OG dated 05/11/2013 and numbered 28812; the procedures and principles regarding the necessary precautions to be taken in order to combat dust in terms of occupational health and safety and to protect the workers from the effects of dust and prevent the risks that may arise from dust in the workplaces, were determined.

The most up-to-date regulation regarding asbestos safety in national legislation is the "TS 13633 Practice Rules for Complete and Partial Demolition of Buildings" standard, published by the Turkish Standards Institute. In the aforementioned standard, the basic principles of the operations regarding asbestos, which may cause significant health and safety risks, during the office work and field research to be performed before the complete and partial (restoration, deconstruction, etc.) demolition operations for the buildings are specified, and a special title is given on the subject of asbestos.

With the Communiqué on Asbestos Removal Training Programs, prepared by the MoLSS and published in the OG dated 29/06/2015 and numbered 28692; procedures and principles regarding the qualifications, training, training programs and exams to be held at the end of the asbestos removal training of the specialists and the training, training programs and their certification of the asbestos removal workers who will take part in asbestos removal, deconstruction, repair, maintenance and removal works, were determined.

Issues related to the management of asbestos wastes in Turkiye are regulated by the Environmental Legislation. In accordance with this legislation, asbestos-containing waste is considered as “hazardous waste” and its packaging, transportation and disposal by storage should be conducted within this framework. The relevant legislation is presented below;

* Waste Management Regulation (Date of OG: 02/04/2015, No:29314)
* Regulation on Regular Storage of Wastes (Date of OG: 26/03/2010, No: 27533)

**2.2. World Bank ESF Requirements**

2.2.1. Resource Efficiency, Pollution Prevention and Management - ESS3

ESS3 recognizes that economic activity and urbanization often pollute the air, water and soil and consume limited resources that can threaten people, ecosystem services and the environment at local, regional, and global levels.

Hazardous wastes pose risks to human health, property, ecosystem services and the environment due to their physical or chemical properties. Wastes containing asbestos should be classified as hazardous waste.

If the waste generated is considered hazardous, the Project is expected to comply with current requirements, national legislation, and applicable international conventions, including those related to cross-border movement, for the management of hazardous waste (including storage, transportation, and disposal). In the absence of such requirements, Good International Industral Practice (GIIP) alternatives will be adopted for an environmentally valid and safe waste management and disposal. If hazardous waste management is conducted by third parties, they will use reputable and legitimate contractors that are licensed by the relevant governmental institutions and obtain chain of custody documentation regarding transportation and disposal to the final destination.

Within the scope of the Project, licensed waste sites, which are operated at acceptable standards will be determined and these sites will be used. Where licensed sites are not operated to acceptable standards, waste sent to these sites will be minimized and alternative disposal options will be considered, including the possibility of developing recovery or disposal facilities at the Project site or elsewhere.

2.2.2 Community Health and Safety – ESS4

ESS4 recognizes that Project activities, equipment and infrastructure can increase community exposure to risks and impacts. The ESS4 defines requirements for the management and safety of hazardous materials.

The Project will prevent or minimize the possibility of community exposure to hazardous substances that may occur due to the Project. Where there is potential for the public (including workers and their families) to be exposed to hazards, particularly life-threatening hazards, the Project will take exceptional care to avoid or minimize exposure by modifying or removing the situation or substances that cause potential hazards. Where hazardous materials are part of existing Project infrastructure or components, the Project will use due diligence to eliminate exposure during construction and Project implementation, including abandoning.

The Project will implement measures and actions to control the safety of the transfer of hazardous materials and the storage, transportation and disposal of hazardous materials and waste, and will implement measures to prevent or control community exposure to such hazardous materials.

**3. Roles and Responsibilities**

Roles and responsibilities for the Environmental and Social (E&S) management of the Project are detailed in the main body of the Project ESMF. In this context, roles and responsibilities related to asbestos management are given in the table below:

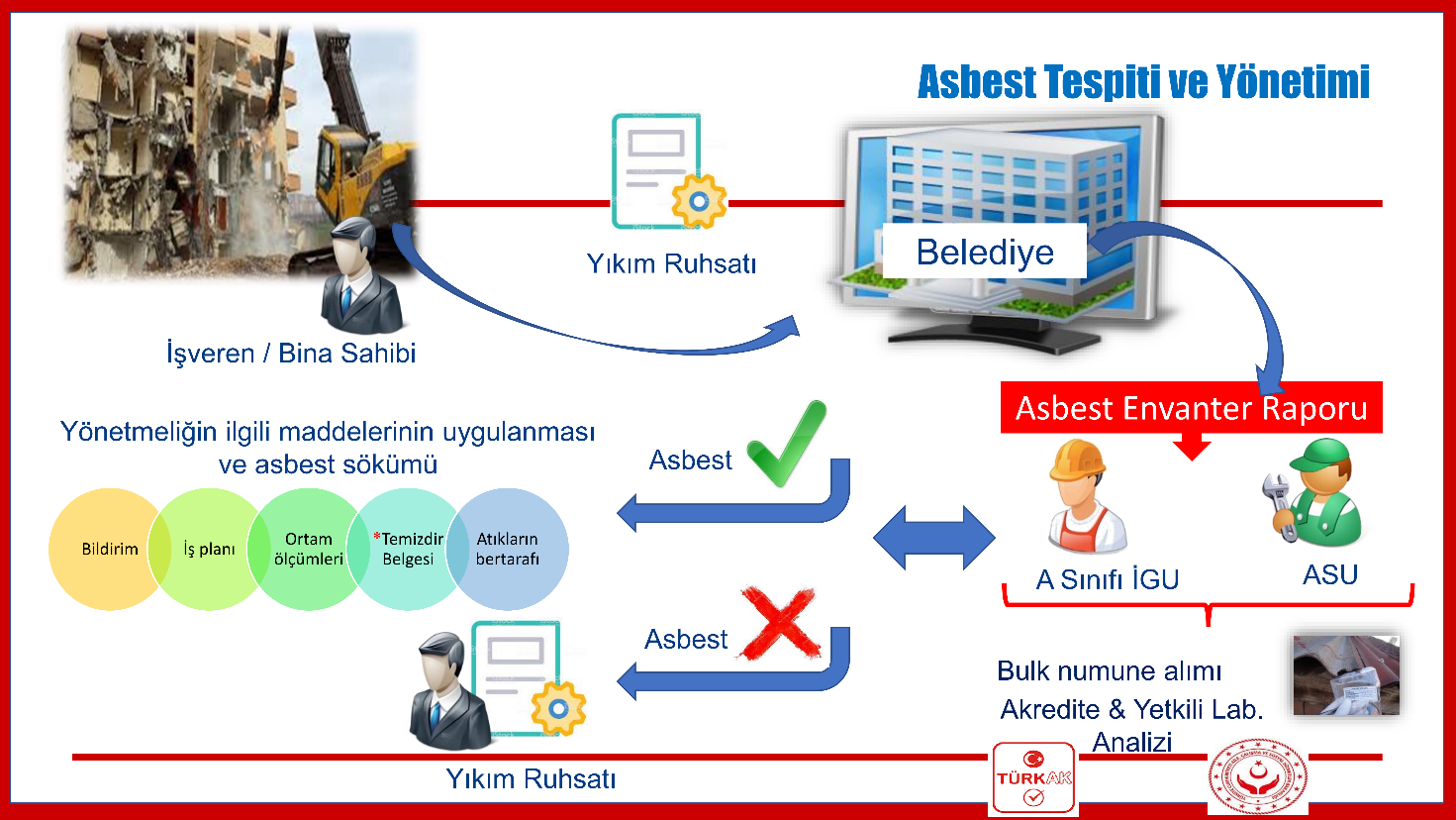
| Roles | Responsibilities |
| --- | --- |
| Project Management Unit  (PMU) | * Ensure adequate resources are provided for the implementation of this Plan. * Review and update the Plan as needed * Ensure that technical support is provided to contractors for the implementation of the plan. * Ensure that relevant training is provided by contractors through review of training records and relevant training documentation. * Supervise the contractor's compliance with Project requirements through contractor monitoring and reports. |
| Contractors | * Ensure that this plan is implemented in line with Project standards * As its main responsibility, to ensure the implementation of the Plan (also by the Subcontractors, if any) and to report the non-compliances and implementation performance of the Plan to the PMU. * Participate in the development of corrective and/or remedial actions when necessary (for example, when non-compliances are detected or there is a change in relevant legislation, etc.). * Provide relevant training. * Performing internal and daily inspections and recording any detected non-compliances. * Ensuring that relevant non-compliances are recorded and promptly responded. * Review and update the Plan as needed (in coordination with the PMU). * Ensure that asbestos management considerations are added in the daily checklist, which will be included in the monthly report to the PMU. |
| All Personnel | * Participating in training required for asbestos management. * Provide self-competence for the implementation of this plan. |

**4. Asbestos Management**

The General Directorate of Occupational Health and Safety of the MoLSS explained the steps to be followed in asbestos work with a workflow chart. The aforementioned workflow chart is presented in Appendix-1. Within the scope of the Project, the steps given in Annex-1 will be followed in the works with asbestos in the demolition, maintenance and repair activities that will be performed in the buildings.

**4.1 Course of Action Before Starting Deconstruction**

Although it is not a requirement in terms of legislation within the scope of urban transformation practices, during the issuance of the demolition license before the demolition of the buildings, the relevant municipalities require the contractors to conduct an asbestos inventory study and prepare an asbestos inventory report in order to determine whether there is asbestos in the building to be demolished. The diagram describing the asbestos detection process in question is given below. Definition of the relevant steps are also provided below.



Asbestos Removal Expert

Waste Disposal

\* Clean Certif.

Ambient measure-ments

Work Plan

Notification

MUNICIPAITY

Obtaining bulk sample

Accredited & Authorized Lab Analysis

Class A OHS Expert

Asbestos Inventory Report

Demolition License

Asbestos

Asbestos

Application of relevant articles of the Regulation and asbestos removal

Employer/ Building Owner

Demolition License

**Asbestos Determination and Management**

1. Identification of parts of buildings, containing asbestos
2. Determining the type of asbestos
3. Preparation of business plan and institution structure
4. Assignment of Occupational Safety Specialist (construction sites are classified in very hazardous class according to NACE code)
5. Preparation of a risk assessment
6. Preparation of asbestos risk analysis
7. Photographing the current condition of the construction site
8. Determination of the required number of employees with Asbestos Removal Certificate and their duties
9. Assignment of Asbestos Removal Specialist
10. Completion of Social Security Institution (SGK) entrances, health checks (including working at height and respiratory system examinations), occupational safety trainings and certification of these trainings or checking related documents.
11. The Asbestos Removal Specialist will prepare and review documents and files.
12. Notification of the Provincial Directorate of the Turkish Employment Agency and the MoLSS

Within the scope of the Regulation on Health and Safety Measures in Working with Asbestos; the analysis of solid samples, taken to investigate the presence of asbestos before deconstruction, demolition, maintenance, and reconstruction works, is considered as occupational hygiene measurement test and analysis. Laboratories authorized by the MoLSS; may perform sampling and analysis and are allowed to accept samples from outside for analysis. Samples coming from outside can be accepted to the laboratory, provided that they are taken by an Asbestos Removal Specialist (Samples from urban transformation areas are considered within this scope). For the acceptance of samples coming from workplaces where no Asbestos Removal Specialist is employed (for example, samples taken during maintenance, repair works related to a part of the process or for the control of raw material content, etc.); the samples are required to be taken by an A Class Occupational Safety Specialist. If asbestos is detected as a result of the inventory study, a risk analysis should be performed.

**4.2. Preparation of the Site Before Asbestos Removal**

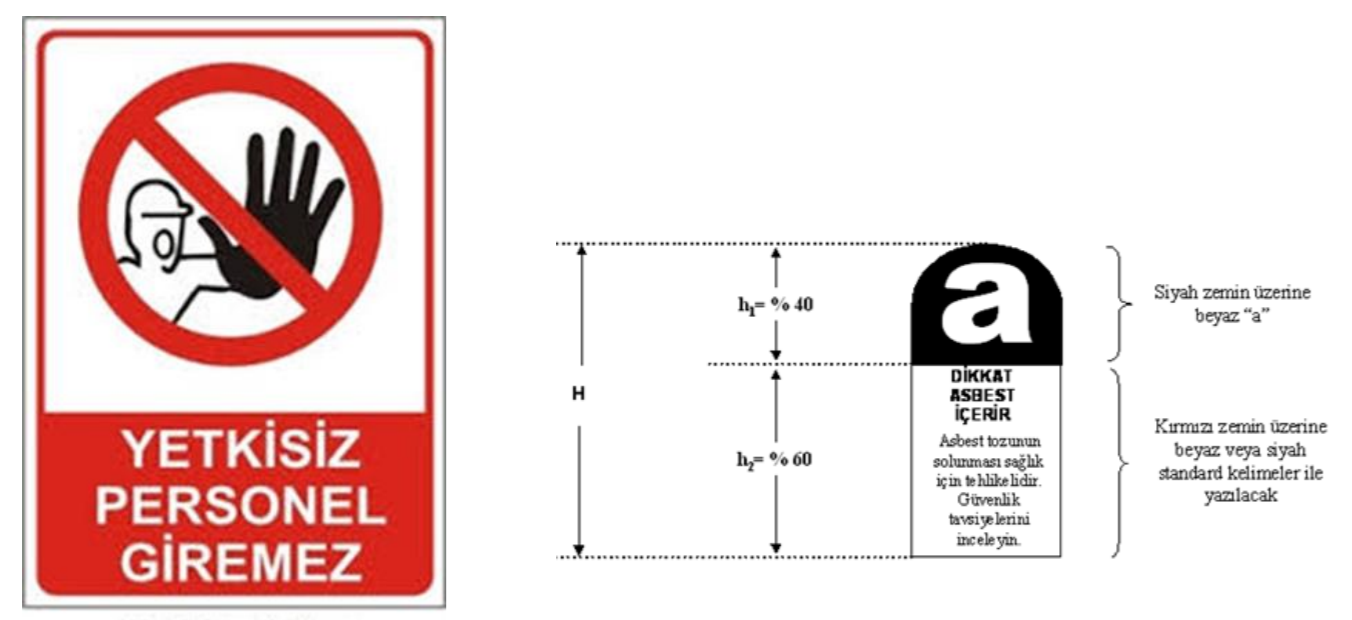
4.2.1. Informing the Employees

Before asbestos removal works, employees will be informed about the following issues.

* Health risks arising from asbestos and/or dust emitted from asbestos-containing materials
* Limit values specified in the regulation and measurements that must be made continuously in ambient air
* Hygiene rules to be followed, including not smoking
* Use of PPE and precautions to be taken
* Special precautions designed to minimize asbestos exposure
* The sites where asbestos waste will be stored and how the waste will be transported to these sites

4.2.2. Marking

The necessary signs should be placed on the work areas where asbestos containing materials are used and the packages used for the transportation of asbestos waste after dismantling. In order to create a safe working area, while marking with “Stop, No Unauthorized Access” signs, there should be a label in accordance with the sample provided in Annex 17 of the Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals.



**UNAUTHORIZED PERSONNEL NOT ALLOWED**

**ATTENTION**

**CONTAINS ASBESTOS**

It is harmful to health to inhale asbestos powder. Review the safety recommendations

To be written with standard wording in white or black font on red background

White “a” on black background

Warning Signs (Work Area Warning Sign and Asbestos Containing Package Label)

4.2.3. Creating the Quarantine Area

In working areas where high fiber concentrations are likely (black area), a quarantine area must be established in order for asbestos removal to be performed in a controlled manner. This quarantine area prevents the exposure of asbestos fibers to other people and workers in the environment by hindering the spread of asbestos fibers during asbestos removal works, waste packaging and cleaning of the deconstruction site.

Quarantines should be designed in such a way that deconstruction works can be done easily in the area where asbestos is to be removed. In determining the dimensions, the number of workers and the size of the equipment to be used should be considered. For example, if a scissor lift or a scaffold will be used, they should be large enough to provide comfortable equipment use. If the quarantine area is larger than necessary, it increases the spreading area of asbestos, therefore the size of the quarantine area should be kept at an optimum level.

The most commonly used material for quarantines is polyethylene coating. This material is highly preferred because of its flexible and impermeable structure. This coating should be thick enough to withstand the erosion and corrosion of quarantine. In most cases, a 1000-gauge (250 micron) coating is sufficient. In exposed areas, the polyethylene coating may not have sufficient strength due to external factors such as wind, so alternative materials such as polyvinyl chloride (PVC) sheet reinforced with woven nylon mesh can be considered.

The most common means of supporting the coating material are timber frames. Specially designed frames such as metal or plastic tubes can also be used. Some wood with a width of 50 mm x 50 mm is sufficient for the wooden sticks used. The coating must be fixed to the bars using staples, tape, and spray adhesive.

The quarantine area must be airtight. All leaks must be detected and sealed. All places where air escape may occur, such as corners, window ledges, doors or area around the negative pressure unit should be properly taped or sealed with suitable foam material.

In very confined and hot areas, the use of certain foams and adhesives close to pipelines or breathing space can cause harmful if they were used in high concentrations. This situation should be avoided.

If the breaches of sealing cannot be prevented with these precautions, additional measures should be taken. These can be as follows;

1. The performance of the negative pressure unit may be increased,
2. Glove bag may be used,
3. Mini-quarantine areas can be set up inside the quarantine area.

Quarantines must be established before any work is done, including inserting injection needles into the asbestos including materials, and the covering material must be disposable.

4.2.4. Negative Pressure Unit (NPU)

No matter how well designed, the quarantine cannot be guaranteed to be airtight and there may be some degree of leakage. Therefore, it should be ensured that the air pressure inside the quarantine is slightly below atmospheric pressure. With that inequality, any leaking airflow inside the quarantine moves inwards, not outwards, so the asbestos dust stays in the quarantine area. However, sufficient fresh air should be provided to replace the exhausted air. This air must enter quarantined area in a controlled manner with shower enclosures or airlocks. In this way, the ventilation of the quarantine is regulated, and fresh air is provided to the asbestos workers. In principle, the NPU should be located opposite the airlocks. However, the optimal location for the NPU depends on several factors, including the shape of the quarantine area, accessibility of the walls or suitability of walls to accommodate the unit. The airlock alone can provide enough fresh air for a small or simple quarantine; however, additional air intakes may be required for larger or complex facilities. These air inlets should have filtration (pre-filter) and should be sealed by taping around. The NPU should normally be located outside the quarantine and only the prefilter should be seen from inside. This depends on access and available space. A flexible piping may be required between the main HEPA filter and the pre-filter in quarantine, in which case this flexible pipe should be maintained and inspected regularly.

Sufficient negative pressure should be created inside the quarantine area and this pressure should be distributed as evenly as possible in the quarantine area. The location of the negative pressure unit should provide effective airflow in the quarantine and airlocks. Air locks and waste cabinets should not be seen as an alternative to negative pressure.

4.2.5. Entering Quarantine (Air Lock)

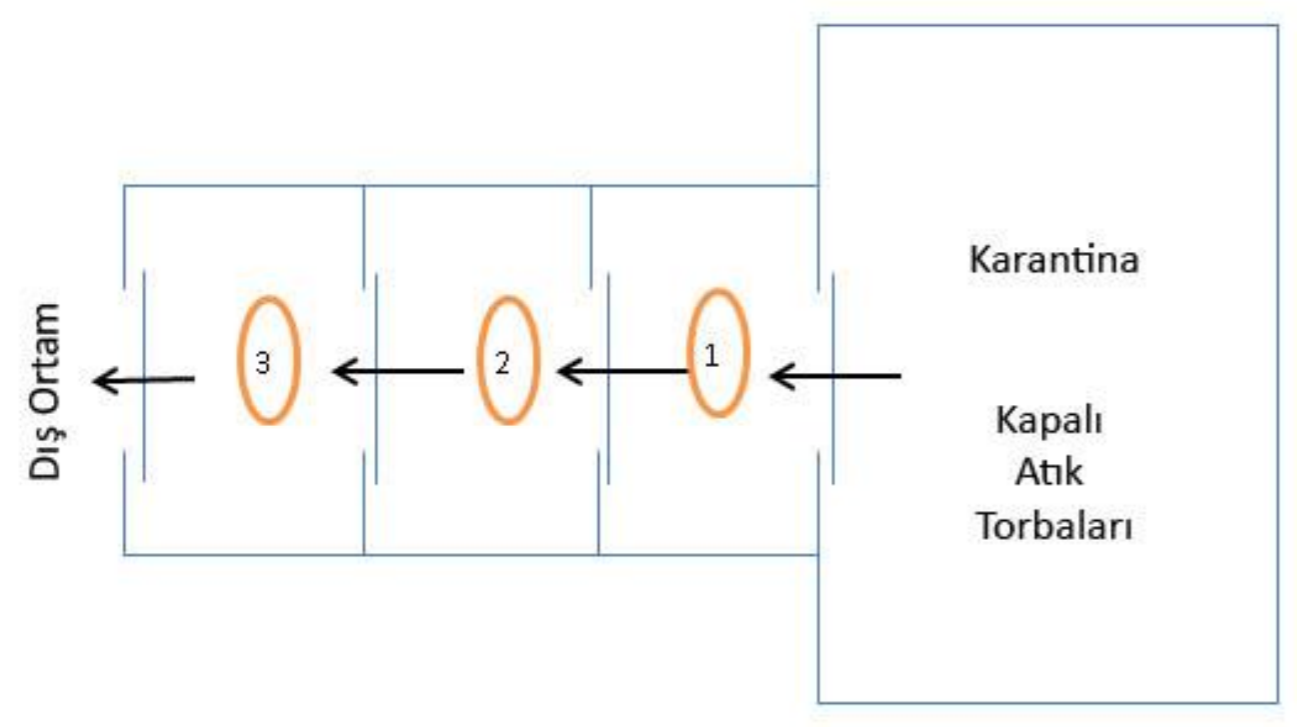
The most important feature for quarantine is shower cabins or air locks. Thanks to the air locks, the entrance and exit of the personnel, equipment and wastes are kept under control. Airlocks and waste cabinets must be at least 1m x 1m x 2m (height) and they should be larger where larger wastes such as pipelines or wood chips are disposed of. Where confined in one direction (i.e., along a corridor), airlocks and waste cabinets should extend in the other direction (i.e., 0.8m x 2m x 2m). If enough space is available, separate airlock and waste cabinet should be used. Air locks should be designed in a way to prevent the leakage of asbestos dust from the passages between the cabinets. This is usually achieved by vertically shearing of the coating between the cabinets. These openings prevent the outside air from entering and the inside air from flowing out. In order to control the air flow, the bottom of the inner slit should be weighted with plastic or wooden sticks. It is essential to provide sufficient reserve air into the quarantine.

4.2.6. Hygiene Unit

The hygiene unit (the system designed for personnel cleaning) should be adjacent to the quarantine area, and if this is not possible, airlocks should be used. Airlocks should be designed in such a way that they do not spread asbestos dust into the environment. The use of the transition system is undesirable and should be avoided as much as possible. Connecting shower units directly to quarantine or to air locks is preferred. The purpose of airlock and waste cabinets is to provide additional control over spreads, and they should be installed adjacent to the quarantine to control air movement during accidental leaks, personnel movement, and waste transfers.

4.2.7. Waste Cabinet

Waste cabins are used for the waste transfer and their design is shown in the figure below:



Outdoors

Closed Waste Sacks

Quarantine

Waste Cabinet Design

In cabin number one, the outside of the waste bags is cleaned by wiping. In cabin number two, the waste bag is transferred into the second waste bag. In cabin number three, the waste is stored temporarily and an outsider personnel takes the waste bag from there and carries it to the temporary waste storage facility. Waste should never be discharged directly from the hygiene unit.

4.2.8. Observation Panel

Observation panels (camera system, etc.) should be attached to the walls of the quarantine so that the Asbestos Removal Specialist can see what is happening inside without having to go inside. The number and location of these panels depend on the location, size, and complexity of the quarantine. Transparent plastic observation panels should be placed over the coating during the construction of the quarantine. Panels should be taped on both sides have the minimum dimensions of 60cm x 30cm and must be placed at a height of 1.5 m from the floor. Observation panels should also be in the airlock and waste cabinets. Where viewing from panels is impractical, the camera system can be used as an alternative for specialists to observe and monitor developments in the quarantine. The camera system should be protected for ease of cleaning.

4.2.9. Site Preparation

Before starting work in the building, a hygiene unit, including the quarantine, should be purchased, and installed. PPE to be used during the initial setup of the quarantine should be determined. The deconstruction area should be examined. The purpose of this operation is to determine the items to be removed and to cover the items that cannot be taken out in order not to have difficulty during the cleaning. The work area should be as free from plants, equipment, and furniture as possible. All remaining equipment, such as electrical equipment, must be pre-cleaned and then covered with a polyethylene coating and tightly taped to prevent contamination. If there are boilers or chimneys in quarantine are, they must be closed to prevent the spread of asbestos due to fumes

If there is any asbestos material in the dismantling area, a preliminary cleaning should be done. For this, all loose materials must be removed before the quarantine is established. Pre-cleaning should be performed using appropriate dust prevention and control measures, including vacuuming with an H-type vacuum cleaner, surface wiping, temporary encapsulation with polyvinyl acetate (PVA), tape or adhesive film, spray wetting, and bagging. In addition, if there is asbestos-free dust and waste, pre-cleaning should be done for this as well. These wastes can be considered as normal waste. Otherwise, after the work starts, this waste will be considered as asbestos waste and must be disposed of as hazardous waste.

4.2.10. Smoke Test

Before deconstruction begins in the quarantine, the tightness of the quarantine should be tested by pumping smoke from the smoke generator while the negative pressure unit is not operating. Large leaks will be readily apparent; but small leaks will show themselves after a little wait. These small leaks can cause asbestos to be released into the environment during removal. The easiest way to examine fugitive smoke is to shine light over it with a flashlight. If any leakage is encountered, that area should be re-examined, and the leaking part should be taped.

**4.3. Necessary Materials and Personal Protective Equipment**

Before starting the deconstruction work, the materials listed below, and personal protective equipment must be provided.

4.3.1 H Type Vacuum Cleaner

Industrial vacuum cleaners in H dust class and suitable for asbestos-containing dust removal should be used in accordance with EN 6035-2-69 in order to clean the small parts spread around during asbestos removal and to remove the fibers stuck to the clothes by vacuuming.

During the works in buildings, low pressure must be maintained in the working area with help of suction devices. In this way, in case of leakage, it is ensured that fresh air from outside enters the work area, and that asbestos air does not flow out of the work area.

4.3.2. Binding Agent

During the deconstruction of asbestos-containing structures, there is a risk that the fibers attached to the components will fly off and mix with the breathing air. For this reason, surfaces must be coated with fiber-binding agents (e.g., plaster fixer) and pressureless spraying method should be used. This ensures that the fibers adhere well to the component.

4.3.3. Hygienic Devices

Washing facilities should be available in all asbestos work areas so that workers can wash their faces and hands before eating or smoking. During extensive work on asbestos-containing structures, a transition area separated by showers and allowing for separate storage of casual and work clothes is required.

4.3.4. Personal Protective Equipment

Protective Clothing

* For protective clothing, disposable body protective coveralls that have anti-static properties should be taken.
* A new protective clothing must be used for each entry into the contaminated area.
* Coveralls used should be appropriate to the Type 5 airborne solid particles standard according to TS EN ISO 13982-1 and Type 6: Limited protection standard against splashing liquid particles according to TS EN 13034.
* Protective clothing and the personal clothing of the employees are kept in separate places.

Respiratory Protective Mask

* The full-face shield must be equipped with a hazard-appropriate filter.
* The suitability of the respiratory protection must be tested before use and its physical dimensions must be the suitable for the user.
* Improper respiratory protection will provide little to no protection.
* A suitable respiratory protection should have a minimum specified protection factor of 20 or more, but 50 or more is recommended.

Disposable respirators:

* Disposable Respirators with FFP3 protection level 50 or more protection factor and compatible with TS EN 149+A1 harmonized standard and EN149:2001+A1:2009 standard, can be used.

Full Face Mask:

* A full-face mask can be used with a particle filter with P3 protection level according to TS EN 143 harmonized standard and EN143+A1/AC standard.

Motorized Respiratory Protection:

* For the motor parts, like battery, a combined shield with EN 12941 standard can be used. It also should comply with every standard suitable for the selected respiratory, head, eye, hearing, and face protection class.

Other Personal Protective Equipment:

* Occupational safety shoes that can be put directly on the feet without laces or buckles should be worn. Boots should be preferred over shoe covers, as they involve the risk of slipping. Washable boots can be preferred.
* Disposable work gloves should be used. If a glove with high mechanical resistance, high electrical resistance or chemical resistance is to be used depending on the job, thin hygiene gloves with high gripping ability can be used inside these gloves. After each asbestos removal operation, the glove should be placed in properly sealed asbestos waste bags after the worker has left the contaminated area. A new pair of safety gloves should be worn each time you enter the contaminated area.

**4.4. Removal of Asbestos Containing Materials by Boxing and Separation**

It is necessary to properly separate termites and/or contaminated materials without creating dust and breaking parts as much as possible. In addition, before starting the cutting, chemical adhesive liquid should be sprayed on the relevant area in order to suppress the dust spread. It is ensured that after squeezing the adhesive liquid, the cut and disassembled parts are put into special sealed foil and/or asbestos sacks (big bags), packaged and labeled and placed in the waste cabinet, which is determined by the contractors, before disposal.

**4.5. Course of Action After Deconstruction**

After the Deconstruction process is completed, the following operations should be performed;

1. If necessary, cleaning all areas indoors with a filtered industrial type vacuum cleaner, and if not, simply humidifying,
2. Wet cleaning with chemicals and/or non-chemical materials,
3. Spraying a special liquid material containing fiber adhesive, on all surfaces

**4.6. Management and Disposal of Asbestos Waste**

The asbestos waste management should not be considered as an issue that will be dealt with only after the deconstruction and demolition works are completed. Asbestos-containing waste should be collected at the end of every working day, placed in bags bearing the asbestos sign, and stored regularly at the workplace. Necessary warnings and guards should be placed to prevent personnel unrelated to waste procedures from accessing waste, and all employees should be informed that asbestos storage locations should not be entered. Double bags should be used if there is a possibility that the stored material will break holes in the bags (e.g., sharp, hard waste). Wetting the waste bags with a fiber binder solution is also recommended. When the deconstruction and demolition works are over or the wastes accumulate in such an amount that it is economical to transport, the waste should be transported and disposed of in accordance with the legislation and by signing a contract with the waste transport company licensed by the MoEUCC and with the authorized waste disposal organization.

Asbestos, which is revealed as a result of deconstruction from the building, is in the nature of "waste" and must be transported and disposed of in accordance with the provisions of "waste legislation". According to Article 11 of the Environmental Law; facilities, businesses, and settlements that are not deemed appropriate to directly or indirectly deliver their wastes generated as a result of production, consumption and service activities to the receiving environment are obliged to treat and dispose of their wastes in accordance with the standards and methods determined in the regulations and to obtain the prescribed permits. This provision, which applies to all wastes, also applies to the disposal of asbestos waste.

Within the scope of the Annex-4 waste list of the Waste Management Regulation (WMR) published in the Official Gazette dated 02/04/2015 and numbered 29314 by the MoEUCC, asbestos-containing wastes that will be generated as a result of the Project activities should be considered as "insulation materials and asbestos-containing construction materials”.

Waste Codes for Insulation Materials and Construction Materials Containing Asbestos

|  |  |  |
| --- | --- | --- |
| **Waste Codes** | **Waste Code Definition** | **Explanation** |
| 17 06 | Insulating materials and building materials containing asbestos |  |
| 17 06 01 | Insulating materials and building materials containing asbestos | M\* |
| 17 06 05 | Insulating materials and building materials containing asbestos | M |

\* M mark: The sign in the "Description" column at the level of 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 hazardous or not, a study should be performed to determine the hazardous properties of the waste as stipulated in Article 11 of the Waste Management Regulation.

The hazardous properties of the wastes marked with (M) in the waste list, must be determined. In these studies, evaluations regarding H3-H8, H10 and H11, which are among the features listed in Annex-3/A of the same regulation, are made on the basis of the concentration values ​​in Annex-3/B. Analysis studies are carried out by laboratories that have been qualified for Annex-3/B from the MoEUCC.

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

During the disposal of asbestos waste, the following will be considered,

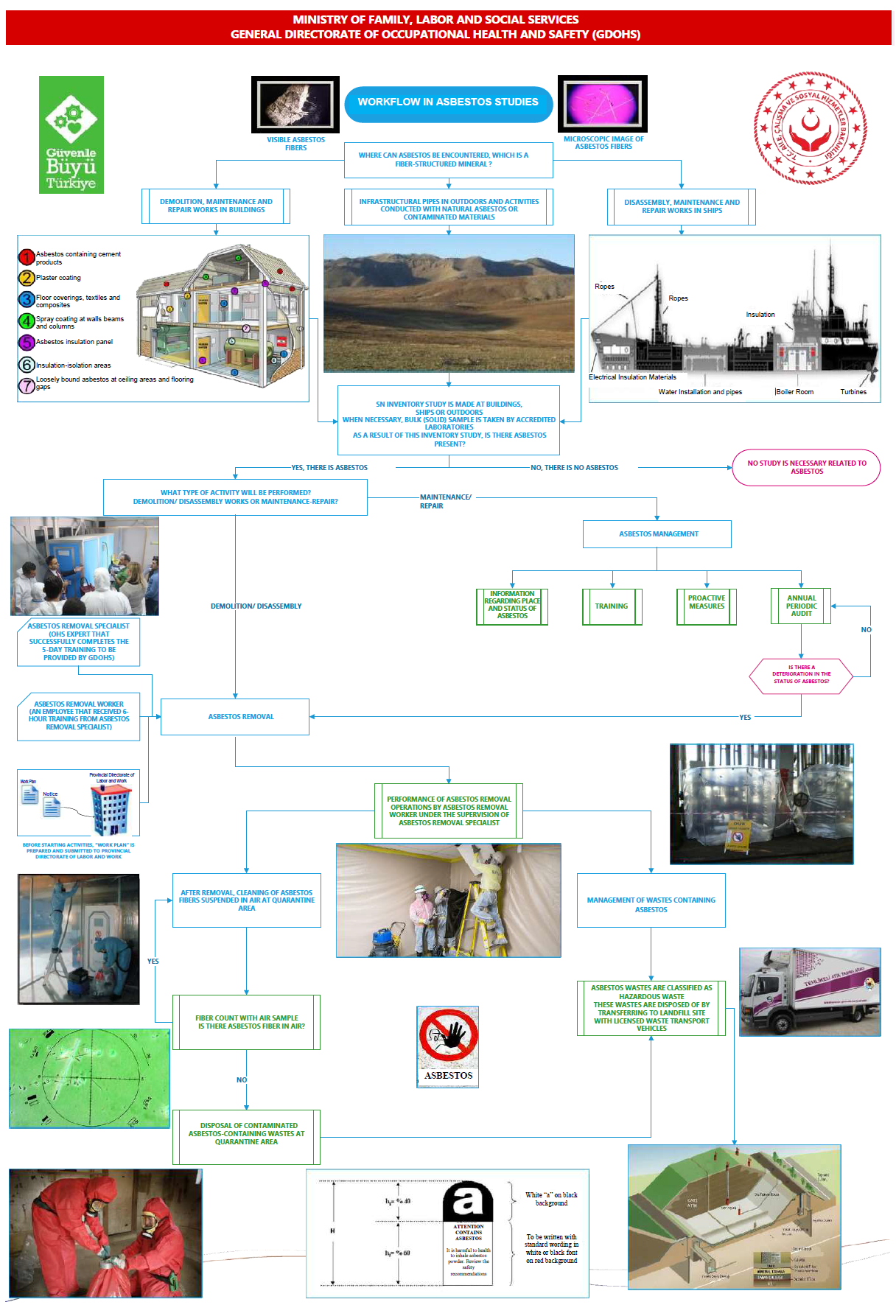
* Asbestos waste should be wrapped and packaged without breaking.
* Asbestos waste should be labeled after packaging without breaking.
* Asbestos waste must be sent to a licensed disposal facility upon completion of online registration.
* Asbestos waste should be sent to the disposal facility by licensed vehicles.
* Asbestos wastes may not be discharged into unloading areas or designated areas for excavation materials.
* Asbestos wastes cannot be discharged along streams.
* Asbestos waste cannot be incinerated.

Aforementioned asbestos wastes, within the framework of the provisions specified in Article 30 (titled "Wastes requiring consideration of special circumstances) of the Regulation on the Regular Storage of Wastes, published in the Official Gazette dated 26/03/2010 and numbered 27533, can be stored in class II storage facilities, without testing.

**5. Review & Update**

This AMP is a 'living' document and responsibilities, procedures and compliance actions should be updated if needed (for example, following a change in legislation). It is the responsibility of PMU and contractors to be fully aware of its contents. Contractors will provide relevant training to personnel and ensure that measures/commitments are implemented to ensure compliance with this AMP.

**Workflow in Asbestos Studies**



# Annex 8. Environmental and Social Management Plan Checklist

The contractors will prepare an Environmental and Social Management Plan Checklist for the sub-project for which they are responsible, taking into account the environmental risks and impacts and the proposed mitigation measures specified in the ESMF and provincial ESMPs. The ESMP Checklist will need to be prepared before the activities begin. The indicative outline of the ESMP checklist is given below.

1 INTRODUCTION

1.1 Sub-project description and planned activities

1.2 National & local legislation and permits that apply to sub-project activity

1.3 Relevant World Bank Environmental and Social Standards

1. PURPOSE and SCOPE of the ESMP CHECKLIST

3 ENVIRONMENTAL AND SOCIAL BASELINE

4. ENVIRONMENTAL AND SOCIAL SCREENING, ASSESSMENT AND MANAGEMENT

4.1 Environmental and Social Screening

4.2 Potential Environmental and Social Risks and Impacts

4.3 Mitigation Measures

5. MONITORING AND REPORTING

6. TRAINING

7. GRIEVANCE MECHANISM (GM)

APPENDICES

Appendix A General Project and site information (Maps and Drawings, Photos)

Appendix B Permits

Appendix C Environmental and Social Screening Template

Appendix D Code of Conduct

# Annex 9. Waste Management Plan

**1. Purpose and Scope**

The Waste Management Plan was developed to identify the primary applicable waste management requirements for the Project in accordance with relevant national legislation, the World Bank Environmental and Social Framework and relevant Environmental and Social Standards (ESSs). The Plan will be implemented during retrofitting/demolition/reconstruction phases of sub-projects under Component 2.

Throughout the Project and sub-projects, different types of waste and materials will be generated from different sources and activities. The purpose of this plan is to guide and ensure the collection, separation, storage, processing, transportation, and disposal of non-hazardous and hazardous wastes resulting from Project activities in a way that minimizes impacts on human health and the environment, including minimizing the loss of valuable reusable/recyclable materials.

The plan is in line with national legislation, Resource Efficiency, Pollution Prevention and Management ESS3 requirements and other applicable Good International Industry Practices (GIIPs). The Plan will be implemented systematically throughout the Project and sub-projects along with the following relevant management plans, documents, and procedures:

* Province-based Environmental and Social Management Plan(s) (ESMP),
* Environmental and Social Management Plan Checklist
* Labor Management Procedure (LMP),
* Community Safety and Traffic Management Plan,
* Province-based Pollution Prevention Plans, and
* Stakeholder Engagement Plan (including grievance mechanism)

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

**2. Legal Requirements & Standards**

**2.1 National Legislation**

The Environmental Law No. 2872, published in the Official Gazette dated 11 August 1983 and numbered 18132, provides the legal framework for the regulation of sectors and their possible effects on the environment.

The Environmental Law has allowed the publication of various regulations. Those related to waste management and what the Project and sub-projects must comply with, are explained below.

2.1.1. Waste Management Regulation

Waste Management Regulation is the implementing regulation published with a purpose to comply with the European Union Waste Framework Directive. The Regulation was published in the Official Gazette No. 29314 and dated 2 April 2015. The Waste Management Regulation provides a single comprehensive framework for waste management. It has repealed and replaced the Solid Waste Management Regulation and the General Principles of Waste Management Regulation as of April 2015 and the Regulation on the Control of Hazardous Wastes as of April 2, 2016.

Article 9 of the Regulation regulates the obligations of waste producers and waste owners, including:

* Taking necessary measures to minimize waste production.
* Preparing and presenting the waste management plan with measures for the produced wastes and the prevention and reduction it.
* Making annual waste production notification through the internet-based system of the MoEUCC and
* When required, using the Urbanization and National Waste Transportation Form for wastes (the template is given in Annex 9-A of the Hazardous Waste Control Regulation, which was amended and repealed by the Waste Management Regulation).

2.1.2. The Regulation on Control of Excavated Soil, Construction and Demolition Wastes

The Regulation on Control of Excavated Soil, Construction and Demolition Wastes was published in the Official Gazette No. 25406 dated 18 March 2004. Articles 10, 34, 35, 36, 37, 38, 39, 40, 41 and 42 regarding the storage of wastes have been repealed by the Regulation on the Regular Storage of Wastes published in the Official Gazette dated 26 March 2010 and numbered 27533.

The purpose of this regulation; It is to determine the principles and procedures regarding the collection, temporary storage, transfer, recycling, reuse, and disposal of wastes in an environmentally friendly manner, as well as minimizing excavated soil, construction, and demolition wastes at the source of production.

Pursuant to Article 9 of the Regulation; Facilities producing excavation, construction and demolition waste are obliged to manage waste in a way that minimizes the negative impacts of waste on the environment and human health. Facilities must obtain the necessary permits for the generation, transport, and storage of waste. Facilities are not allowed to dump construction waste on places/locations and facilities other than those permitted by municipal or other authorities.

The regulation also stipulates that the Project owner is responsible for taking the necessary measures to minimize the noise and visual effects and dust emissions during the removal of the excavation material. The activity area should also be closed. In addition, planning should be done so that the amount of excavated soil is equal to the fill volume. Excavated soil should be used within the area of activity as much as possible.

2.1.3. Packaging Waste Control Regulation

Packaging Waste Control Regulation was published in the Official Gazette No. 28035 and dated 24 August 2011. The purpose of the regulation:

* To provide certain environmentally specific criteria, basic conditions, and properties for packaging production,
* To prevent the direct or indirect disposal of packaging wastes in a way that harms the environment, and
* To prevent and minimize the creation of packaging waste by using reuse, recycling, and recovery methods.

Packaging Waste Control Regulation states that packaging waste should be collected and stored separately from other wastes in order to ensure to reduce environmental pollution, make maximum use of landfills, contribute to the economy and it is disposed of without harming the environment.

The parties, which produce packaging waste within the borders of municipalities collecting wastes separately, are obliged to deliver the packaging wastes to the responsible municipalities or their contracted and licensed collection/separation organizations.

2.1.4. Waste Batteries

The Regulation on Control of Waste Batteries and Accumulators was published in the Official Gazette No. 25569 and dated 31 August 2004. The purpose of the regulation:

* To regulate the legal and technical principles for the determination of policies and programs from production to final disposal of batteries and accumulators,
* To ensure the production of batteries and accumulators with certain environmental criteria, basic conditions, and features,
* To prevent wastes from reaching to receiving environments,
* To provide the necessary technical and administrative standards in its management, and
* To establish a collection system for the recovery and final disposal of waste batteries and accumulators.

According to the regulation, battery and accumulator consumers are obliged to:

* To collect waste batteries separately from domestic waste,
* Delivering waste batteries to collection points to be established by businesses or municipalities that distribute and sell battery products,
* Delivering old accumulators to temporary storage areas created by businesses that distribute and sell accumulator products and those who operate vehicle maintenance and repair shops (accumulators cannot be delivered by waiting for more than 90 days after they become waste),
* Paying a deposit in case of purchasing a new accumulator without delivering the old ones, and
* To ensure that impermeable ground and other necessary conditions are provided in the temporary storage areas where batteries and accumulators will be stored.

2.1.5. Waste Oil Control Regulation

Waste Oil Control Regulation was published in the Official Gazette No. 26952 and dated 30 June 2008. The purpose of the regulation:

* To prevent the direct and indirect disposal of electrical waste and electronic waste oils to the environment.
* To ensure its temporary storage, transportation, and disposal without harming the environment and human health.
* To establish the necessary technical and administrative standards in the management of waste oils.
* To determine the necessary principles and programs for the establishment of temporary storage, collection, and disposal facilities, and
* To manage these facilities in an environmentally friendly way.

According to Article 9 of the Waste Oil Control Regulation, waste oil producers are obliged to take the necessary measures to minimize the creation of waste oils, including waste motor oils and residues from the processing of waste oils. Waste oil producers must make waste oil analyzes and report the production amounts to the MoEUCC. Waste oils of different categories should not be mixed with each other or with other hazardous wastes.

Waste oil producers must comply with the provisions of the Hazardous Waste Control Regulation for disposal. All records, including waste oil declaration forms and analysis reports, must be kept for at least five years. Regulations prepared by the MoEUCC should be followed for the transportation of waste oils.

Waste oil must be collected in red colored tanks/barrels, labeled as "Waste Oil". The barrels are placed in the warehouse with provisions for a sealed floor (at least 25 cm thick and lined with epoxy, geo membrane and similar insulating materials) as well as protection from rain.

2.1.6. Electrical and Electronic Equipment Waste Control Regulation

One of the main purposes of the Regulation, published in the Official Gazette No. 28300 and dated 22 May 2008, is to determine the methods and targets for minimizing the generation of electrical and electronic waste through reuse, recycling, and recovery.

2.1.7. Communiqué on Recovery of Certain Non-Hazardous Wastes

The Communiqué on Recovery of Certain Non-Hazardous Wastes was published in the Official Gazette No. 27967 and dated 17 June 2011. According to this communiqué, non-hazardous waste producers are obliged to prepare and implement a waste management plan for the recovery of these wastes, as well as minimizing their production.

Waste should be stored in sealed (or similar) containers in an impermeable floor and roof area. Non-hazardous wastes can be temporarily stored at the construction site until they are recovered, up to one year. Producers are also obliged to send their non-hazardous waste to licensed collection and separation or licensed recycling facilities. In addition, a three-year waste management plan must be prepared and submitted to the Provincial Directorate of Environment and Urbanization.

In addition, it is obligatory to fill in the non-hazardous waste declaration form every year with the information of the previous year and to submit these forms digitally to the MoEUCC. It was also stated that copies of the forms should be kept for 5 years.

**2.2 World Bank ESF Requirements**

2.2.1. Resource Efficiency, Pollution Prevention and Management - ESS3

ESS3 recognizes that economic activity and urbanization often pollute the air, water and soil and consume limited resources and can threaten people, ecosystem services and the environment at local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the well-being of present and future generations. At the same time, more efficient and effective resource use, pollution prevention and greenhouse gas emission avoidance and reduction technologies and practices have become more accessible.

Throughout the Project lifecycle, the ESS3 determines the requirements regarding to resource efficiency and pollution[[45]](#footnote-46) prevention and management[[46]](#footnote-47) consistent with Global International Industry Practices (GIIP).

The objectives of the Resource Efficiency and Pollution Prevention and Management Standard are given below:

* To promote sustainable use of resources, including energy, water, and raw materials
* To prevent or minimize adverse impacts on human health and the environment by preventing or minimizing pollution from Project activities
* To prevent or minimize Project-related emissions of short- and long-lived climate pollutants
* To prevent or minimize the generation of hazardous and non-hazardous waste
* Minimizing and managing the risks and impacts associated with pesticide use.

**2.3 European Union (EU) Legislation**

European Union Directive 2000/532/EC2008/98/EC (Waste Framework Directive) predicts the general provisions regarding waste management and determines the basic waste management definitions. It requires the management of wastes without endangering human health and harming the environment, and without posing a risk to water, air, soil, plants, or animals, and without causing disturbance due to noise or odors, and without adversely affecting rural areas or areas of special interest. Directive replaced the old EU directive on waste, hazardous waste and waste oils and now covers all wastes defined by Decision 2000/532/EC (i.e., European Waste Codes).

In an effort to adjustment of Turkish environmental protection standards with the EU's Waste Framework Directive (2008/98/EC) and the European Commission Decision (2000/532/EC), which creates a waste list, the Republic of Turkiye the MoEUCC adopted a new waste management regulation that will affect the important waste generating companies in Turkiye. The waste management implementation regulation, published to comply with the Waste Framework Directive, was adopted in 2015. Currently, the waste codes given in Annex 4 of the Turkish Waste Management Regulation are exactly the same as the European Waste Codes.

**3. Roles and Responsibilities**

Roles and responsibilities for the Environmental and Social (E&S) management of the Project are detailed in the Project ESMF. In this context, roles and responsibilities related to asbestos management are given in the table below:

Roles and Responsibilities

| Roles | Responsibilities |
| --- | --- |
| Project Management Unit  (PMU) | * Ensure adequate resources are provided for the implementation of this Plan. * Review and update the Plan as needed * Ensure that technical support is provided to contractors for the implementation of the plan. * Ensure that relevant training is provided by contractors through review of training records and relevant training documentation. * Supervising the contractor's compliance with Project requirements through contractor monitoring and reports. |
| Contractors | * Ensure that this plan is implemented in line with Project standards * As its main responsibility, to ensure the implementation of the Plan (also by the Subcontractors, if any) and to report the non-compliances and implementation performance of the Plan to the PMU. * Participate in the development of corrective and/or remedial actions when necessary (for example, when non-compliances are detected or there is a change in relevant legislation, etc.). * Provide relevant training. * Performing internal and daily inspections and recording any detected non-compliances. * Ensuring that relevant non-compliances are recorded and promptly responded. * Review and update the Plan as needed (in coordination with the PMU). * Ensure that asbestos management considerations are added in the daily checklist, which will be included in the monthly report to the PMU. |
| All Personnel | * Participating in training required for asbestos management. * Provide self-competence for the implementation of this plan. |

**4. Waste Management**

**4.1. Waste Management Approach**

The Waste Framework Directive (Directive 2008/98/EC) provides a waste hierarchy that sets priorities for the best overall environmental option in current waste legislation and policy. In this context, the EU waste hierarchy will also be the hierarchical approach of the Project and the waste management will be based on the following in descending order of preference:

The following good management practices will be used to minimize and appropriately manage site waste:

* Reducing waste generation (through management practices, avoiding or reducing material use, etc.) is the primary objective of this plan.
* Non-hazardous wastes will be separated from hazardous wastes.
* Waste recycling will be mandatory throughout all Project activities and relevant training will be provided.
* Wastes to be sent to licensed recycling/recovery companies will be separated according to their types.
* Efforts will be made to minimize the amount of hazardous materials used.
* Personnel working with hazardous materials and waste will be trained in proper use and management.
* Hazardous material leaks will be prevented through careful and logical management of materials.
* Where possible, non-hazardous alternatives will be used instead of hazardous materials.
* Regular inspections of storage areas will be made. Damaged or leaking containers will be replaced when detected.
* Corrective/Preventive maintenance will be performed on the equipment to prevent possible leaks.
* Waste storage areas will have secondary safety barriers or overflow containers.
* Under no circumstances, wastes will be disposed of at the construction site.

**4.2. Classification of Waste**

Project activities will result in the generation of various non-hazardous and hazardous wastes.

4.2.1. Non-Hazardous Wastes

Typical non-hazardous wastes are listed below.

* Domestic waste,
* Recyclable waste (e.g., paper, glass, metals, wood waste, trees, tin cans, textiles, etc.),
* Packaging waste,
* Waste tires and
* Excavation waste.

4.2.2. Hazardous Wastes

Different types of hazardous wastes possibly to be generated as a result of Project activities are listed below:

* Waste batteries and accumulators,
* Waste vegetable oil,
* Medical waste,
* Waste oil (from the maintenance of equipment and vehicles, transformers, etc.),
* Waste paint,
* Other hazardous wastes related to operation and maintenance activities and
* Materials that come into contact with hazardous materials (including pesticide boxes).

**4.3. Implementation**

4.3.1. Waste Collection, Storage, Transportation and Disposal

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

4.3.2. Collection, Separation and Storage

Wastes will be separated and temporarily stored in safe storage areas that are defined separately for hazardous and non-hazardous wastes. Transportation and final disposal activities are explained in Part 4.3.3.

*Non-Hazardous Wastes*

The management of non-hazardous wastes will be as follows:

* Domestic wastes will be collected in special bins in accordance with the Waste Management Regulation and will be temporarily stored at the construction site.
* Recyclable wastes will be separated and temporarily stored on site in designated areas.
* Packaging wastes will be collected separately and temporarily stored in the areas reserved for them at the construction site in accordance with the Packaging Waste Control Regulation.
* Appropriate waste containers will be provided at waste generation sites to facilitate safe and environmentally sound temporary storage. All containers will be clearly marked according to their contents.

*Hazardous Wastes*

The management of hazardous wastes will be as follows:

* In accordance with international standards and international common practice, hazardous wastes will be stored in undamaged, leak-proof, safe and suitable containers. In line with the relevant legislation, a specific area with a concrete floor will be used for storage.
* All waste containers to be used, will have a clear label and an accurate description of the waste type. This will inform site and external personnel for the safe collection and transport of waste. All unidentified waste will be considered hazardous waste. Waste labels will include information such as waste classification/category, waste volume, MSDS and required PPE. All old labels on containers will be removed or sealed to avoid confusion.
* Hazardous waste containers will be inspected regularly to determine if they are damaged or has any leaks.
* Hazardous waste containers will be kept closed and wastes will be stored in a way that no chemical reaction occurs.
* Vehicles and construction machinery will be used in the land preparation, construction, and closure phases of the Project. Maintenance of machinery and equipment (e.g., oil change, battery change, etc.) is planned to be done by qualified service providers outside the Project Area. If it is necessary to perform such activities (oil change, battery change, tire change etc.) at the construction site, areas reserved for this work (with appropriate drainage) will be used. In order to prevent soil contamination, a sealed cover will be placed under the vehicles and this activity will be performed away from water sources. If any oil/fuel/lubricant spills or leaks occur at the construction site, the pollution will be controlled by using absorbent materials and the contaminated soil (if any) will be taken to a sufficient depth and stored as hazardous waste.
* All vehicles used for transportation will have absorbent material against any leakage or spillage. Workers will be informed about the use and disposal of materials. Filters or materials saturated with petroleum products will be discharged into a suitable container to remove any free products prior to disposal.
* Waste oils will be temporarily stored, collected, and disposed of in separate containers according to the categories specified in the Waste Oil Control Regulation. Waste oil will be collected in containers placed on an impermeable surface. Different containers will be used for different categories of waste oils. There will be a "Waste Oil" sign on the waste oil temporary storage containers.
* Waste vegetable oils will be temporarily collected in special containers.
* Bulbs containing mercury
* Waste oils will not be allowed to be discharged into receiving environments or toilets/sinks.
* Waste batteries and accumulators will be collected and stored separately in accordance with the Regulation on Control of Waste Batteries and Accumulators.
* Vehicle maintenance in the Project will be done outside the construction site. However, when it is necessary to change the tires of vehicles and construction machines, the changed tires will be kept in the places reserved for them in accordance with the Waste Tire Control Regulation.
* Medical wastes will be collected separately from other wastes in accordance with the Regulation on Control of Medical Wastes.
* Project activities do not require the use of explosives. However, if necessary, waste explosives will be stored in containers of the same type as the original but marked as explosive waste and transported by licensed companies.

*Excavation, Construction and Demolition Wastes*

Soil and rock materials excavated during the land preparation and construction phase will be reused on site as much as possible. In addition to the excess excavation material to be generated, the following practices will be conducted for the management of other construction and demolition wastes:

* Excavation, construction, and demolition wastes will not be disposed of at the construction site, under any circumstances.
* Only the part of cut trees and shrubs such as small branches, leaves that is not collected by the relevant forestry authority will be left on the site, as this material will contribute to increased local flora growth through soil fertilization.
* Areas used for temporary storage of excavation waste will be restored as soon as the excavation works/construction activities in each relevant area are concluded.
* Topsoil will be taken separately from the excavation material.

4.3.3. Transportation and Disposal

*Non-Hazardous Wastes*

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

* A protocol will be signed with the relevant municipality for the transportation of domestic wastes to the sanitary landfill.
* Agreements will be signed with licensed companies for the transport of separated recyclable waste and packaging waste.
* The part of the excavation waste that cannot be reused at the construction site will be transported to the excavation, construction, and demolition waste disposal areas, which are approved by the relevant municipality. This process must comply with the Regulation on Control of Excavation, Construction and Demolition Wastes.
* The company's agreements with licensed waste facilities will be added to this plan.

*Hazardous Waste*

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

* Hazardous wastes will be transported out of the construction site when the storage at the construction site approaches the maximum storage capacity levels. Hazardous wastes will be securely packaged and labeled before they are removed from the site to ensure they are transported safely to an approved landfill without harming the collectors or the environment.
* Waste batteries and accumulators collected separately; will be delivered to collection points established by municipalities or businesses engaged in the recovery, distribution, and sale of battery products.
* Waste tires; will be handed over to licensed transport, recycling or (as fuel) reuse companies.
* Medical wastes will be sent to a nearby health facility or medical waste disposal company under the supervision of the workplace physician.
* Waste oils will be transported to licensed processing and disposal facilities by licensed carriers. Before the transportation, the National Transportation Form will be filled, and the annual waste oil declaration form will be submitted to the relevant authorities.
* Waste vegetable oils collected in special containers will be sent to licensed companies for reuse/recovery.
* Licensed disposal facilities will be used for the transportation and disposal of other hazardous wastes.
* The company's agreements with licensed waste facilities will be added to this plan.

**5. Monitoring and Reporting**

Waste types, amount of collected waste of each type and waste classifications will be recorded monthly. Records of generated waste, from the time of production to the destination, will be kept. A sample waste registration form for this purpose is presented in Annex-1.

Annual waste declaration forms (online internet-based system of the MoEUCC, http://online.cevre.gov.tr) and National Waste Transport Forms (template, given in Hazardous Waste Control Regulation – Annex 9-A, which was repealed on April 2, 2016) will be stored at the construction site for 5 years.

During the construction and operation phase, daily inspections will be conducted regarding the management of waste at the construction site.

A sample checklist of issues to be addressed during inspections is provided in Annex-2. In addition to these inspections, quarterly internal inspections will be conducted during the construction phase. Inspection and monitoring results will be presented to the PMU and the World Bank as part of the biennial report.

Based on monitoring and inspection results, corrective and/or remedial actions will be determined and implemented. The performance of these activities will also be monitored and reported.

**6. Trainings**

The contractors will ensure that adequate training is provided to all personnel (including those of subcontractors, if any). The scope of the training covers the waste management duties and functions of workers; and ensures them to be aware of relevant aspects of this plan, relevant legislation and standards, and general waste management practices (e.g., tidiness, waste separation).

Details of the training (e.g., participants, topics, training hours provided) will be recorded and records kept on site. Personnel who routinely work with hazardous wastes and materials; will receive additional specialization training in which special handling, separation, labeling, storage, spill response and disposal requirements are explained in detail.

**7. Review & Update**

This Plan is a 'living' document and responsibilities, procedures and compliance actions should be updated if needed (for example, following a change in legislation). It is the responsibility of PMU and contractors to be fully aware of its contents. Contractors will provide relevant training to personnel and ensure that measures/commitments are implemented to ensure compliance with this Plan

**Waste Registration Form**

Date (Month/Year): Waste Registration Form No:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Date** | **Waste Type (Hazardous/Non-Hazardous)** | **Subtype** | **Waste Amount (ton/m3)** | **Transporter** | **Disposal** | **Disposal Method** |
| 1 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |

**Waste Management Inspection Checklist**

Inspection Place:

Inspection Date:

|  |  |  |
| --- | --- | --- |
| **Measures** | **Accordance (Yes/No)** | **Explanation** |
| Are all waste streams properly segregated and labeled according to the following categories?  - Hazardous Wastes  - Non-Hazardous Waste |  |  |
| Is the site waste inventory valid and up to date? |  |  |
| Are hazardous and non-hazardous wastes stored separately? |  |  |
| Has a map been prepared showing the correct landfills, and is it visible to all workers? |  |  |
| Are all waste storage containers properly labeled to prevent cross-contamination of waste materials? |  |  |
| Is appropriate information written on all waste labels, including:  - Waste flow (hazardous, non-hazardous, etc.)  - Type of waste (solid, liquid or sludge)  - Amount of waste  - Known environmental, health and safety hazards (e.g., MSDS forms)  - Required personal protective equipment (PPE) |  |  |
| Are the licenses of the companies contracted for waste transportation and waste disposal valid and up to date? |  |  |
| Are copies of the National Waste Transport Forms kept as part of the monthly waste registration forms? |  |  |

# Annex 10. Resource Efficiency and Pollution Prevention Plan

Resource Efficiency and Pollution Prevention Plans will be prepared for each province within the scope of the Project and it will be integrated to each sub-project under Component 2; together with ESMP Checklist of each sub-project. Retrofitting, demolition, and reconstruction activities will cause noise and air pollution, as well as hazardous material risks such as chemical leakage. Besides, basic retrofitting/reconstruction requirements, such as concrete, rebar, insulation material etc., water for personnel usage, and fuels for vehicles and equipment will be required as resources.

The main objectives of the preparation of the Resource Efficiency and Pollution Prevention Plans are:

* Define roles and responsibilities
* Define the legal/institutional framework
* Identifying and examining the potential negative environmental impacts of the sub-projects
* Recommending measures to minimize, mitigate or compensate for adverse effects
* Improving environmental performance
* Ensuring failures of appropriate monitoring and environmental management measures are addressed

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

* Possible sub-project types and details
* Description of relevant base case conditions
* Summary of effects
* Description of mitigation measures
* Description of the monitoring program
* Institutional arrangements and outline of roles and responsibilities

The summary of impacts should describe the adverse environmental impacts anticipated for which mitigation is required. Each mitigation measure should be briefly described with reference to the related impact.

Proposed mitigation measures should be supported by relevant resources, designs, hardware descriptions, and/or operating procedures. Monitoring is important to evaluate environmental performance. Therefore, the monitoring program should be designed to ensure that necessary mitigation measures are taken if the proposed measures are insufficient, or the impacts have been underestimated. The monitoring program should be linked to the impacts identified and the methods to be used.

Mitigation and monitoring responsibilities should be clearly defined and coordination arrangements between the various responsible parties should be defined. These parties include beneficiaries, contractors and administrative bodies.

# Annex 11. Occupational Health and Safety Management Plan

**1. Purpose and Scope**

This plan presents the Occupational Health and Safety (OHS) management principles for the subproject activities within the scope of Component 2 of the Project. Prior to construction activities, the Contractor will also develop its own Occupational Health and Safety Management Plan (OHSMP) in line with national legislation to address OHS issues.

This plan outlines the framework of the OHS system to be followed by the Contractor during the land preparation and construction phase.

This plan has been prepared to be implemented by the Project Management Unit (PMU), Contractors and Subcontractors. In addition, Contractors are required to adopt plan requirements within their management plans. The roles and responsibilities for the implementation of the Plan are presented in Chapter 3.

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

**2. Legal Framework**

**2.1. National Legislation**

The main national legislation that the Project is subject to on occupational health and safety is as follows:

* + Occupational Health And Safety Law No. 6331
  + Health and Safety Signs Regulation
  + Implementing Regulation on the Duties, Authorities, Responsibilities and Training of Workplace Physicians and Other Health Personnel
  + Regulation on Emergency Situations in Workplaces
  + Implementing Regulation on the Procedures and Principles of Employee Occupational Health and Safety Training
  + Communiqué on Workplace Hazard Classes Regarding Occupational Health and Safety
  + Regulation on the Duties, Authorities, Responsibilities and Training of Occupational Safety Specialists
  + Occupational Health and Safety Services Regulation
  + Occupational Health and Safety Risk Assessment Regulation
  + Regulation on Occupational Health and Safety Boards
  + Regulation on Health and Safety Measures in Asbestos Work
  + National Occupational Health and Safety Council Regulation
  + Regulation on Stopping Work at Workplaces
  + Regulation on Health and Safety Conditions in the Use of Work Equipment
  + Regulation on the Protection of Employees from the Hazards of Explosive Environments
  + Implementing Regulation on the Use of Personal Protective Equipment in Workplaces
  + Implementing Regulation on the Vocational Training of Those Who Will Work in Dangerous and Very Dangerous Class Jobs
  + Regulation on the Protection of Employees from Risks Related to Noise
  + Regulation on Health and Safety Precautions in Working with Chemicals
  + Regulation on Laboratories Performing Occupational Hygiene Measurement, Testing and Analysis
  + Regulation on Health and Safety Precautions in Working with Screened Vehicles
  + Regulation on the Protection of Employees from Vibration Related Risks
  + Regulation on Occupational Health and Safety in Temporary or Fixed Term Jobs
  + Communiqué on the Qualifications and Selection Procedures and Principles of the Employee Representative on Occupational Health and Safety
  + Regulation on Combating Dust
  + Regulation on Support of Occupational Health and Safety Services
  + Implementing Regulation on the Prevention and Mitigation of Major Industrial Accidents
  + Regulation on Occupational Health and Safety in Construction Works
  + Regulation on the Procedures and Principles of Employment of Children and Young Workers
  + Communiqué on Supporting Occupational Health and Safety Services
  + Regulation on Protection of Buildings from Fire
  + Communiqué on Categorization Guide of Personal Protective Equipment

**2.2. World Bank ESF Requirements**

2.2.1. Labor and Working Conditions - ESS2

ESS2 emphasizes measures relating to occupational health and safety that should be applied to the Projects and sets the requirements that should be fulfilled by financed Projects.

2.2.2. Environmental Health and Safety Guidelines

The World Bank Group Environmental, Health and Safety Guidelines (EHS Guideline) are technical reference documents with general and industry-specific examples of GIIP. EHS Guideline is used as a technical source of information during Project appraisal. The EHS Guideline contains the performance levels and measures that are generally considered to be achievable in new facilities at reasonable costs by existing technology. Occupational Health and Safety is addressed in the General EHS Guideline document under Section 2. In addition, in Section 4.2, risks and measures related to occupational health and safety are specified in construction and demolition activities.

**3. Roles and Responsibilities**

Involvement of all in implementing, maintaining and continually improving OHS processes is the key to successful completion and achievement of quality objectives set by the management. All Project personnel will therefore be required to be familiar with the content of this plan and will participate in implementing, maintaining and improving the management system. It is the responsibility of the PMU and all key personnel to ensure that the requirements for quality are fulfilled for works under their responsibility.

All new staff and staff who are given new responsibilities are to be inducted into the requirements set out in this plan in general and into their function and responsibilities in particular. In this context, roles and responsibilities related to occupational health and safety management are given in the table below:

Roles and Responsibilities

| Roles | Responsibilities |
| --- | --- |
| Project Management Unit (PMU) | * Ensure adequate resources are provided for the implementation of this Plan. * Review and update the Plan as needed * Ensuring that technical support is provided to contractors to implement the plan. * Ensure that relevant training is provided by contractors through review of training records and relevant training documentation. * Supervising the contractor's compliance with Project requirements through contractor monitoring and reports. |
| Contractor  Management Representative / Project Manager | * Demonstrates the values through H&S Leadership outlined within this H&S plan. * Provides suitable and sufficient resources (e.g. people, equipment and budget) to ensure H&S department can fully function. * Reviews H&S performance to provide support and commitment and to ensure that areas of concern are recognized and effectively managed. * Provides active participation in the implementation of the safety program (e.g., audits, safety committees, training etc.). * Recognizes personnel who continuously demonstrate commitment and proactive leadership qualities with regard to H&S. * Ensures that H&S will be the first specific topic, at all Project related meetings. * Reviews the H&S performance on an ongoing basis, provide support and commitment to ensure that areas of H&S concern are recognized and managed. * Establishes coordination to resolve the non-compliance issues that cannot be addressed / resolved by the line organization. * Participates actively in the implementation of the safety program (e.g., audits, safety committees, training etc.). * Approves specific work method statements and risk assessments for work being carried out, where applicable. * Will co-ordinate with the H&S Expert and facilitate the weekly H&S meetings. * Will set a personal example and assist in the proactive promotion of safety as a personal objective. * Ensures that all sub-contractors at the site are aware and trained in the H&S requirements of the Project. * Actively participates in construction site/ camps and office inspections. * Ensures that this plan is implemented in line with Project standards * As his/her main responsibility, ensures the implementation of the Plan (also by the Subcontractors, if any) and reports the non-compliances and the implementation performance of the Plan to the PMU. * Participates in the development of corrective and/or remedial actions when necessary (e.g. when non-compliances are detected, when there is a change in the relevant legislation, etc.). * Provides relevant training. * Performs internal and daily audits and recording any non-compliances detected. * Ensures that relevant non-compliances are recorded and promptly responded to. * Reviews and updates the Plan as needed (in coordination with the PMU). * Develops and implements a program for monitoring and analysis of all environmental incidents and contingencies * Ensures that OHS considerations are included in the daily checklist to be included in the monthly report to the PMU |
| Contractor  OHS Focal Point | * Provides office H&S support and assistance as required. * Evaluates and monitors the safety performance on a weekly and monthly basis. * Develops all necessary OHSAS 18001 Systems Documents * Develops core H&S Strategies, Procedures, Instructions etc. * Effectively manages the safety personnel under his control and provide appropriate direction and training as required optimizing their effectiveness on site * Establishes an inspection scheme and schedule that involves all levels of site supervision, office personnel and other exposed to the define stage of the Project * Implements an H&S training program * Reviews the results of inspections of PMU to identify safety issues and deficiencies, and to advise PMU on findings * Co-ordinates the investigation of any incident (LTI, near miss, property damage etc. as necessary) * Identifies any trends relevant to incident investigations that become apparent and to ensure that remedial actions have been agreed and corrective action performed and recorded * Reviews, compiles, analyses, and interprets contractor Key Performance Indicator data to determine causes, trends, and relationships of injury/illness, major severity potential Incidents and all other unplanned events * Inspects the place of employment, by visual observation and mechanical testing equipment, to observe and report on potential violations of any of the above H&S standards * Gathers evidence and prepares reports on safety violation complaints and occupational accidents and fatalities * Reviews accident, injury, and illness reports to detect problem areas related to employee / contractor safety * Act as a team member of all Incident Investigation committees where required |
| All Staff | * Learning, understanding and complying with all Health & Safety procedures, rules and practice which are applicable to their conduct at all times whether at or away from the workplace * Employees are responsible for their personal safety and the safety of their co-workers, through both their acts or their omissions * Be constantly aware of their work situation and report hazardous situations to their supervisors, stopping work and informing their immediate supervisor if there is a potential for any harm * Comply with all health and safety requirements, practices and other initiatives at all times * Use and maintain the appropriate supplied Personal Protective Equipment (PPE), reporting all deficiencies and replacing as necessary * Reporting substandard procedures or conditions to their immediate supervisor * Understand that any employee who jeopardizes their safety and health and /or the safety and health of others will be subject to disciplinary action (including immediate termination of employment) * Working in a safe manner at all times. * Stopping their immediate or impending work where they consider the work being performed is ‘at risk’ or unsafe |

**4. Mitigation Measures and Management Controls**

**4.1. Risk Assessment and Management**

Risk assessment and the management of risks is a key process for the management of H&S and is central to meeting the expectations of the Project’s H&S goals. The approach focuses on identifying, assessing and managing H&S related risks in all Project activities.

The approach is one of systematic identification of hazards, recording of hazards, performing risk assessments, and devising risk controls to eliminate or reduce risk to at least tolerable level that is “As Low as Reasonably Practicable (ALARP)”.

The main categories of activity for which risk assessments are required on a case by case basis are:

* + Hazard Identification (HAZID);
  + Hazard and Operability Study (HAZOP);
  + Quantitative Risk Assessment (QRA);
  + Layout reviews;
  + Design and engineering reviews;
  + Utilization of an Action Tracking Register.

The Contractor will implement a number of risk assessment and risk management activities prior to the commencement of construction activities.

Actions will be taken to resolve potential problems prior to beginning work or mobilization to site, underlining the need to determine levels of risk for all activities to impose appropriate management controls.

The Contractor is required to continue the development of these assessments to ensure that risks are mitigated prior to execution of the work. The Contractor will develop a comprehensive training program that will be in compliance with Turkish H&S Legislation and the requirements of the World Bank.

**4.2. Hazard Identification**

Identification of hazards is the responsibility of all personnel who access all Project areas. The Contractor must ensure that hazards with potential to harm personnel are identified, assessed (in terms of risk) and controlled to reduce the risk.

The Contractor will provide a range of tools to assist in the identification, assessment and control of hazards and risks pertaining to activities within the Project area.

Risk assessment framework should be in place to provide for the efficient assessment of risks, and allow for the implementation of controls commensurate with the level of risk identified.

Hazards and risks are identified through other means such as:

* + throughout the course of a work activity;
  + during workplace inspections;
  + during pre-start inspections of equipment;
  + through Incident Analyses;
  + during auditing activities; and
  + via a range of other methods.

**4.3. Incident Management**

The Contractor must ensure immediate response to and timely reporting, analysis and communication of all incidents to PMU.

All personnel have a responsibility to report all incidents regardless of severity, to their supervisor as soon as practicable.

All incidents will be recorded in the approved incident reporting system, and be analyzed to a level commensurate with the actual consequence or potential risk rating, whichever is higher.

**4.4. Injury Management**

The Contractor is committed to return workers to meaningful and productive employment at the earliest possible time.

**4.5. Fitness for Duty**

The Contractor employees will undergo a medical assessment to ensure they are medically fit to perform their role before commencing the works and these controls will be repeated annually.

Employees must make their supervisor informed of any pre-existing injury or illness which may affect their performance or has the potential to impact safety and health in the workplace. A medical assessment may also be required to determine associated risks or limitations.

The Contractor will ensure that work activities do not aggravate a disclosed injury or illness, or impact the safety and health of the workplace.

4.5.1. Health Surveillance

The Contractor must ensure that health assessments are carried out in respect of all personnel who engage in specific tasks with the potential for occupational exposure, if:

* + an identifiable disease or other adverse effect on the health of the employee may be related to the exposure;
  + there is a reasonable likelihood that the disease or adverse effect may occur under the particular conditions of work; and
  + there are recognized techniques for detecting indications of the disease or adverse effect.

Health Surveillance is carried out to monitor for possible health effects that may arise following occupational exposures at concentrations above accepted exposure standards. Where a risk assessment determines there is a reasonable likelihood that employees may be exposed to an occupational hazard at levels exceeding accepted values, management will conduct specific health monitoring to assess actual exposures and the effects of these exposures on personnel.

4.5.2. Fatigue Management

Fatigue is defined as an impaired physical and/or mental condition that arises from an individual’s exposure to physical and mental exertion and inadequate or disturbed sleep.

The Contractor recognizes that fatigue may arise from hours and patterns of work and activities, and travel/commute time. As it is also influenced by factors outside of work, such as family responsibilities, stress, lifestyle, personal health etc., the management of fatigue is a shared responsibility between management and the individual.

**4.6. General Hazard Prevention**

The Contractor acknowledges the risk associated with Project area operations, and provides for the reporting and rectification of hazards.

4.6.1. Working Alone

Where personnel are required to work alone, the activities and conditions should be subjected to risk assessment and a safe system of work should be developed.

4.6.2. Manual Handling

Where a manual handling task is required, a risk assessment will be completed to identify the hazards. The risk of injury should be assessed for each hazard, and appropriate controls implemented, including manual handling training as appropriate.

The Contractor must ensure suitable powered mechanical plant or equipment and lifting aids are provided to enable personnel to avoid heavy manual tasks.

4.6.3. Hygiene and Sanitation

The Contractor must supply suitable facilities for personnel including:

* + toilet facilities within a reasonable distance from each workspace;
  + sanitation and hygiene facilities that are properly maintained;
  + eating places that are dry, clean, well ventilated and have adequate seating, tables, hand washing and waste disposal facilities; and
  + potable water supplies available to all personnel.

Personnel must not intentionally pollute work areas or misuse or damage any sanitation or hygiene facilities provided.

4.6.4. Occupational Hygiene

The Contractor must ensure commitment to monitoring and reporting of occupational health hazards and hazardous occupational environments, and implement controls to reduce risk in accordance with all applicable regulations and, wherever practicable, with regard to accepted best practices.

Specific occupational hygiene assessments will be conducted with reference to approved methodologies and applicable standards. Ongoing assessments will be conducted and, as required, controls implemented for the following occupational health hazards:

* + airborne contaminants such as metal dusts, respirable silica and asbestos fibers; and
  + occupational noise exposure.

Risk assessment, evaluation and control of occupational hazards may be undertaken in consideration of the following broad hazard categories:

* + chemical hazards - such as fumes and vapors;
  + physical hazards - those related to heat, cold, noise, vibration, ionizing radiation, ultra-violet light and workplace lighting;
  + biological hazards - including mosquito-borne viruses, potable water contaminants and other water-borne hazards such as legionella; and
  + ergonomic hazards - including manual handling hazards.

4.6.5. Hazardous Substances

The Contractor must ensure the safe control of hazardous substances and reduce the level of exposure to personnel, property and the environment in accordance with the ESIA Requirements.

A risk assessment will be undertaken to assess the health risks to personnel. Health Surveillance may be required to monitor the health of personnel who are at significant risk of exposure to hazardous substances. Material Safety Data Sheet Forms will be present near each chemical and hazardous substance.

4.6.6. Personal Protective Equipment (PPE)

The Contractor must ensure that all personnel and visitors wear or use personal protective equipment provided if it is necessary to protect them from harm. Personal protective equipment will be properly fitted, and users instructed in their use.

All personal protective equipment supplied must conform to an applicable be properly maintained and, if it becomes defective, replaced.

4.6.7. Safety Signs

The Contractor must ensure that sufficient Safety Signs are posted in workplaces and travel ways to prevent incidents, identify hazards, indicate the location of safety and fire protection equipment, and provide guidance and instruction in emergency procedures.

4.6.8. Fall Prevention

The Contractor must ensure that all personnel undertaking activities where there is a risk of a person falling from one level to another do so in a controlled manner to reduce the risk of personal injury.

**4.7. Task Specific Hazard Prevention**

4.7.1. High Risk Work

The Contractor must identify High Risk Work, as detailed in the Danger Classes List Communique Related to Occupational Health and Safety (O.G. 25.11.2009/ 27417), and implement a procedure or risk assessment specific to that task to ensure adequate controls are in place to eliminate, prevent or control possible risks.

The Contractor must ensure that personnel performing High Risk Work having relative training with respect to Regulation on The Procedures And Principles Of Employee Health And Safety Trainings (O.G. 15.03.2013 / 28648).

4.7.2. Electrical Work

An electrical log book will be kept at each operational site to record plans, work carried out and other relevant information.

Electrical equipment will be provided with full current isolating devices capable of being secured in the isolating position wherever practicable. Where such features are not practicable, a risk assessment will be conducted to establish suitable alternative controls, and outcomes communicated to impacted personnel.

4.7.3. Scaffolding

Scaffolding may be used for the purpose of supporting access or working platforms, personnel, plant or other material.

Personnel erecting scaffold must ensure that an area where scaffold is to be erected is clear of rubbish and material or equipment not required for immediate use.

The Contractor must ensure personnel are not required to use incomplete scaffold. Where incomplete scaffold is to be left unattended, danger tags, warning signs or other appropriate measures will be used to alert personnel and deter them from unauthorized access.

4.7.4. Driving Safety

The Contractor must ensure that personnel permitted to drive either a vehicle in Contractor controlled areas or a Contractor owned vehicle on public roads, hold a current driver’s license and comply with the relevant road rules for that class of vehicle.

All personnel driving vehicles on Contractor land must obey all traffic directions, traffic rules and the relevant Traffic Management Plan.

**4.8. Access and Site Security**

Access to the Project area will be restricted by the Contractor and necessary precautions will be taken such as fencing the area and placing relevant signs, etc.

It is the Contractor’s responsibility to ensure that all site security requirements identified in the Risk Assessment for this activity are fully implemented.

**4.9. Site Induction and Site Safety Rules**

Site inductions will be carried out by the Contractor. Arrangements for site inductions for this Project will be:

* + Any new worker coming to the work site will be briefed on the site safety rules including the site logistics plan, hazards, evacuation procedures, emergency and first aid procedures, and the duties and responsibilities of all persons on site.
  + A Site Induction briefing and Site Safety Rules will be developed in Turkish and in English.
  + All attendees of the Site Induction briefing will be recorded.
  + Visitors will be given a brief site induction (either orally or in writing) and will be accompanied at all times during their visit to the site.

**4.10. Workplace Inspections**

Inspections of the Project site should be carried out weekly. Contractor will undertake weekly inspections of the whole work site, and specifically of:

* + Equipment
  + Scaffolds
  + Small tools
  + Lifting devices
  + Electrical cables
  + Fire extinguishers
  + First aid kits

Records of the inspections will be kept by H&S Expert.

**5. Training, Reporting and Monitoring**

**5.1. Training**

The Contractor will be committed to providing employees with the necessary training to perform their work safely and effectively.

Refer to the Employment and Training Plan (ETP) for further information about the identification, coordination and management of training.

All personnel are required to complete the induction training. This induction informs participants of the minimum safety, environmental and security requirements to gain access to the Project area.

On completion of the Induction Training, personnel will be suitably inducted to their work area. They will be informed of the hazards and controls, the location of firefighting and first aid equipment, and emergency response and evacuation procedures as a minimum.

It will be the responsibility of the H&S Expert to control and determine the training needs of the personnel, prepare the training programme and have it approved by the Project manager. Trainings may be renewed or additional trainings may be provided if it is seen necessary by H&S expert or Project Manager in case of a significant incident etc.

**5.2. Reporting**

Daily inspections will be carried out under the coordination of the H&S Expert. All serious incidents including near misses will be reported, investigated, and documented immediately to PMU and WB. In this scope, the World Bank and PMU will be promptly notified of any incident or accident related to the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers including but not limited to; incidents and accidents encountered during construction works, environmental spills, etc. Sufficient detail will be provided regarding the incident or accident, findings of the Root Cause Analysis (RCA), indicating immediate measures or corrective actions taken or that are planned to be taken to address it, compensation paid, and any information provided by any contractor and supervision consultant, as appropriate. It will be ensured that the incident report is in line with the World Bank’s Environment and Social Incidence Response Toolkit (ESIRT). Subsequently, as per the Bank’s request, a report on the incident or accident and propose any measures to prevent its recurrence will be prepared.

All contact with and reporting to government officials is to be done by the H&S Expert in consultation with the Project Manager. In regard to injuries, all compensation carriers have specific legislative reporting requirements for the employer, worker, and attending physician(s).

All incidents will be reported to the H&S Expert immediately. All incidents that require medical attention or have the potential for medical attention require immediate notification to the Project Manager. All serious incidents will be reported to the Project Manager immediately – the notification of any government agencies will be coordinated by the Project Manager.

The H&S Expert and the Project Manager will be promptly notified of equipment or property damage. The Incident Report Form will be completed for all incidents and forwarded to the district office for administrative processing.

**5.3. Monitoring**

Key monitoring activities outlined in the ESMF will focus on ensuring compliance with the mitigation measures and management controls described in this plan, using key performance indicators.

Monitoring activities for each Occupational Health and Safety issue will be detailed in the management / implementation plans and procedures to be prepared by the Contractor prior to the start of the land preparation and construction phase. Monitoring activities will be designed to target specific issues to meet site-specific requirements, in line with the plan framework presented in the ESMF and taking into account key performance indicators.

Performance indicators for the implementation of the Plan are provided below and relevant indicators will also be included in the Project's Environmental, Health and Safety (EHS) procedures and plans:

OHS Management

|  |  |  |  |
| --- | --- | --- | --- |
| **Key Performance Indicator** | **Target** | **Records** | **Responsibility** |
| H&S Audit and Review Schedule | At least once a week | H&S Records  Audit Reports | HS Expert |
| H&S Policies communicated to all Project personnel | At least once a month | Minutes of Meetings  Training Records | HS Expert |
| Management engagement in H&S Meetings/ Reviews to demonstrate visible leadership | At least once a month | Minutes of Meetings | Project Manager |
| Weekly H&S Meetings | At least once a week | Minutes of Meetings | HS Expert |
| H&S Walkdowns | At least once a week | H&S Records  Audit Reports | HS Expert |
| H&S Induction - All Project site personnel receives before commencing the work at site | Before starting the works | Training Records | HS Expert |
| Emergency Drills | Twice a year | H&S Records  Audit Reports | Project Manager |
| H&S Reporting | Quarterly | Quarterly Monitoring Reports | Project Manager |

Lagging Indicators

|  |  |  |  |
| --- | --- | --- | --- |
| **Key Performance Indicator** | **Target** | **Record** | **Responsibility** |
| Number of fatalities | 0 in a year | H&S Records  Incident Reports | Project Manager |
| Lost Time Incident | 0 hours in a year | H&S Records  Incident Reports | Project Manager |
| Total Recordable Injury | 0 hours in a year | H&S Records  Incident Reports | HS Expert |
| Incidents reported and investigated | After each incident | H&S Records  Incident Reports | HS Expert |

**6. Review & Update**

This Plan is a living document and will be updated as responsibilities, procedures and compliance actions are needed (for example, following a change in legislation). It is the responsibility of PMU and contractors to be fully aware of its contents. The Contractors will provide relevant training to staff and ensure that measures/commitments are implemented to ensure compliance with this Plan.

# Annex 12. Community Safety and Traffic Management Plan

Major community health and safety issues in sub-projects involving retrofitting, demolition and reconstruction activities are; i) noise and dust, ii) work site safety, iii) emergency situations and iv) traffic safety. This Annex introduces general guidelines for the preparation of Community Safety and Traffic Management Plans (CSTMP) to be prepared for each province under Component 2. The main objective of the plan is to ensure safety and health of community by careful planning, routine inspections, awareness, and training of community during Project development, to reduce risks associated with motor vehicle travel and to define practical actions which can be put in effect to mitigate road safety risks. Retrofitting or demolition and reconstruction activities may require detailed planning depending on site-specific issues. These issues will be managed through integration of CSTMPs to each sub-project.

The items listed below will 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
  + 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 sub-project-related emergency situations (accident, fire, explosion, etc.)
  + Improperly controlled or trained security guards
* Placement of access deterrents, such as fences and warning signs, to prevent access and provide warning against existing hazards.

The outline of the Community Safety and Traffic Management Plan is given below as an example, which will be developed by the PMU for each province.

**Table of Contents of a sample Community Safety and Traffic Management Plan**

1. Purpose and Scope

2. Legal Framework

2.1 National Legislation

2.2 International Standards

3. Roles and Responsibilities

4. Mitigation Measures and Management Controls

4.1 General Requirements

4.2 Province-Specific Requirements

4.3 Sub-project Related Possible Requirements based on Types

5. Training, Reporting and Monitoring

5.1 Training

5.2 Reporting

5.3 Monitoring

# Annex 13. Chance Find Procedure

**1. Introduction**

The General Directorate of Infrastructure and Urban Transformation (GDIUTS) of the Ministry of Environment, Urbanization and Climate Change (the MoEUCC) is responsible for the sub-project activities to be carried out within the scope of the Project and the management and protection of archaeological and cultural heritage sites/resources in the areas affected by these activities. Natural and Archaeological Sites, Cultural and Historical Buildings will not be included in the Project. However, it is still possible to encounter some unknown archaeological sites and cultural heritage assets as “Chance Finds” during the Project activities.

**1.1. Purpose**

The purpose of this document is to outline the procedure and related responsibilities required in relation to managing the Chance Finds process during the works to be carried out within the sub-project.

**1.2. Definitions**

|  |  |
| --- | --- |
| CHANCE FIND | 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. |
| MUSEUM DIRECTORATES |  |
| REGIONAL CONSERVATION BOARDS |  |
| PROJECT | Climate and Disaster Resilient Cities Project |
| WORK TO BE DONE OR MANDATORY ACTIONS | Represents mandatory conditions |
| COMPULSORY WORK | Indicates that a provision is not mandatory but recommended as good practice |

**2. Roles and Responsibilities**

The Project Management Unit (PMU), which will be established under the MoEUCC, General Directorate of Infrastructure and Urban Transformation, is obliged to comply with this procedure along with all its affiliated units and subcontractors throughout all activities for all sub-projects under Component 2. All workers involved in sub-projects’ activities will receive training on the implementation of this procedure.

Roles and responsibilities for the Environmental and Social (E&S) management of the Project are detailed in the Project ESMF. In this context, roles and responsibilities regarding the chance find process are given in the table below:

**Roles and Responsibilities**

| Roles | Responsibilities |
| --- | --- |
| Project Management Unit (PMU) | * Ensure adequate resources are available to implement this procedure. * Reviewing and updating the procedure as needed * Ensure that technical support is provided to contractors to implement the procedure. * Ensure that relevant training is provided by contractors through review of training records and relevant training documentation. * Supervising the contractor's compliance with Project requirements through contractor monitoring and reports. |
| Contractor  Project/Site Manager | * Ensure that this procedure is implemented in line with Project standards * As its main responsibility, to ensure the implementation of the procedure (also by the Subcontractors, if any) and to report the non-compliances and the implementation performance of the procedure to the PMU. * Participating in the development of corrective and/or remedial actions when necessary (e.g. when non-compliances are detected, when there is a change in the relevant legislation, etc.). * Providing relevant training. * Performing internal and daily audits and recording any observed non-compliances. * Ensuring that relevant non-compliances are recorded and promptly responded to. * Reviewing and updating the procedure as necessary (in coordination with the PMU). * Ensure that chance finds are included in the daily checklist to be included in the monthly report to the PMU. |
| All employees | * Participating in training required for chance finds. * Providing provide self-competence for the implementation of this procedure. |

**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.

|  |  |  |  |
| --- | --- | --- | --- |
| **STEP 1– Following a chance find:**   1. All works in the survey area will cease. 2. A transitional buffer zones will be established around the chance find area. 3. Site management and the museum archaeologist will be contacted immediately. 4. The area of the finding will be adequately secured by markings, signposts and banners, etc. 5. Protection of the site the chance finding will not be transported lifted or damaged further. | | | |
| **STEP 2 – Registration**  Chance Find Notification Form Section A will be filled in and a copy will be forwarded to the Project/Site Manager in 24 hours. | | | |
| **STEP 3 – Communication with local authorities**  The director of the related museum will be notified regarding the chance find. | | | |
| **STEP 4 – Museum Decision**  The archaeologist of the related museum will decide actions to follow in the chance find site. | | | |
| **STEP 4 A – Site or the find is of no significance**   1. Museum archaeologist declares that the site/find is of no significance. 2. Project/Site Manager notifies respective authorities. 3. The Project/Site Manager keeps a copy of the chance finds record for his/her own records. 4. No further action is required. 5. The chance find procedure ends. 6. Construction activities can continue. | | **STEP 4 B – Site is significant**   1. Museum archaeologist declares that the site/find is significant. 2. The archaeologist of the museum directorate decides on the next steps and informs the Project/Site Manager. 3. Project/Site Manager notifies respective authorities. 4. Go to Step 5. | |
| **STEP 5 – Site survey**  Project staff follows the instructions of the archaeologist of the related Museum. | | | |
| 1. Following the site survey, the museum archaeologist declares that the **site is of** **minor significance**. 2. Project/Site Manager informs the PMU. 3. Project/Site Manager records Part C of the Chance Find Form. 4. No further action is required. 5. The chance find procedure ends. 6. ***Construction activities can resume.*** | 1. Following the site survey, the museum archaeologist declares that the **site is moderately significant**. 2. More advanced works such as the test pit/recovery excavation or remote sensory surveys will be completed. 3. Museum archaeologist will instruct and/or supervise works. 4. Project/Site Manager informs the PMU. 5. Project management will provide an archaeological task force under the lead of the museum archaeologist. The task force will be composed of qualified archaeologists as well as other specialists and workers. 6. Upon completion of excavation, the team will report to the museum. 7. Museum forwards the findings of the survey to the Regional Cultural Asset Conservation Board. 8. The Regional Cultural Asset Conservation Board will officially approve such recovery and notifies the Project management. 9. Project/Site Manager records Part C of the Chance Find Form. 10. No further action is required. 11. The chance find procedure ends. 12. ***Construction activities can resume.*** | | 1. Following the site survey, the museum archaeologist declares that the site/find is **highly significant**. 2. Recovery excavation will be completed. 3. The site will be handled in observance of the provisions of the Law No.2863 on the Protection of Cultural and Natural Assets dated 21.07.1983. 4. Museum Archaeologist provides instructions and/or supervision for the test pit/archaeological recovery excavation. 5. Project/Site Manager informs the PMU. 6. Project management will provide an archaeological task force under the lead of the museum archaeologist. The task force will be composed of qualified archaeologists as well as other specialists and workers. 7. Upon completion of excavation, the team will report to the museum. 8. The Regional Cultural Asset Conservation Board will officially approve such recovery and notifies the Project management. 9. The site will be registered and placed under protection as per the Turkish legislation. 10. Project/Site Manager informs the PMU. 11. Project/Site Manager records Part C of the Chance Find Form. 12. No further action is required. 13. The chance find procedure ends. 14. ***Construction activities may resume in accordance with the Board's decision or additional preventive studies may be required.*** |

**4. Monitoring and Reporting**

Project/Site Manager will visually monitor any and all construction and other activities as proof of presence of cultural inheritance assets.

Chance Finds will be recorded in the Chance Finds Notification Form (see. Annex-1). Print copies of Chance Find Notification Forms will be available on site, which will be always scanned once filled in and registered and saved.

Chance Find Notification Forms will be updated by the Project/Site Manager, which be recorded in the Chance Finds Log (see. Annex-2). This document will be regularly checked.

**Chance Find Report Form**

**CHANCE FIND REPORT FORM**

**RASTLANTISAL BULUNTU RAPOR FORMU**

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| **PART A**  **BÖLUM A** | | | |
| Project Location:  *project Sahasi* | District (İlçe):  *Village (Koy):* | Date:  *Tarih* | Form No: |
| Name of person reporting chance find:  *Rastlantisal buluntuyu rapor eden kisinin ismi* | | | |
| Was work stopped in the immediate vicinity of the chance find? ☐ Yes ☐ No  *Rastlantisal buluntunun tam çevresinde is durduruldu mu? Evet Hayir* | | | |
| Was a buffer zone created to protect the chance find? ☐ Yes ☐ No  *Rastlantisal buluntuyu korumak için tampon bolge olusturuldu mu? Evet Hayir* | | | |
| **NOTIFICATION**  ***BİLDİRİM*** | | | |
| Project/Site manager contacted ☐ Yes ☐ No  *Proje/Santiye Muduru ile irtibata geçildi Evet Hayir* | | | |
| **CHANCE FIND DETAILS**  ***RASTLANTISAL BULUNTU AYRINTILARI*** | | | |
| GPS coordinates  *GPS koordinatlari* | | Photo record ☐ Yes ☐ No  (HD quality – no cell phone photos)  *Fotograf kaydi Evet Hayir*  *(HD kalitesinde – cep telefonu fotografi degil)*  If not, explain why:  *Yok ise nedenini açiklayiniz*  Other records ☐ Yes ☐ No  Specify (drawings, HD quality videos, etc.):  *Diger kayitlar Evet Hayir*  *Belirtin (çizimler, HD kalite videolar, vb.)* | |
| Description of chance find:  *Rastlantisal buluntunun tanimi* | | | |
| Description of site and vegetation: (e.g. surface sediment type, ground surface visibility, distance to closest watercourse, etc.)  *Sahanin ve bitki ortusunun tanimi: (orn. Yuzey sediman turu, yuzey zemin gorunurlugu, en yakin su yoluna olan mesafe, vb.)* | | | |
| **PART B**  ***BÖLUM B*** | | | |
| **NOTIFICATION OF MUSEUM DIRECTORATE ARCHAEOLOGIST**  ***MUZE MUDURLUĞU ARKEOLOĞUNA BİLDİRİ*** | | | |
| Monitoring archaeologist contacted museum directorate archaeologist ☐ Yes ☐ No  *Arkeolog muze mudurlugu arkeologu ile irtibata geçti. Evet Hayir*  Date of notification:  *Bildirim tarihi*  Name of museum directorate and Name of museum archaeologist:  *Muze mudurlugu ve Muze mudurlugu arkeologunun ismi*  Contact number of museum directorate archaeologist:  *Muze mudurlugu arkeologunun iletisim numarasi* | | | |
| **DECISION OF MUSEUM DIRECTORATE ARCHAEOLOGIST**  ***MUZE MUDURLUĞU KARARI*** | | | |
| Date of site visit:  *İlk saha ziyaret tarihi:* | | | |
| ☐ Site of no significance - Construction to proceed with no further action – End of chance find procedure  *Önemsiz saha – İnsaat daha fazla arastirma yapilmadan devam edilebilir – rastlantisal buluntu prosedurun sonu.*  Date of notice to resume work:  *İse baslama tarihi bildirisi* | | ☐ Site of significance - Further actions required  *Önemli saha – Ek arastirma gerekmektedir*  Please Fill out Part C  *Lutfen Bolum C’yi doldurun.* | |
| Name of museum directorate archaeologist:  *Muze mudurlugu arkeologunun ismi*  Contact information:  *İletisim numarasi* | | | |
| Project/Site manager contacted ☐ Yes ☐ No  Proje/Santiye Muduru ile irtibata geçildi Evet Hayir | | | |

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| **PART C**  ***BÖLUM C*** | | | | | |
| **FURTHER FIELD INVESTIGATION**  ***EK SAHA ARASTIRMASI*** | | | | | |
| ☐ Site of minor significance  *Önemsiz saha* | | ☐ Site of moderate significance  *Az onemli saha* | | ☐ Site of major significance  *Cok onemli saha* | |
| Describe additional work to be conducted:  *Yapilmasi gereken ek islerin tanimlari* | | | | | |
| Date started:  *Baslangiç tarihi* | | | Date completed:  *Bitiris tarihi* | | |
| Date of notice to resume work:  *İse baslama tarihi bildirisi* | | | | | |
| Name of museum directorate archaeologist:  *Muze mudurlugu arkeologunun ismi:*  Contact information:  *İletisim numarasi* | | | | | |
| Construction manager contacted ☐ Yes ☐ No  *Proje/Santiye muduru ile irtibata geçildi Evet Hayir* | | | | | |
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| **CHANCE FIND RECORD FORM** | | | | | | | | | | | | |  |
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| **DATE OF FIND** | **BRIEF DESCRIPTION OF THE CHANCE FIND** | | **NAME OF AUTHORIZED STAFF HAS BEEN NOTIFIED** | | **ACTION TAKEN** | | **NAME OF AUTHORIZED STAFF FILLED THE CHANCE FIND FORM** | | **STATUS (OPEN/CLOSED)** | | **OTHER CONSIDERATIONS** | |  |
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**Contact Information**

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| --- | --- | --- | --- | --- |
| **MUSEUM** | **ADDRESS** | **TELEPHONE** | **FAX** | **E-MAIL** |
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| **CONSERVATION**  **BOARD** | **AREAS OF**  **RESPONSIBILITY** | **ADDRESS** | **TELEPHONE** | **FAX** | **E-MAIL** |
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# Annex 14. Sample Commitment Letter

The Commitment Letter is to be included as an annex to the contracts between rights holders and the Contractors. (The Commitment Letter will be included in the final version of the ESMF).

1. *Applicable to Component 3, which is being implemented by ILBANK.* [↑](#footnote-ref-2)
2. Commercial banks (public and private) will be selected by MoEUCC based on expressions of interest and according to criteria acceptable to the WB outlined in the Project Operations Manual (POM), including adequate financial standing, and compliance with the prudential norms of the Banking Regulatory and Supervision Agency. [↑](#footnote-ref-3)
3. In cases where owners rent out their risky housing units, tenants would be eligible for the rental subsidy to relocate during building retrofitting or reconstruction. [↑](#footnote-ref-4)
4. This will be mostly housing but may include a small number of commercial units in mixed-use buildings. [↑](#footnote-ref-5)
5. As per Law 6306, urban transformation of risky residential buildings is a voluntary process initiated with risk detection assessments of individual buildings at the request of homeowners, except for cases where buildings are deemed at risk of imminent collapse. Any owner of a single-family home or of a unit in a multi-family building can request a building risk assessment, which is conducted by a licensed evaluator and includes opportunities for objection. The assessment results may recommend either retrofitting or reconstruction. Once a building is officially designated as risky in the property register, agreement of at least 2/3 of the homeowners on the reconstruction is required by law; those owners who choose not to participate may be bought out by the other owners or sell their property at market rates. After this process is complete, owners may apply for a loan under the Project. Technical support will be provided for homeowners to apply for loans and manage contracts with developers under Component 1. [↑](#footnote-ref-6)
6. City-wide risk assessments are completed for Kahramanmaras and Tekirdag. A city-wide risk assessment is ongoing with the Manisa. [↑](#footnote-ref-7)
7. The area of all five provinces was obtained from https://www.harita.gov.tr/il-ve-ilce-yuzolcumleri [↑](#footnote-ref-8)
8. The population of all five provinces was obtained from TurkStat, Address Based Population Registration System, 2021 [↑](#footnote-ref-9)
9. Per capita GDP figures were obtained from TurkStat, Gross Domestic Product by Provinces, 2020 [↑](#footnote-ref-10)
10. Istanbul Governorship Provincial Directorate of Disaster and Emergency, Istanbul Provincial Disaster Risk Reduction Plan.

    <https://istanbul.afad.gov.tr/kurumlar/istanbul.afad/PDF-Dosyalar/irap_istanbul.pdf> [↑](#footnote-ref-11)
11. Izmir Governorship Provincial Directorate of Disaster and Emergency, Izmir Provincial Disaster Risk Reduction Plan.

    https://izmir.afad.gov.tr/kurumlar/izmir.afad/E-KUTUPHANE/Il-Planlari/Izmir-IRAP.pdf [↑](#footnote-ref-12)
12. Based on figures from the United States Geological Survey [↑](#footnote-ref-13)
13. Bogazici University Kandilli Observatory and Earthquake Research Institute estimate magnitudes as 7.7 and 7.6. [↑](#footnote-ref-14)
14. Up until March 15, 2023, https://tdvms.afad.gov.tr/event\_spec\_data [↑](#footnote-ref-15)
15. Adapted from Global Rapid Post-Disaster Damage Estimation (GRADE) Report “February 6, 2023 Kahramanmaraş Earthquakes, Türkiye Report”, GFDRR, WB. February 20, 2023 and updated with the Press Bulletin No.36 of AFAD on March 3, 2023. https://www.afad.gov.tr/kahramanmarasta-meydana-gelen-depremler-hk-36 [↑](#footnote-ref-16)
16. Manisa Governorship Provincial Directorate of Disaster and Emergency, Manisa Provincial Disaster Risk Reduction Plan.

    https://manisa.afad.gov.tr/kurumlar/manisa.afad/Haberler/2021/IRAP/MANISA-IRAP.pdf [↑](#footnote-ref-17)
17. Tekirdag Governorship Provincial Directorate of Disaster and Emergency, Tekirdag Provincial Disaster Risk Reduction Plan.

    https://tekirdag.afad.gov.tr/kurumlar/tekirdag.afad/Kutuphane/TEKIRDAG\_IRAP\_.pdf [↑](#footnote-ref-18)
18. *In the Law and the Implementing Regulation, the Administration refers to “Municipalities within the boundaries of municipalities and adjacent areas, special provincial administrations outside these boundaries, metropolitan municipalities in metropolitan provinces and, if authorized by the MoEUCC, district municipalities within the boundaries of metropolitan municipalities”. Since all of the provinces within the scope of the Project are metropolitan cities, the “Administration” will be used as the Municipality within the scope of the Project.* [↑](#footnote-ref-19)
19. *“Directorate” refers to “Directorate of Infrastructure and Urban Transformation" in the provinces where this department exists or refers to “Provincial Directorate of Environment, Urbanization and Climate Change” where Directorate of Infrastructure and Urban Transformation does not exist.* [↑](#footnote-ref-20)
20. *Expenses are followed up and collected from the owners in accordance with the provisions of Law No. 6183 on Collection Procedure for Public Receivables.*  [↑](#footnote-ref-21)
21. It is important to note that this will be different under the proposed Project, i.e. homeowners will be eligible to receive both the rental assistance and the favorable loan under the Project. [↑](#footnote-ref-22)
22. [*https://www.ifc.org/ehsguidelines*](https://www.ifc.org/ehsguidelines) [↑](#footnote-ref-23)
23. https://www.isgum.gov.tr/labyetki.aspx [↑](#footnote-ref-24)
24. https://sim.csb.gov.tr/ [↑](#footnote-ref-25)
25. TurkStat, The results of Address Based Population Registration System, 2021 [↑](#footnote-ref-26)
26. Sanayi ve Teknoloji Bakanligi, Kalkinma Ajanslari Genel Mudurlugu, İlcelerin Sosyo-ekonomik Gelismislik Siralamasi Arastirmasi, 2022. [↑](#footnote-ref-27)
27. On February 6, 2023, two very large earthquakes of magnitude (Mw) 7.8 and 7.5 occurred nine hours apart on different fault lines in the southern region of Türkiye and northern Syria, which are referred to as the “Kahramanmaraş earthquakes”. The most extensive damage to buildings and infrastructure occurred in Hatay, Kahramanmaraş, Gaziantep, Malatya and Adıyaman provinces, which are home to around 6.45 million people (around 7.4 percent of the population). Of the total damages, 36 percent occurred in Hatay province (population 1.69 million), followed by 17 percent in Kahramanmaraş province (population of 1.18 million) and 14 percent in Gaziantep province (population of 2.15 million). (Global Rapid Post-Disaster Damage Estimation (GRADE) Report “February 6, 2023 Kahramanmaraş Earthquakes, Türkiye Report”, GFDRR, WB. February 20, 2023) [↑](#footnote-ref-28)
28. When the term “migrant” is used alone in this section, it also includes Syrians under temporary protection. [↑](#footnote-ref-29)
29. The definitions of migrants and Syrians under temporary protection are given in Section 6.3.1.8 “Vulnerable Groups” [↑](#footnote-ref-30)
30. There is no official statistics regarding the number of people living in Turkiye whom are under international protection, and their nationality. [↑](#footnote-ref-31)
31. Comprehensive Vulnerability Monitoring Exercise published by WFP in January 2020, <https://docs.wfp.org/api/documents/WFP-0000112161/download/?_ga=2.108333829.666977054.1666982013-248894017.1666982013> [↑](#footnote-ref-32)
32. These data were taken from the 4th Stage of the Comprehensive Vulnerability Monitoring Study, and up-to-date official statistics could not be reached. [↑](#footnote-ref-33)
33. Baseline Assessment in Istanbul province: Analysis Report: May-July 2019. International Organization for Migration. [↑](#footnote-ref-34)
34. Baseline Assessment in Istanbul province: Analysis Report: May-July 2019. International Organization for Migration. [↑](#footnote-ref-35)
35. Although Fatih is the second most preferred district in Istanbul by migrants and Syrians under temporary protection, since the whole area of this district is under cultural protection zone and hence no Project activities will be carried out on such protection zones, the socio-economic structure of this district is not given. [↑](#footnote-ref-36)
36. Ministry of Family and Social Policies, General Directorate of Family and Community Services. Strategy Paper for Roma Population (2016-2021). April 2016. Ankara

    Access address: http://www.sp.gov.tr/upload/xSPTemelBelge/files/wZYtU+Roman\_Vatandaslara\_Yonelik\_Strateji\_Belgesi\_2016-2021\_.pdf [↑](#footnote-ref-37)
37. İBB Kültür Varlıkları Daire Başkanlığı and İstanbul Planlama Ajansı. 2020. *İstanbul Roman Çalıştayı* *2019*. İstanbul: İstanbul Metropolitan Municipality. [↑](#footnote-ref-38)
38. Even this ESMF is a framework document, the Asbestos Management Plan provided in Annex 7 can directly be implemented for any sub-project. In case of identification of sub-project specific requirements, it can easily be integrated to meet these requirements. [↑](#footnote-ref-39)
39. A “High Risk” environmental 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; and (g) hazardous materials in more than incidental quantities. It should be noted here that, as the whole Project is rated as “High Risk” in terms of social risks, subprojects with “high risk” in terms of social risks will not be non-eligible. Therefore, professional judgement will be used to identify “high risk” categorization in terms of environmental aspects during screening phase. [↑](#footnote-ref-40)
40. Tenants who will not return to their residences/workplaces are not considered as Project beneficiaries. However, these tenants will receive assistance to move to another residence/workplace. [↑](#footnote-ref-41)
41. Under this Project, the definition of the limited real right holder is related to the users who have the "usufruct" right. The usufruct right is the right to benefit (use) the whole of a real estate owned by someone else. Persons who have registered this right in the land registry are the owners of “limited real rights” and "beneficial rights" and named "owner". [↑](#footnote-ref-42)
42. Through a pre-prepared standard stakeholder engagement and grievance mechanism information form for the province level, which includes a contact phone number, e-mail address and contact address. [↑](#footnote-ref-43)
43. Standard brief memo containing the Project content and purpose [↑](#footnote-ref-44)
44. *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. It should be noted here that, as the whole Project is rated as “High Risk” in terms of social risks, sub Projects with “high risk” in terms of social risks will not be non-eligible. Therefore, professional judgement will be used to identify “high risk” categorization in terms of environmental aspects during screening phase.* [↑](#footnote-ref-45)
45. The term "Pollution" is used to refer to both hazardous and non-hazardous chemical pollutants in solid, liquid, or gaseous form and includes thermal discharge into water, emissions of short and long-lived climate pollutants, offensive odors, noise, vibration, radiation, electromagnetic energy and contains other components, such as the creation of potential visual impacts, including light [↑](#footnote-ref-46)
46. Considering that measures to promote reductions in the use of energy and raw materials, as well as local pollutant emissions, also generally promote the reduction of emissions of short- and long-lived climate pollutants, "pollution management" is defined as short- and long-lived climate pollutant emissions, unless otherwise specified in this ESS. It includes measures designed to prevent or minimize emissions of pollutants, including climate pollutants. [↑](#footnote-ref-47)