CLIMATE AND DISASTER RESILIENT CITIES PROJECT

**ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN**

FOR İZMİR PROVINCE

**August 2024**

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|  |  |
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| **List of Abbreviations** | |
| ARAAD | Transformation of Areas Under Disaster Risk [Afet Riski Altindaki Alanlarin Donusumu] |
| AFAD | Disaster and Emergency Management Presidency [Afet ve Acil Durum Yonetimi Baskanligi] |
| CDRC | Climate and Disaster Resilient Cities |
| 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 |
| GDP | Gross Domestic Product |
| GHG | Greenhouse Gas |
| GIIP | Good International Industry Practices |
| GM | Grievance Mechanism |
| GT | Government of Türkiye |
| GPS | Global Positioning System |
| IBA | Important Bird Area |
| IBRD | International Bank for Reconstruction and Development |
| ILBANK | Iller Bankasi Anonim Sirketi |
| ILO | International Labor Organization |
| IT | Information Technology |
| KBA | Key Biodiversity Area |
| KPI | Key Performance Indicator |
| LMP | Labor Management Procedures |
| 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 |
| SEA/SH | Sexual Exploitation and Abuse / Sexual Harassment |
| SEP | Stakeholder Engagement Plan |
| TMMOB | Türkiye Union of the Chambers of Architects and Engineers |
| TOKİ | Directorate of Housing Development Administration [Toplu Konut İdaresi Baskanligi] |
| ToR | Terms of Reference |
| TurkStat | Turkish Statistical Institute |
| UNCCD | United Nations Convention to Combat Desertification |
| UTP | Urban Transformation Presidency |
| WB | World Bank |
| WBG | World Bank Group |
| WHO | World Health Organization |

# 1. EXECUTIVE SUMMARY

The Climate and Disaster Resilient Cities Project[[1]](#footnote-2) (CDRC), funded by the World Bank, aims to enhance access to seismic and climate resilient housing, urban infrastructure, and services in selected provinces in Türkiye. This Project will support the Government of Türkiye (GT) in tackling the challenges related to climate and disaster resilient housing and infrastructure interventions, focusing on the provinces of Istanbul, İzmir, 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.

The Project includes five components with different implementing agencies:

* Component 1: Institutional strengthening to enable conditions for urban resilience (Urban Transformation Presidency (UTP)[[2]](#footnote-3), Ministry of Environment, Urbanization and Climate Change [MoEUCC])
* Component 2: Expanding access to resilient housing (UTP, MoEUCC)
* Component 3: Investments in climate and seismic resilient urban infrastructure (ILBANK)
* Component 4: Project Management, Monitoring and Evaluation

4a: For Component 1, 2 and 5 (UTP, MoEUCC)

4b: For Component 3 (ILBANK)

* Component 5: Contingent Emergency Response Component (CERC)

This Environmental and Social Management Plan (ESMP) for İzmir Province focuses on Component 2 of the Project and is designed to inform the stakeholders, especially those who will implement and be parties to the subprojects for resilient housing, of the potential environmental and social risks and impacts as well as the ways to address these impacts and risks in line with the Türkiye’s legislation and the World Bank’s environmental and social standards.

This province-based ESMP lays out the legal and institutional framework pertaining to the matters of environmental and social governance to which the stakeholders must adhere. It introduces environmental features of the province in terms of water resources, nature, natural protected areas, urban areas, seismicity, air quality, waste management etc. The document also provides a comprehensive overview of the socioeconomic context of İzmir and its districts as well as other social baseline conditions. This ESMP is intended to serve as a reference document for preparation of E&S governance documents such as E&S impact assessments, ESMP checklists, E&S action plans, other documents for screening, monitoring & evaluation and so on.

The CDRC involves significant construction activities which are expected to generate numerous environmental and social impacts and risks that need to be addressed. Potential environmental and social risks and impacts may arise during the implementation of demolition and reconstruction activities of risky buildings in the scope of Component 2, which finances sub-loans for rightsholders to retrofit or rebuild their housing units to be more resilient to the impacts of seismic and other hazard risks. Some of the primary environmental risks/impacts include air pollution, noise pollution, water pollution, traffic accidents due to improper signs and planning, asbestos and its related incidents and so on. On the other hand, livelihood loss, temporary and permanent displacement of owners and tenants resulting from the rehabilitation/reconstruction of housing units/workspaces, inadequate outreach and stakeholder engagement, lack of dissemination of information about or access to grievance mechanisms for workers and/or Project-affected people, exclusion of poorer or vulnerable/disadvantaged individuals/groups from Project benefits can be highlighted as some of the major social risks/impacts. This ESMP details and classifies these risks and impacts and helps users explore acceptable ways to address them.

The ESMP also outlines the mitigation measures, monitoring and administrative roles and responsibilities to be taken during Project implementation to prevent or eliminate adverse environmental and social impacts in İzmir province. This ESMP is aligned with the project’s Environmental and Social Management Framework (ESMF)[[3]](#footnote-4), Stakeholder Engagement Plan[[4]](#footnote-5) (SEP) and Labor Management Procedures[[5]](#footnote-6) (LMP) of the CDRC Project. Sub-project (building) specific ESMP Checklists will be developed, based on this ESMP, to address the potential environmental and social risks of each relevant sub-project in İzmir province.

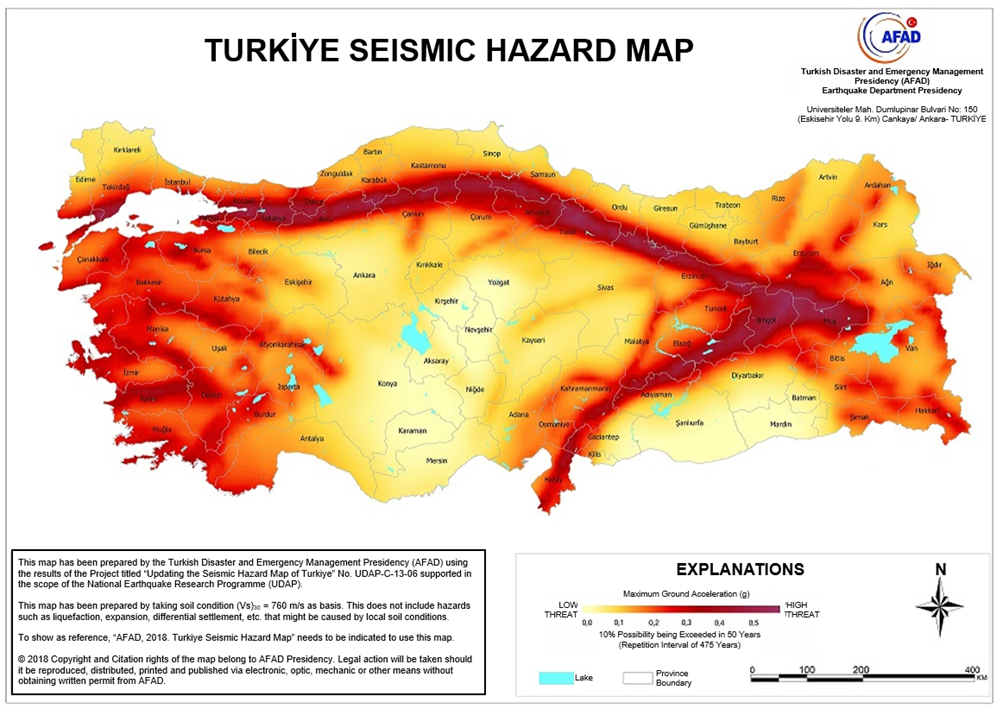
The İzmir ESMF is a living document that will be updated whenever necessary and it is the responsibility of the sub-project contractors to be fully aware of its contents. The Contractors are expected to provide relevant training to staff and ensure that measures/commitments are implemented to ensure compliance with this Plan.

## 1.1. Objectives of Climate and Disaster Resilient Cities Project

Türkiye is prone to climate and disaster risks with about 70 percent of Türkiye’s population living in high and medium-high risk seismic zones. Moreover, many settlements are increasingly exposed to flooding and extreme weather events. In 2023 alone, 1475 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 CDRC Project is to increase access to seismic and climate resilient housing, urban infrastructure and services in selected provinces in Türkiye. This Project will 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. 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 (see Figure 1). The main activity carried out by the UTP in İzmir within the scope of this project is supporting resilient housing through financing urban transformation in the province in line with the new code.

**Figure 1** Türkiye Seismic Hazard Map



**Source:** AFAD, 2018

## 1.2. Potential Sub-projects and Project Activities in İzmir

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, and
* **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.

According to the records of the Urban Transformation Presidency, in İzmir province, there are a total of 69,168 independent units in risky buildings. Among these units, 64,268 have been demolished, while 4,900 have not yet been demolished. It has been found that 52,527 of the risky buildings that were demolished have been reconstructed, while the construction of 11,741 buildings has not yet commenced. Within these independent units, some that have not yet been demolished (Type 1 and Type 2), and some that have been demolished but awaiting reconstruction activities (Type 3) are expected to constitute the potential sub-projects of the project in İzmir Province under the Component 2.

Apart from the application and implementation process of the three types of sub-projects, component 2 of CDRC involves also a lot of communication and stakeholder engagement, information dissemination and consultation activities. İzmir PMU Office, opened on March 2024, is the provincial center of these activities.

## 1.3. Project Benefits and Positive Impacts

The main potential positive environmental and social benefits and impacts of the activities and sub-projects linked to resilient housing are as follows:

* The fact that risky buildings are generally built at an earlier date than non-risky buildings cause 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, during the reconstruction of structures in certain neighbourhoods in Izmir where coal is still used for heating purposes, the heating systems can 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 rainwater 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.

# 2. LEGAL AND INSTITUTIONAL FRAMEWORK

## 2.1. Legal Framework

### 2.1.1. Legal Framework for Environmental Protection & Conservation in Türkiye

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 (MoEUCC), 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
* Urban Transformation Presidency
* 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 Türkiye'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)

The Urban Transformation Presidency established with the Presidential Decree No. 153 published in the Official Gazette No. 32341 of October 16, 2023 is affiliated to the MoEUCC. The UTP is a special budget public entity and manages the transformation of areas under disaster risk and of areas / lands where risky buildings present outside of the areas under disaster risk. UTP carries out its activities in close cooperation with Turkish Housing Development Administration (TOKİ), ILBANK and other subsidiaries of the Ministry, including local authorities. UTP is responsible for ensuring the determination of urban transformation, renewal and transfer areas, as well as the fulfilment of the determination, arrangement and valuation works & procedures on the risky structures; to carry out all kinds of maps, plans, projects, land and land arrangement processes and land consolidation regarding risky areas, reserve building areas and areas with risky structures; to carry out the determination of ownership, conciliation, expropriation, valuation of properties in the transformation practices, to come to agreement with the property owners within the framework of the procedures and projects prescribed by the Presidency, to carry out the works and procedures with regards to allocation of flat ownership, registration and transfer of development rights.

### 2.1.2. 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 (OHS) 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 Türkiye. 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

# 3. NATIONAL LAWS ON SOCIAL IMPACTS

## 3.1. National Laws on Labor & Working Conditions

The Project is expected to employ the following type of Project workers, as per ESS 2 and described in the Labor Management Procedures (LMP) of the CDRC Project, direct workers, contracted workers, community workers, primary suppliers and migrant workers. For further details on the types of workers in the Project, the numbers and characteristics of the Project Workers and scheduling of labor requirements check Subsections 2.1 through 2.4 of the LMP[[6]](#footnote-7).

**Occupational Health and Safety**

In recent years, Türkiye 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 International Labor Organization (ILO) Occupational Safety and Health Convention No. 155 of 1981. The Convention was ratified by Türkiye in 2005 together with the Occupational Health Services Convention No. 161 of 1985 and Türkiye has also been a party to the Labor Inspection Convention No. 81 of 1945 since 1951. Türkiye 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**

Türkiye is a party to numerous conventions of 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 Türkiye 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 Ministry of Labor and Social Security (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.

## 3.2. 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 Türkiye (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

**Turkish Earthquake Code**

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. Check the Regulation in question and the ESMF subsection 2.4. for further details.

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

The process related to the retrofitting/demolition/reconstruction of the risky buildings against disaster risk in Türkiye 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.

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.

*Risky Building Identification*

According to Annex-2 of the Regulation entitled 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.[[7]](#footnote-8)

*Informing the Owners*

Notifications 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.

*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 (Municipality) in case of transfer of authority by the MoEUCC.

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.

*Post Demolition Process and Implementation*

On 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 absolute majority of the stakeholders in proportion to their shares.

For further information regarding the risky building process, check the relevant parts of the subsection 2.4 of the ESMF,

**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.

*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.

*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.

*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.

*Rental Assistance and Other Supports*

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, rental assistance is given:
* For 18 months for *those who are entitled,*
* Twice the monthly rental assistance for slum owners.

*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.

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

In the urbanization process in Türkiye, 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. The buildings in slum 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 riskier 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.

## 3.3. National Laws on Land Acquisition

Within the scope of the legal framework in Türkiye, 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 (RF)[[8]](#footnote-9) prepared for this Project.

# 4. ASSESSMENT OF KEY POTENTIAL LABOR RISKS

The key labor risks related to OHS risks associated with construction activities of sub-projects such as exposure to physical, chemical and biological hazards are estimated as follows: heavy equipment use, trip and fall hazards, exposure to noise and dust, falling objects, exposure to hazardous materials and exposure to electrical hazards arising from the use of tools and machinery. Persons under the age of 18 will not be employed in the Project, as construction activities will involve hazardous work. Many workers will be exposed to OHS hazards, including but not limited to:

* Working at a height,
* Electric shocks and arc failure burns (use or faulty of electrical appliances such as cable plugs, cords, hand tools),
* Electrical works,
* Exposure to chemicals (such as paints, solvents, lubricants and fuels),
* Chainsaws and tree falls during logging,
* Traffic accidents,
* Excavation hazards,
* Lifting of heavy objects,
* Rebar accidents,
* Exposure to construction-induced air emissions (dust, silica and asbestos),
* Ergonomic hazards during construction,
* Welding hazards (smoke, burns and radiation),
* Steel erection (towers) hazards,
* Lack of awareness about OHS requirements such as the use of personal protective equipment (PPE) and safe workplace practices, and
* Use of rotating and moving equipment.

In Türkiye, overtime hours are a potential labor risk in the construction sector. Due to the limited time period of the Project and the seasonal constraint of the construction works, it is a possible risk for contracted workers to work overtime above the annual limit set by the Labor Law. Reducing this risk is described in the Terms and Conditions section.

In addition, some potential gender related risks may arise between the local community and Project workers or among the workers themselves. These risks include gender discrimination, sexual exploitation, abuse, and harassment (SEAH) in the workplace. Forced labor and child labor are prohibited under national law, and specific provisions addressing these issues are included in the LMP of the CDRC Project.

Since sub-projects will be carried out in urban areas, majority of the labor will be recruited from Project provinces and thus sub-projects are not expected to have labor influx risks. The majority of the workforce will be Turkish citizens. However, if other labor risks arise during Project implementation, the Project Management Unit (PMU) will develop procedures, in compliance with both the national legislation and LMP of the CDRC Project, to prevent further impact.

# 5. OVERVIEW OF LABOR LEGISLATION: TERMS AND CONDITIONS

According to the Labor Law No. 4857, the main categories of employment contracts are:

* Fixed-term (fixed- duration) and Indefinite-term (undetermined duration) Employment Contracts
* Full-Time and Part-Time Employment Contracts,
* Permanent and Temporary Employment Contracts,
* Seasonal Employment Contracts (Indefinite-Definite Duration),
* Work-on-Call Contracts,
* Employment Contracts with or without Trial Periods,
* Team Employment Contracts.

## 5.1. Wages and Deductions

Article 32 of the Labor Law No. 4857 defines wages in general as “the amount provided to a person by the employer or third parties in exchange for a job and paid in money”. Without discrimination, every worker has the right to be paid for the work he/she conducts. A worker’s salary cannot be lower than the minimum wage set by the state. There is a national minimum wage that applies to all workers in Türkiye. According to Article 39 of the Labor Law; minimum limits of wages are determined by the relevant commission of the Ministry of Labor and Social Security no later than every two years.

## 5.2. Working Hours

According to the Labor Law No. 4857; in general, the working time is a maximum of forty-five hours per week. Unless otherwise agreed, this period is applied by dividing it equally into the working days of the week in workplaces.

## 5.3. Rest Breaks

Workers are allowed to rest for at least twenty-four hours (weekly rest day) uninterrupted in a seven-day period, provided that they have worked up to 45 hours on the days before the weekly rest day.

## 5.4. Leave

According to Article 53 of the Labor Law, workers who have served at least one year in the workplace, including the trial period, are granted annual paid leave. The duration of the workers' annual paid leave is;

* If the service period is between one and five years, fourteen days (including five),
* Twenty days if more than five years and less than fifteen years,
* Twenty-six days (including fifteen) if fifteen years or more.

The annual paid leave duration cannot be less than twenty days for workers who are over the age of fifty. The provisions of this Law regarding annual paid leave do not apply to workers, working in seasonal or other jobs lasting less than one year in nature.

## 5.5. Overtime Work

According to Article 41 of the Labor Law; overtime work is working more than forty-five hours per week limit regulated within the framework of the conditions written in the law. Worker consent is required for overtime work.

Pregnant women and breastfeeding mothers cannot be required to do overtime work.

## 5.6. Labor Disputes

Under the Labor Law, employers can terminate contracts in two ways: (i) to give a valid reason (Articles 18-19) or (ii) termination with a valid reason (Article 25). If the contract of a worker with at least six months of seniority in a workplace with at least 30 employees is terminated, the worker may benefit from certain protections under the Labor Law. In order to terminate the employment contract effectively, the worker must be given a written notice and the legal notice periods must be followed. However, in some cases, employers may terminate the employment relationship for a fair reason (for health reasons, immoral, dishonorable or malicious behavior or other similar behavior, force majeure). In these cases, the employer is not obliged to comply with the legal notice periods and may terminate immediately.

National labor legislation contains provisions that allow workers to resolve disputes where there is a dispute between employer and worker about the essential terms and conditions of an employment contract or other aspects of work. Such disputes will be resolved in accordance with the Law on Mediation in Civil Disputes No. 6325 and Article 20 of the Labor Law No. 4857.

For further details about the labor legislation and its implementation, check the Project’s LMP Section 4.

## 5.7. International Agreements & Conventions

Türkiye 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 (Türkiye: 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) (Türkiye: O.G. No. 17996 of 23.3.1983)

**Biodiversity**

* Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (Türkiye: 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 (Türkiye 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)

### 5.7.1. 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**

This standard does not apply to the MoEUCC but to ILBANK, acting as a Financial Intermediary, which will be implementing Component 3 and 4b of the Project. ILBANK also has prepared their Environmental and Social Commitment Plan (ESCP), ESMF, RF and SEP specific to Component 3 and 4. ILBANK also has established its Environmental and Social Management System (ESMS).

**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.

# 6. ENVIRONMENTAL & SOCIAL BASELINE CONDITIONS FOR İZMİR PROVINCE

This section outlines some of the environmental and social baseline conditions for İzmir Province, where the CDRC Project will be implemented. The environmental baseline details the province's water resources, natural protected areas, urban regions, seismic activity, air quality, and waste management. The social baseline describes the prevailing social conditions in the province like the demographic situation including information on vulnerable groups, Roma and Jewish population, Syrians under temporary protection, education and socioeconomic level and cultural heritage of the province and its districts. The baseline presents relevant issues for specific investments in İzmir Province under the CDRC Project Component that is financed by MoEUCC.

## 6.1. Environmental Baseline Conditions

### 6.1.1. Water Resources and Potential of İzmir Province

İzmir Province is a province located in the Aegean Region on the coastline of Western Anatolia. Its border neighbors are Balıkesir, Manisa and Aydın provinces. Its borders lie between 370 45' and 390 15' north latitudes and 260 15' and 280 20' east longitudes. The province has a surface area of 12.012 km2 and has 30 districts in total. It is located in a geography with an altitude of up to 2159 m starting from sea level.

#### 6.1.1.1. Surface waters

###### 6.1.1.1.1 Rivers

The Küçük Menderes, Bakırçay and Gediz rivers are the most important rivers of the Aegean Region and the İzmir province. Important tributaries of the Gediz River are Nif, Murat, Kum, Medar, Selendi, Alaşehir, Demirci, Yiğitler Stream, Ahmetli Stream, Deliiniş Stream, Sarma Stream, Tabak Stream, Dikendere, Kunduz Stream, Savanda Stream, Çataldere, Derbent and Gördes streams. The important settlement centers in the basin, which falls within the borders of İzmir, Manisa and Uşak provinces, are Manisa Province center and Foça, Menemen, Kemalpaşa, Turgutlu, Salihli, Demirci, Alaşehir and Gediz district centers. The important tributaries of Küçük Menderes River are Rahmanlar Stream, Falaka Stream, Pirinççi Stream, Ilıcadere, Kiraz Stream, Kızılkaya Stream, Ağlık Stream, Künk Stream, Vakıflar Stream, Uladı Stream and Aktaş Stream. Within the borders of Küçük Menderes Basin, there are district centers such as Seferihisar, Torbalı, Selçuk, Tire and Ödemiş. Bakırçay is a river flowing in Manisa and İzmir provinces. A small part of the Bakırçay Valley, which starts east of Gelenbe in Kırkağaç District of Manisa Province, lies within the Manisa Province. The important tributaries of Bakırçay are İlyadere, Yortanlıdere, Geyiklidere, Himmetdere, Levent Stream, Kırkgeçit, Galinos Stream, Cumalıdere, Ilıcadere, Kocadere, Keçikaya Stream and Karader.

###### 6.1.1.1.2. Natural Lakes, Ponds

There are more than 3 natural lakes within the borders of İzmir province, including small lakes in the mountains. The largest lake is Gölcük Lake, located in the Ödemiş district. The second largest lake is Lake Belevi, which is not a deep lake. As the third largest lake, we can define Karagöl within the borders of İzmir Central district. Apart from natural lakes, there are 13 dam lakes within the borders of our province. The dam lakes can be listed as follows; Kavakdere, Kutlu Aktaş, Güzelhisar, Tahtalı, Beydağ, Seferihisar, Kestel, Balçova, Çaltıkoru, Yortanlı, Ürkmez, Burgaz, Bademli Dam lakes.

#### 6.1.1.2. Ground Water

Within the borders of İzmir province, groundwater is used for drinking water, industrial water and agricultural irrigation purposes.

**Table 1** Underground Water Resources (İZSU, 2022)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of Facility** | **Share in groundwater resources (%)** | **Distribution Ratios to All Sources (%)** | **Capacity (m³/yıl)** | **Number of Active Wells** |
| Sarıkız Derinkuyuları | 18,28 % | 9,79 % | 45.000.000 | 37 |
| Göksu Derinkuyuları | 42,44 % | 22,72 % | 63.000.000 | 22 |
| Menemen-Çavuşköy Derinkuyuları | 13,74 % | 7,35 % | 25.000.000 | 25 |
| Halkapınar Derinkuyuları | 23,73 % | 12,70 % | 45.000.000 | 17 |
| Pınarbaşı Derinkuyuları | 0,90 % | 0,48 % |  | 2 |
| Buca ve Sarnıç Derinkuyuları | 0,91 % | 0,49 % |  | 4 |
| Diğer Yeraltı su Kaynaklarından Elde Edilen su Miktarı | 0,00 % | 0,00 % |  | 1415 |
| Toplam | 100 % | 53,53 % | 178.000.000 | 1522 |

### 6.1.2. Current Status of Waste Water in İzmir Province

Below are the wastewater treatment plants in operation in İzmir province, their capacities and the population benefiting from them.

**Facilities and Wastewater Treatment Quantities**

Within the scope of wastewater treatment services carried out by the Wastewater Treatment Department, 66 wastewater treatment plants with a daily treatment capacity of 949,848 m3 are operated, including 23 advanced biological, 37 biological and 6 natural wastewater treatment plants that treat at European Union standards.

A total of 278,531,502 m3 of wastewater was treated at the wastewater treatment plants in operation in 2019.

**Table 2** Wastewater Treatment Plants In İzmir Province

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Facility Name | District | Capacity (m3/day) | Year of Operation / Takeover | Treatment Method | Amount of Wastewater Treated in 2019 |
| (m3/year) |
| 1 | Cigli WWTP | Cigli | 604.800 | 2000 | Advanced Biological | 190.670.918 |
| 2 | Teleferik WWTP | Balçova | 120 | 2015 | Activated Sludge Package(SBR) | 21.900 |
| 3 | Menemen WWTP | Menemen | 21.600 | 2010 | Advanced Biological | 5.616.403 |
| 4 | Turkelli WWTP | Menemen | 3.000 | 2017 | Advanced Biological | 523.718 |
| 5 | Villakent East WWTP\* | Menemen | 250 | 2015 | Activated Sludge Package | - |
| 6 | Villakent West WWTP | Menemen | 250 | 2015 | Activated Sludge Package | - |
| 7 | Cukurkoy WWTP | Menemen | 200 | 2014 | Natural Treatment | 49.000 |
| 8 | Kemalpasa WWTP | Kemalpasa | 12.960 | 2010 | Advanced Biological | 3.604.628 |
| 9 | Halilbeyli Village WWTP | Kemalpasa | 1.000 | 2007 | Activated Sludge | 116.524 |
| 10 | Aliaga WWTP | Aliaga | 21.600 | 2010 | Advanced Biological | 3.632.176 |
| 11 | Hacıömerli Village WWTP | Aliaga | 250 | 2008 | Biodisk | 94.300 |
| 12 | Çıtak Village WWTP | Aliaga | 200 | 2019 | Activated Sludge | 49.050 |
| 13 | Foça WWTP | Foça | 9.763 | 2008 | Advanced Biological | 1.765.090 |
| 14 | Yenifoça WWTP | Foça | 10.000 | 2017 | Advanced Biological | 1.271.746 |
| 15 | Gerenkoy WWTP | Foça | 2.607 | 2020 | Advanced Biological | - |
| 16 | Ilipinar Village WWTP | Foça | 130 | 2018 | Activated Sludge Package (SBR) | 47.450 |
| 17 | Kozbeyli Village WWTP | Foça | 500 | 2007 | Activated Sludge | 39.500 |
| 18 | Bağarası Village WWTP | Foça | 2.100 | 2008 | Activated Sludge | 231.284 |
| 19 | Bergama WWTP | Bergama | 14.304 | 2014 | Advanced Biological | 1.236.932 |
| 20 | Dagestan Village WWTP | Bergama | 100 | 2015 | Activated Sludge Package | 36.700 |
| 21 | Aşağıkırıklar Village WWTP | Bergama | 200 | 2014 | Activated Sludge Package | 73.400 |
| 22 | Terzihaliller Village WWTP | Bergama | 100 | 2015 | Activated Sludge Package | 36.700 |
| 23 | Karaveliler Village WWTP | Bergama | 300 | 2015 | Activated Sludge Package | 110.100 |
| 24 | Suleymanli Village WWTP | Bergama | 100 | 2015 | Activated Sludge Package | 36.700 |
| 25 | Çandarlı WWTP | Dikili | 15.204 | 2014 | Advanced Biological | 1.474.120 |
| 26 | Bademli WWTP | Dikili | 450 | 2014 | Activated Sludge | 164.250 |
| 27 | Salihler Village WWTP | Dikili | 1.000 | 2015 | Activated Sludge | 365.000 |
| 28 | Southwest WWTP | Narlidere | 21.600 | 2001 | Advanced Biological | 8.527.646 |
| 29 | Gödence Village WWTP | Seferihisar | 250 | 2010 | Activated Sludge package | 40.000 |
| 30 | Urla WWTP | Urla | 21.600 | 2009 | Advanced Biological | 6.654.385 |
| 31 | IZTECH A.A.T. | Urla | 2.250 | 2008 | Activated Sludge | 290.168 |
| 32 | Seferihisar WWTP | Seferihisar | 10.800 | 2010 | Advanced Biological | 4.348.242 |
| 33 | Doganbey WWTP | Seferihisar | 25.000 | 2013 | Advanced Biological | 4.775.970 |
| 34 | Ozdere WWTP | Meander | 25.000 | 2013 | Advanced Biological | 5.019.204 |
| 35 | Basin WWTP | Meander | 21.600 | 2004 | Advanced Biological | 5.697.636 |
| 36 | Ayrancilar WWTP | Torbali | 6.912 | 2010 | Advanced Biological | 2.923.200 |
| 37 | Torbali WWTP | Torbali | 21.600 | 2010 | Advanced Biological | 8.105.114 |
| 38 | Karakuyu Village WWTP | Torbali | 320 | 2020 | Activated Sludge package | - |
| 39 | Helvaci Village WWTP | Torbali | 100 | 2002 | Activated Sludge package | 30.040 |
| 40 | Çakırbeyli Village WWTP | Torbali | 200 | 2007 | Natural Treatment | 104.730 |
| 41 | Korucuk Village WWTP | Torbali | 200 | 2007 | Natural Treatment | 118.870 |
| 42 | Selcuk WWTP | Selcuk | 10.200 | 2008 | Natural Treatment | 3.075.460 |
| 43 | Çamlık Village WWTP | Selcuk | 225 | 2014 | Activated Sludge | 205.040 |
| 44 | Gökçealan Village WWTP | Selcuk | 300 | 2014 | Activated Sludge | 232.621 |
| 45 | Sirince Village WWTP | Selcuk | 200 | 2014 | Activated Sludge | 195.360 |
| 46 | Bayindir WWTP | Bayindir | 6.912 | 2009 | Advanced Biological | 1.227.775 |
| 47 | Haskoy WWTP | Mine Minefields | 2.000 | 2017 | Advanced Biological | 573.817 |
| 48 | Zeytinova Village WWTP | Mine Minefields | 500 | 2014 | Activated Sludge | 151.236 |
| 49 | Yusuflu Village WWTP\* | Mine Minefields | 100 | 2015 | Activated Sludge | - |
| 50 | Çeşme WWTP | Fountain | 21.900 | 2014 | Advanced Biological | 6.618.887 |
| 51 | Reisdere Village WWTP | Fountain | 150 | 2014 | Activated Sludge Package(SBR) | 111.600 |
| 52 | Bodrum WWTP | Karaburun | 300 | 2014 | Activated Sludge package | 109.300 |
| 53 | Kuyucak WWTP | Karaburun | 300 | 2014 | Activated Sludge package | 109.300 |
| 54 | Eğlenhoca Village WWTP | Karaburun | 300 | 2014 | Activated Sludge | 108.000 |
| 55 | Kösedere Village WWTP | Karaburun | 300 | 2014 | Activated Sludge | 108.000 |
| 56 | Inecik Village WWTP | Karaburun | 100 | 2014 | Activated Sludge | 36.000 |
| 57 | Sarpincık Village WWTP | Karaburun | 100 | 2014 | Activated Sludge | 36.000 |
| 58 | Saip Village WWTP | Karaburun | 300 | 2014 | Activated Sludge | 108.000 |
| 59 | Ambarseki Village WWTP | Karaburun | 100 | 2014 | Activated Sludge | 36.000 |
| 60 | Hasseki Village WWTP | Karaburun | 100 | 2014 | Activated Sludge | 36.000 |
| 61 | Yaylakoy Village WWTP | Karaburun | 100 | 2014 | Activated Sludge | 36.000 |
| 62 | Ödemiş WWTP | Ödemiş | 15.765 | 2014 | Advanced Biological | 4.924.804 |
| 63 | Hamamkoy WWTP | Ödemiş | 150 | 2014 | Activated Sludge package | 54.600 |
| 64 | İlkkurşun Village WWTP | Ödemiş | 100 | 2014 | Activated Sludge package | 36.500 |
| 65 | Kizilcaavlu Village WWTP | Ödemiş | 100 | 2014 | Activated Sludge package | 36.500 |
| 66 | Cherry A WWTP | Cherry | 2.000 | 2014 | Activated Sludge | 730.000 |
| 67 | Tire WWTP | Tire | 6.976 | 2018 | Advanced Biological | 1.512.908 |
| 68 | Yenisehir Village WWTP | Cherry | 350 | 2014 | Natural Treatment | 127.750 |
| 69 | Kırtepe Village WWTP | Tire | 250 | 2014 | Natural Treatment | 91.250 |

\*In 2019, Kozbeyli Village, Yusuflu Village and Villakent East WWTP operations were terminated in the first 6 months of 2020.

Source <https://www.izsu.gov.tr/tr/TesisDetay/1/32/2?AspxAutoDetectCookieSupport=1>

**Table 3** Some Wastewater Data For İzmir Province

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Years | Amount of Wastewater Discharged from the Network by Receiving Media (Thousand M3/Year) | Wastewater Treatment Plant Capacity (Thousand M3/Year) | Ratio of municipal population served by wastewater treatment plant to total municipal population (%) | Daily Per Capita Amount of Wastewater Discharged in Municipalities (Liters/Person-Day) |
| 2016 | 301087.0 | 338560.0 | 100 | 195 |
| 2018 | 276873.0 | 348015.0 | 99 | 176 |
| 2020 | 279135.0 | 348737.0 | 99 | 174 |
| 2022 | 295369.0 | 348715.0 | 100 | 181 |

Source: https://biruni.tuik.gov.tr/medas/?locale=tr

### 6.1.3. İzmir Province Surface Water Resources and Groundwater Resources Status

**Table 4** Groundwater Resources Of 11 Districts in The Former Metropolitan Area Of İzmir Province

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Facility name | Year of entry into service | Capacity (DSİ Quota) (m3/year) | Number of active wells | Description |
| Halkapinar deep wells | 1897 | 45.000.000 | 19 | It is located within the urban area. |
| Goksu deep wells | 1988 | 63.000.000 | 22 | Located in muradiye neighborhood of yunusemre district, Manisa province |
| Sarikiz deep wells | 1990 | 45.000.000 | 35 | It is located in Nuriye neighborhood of Saruhanlı district, Manisa province. |
| Menemen and Çavuşköy deep wells | 1976 | 25.000.000 | 30 | Menemen (20 deep wells) and Çavuşlu wells (10 deep wells) |
| Pınarbaşı, buca and sarnıç deep wells | 1990/1972 | - | 6 | It is located within the urban area. |

Source: https://www.izsu.gov.tr/YuklenenDosyalar/Dokumanlar/03012020\_095712\_sp\_2020-2024.pdf

**Table 5** Underground Water Resources Drinking Water Treatment Plants

|  |  |  |  |
| --- | --- | --- | --- |
| Facility name | Year of entry into service | Capacity (m3/year) | Description |
| Halkapinar arsenic drinking water treatment plant | 2009 | 31536000 | The plant, which treats raw water from Halkapınar deep wells, consists of 22 filter tanks and chlorination units. |
| Çullu arsenic drinking water treatment plant | 2009 | 94608000 | The plant, which treats raw water from Göksu and Sarıkız deep wells, consists of 32 filters, chlorination, sludge thickening and dewatering (decanter) units. |
| Menemen arsenic drinking water treatment plant | 2009 | 18921600 | The plant, which treats raw water from Menemen and Çavuşköy deep wells, consists of 14 filter tanks and chlorination units. |
| Menemen K5 wells arsenic drinking water treatment plant | 2018 | 7884000 | The plant, which treats raw water from Menemen K5 deep wells, consists of 6 filter tanks, chlorination, sludge thickening and dewatering (decanter) units. |

Source: https://www.izsu.gov.tr/YuklenenDosyalar/Dokumanlar/03012020\_095712\_sp\_2020-2024.pdf

**Table 6** Surface Water Resources

|  |  |  |  |
| --- | --- | --- | --- |
| Facility name | Year of entry into service | Capacity (m3/year) | Description |
| tahtali dam | 1997 | 306.650.000 | Tahtalı Dam is the most important surface water source in İzmir. The dam is located on the Tahtalı Creek, 5 kilometers east of the town of Gümüldür, 40 kilometers south of İzmir. The Tahtalı Dam was constructed by the State Hydraulic Works and completed in 1996 (including the water transferred to Menderes District along with 11 other districts). |
| Balçova dam | 1984 | 7.759.000 | The Balçova Dam, located on the Ilıca Stream 3 kilometers south of the Ilica facilities in Balçova District, is for drinking water purposes. The dam, the design and construction of which was carried out by the State Hydraulic Works, was completed in 1980 and started to supply drinking water to the city of İzmir in 1984. |
| Gördes dam | 2009 | 473.000.000 | Gördes Dam, located in Manisa province, was completed in January 2009 and started to hold water. Gördes Dam is planned to supply 59 million m3 of water to İzmir annually. After Tahtalı Dam, Gördes Dam is the largest surface water source that will provide drinking water to İzmir. This source will be included in the water system of İzmir province following the completion of İzmir Transmission Line Section 3 (Kavaklıdere-Buca-Bornova). |
| Guzelhisar dam | 1993 | 155.350.000 | Located on Güzelhisar Stream 12 kilometers east of Aliağa District center, the dam was built to meet the industrial water demand of PETKİM Petrochemical plants and was completed in 1982 and started to supply water to PETKİM facilities. According to the protocol between PETKİM and DSİ regulating the use of water from the dam, the Aliağa Drinking Water Treatment Plant, which was built by Iller Bank in 1993, receives water from the Güzelhisar Dam. The Aliağa Drinking Water Treatment Plant was transferred to the General Directorate of IZSU in 2007. |
| Ürkmez dam | 1990 | 8.625.000 | Located 3 kilometers north of the town of Ürkmez in Seferihisar district, the dam on Ürkmez Creek is for irrigation and drinking water purposes. The dam, the design and construction of which was carried out by the State Hydraulic Works, was completed in 1990 and started to provide irrigation water to the Ürkmez plain. In 2004, after the completion of the drinking water treatment facilities built by Iller Bank, it started to provide drinking water to Ürkmez. Ürkmez Drinking Water Treatment Plant was transferred to IZSU General Directorate in 2007. |
| Kutu aktas dam | 2000 | 16.480.000 | Kutlu Aktaş Dam, located 10 kilometers northeast of Çeşme district center and 2.5 kilometers east of Alaçatı, is for drinking water purposes. The dam, the design and construction of which was carried out by the State Hydraulic Works, was put into service in 2000. |

Source: https://www.izsu.gov.tr/YuklenenDosyalar/Dokumanlar/03012020\_095712\_sp\_2020-2024.pdf

**Table 7** Surface Water Resources Drinking Water Treatment Plants

|  |  |  |  |
| --- | --- | --- | --- |
| Facility name | Year of entry into service | Capacity (m3/year) | Description |
| Tahtali Drinking Water Treatment Plant | 1997 | 189.800.000 | The plant, which has a conventional treatment type, treats water conveyed through the pumping station located at Tahtalı Dam. The plant consists of aeration, rapid mixing, clarifiers, rapid sand filters, chlorination, sludge thickening and dewatering (filter press) units. |
| Balçova drinking water treatment plant | 1984 | 25.228.800 | The plant has a physical treatment type and treats the raw water coming from Balçova Dam. The plant consists of aeration, pre-chlorination, rapid sand filters, filtered water tank and final chlorination units. |
| Sarıkız drinking water treatment plant | 2011 | 49.275.000 | The plant has conventional treatment type and treats raw water from Gördes Dam. The plant consists of aeration, rapid mixing, slow mixing, clarifiers, rapid sand filters, chlorination, sludge thickening and dewatering, filtered water tank and chlorine contact tank units.  Sarıkız Drinking Water Treatment Plant has been inactive since June 2015. Gördes Dam, whose maintenance and repair works were completed by the General Directorate of State Hydraulic Works, started to hold water as of December 2016, and the plant will be commissioned after the dam reaches sufficient water level. |
| Aliaga drinking water treatment plant | 1993 (Transfer to IZSU 2007) | 2.207.520 | The plant has conventional treatment type and treats raw water from Güzelhisar Dam. The plant consists of aeration, rapid mixing, slow mixing, clarifier, rapid sand filters, chlorination, sludge thickening and dewatering (sludge drying beds) units. |
| Ürkmez drinking water treatment plant | 2004 (Transfer to IZSU 2007) | 3.437.424 | The plant has a conventional treatment type and can be supplied with water from both Ürkmez Dam and Tahtalı Dam. The plant consists of aeration, rapid mixing, slow mixing, clarifier, rapid sand filters, chlorination, sludge thickening and dewatering (sludge drying beds) units. |
| Cesme (alacati) drinking water treatment plant | 2000 (Transfer to IZSU 2014) | 9.460.800 | The plant has conventional treatment type and treats raw water from Kutlu Aktaş Dam. The plant consists of aeration, rapid mixing, slow mixing, clarifier, rapid sand filters, chlorination, sludge thickening and dewatering (sludge drying beds) units. |
| Ödemiş drinking water treatment plant | 2011 (Transfer to IZSU 2014) | 6.793.380 | The plant has conventional treatment type and treats raw water from Pıtrak and Suçıktı springs. The plant consists of aeration, rapid mixing, slow mixing, clarifiers, rapid sand filters, chlorination, sludge thickening and dewatering (filter press) units. |
| Kavaklidere drinking water treatment plant |  | 131.400.000 | Kavaklıdere Drinking Water Treatment Plant The city's largest drinking water treatment plant after Tahtalı was built on an area of 150 thousand square meters in Bornova's Kavaklıdere neighborhood. The Kavaklıdere Treatment Plant will supply 59 million cubic meters of water annually to İzmir from the Gördes Dam, which has a water holding capacity of 120 million cubic meters, and will meet the water needs of 1 million people annually. Kavaklıdere Drinking Water Treatment Plant; inlet flow measurement room, inlet aeration structure, pre-ozone contact tank, rapid mixing tank, slow mixing tanks, clarifier structure, rapid sand filters, filter washing water tank, rapid sand filter machine block, by-pass valve room, mixing structure, chlorine contact tank, clean water tank, treated water flow measurement room, filter backwash water holding tank, sludge thickening tanks distribution structure, sludge thickening tanks, sludge thickening tanks collection structure, neutralization tank, pre-ozone generator building, chemistry building, chlorine building, sludge dewatering building, transformer generator building, heat center, administration building, entrance security building. |

Source: https://www.izsu.gov.tr/YuklenenDosyalar/Dokumanlar/03012020\_095712\_sp\_2020-2024.pdf

**Table 8** Package Drinking Water Treatment Plants

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | District | Settlement Location | Type. | Flow Rate (Lt/Sec) |
| 1 | Aliaga | Yerleşim Yeri | Arsenic | 3,5 |
| 2 | Yukarı Şehit Kemal | Arsenic | 7 |
| 3 | Bozköy | Arsenic | 3,5 |
| 4 | Bayındır | Samurlu | Iron | 1,4 |
| 5 | Lütuflar | Iron/Manganese | 8 |
| 6 | Çınardibi | Iron/Manganese/Arsenic/Antimony | 3 |
| 7 | Dernekli | Iron/Manganese | 3 |
| 8 | Çamlıbel | Iron/Manganese | 3 |
| 9 | Söğütören | Iron/Manganese | 5 |
| 10 | Yusuflu | Iron/Manganese | 8 |
| 11 | Bergama | Kızıloba | Arsenic/Iron | 1,5 |
| 12 | İneşir | Arsenic/Selenium | 8 |
| 13 | Aşağıkırıklar | Arsenic/Iron | 1,4 |
| 14 | Örenli | Iron | 0,7 |
| 15 | Eğiller | Iron/Manganese | 5 |
| 16 | Pınarköy | Arsenic | 10 |
| 17 | Yenikent | Arsenic | 6 |
| 18 | Bornova | Kurfallı | Arsenic | 4 |
| 19 | Yakaköy 1 | Arsenic | 8 |
| 20 | Yakaköy 2 | Arsenic/Iron/Manganese | 3 |
| 21 | Foça | Çiçekli | Arsenic | 8 |
| 22 | Kemalpasa | Ilıpınar | Iron/Manganese | 5 |
| 23 | Kınık | Kamberler | Arsenic | 3 |
| 24 | Arpaseki | Arsenic/Iron | 1,5 |
| 25 | Bağalan | Arsenic | 1,2 |
| 26 | Cumalı | Arsenic | 4 |
| 27 | Menderes | Taştepe | Iron/Manganese | 15 |
| 28 | Özdere-Çukuraltı Ç3p Kuyusu | Iron/Manganese | 15 |
| 29 | Menemen | Özdere-Çukuraltı Ç4pdkuyusu | Arsenic | 10 |
| 30 | Seyrek Deposu | Arsenic | 4 |
| 31 | Bozalan | Arsenic | 14 |
| 32 | Musabey, Çavuş Ve Kesik | Nitrate | 5 |
| 33 | Ödemiş | Buruncuk | Arsenic/Iron | 3 |
| 34 | Emirli | Arsenic/Iron | 15 |
| 35 | Seferihisar | Birgi | Iron/Manganese | 8 |
| 36 | Tire | Eski Orhanlı Kuyusu | Iron/Manganese | 5 |
| 37 | Yamandere | Iron/Manganese | 3 |
| 38 | Dallık | Iron/Manganese | 3 |
| 39 | Torbali | Akmescit | Iron/Manganese | 3 |
| 40 | Helvacı 1 | Iron/Manganese | 8 |

### 6.1.4. Nature

#### 6.1.4.1. Flora

Within the scope of İzmir Province Biodiversity Inventory and Monitoring Project, a list was compiled by scanning Flora of Turkey, Turkish Plant Data Service (TÜBIVES), flora studies, theses, projects and floristic publications in İzmir. Together with the additional volumes of Flora of Turkey (Volumes 1-11) (Davis 1965-1985; Davis et al. 1988; Güner et al. 2000), the number of species identified in İzmir is 1532 and 132 of them are endemic. According to the literature data obtained from master's and doctoral theses and floristic research studies carried out in İzmir province after the Flora of Turkey, a total of 1,938 taxa including Pteridophyta, Angiosperm and Gymnosperm elements are distributed in İzmir province (Aksoy, 1992; Bekat, and Seçmen, 1982; Dikicioğlu, 2005; Durmuşkahya, 2005 Ersoy, 1999; Gemici and Seçmen 1983; Görk et al, 1989; Güngör, 2012; Güvensen, 1994; Kahvesi, 2012; Kaya and Nemli, 2003; Koçyiğit et al., 2014; Oluk, 1994; Pakfiliz, 1995; Seçmen et al., 1983; Seçmen, 1976; Şenol, 2000; Şenol, 2006; Şenol, et al. 2011; Yıldırım and Şenol, 2010; Yıldırım and Şenol, 2011; Yıldırım, 2004; Yıldırım, 2010; Yıldırım, 2013). Of these, 158 were determined to be endemic.

#### 6.1.4.2. Fauna

Mammals, Determinations Based on Literature (Taken from the data of İzmir Province Biological Diversity Inventory and Monitoring Project conducted by the İzmir Branch Directorate of the 4th Regional Directorate of the Ministry of Agriculture and Forestry). According to literature data, 54 small and large mammal species from 23 families are likely to be distributed in İzmir Province. According to IUCN data, 2 of these species (Myomimus roachi and Rhinolophus mehelyi) are vulnerable (VU- Vulnerable), 4 of them (Eliomys quercinus, Rhinolophus euryale, Lutra lutra and Hyaena hyaena) may be threatened (NT-Near Threatened), 1 (Nannospalax xhantodon) is data deficient (DD-Data Deficient) and 1 (Monachus monachus) is categorized as threatened (EN-Endangered).

Birds, Determinations Based on Literature (Taken from the data of İzmir Province Biological Diversity Inventory and Monitoring Project conducted by the İzmir Branch Directorate of the 4th Regional Directorate of the Ministry of Agriculture and Forestry). In İzmir province, there are 277 species belonging to 51 families in the literature.

Reptiles, Detections Based on Literature (Taken from the data of İzmir Province Biological Diversity Inventory and Monitoring Project commissioned by the İzmir Branch Directorate of the 4th Regional Directorate of the Ministry of Agriculture and Forestry) The province of İzmir is recognized as the origin of Herpetology (Amphibian and Reptile Science) in Anatolia. Researches and many educational trips have been made to various parts of the province. According to literature data, a total of 32 reptile species, including 3 turtles, 14 lizards and 15 snakes, are distributed in İzmir Province (Baran and Atatür, 1998; Baran et al., 2012, Skourtanioti, et al., 2016).

### 6.1.5. Protected Nature

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

**Table 9** Internationally Recognized Areas within Provinces and Relevant Triggering Species

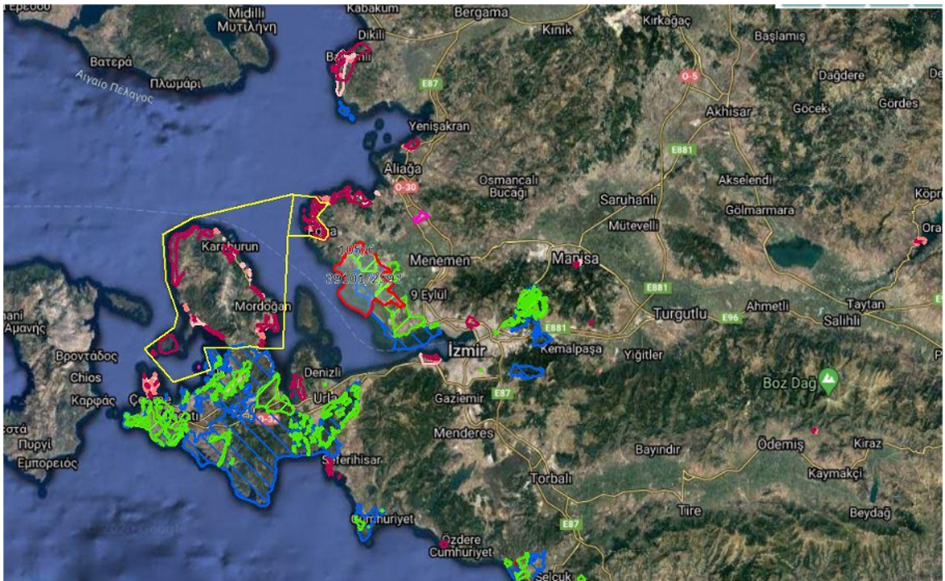
| **Province** | **Internationally Recognized Area** | **Triggering Species** |
| --- | --- | --- |
| İzmir | Bakircay Delta KBA (IBA) | Fish, reptiles |
| İzmir | Foca Peninsula KBA (IBA) | Marine mammals (Mediterranean Monk Seal), reptiles |
| İzmir | Gediz Delta KBA (IBA) | Migratory birds, fish, marine mammals (Mediterranean Monk Seal), reptiles (marine & terrestrial) |
| İzmir | Cicek Islands KBA (IBA) | Marine mammals (Mediterranean Monk Seal) |
| İzmir | Karaburun and Ildir Strait Islands KBA (IBA) | Migratory birds, marine mammals (Mediterranean Monk Seal) |
| İzmir | Alacati KBA (IBA) | Migratory birds, marine mammals (Mediterranean Monk Seal) |
| İzmir | Kizildag İzmir KBA (IBA) | Marine mammals (Mediterranean Monk Seal) |
| İzmir | Mahal Hills KBA | Fish, marine mammals (Mediterranean Monk Seal), reptiles |
| İzmir | Lesser Menderes Delta KBA (IBA) | Fish, mammals, plants, reptiles |
| İzmir | Yamanlar Mountain KBA | Fish, mammals, reptiles |
| İzmir | Nif Mountain KBA | Plants |
| İzmir | Boz Mountains KBA | Fish, invertebrates, plants |
| İzmir/Manisa | Spil Mountain KBA | Plants |

Source: <https://www.ibat-alliance.org/>; <https://www.keybiodiversityareas.org/kba-data>

### 6.1.6. Natural Protected Areas

Within the borders of İzmir Province; 21846.61 hectares of 1st Degree Natural Protected Area, 2887.03 hectares of 2nd Degree Natural Protected Area, 2530.86 hectares of 3rd Degree Natural Protected Areas, 494.33 hectares of Indefinite Natural Protected Areas, 87659.43 hectares of Qualified Natural Protected Areas, 35251.77 hectares of Sustainable Natural Protected Areas, and 4820.38 hectares of Sensitive Areas to be Definitively Protected, totaling 155490.42 hectares. (Source: www.tvksays.csb.gov.tr, 2023)

**Figure 2** İzmir Province Natural Protected Areas

Source: (https://www.says.gov.tr/savab/#/,2023)

### 6.1.7. Urban Areas

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)

The areas where the ancient cities are located in and around İzmir are determined as Archaeological Sites. There are Urban Protected Areas in Buca, Bornova, Urla, Cesme, Alacati, Seferihisar, Selcuk, Sirince, Menemen, Foca, Yenifoca and Candarli.

### 6.1.8. Seismicity

Due to the geological structure, topographic and climatic characteristics, İzmir 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 Türkiye Seismic Hazard Map (please see Figure 1), which is prepared by AFAD and published in 2019, earthquake hazard risk classification of the İzmir can be regarded as generally “high”, while Bayindir, Beydag, Kiraz, Ödemis, and Tire Districts’ relevant classification can be regarded as “medium/high”.

### 6.1.9. 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[[9]](#footnote-10) 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.

Monitoring of the particulate matter parameter in İzmir was carried out with a total of 8 fixed measurement stations in 2023. 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 İzmir in 2023

| **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 (%)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| İzmir  Aliağa | 5,95 | 120,45 | 11.01.2023 | 11.06.2023 | 34,21 | 46 | 92,33 |
| İzmir Alsancak İBB | 5,37 | 222,97 | 01.05.2023 | 03.01.2023 | 52,05 | 137 | 98,41 |
| İzmir Bayraklı İBB | 5,57 | 160,99 | 17.12.2023 | 07.11.2023 | 44,27 | 112 | 95,89 |
| İzmir Bornova İBB | 17,21 | 99,20 | 11.01.2023 | 7.11.2023 | 45,79 | 108 | 95,89 |
| İzmir Gaziemir | 10,71 | 110,42 | 26.11.2023 | 24.01.2023 | 36,92 | 46 | 92,60 |
| İzmir Güzelyalı İBB | 6,91 | 134,33 | 07.02.2023 | 07.11.2023 | 28,92 | 37 | 93,70 |
| İzmir Karşıyaka İBB | 3,17 | 88,69 | 19.01.2023 | 28.02.2023 | 30,12 | 27 | 97,53 |
| İzmir Şirinyer İBB | 10,50 | 107,64 | 27.04.2023 | 03.01.2023 | 31,90 | 35 | 97,90 |

* 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 İzmir Alsancak stations for 2023 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

### 6.1.10. Waste Management

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

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 İzmir is given in Table 11.

**Table 11** Excavated Soil Fields and Construction / Demolition Waste Recovery Facilities for İzmir Province

| **Name of The Facility** | **Activities** | **Location** | **Operated by** |
| --- | --- | --- | --- |
| Guzelbahce-Yelki-2 | Dumping / Excavated Soil Recovery / Construction & Demolition Waste Recovery | Guzelbahce District | İzmir Metropolitan Municipality |
| Kuner | Dumping | Menderes District | İzmir Metropolitan Municipality |
| Poyracik | Dumping / Excavated Soil Recovery / Construction & Demolition Waste Recovery | Kinik District | İzmir 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 |
| Guzelbahce-Yelki-2 | Dumping / Excavated Soil Recovery / Construction & Demolition Waste Recovery | Guzelbahce District | İzmir Metropolitan Municipality |
| Kuner | Dumping | Menderes District | İzmir Metropolitan Municipality |
| Poyracik | Dumping / Excavated Soil Recovery / Construction & Demolition Waste Recovery | Kinik District | İzmir 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 İzmir, 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 1. 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.

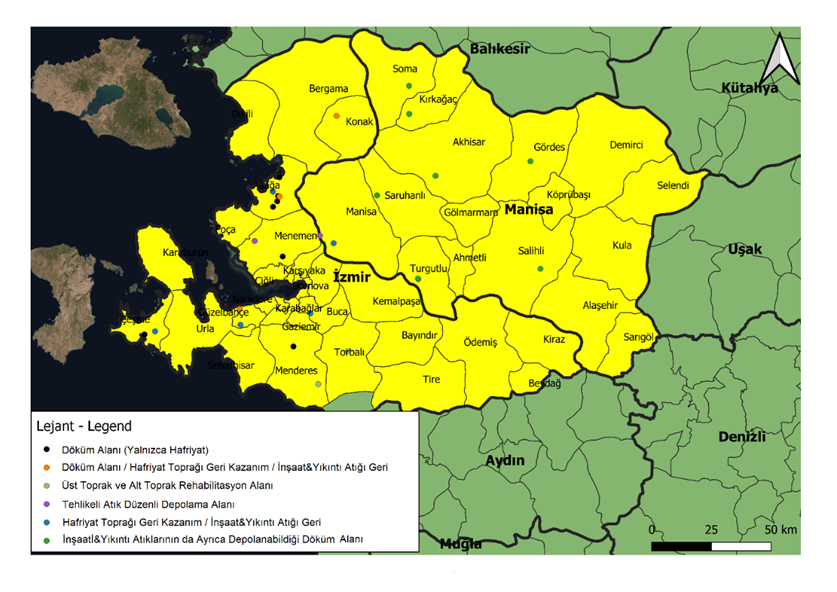
#### 6.1.10.2. Hazardous Waste Management Capacity

In İzmir, there are 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 Türkiye together with developed Organized Industrial Zones, general experience and ongoing practices regarding hazardous waste management in İzmir can be regarded as quite sufficient.

The locations of the facilities related to excavation soil and construction & demolition waste management and hazardous waste landfill facilities detailed in Section 6.1.8 are presented in the figures below:

**Figure 3.** Locations of Waste Management Facilities in İzmir



#### 6.1.10.3. 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 İzmir 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 Türkiye[[10]](#footnote-11) 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.

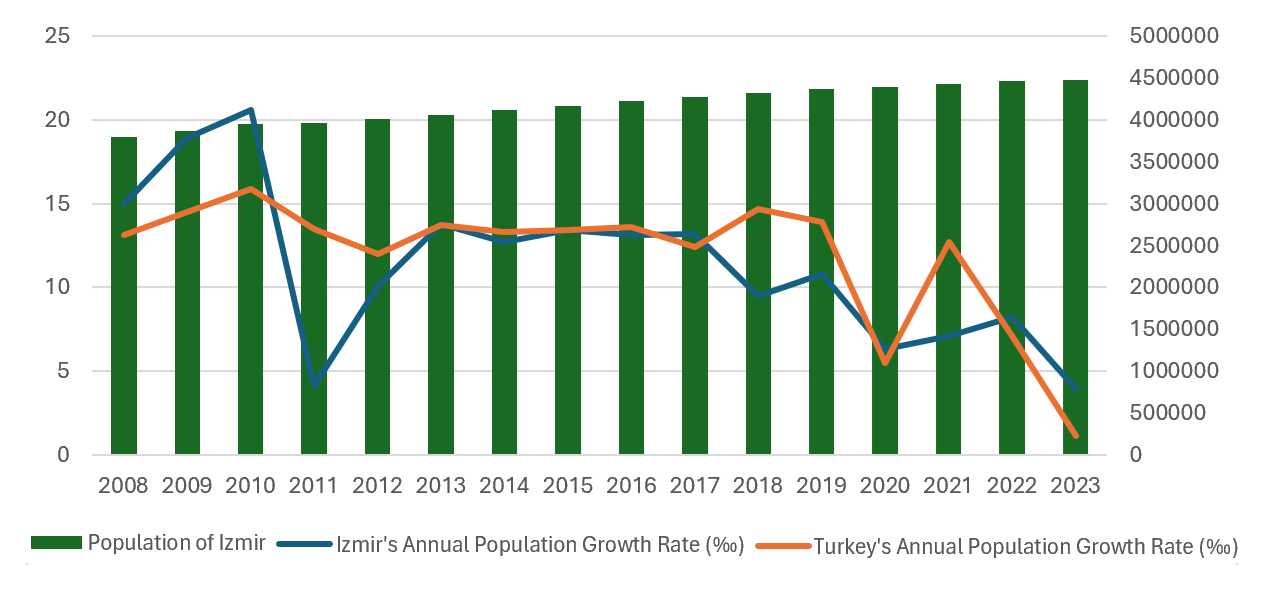
Three licensed interim storage and hazardous waste landfills in İzmir, two in Torbali and one in Aliaga, are certified within the scope of waste codes 17 06 01 (insulation materials containing asbestos) and 17 06 05 (construction materials containing asbestos).

## 6.2. SOCIAL BASELINE

### 6.2.1. İzmir Province Population Status

İzmir is the third largest city in Türkiye with its population reaching nearly 4.5 million as end of 2023. The population of İzmir, which has 30 districts in total, has increased regularly every year since 2007. İzmir's population, which was 3,739,353 in 2007, increased to 4.479.525 in 2023. 49.6% of the population is male and 50.4% is female. The population trend of İzmir is shown in Figure 4. Annual population growth rate of İzmir is below the average of Türkiye.

**Figure 4** Population Trend of İzmir



Source: TurkStat, Address Based Population Registration System, 2008-2023

When the population structure of İzmir is analyzed, it is seen that the total age dependency ratio and average household size are lower than the average of Türkiye as seen in Table 12.

**Table 12** Total Age Dependency Ratio and Average Size of Households in İzmir

| **Population** | **Türkiye** | **İzmir** |
| --- | --- | --- |
| Total age dependency ratio (%) | 46.3 | 43,2 |
| Average size of households (number) | 3,1 | 2,8 |

*Source:* TurkStat, Address Based Population Registration System, 2023

The distribution of the population of İzmir, which has a high active population and a low age dependency ratio, by age groups is given in Figure 5.

**Figure 5** The Change in the Population Pyramid of İzmir

diyagram, öykü gelişim çizgisi; kumpas; grafiğini çıkarma, çizgi, ekran görüntüsü içeren bir resim

Açıklama otomatik olarak oluşturuldu

Source: TurkStat, Address Based Population Registration System, 2007 and 2023

### 6.2.2. Education in İzmir Province

Education data of İzmir shows that, literacy and education level of İzmir is higher than the average ratio of Türkiye. Educational attainment which is the highest level of education that an individual has completed is given in Figure *6* and Figure 7. Although there is a gap between the education levels of male and female at primary or secondary education level, this gap wanes at tertiary education level.

**Figure 6** Adult Education Level in İzmir

metin, ekran görüntüsü, yazı tipi, öykü gelişim çizgisi; kumpas; grafiğini çıkarma içeren bir resim

Açıklama otomatik olarak oluşturuldu

**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 İzmir is higher than Türkiye as shown in Figure 7.

**Figure 7** Percentage of Adult Education Levels in İzmir and Türkiye

|  |  |
| --- | --- |
| İzmir | Türkiye |
|  | Chart, pie chart  Description automatically generated |

Source: TurkStat National Education Statistics, 2022

Notes: Adult refers to ages between 25 and 64.

Looking at the 2022/23 education year, Izmir has 1,844 public schools affiliated to the Ministry of National Education at all levels of education, 21,738 classrooms, and a total of 687,882 students are receiving education in these schools. A total of 422 thousand 969 of these students, 220 thousand 720 of them in primary school and 202 thousand 249 in secondary school, are in primary education. 210 thousand 664 students attend secondary education and 96 thousand 994 students attend high school.

The net enrolment rates in Izmir for the 2022/23 education year are 95.63% for primary school, 92.36% for secondary school and 93.95% for secondary education. In Izmir, 307,658 students attend secondary education. While 34.44% of them prefer Vocational and Technical Education, 59.51% of them study in General Secondary Education institutions. There are ten universities operating in Izmir: Dokuz Eylül University, Ege University, Izmir Bakırçay University, Izmir Democracy University, Izmir University of Economics, Izmir Katip Çelebi University, Izmir High Technology University, Yaşar University, Izmir Tınaztepe University and Izmir Kavram Vocational School.

Founded on April 14, 2001 as 2 faculties, 5 colleges and 2 institutes, İzmir University of Economics is the first foundation university of our city and the Aegean Region.

Source: Governorate of İzmir

**Table 13** Education Level Distribution in İzmir Province,2022

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Education Status** | | | | | |
| **Education Status (6+ years)** | **Total** | **Male** | **Woman** | **Male Proportion** | **Proportion of Women** |
| ILLITERATE | **49.540** | 9.823 | 39.717 | 0,5 | 1,9 |
| LITERATE BUT NOT GRADUATED FROM A SCHOOL | **331.769** | 139.760 | 192.009 | 6,8 | 9,2 |
| PRIMARY SCHOOL | **901.627** | 383.468 | 518.159 | 18,7 | 24,8 |
| SECONDARY SCHOOL OR EQUIVALENT VOCATIONAL SCHOOL | **662.516** | 362.009 | 300.507 | 17,7 | 14,4 |
| PRIMARY EDUCATION | **251.287** | 146.133 | 105.154 | 7,1 | 5 |
| HIGH SCHOOL OR EQUIVALENT VOCATIONAL SCHOOL | **1.019.201** | 550.944 | 468.257 | 26,9 | 22,4 |
| COLLEGE OR FACULTY | **807.360** | 401.366 | 405.994 | 19,6 | 19,4 |
| MASTER'S DEGREE AND ABOVE | **115.014** | 56.987 | 58.027 | 2,8 | 2,8 |
| UNKNOWN | **37.334** | 17.949 | 19.385 | 0 | 0 |
| **TOTAL** | **4.175.648** | **2.068.439** | **2.107.209** | **0** | **0** |

Source:https://nip.tuik.gov.tr/?value=EgitimDurumu

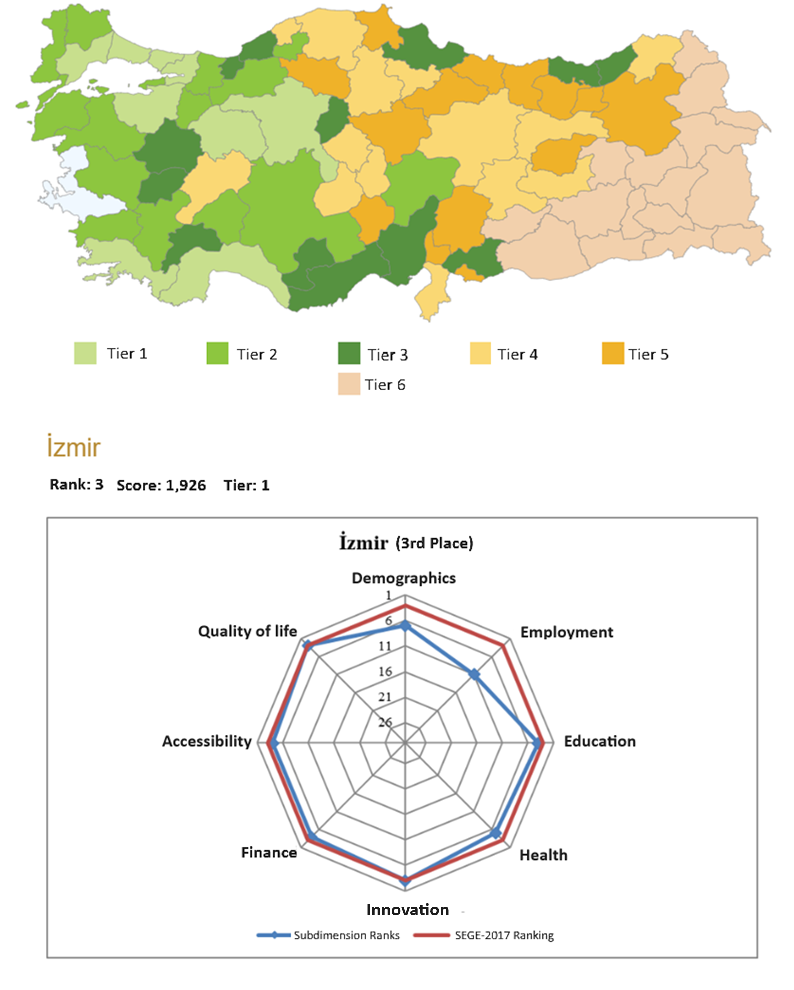
**Figure 8** Education Level Distribution in İzmir Province,2022

* + 1. İZMİR İLİ SOSYOEKONOMİK DURUMU

According to the 2017 Socio-Economic Development Ranking Survey of Provinces and Regions conducted by the Republic of Turkey Ministry of Industry and Technology, Directorate General of Development Agencies, İzmir is among the first tier developed provinces and ranks third. Results of this study is given in Figure8.

<https://nip.tuik.gov.tr/?value=EgitimDurumu>

**Figure 9** Development Agencies Gen. Directorate. 2017 SEGE Studies



It is seen that the provinces in first-tier[[11]](#footnote-12), which include the most developed provinces, generally increase the welfare levels of other provinces around them.

### 6.2.3. Socio-Economic Status of İzmir Province

The socioeconomic development level within the scope of the districts of İzmir is provided in Table 14, on the basis of following three criteria:

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

Table 14. Socioeconomic Development Rankings of İzmir Districts

| **District** | **National Development Ranking** | | | **Development Ranking in İzmir Province** | | | **Level of Development** | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2004** | **2017** | **2022** | **2004** | **2017** | **2022** | **2004** | **2017** | **2022** |
| Konak | - | 6/970 | 11/973 | - | 1/30 | 1/30 | - | 1 | 1 |
| Balçova | - | 12/970 | 18/973 | - | 2/30 | 3/30 | - | 1 | 1 |
| Bornova | - | 20/970 | 17/973 | - | 3/30 | 2/30 | - | 1 | 1 |
| Çeşme | 19/872 | 22/970 | 45/973 | 2/19 | 4/30 | 7/30 | 2 | 1 | 1 |
| Çiğli | - | 43/970 | 41/973 | - | 5/30 | 5/30 | - | 1 | 1 |
| Karşıyaka | - | 44/970 | 37/973 | - | 6/30 | 4/30 | - | 1 | 1 |
| Gaziemir | - | 45/970 | 43/973 | - | 7/30 | 6/30 | - | 1 | 1 |
| Aliağa | 5/872 | 54/970 | 105/973 | 1/19 | 8/30 | 13/30 | 1 | 1 | 2 |
| Güzelbahçe | - | 77/970 | 52/973 | - | 9/30 | 8/30 | - | 2 | 1 |
| Narlıdere | - | 80/970 | 67/973 | - | 10/30 | 10/30 | - | 2 | 1 |
| Bayraklı | - | 92/970 | 92/973 | - | 11/30 | 11/30 | - | 2 | 2 |
| Urla | 43/872 | 93/970 | 59/973 | 3/19 | 12/30 | 9/30 | 2 | 2 | 1 |
| Foça | 79/872 | 115/970 | 154/973 | 8/19 | 13/30 | 19/30 | 2 | 2 | 2 |
| Buca | - | 121/970 | 99/973 | - | 14/30 | 12/30 | - | 2 | 2 |
| Seferihisar | 61/872 | 130/970 | 139/973 | 5/19 | 15/30 | 17/30 | 2 | 2 | 2 |
| Karabağlar | - | 133/970 | 120/973 | - | 16/30 | 14/30 | - | 2 | 2 |
| Selçuk | 75/872 | 146/970 | 178/973 | 7/19 | 17/30 | 21/30 | 2 | 2 | 2 |
| Kemalpaşa | 62/872 | 153/970 | 133/973 | 6/19 | 18/30 | 15/30 | 2 | 2 | 2 |
| Torbalı | 54/872 | 156/970 | 138/973 | 4/19 | 19/30 | 16/30 | 2 | 2 | 2 |
| Karaburun | 84/872 | 172/970 | 186/973 | 9/19 | 20/30 | 22/30 | 2 | 2 | 2 |
| Menemen | 142/872 | 178/970 | 156/973 | 12/19 | 21/30 | 20/30 | 2 | 2 | 2 |
| Menderes | 124/872 | 181/970 | 145/973 | 10/19 | 22/30 | 18/30 | 2 | 2 | 2 |
| Dikili | 130/872 | 182/970 | 200/973 | 11/19 | 23/30 | 23/30 | 2 | 2 | 2 |
| Tire | 174/872 | 192/970 | 221/973 | 13/19 | 24/30 | 24/30 | 3 | 2 | 2 |
| Bergama | 180/872 | 209/970 | 241/973 | 14/19 | 25/30 | 25/30 | 3 | 2 | 3 |
| Ödemiş | 199/872 | 236/970 | 250/973 | 15/19 | 26/30 | 26/30 | 3 | 3 | 3 |
| Kınık | 418/872 | 417/970 | 493/973 | 17/19 | 27/30 | 27/30 | 3 | 3 | 4 |
| Bayındır | 392/872 | 477/970 | 503/973 | 16/19 | 28/30 | 28/30 | 3 | 4 | 4 |
| Beydağ | 450/872 | 562/970 | 618/973 | 18/19 | 29/30 | 29/30 | 3 | 4 | 4 |
| Kiraz | 644/872 | 623/970 | 715/973 | 19/19 | 30/30 | 30/30 | 4 | 4 | 5 |

**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 İzmir Metropolitan Municipality at that time were accepted as developed centers and were excluded from the scope of the research. Since the border of İzmir 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.

To compare the 2017 and 2022 results, while national rankings of some of İzmir’s districts changed, province level situation seems to have remained somewhat stable: Kınık, Bayındır, Beydağ and Kiraz districts are still the İzmir’s least developed. Güzelbahçe, Narlıdere and Urla went from second tier development to the first tier.

Approximately 40% of the building stock of İzmir 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 conducted during the preparation of the Project’s ESMF 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.

### 6.2.4. Vulnerable Groups

The potential vulnerable groups in İzmir are considered but not limited to the following:

* 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).
* Roma population,
* Historic Jewish community

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.

Migrants and Syrians under Temporary Protection (SuTP)

As of May 2024, the number of Syrians under temporary protection in Türkiye is 3,115,844. While 1.5 percent of Syrians live in temporary shelters, 98.5 percent of them live in cities and villages. According to the Presidency of Migration Management of Türkiye, İzmir has the 9th largest SuTP population in the country. The following table below shows the distribution of the Syrian population in İzmir Province.

**Table 15** Population and Percentage of SuTP in İzmir

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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** |
| İzmir | 4.479.525 | 119.458 | 2,60% | 9 | 18 |

**Source:** <https://www.goc.gov.tr/gecici-koruma5638>. Date of Access: May 13, 2024.

#### 6.2.4.1. 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 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: [[12]](#footnote-13)

* 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 livein 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.

In the interviews held in İzmir within the scope of field studies conducted during the preparation of the Project’s SEP, 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.

Many Roma people reside in Konak’s Tepecik/Yenişehir and Hilal neighborhoods (Tenekeli mahalle, Güney mahallesi). The Roma their work in music industry, engage in small commercial activities and some of them live on government aid. While there are no significant signs of urban transformation in the said neighborhoods, they are situated in highly central locations in the city. Thus, they can be regarded as future candidates for gentrification and urban development activities.

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.

#### 6.2.4.2. Jewish Population

İzmir has a historic community of Sephardic Jews migrated to Türkiye from Spain in the 16th century. According to the İzmir’s Provincial Directorate of Culture and Tourism, the Jewish community now has around 2000 members.[[13]](#footnote-14) İzmir’s Jews are concentrated in Alsancak and also in Mithatpaşa neighborhood where they have an actively used synagogue. The said neighborhoods are likely to engage in some level of urban transformation. The community’s synagogues are all historic and part of the city’s cultural heritage.

### 6.2.5. Cultural Heritage

İzmir, an ancient and grand commercial hub of the Mediterranean, is quite rich in terms of cultural heritage with its ancient ruins, monuments, temples and protected sites.

The Cultural and Natural Heritage Protection Law (No. 2863) of Türkiye outlines a comprehensive framework for the identification, protection, and management of various types of protected areas that hold cultural and natural significance. The law defines several types of areas to be protected:

**Archaeological Sites:** Areas containing remnants of past civilizations, including ruins, artifacts, and structures. These sites are carefully excavated and conserved, with restrictions on construction and development to prevent damage.

**Historical Sites:** Locations with significant historical buildings, monuments, and other structures. Efforts focus on preserving the architectural integrity and historical context, often through restoration projects and maintenance regulations.

**Urban Conservation Areas:** Sections of cities or towns with significant historical and cultural value, often featuring a concentration of heritage buildings. Regulations control alterations to buildings and urban development to maintain the area's historical character.

**Natural Sites**: Areas with unique natural features, landscapes, or ecosystems that have cultural or scientific importance. Conservation efforts include preserving the natural state, restricting harmful activities, and promoting sustainable use. (A map displaying location of such sites is provided in Section 6.1.4.)

**Mixed Sites:** Areas that possess both cultural and natural heritage values, such as landscapes with archaeological significance or historic rural areas. Management strategies aim to balance the preservation of both natural and cultural elements, often integrating conservation practices for both types of heritage.

**Table 16** Immovable Cultural Heritage in İzmir

|  |  |
| --- | --- |
| Protected Streets | 6 |
| Monuments and Memorials | 33 |
| Administrative Structures | 259 |
| Cultural Structures | 750 |
| Military Cemeteries | 2 |
| Military Structures | 35 |
| Industrial and Commercial Structures | 771 |
| Religious Structures | 485 |
| Graveyards | 269 |
| Examples of Civilian Architecture | 5244 |
| Remnants and Ruins | 122 |
| Total | 7976 |

**Source:** The Directorate General of Cultural Assets and Museums, Ministry of Culture and Tourism.

Some of İzmir’s cultural heritage were recognized by UNESCO, as well. Two cultural assets located in İzmir Province were included in the UNESCO World Heritage List, and five were included in the World Heritage Tentative List. Bergama Multi-Layered Cultural Landscape Area was included in the World Heritage List in 2014 and Ephesus World Heritage Site in 2015. After Birgi Historical City (2012), Foça and Çandarlı Castles (2013), İzmir Çeşme Castle (2020) were also added to the tentative list. Efforts to get more cultural assets from İzmir under UNESCO recognition are ongoing.

**Table 17** Protected Sites in İzmir

|  |  |
| --- | --- |
| Protected Sites | |
| Urban Protected Site | 49 |
| Urban Archeological Protected Site | 5 |
| Historical Protected Site | 25 |
| Archeological Protected Site | 999 |
| Mixed Sites | |
| Archeological and Urban Protected Site | 8 |
| Archeological and Historical Site | 5 |
| Total | 1091 |

Source: The Directorate General of Cultural Assets and Museums, Ministry of Culture and Tourism.

### 6.2.6. Health Status In İzmir Province

Health is defined as "the complete physical, mental and social well-being of human beings in addition to the absence of disease and disability". Health is a growing sector with rapidly changing dynamics.

Hospitals, branch centers, outpatient clinics, and doctor's offices that provide health services are businesses that provide a variety of health services to the society and undertake important tasks in creating and maintaining a healthy society. It is the raison d'être of the sector.

Health has a historical importance in İzmir. The Asclepion of Pergamon was a health treatment center of equal importance to its counterparts in Epidaurus and Kos in ancient times. According to Pausanias, the first Temple of Asclepius was established in Pergamon in the first half of the 4th century BC. The Sanctuary of Asclepius was a very important health center during the Roman Period with its courtyard with galleries, theater structure for 3500 people, cult hall belonging to Emperor Hadrian, library, round planned Temple of Asclepius. When we look at health facilities, positive developments are seen in İzmir in recent years.

When the Health Statistics Yearbooks published by the Ministry of Health are examined, the following data are obtained according to years.

**Table 18** Institutions and Infrastructures Providing Health Services

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Years | Number of Hospitals | Number of Beds | Number of Beds per 10,000 People | Number of Qualified Beds | Number of Intensive Care Beds | Qualified Bed Ratio\* | Number of Intensive Care Beds per 10,000 People | Number of Family Medicine Units | Population per Family Medicine Unit |
| 2022 | 63 | 12.543 | 28,1 | 6.937 | 2.231 | 67,3 | 5,0 | 1.381 | 3.231 |
| 2021 | 63 | 12.329 | 27,9 | 6.660 | 2.205 | 65,8 | 5,0 | 1.364 | 3.245 |
| 2020 | 61 | 12.077 | 27,5 | 6.549 | 2.248 | 66,6 | 5,1 | 1.358 | 3.236 |
| 2019 | 60 | 12.248 | 28,0 | 6.440 | 1.904 | 62,3 | 4,4 | 1.348 | 3.240 |

\*Intensive care beds are not included

Source: https://www.saglik.gov.tr/TR,84930/saglik-istatistikleri-yilliklari.html

**Table 19** Use of Health Services-1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Years | Number of Primary Care Referrals | Number of Second and Third Step Referrals | Number of Physician Referrals per Person | Number of Visits to Dentist | Number of Dentist Visits per Person |
| 2022 | 18.942.066 | 27.994.007 | 10,5 | 3.041.391 | 0,68 |
| 2021 | 12.728.416 | 23.228.873 | 8,1 | 1.766.522 | 0,40 |
| 2020 | 13.715.245 | 19.291.460 | 7,5 | 1.499.128 | 0,34 |
| 2019 | 16.634.605 | 29.760.583 | 10,6 | 3.282.247 | 0,75 |

Source: https://www.saglik.gov.tr/TR,84930/saglik-istatistikleri-yilliklari.html

**Table 20** Use of Health Services-2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Years | Number of Inpatients | Number of Days Hospitalized | Number of Surgeries | Bed Occupancy Rate | Average Day of Stay | Bed Turnover | Bed Speed Range |
| 2022 | 620.887 | 2.766.416 | 337.932 | 60,4 | 4,5 | 49,5 | 2,9 |
| 2021 | 555.734 | 2.570.314 | 287.870 | 57,1 | 4,6 | 45,1 | 3,5 |
| 2020 | 500.761 | 2.363.230 | 241.922 | 53,6 | 4,7 | 41,5 | 4,1 |
| 2019 | 647.722 | 3.067.854 | 323.024 | 68,6 | 4,7 | 52,9 | 2,2 |

Source: https://www.saglik.gov.tr/TR,84930/saglik-istatistikleri-yilliklari.html

**Table 21** Human Resources in Health

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Years | Specialist Physician | General Practitioner | Assistant Physician | Total Physicians | Total Dentist | Pharmacist | Nurse | Midwife | Other Health Personnel |
| 2022 | 6.845 | 2.498 | 3.667 | 13.010 | 2.783 | 2.311 | 12.943 | 2.750 | 12.570 |
| 2021 | 6.692 | 2.332 | 3.200 | 12.224 | 2.571 | 2.253 | 12.618 | 2.698 | 12.000 |
| 2020 | 6.347 | 2.190 | 2.975 | 11.512 | 2.389 | 2.195 | 11.628 | 2.707 | 10.127 |
| 2019 | 6.299 | 2.366 | 2.518 | 11.183 | 2.309 | 2.144 | 10.219 | 2.684 | 9.189 |

Source: https://www.saglik.gov.tr/TR,84930/saglik-istatistikleri-yilliklari.html

**Table 22** Emergency Health Services

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Years | Number of Emergency Aid Stations | Population Per Emergency Aid Station | Number of Emergency Ambulances | Population Per Emergency Ambulance | Unfounded Notification Rate, (%) |
| 2022 | 113 | 39.487 | 175 | 25.497 | 13,7 |
| 2021 | 107 | 41.363 | 178 | 24.864 | 13,2 |
| 2020 | 103 | 42.667 | 179 | 24.551 | 11,0 |
| 2019 | 104 | 41.993 | 157 | 27.817 | 15,0 |

Source: https://www.saglik.gov.tr/TR,84930/saglik-istatistikleri-yilliklari.html

### 6.2.7. Agriculture, Animal Husbandry and Industry Of İzmir Province

Izmir's economy is mainly composed of industry, trade, transportation-communication and agricultural activities. Izmir's industry is dominated by petroleum and chemical products, metals, textiles, textiles, machinery, automotive, food, tobacco and soil-based industries, while trade in food, commerce, construction, textiles-garments, wood-furniture, chemicals-plastics and agricultural products is widespread. In agriculture and animal husbandry, cotton, grapes, olives, figs, tobacco, vegetables and fruits, fish and animal by-products are at the top.

Izmir is the third largest contributor to the Turkish economy after Istanbul and Ankara.

Izmir is the second largest contributor to the Turkish economy in the fields of industry and agriculture, forestry and fisheries.

**Figure 10** Employment Rates In Turkey And İzmir By Years

çizgi, öykü gelişim çizgisi; kumpas; grafiğini çıkarma, diyagram, metin içeren bir resim

Açıklama otomatik olarak oluşturuldu

Source:https://İzmirinrakamlari.İzmir.bel.tr/tr/2022/96/YillaraGoreIstihdamOrani

As of 2022, 60.2% of employed people in İzmir work in services, 32.4% in industry and 7.4% in agriculture. In terms of employment rate, İzmir is above the average of Turkey and the Aegean Region in the services and industry sectors.

**Figure 11** Sectoral Distribution Of The Employed In İzmir

Source: <https://İzmirinrakamlari.İzmir.bel.tr/tr/2022/96/YillaraGoreIstihdamOrani>

#### 6.2.7.1 Agriculture and Animal Husbandry Situation In İzmir Province

İzmir's territory consists of 27.5% arable land, 2.6% pasture, 37.1% forest and heathland, and 32.8% other land, with 51,287 registered enterprises engaged in farming activities.

In 2022, the distribution of arable land by crop and area of use is as follows: 48.1% of arable land is arable land (including fallow + arable vacant land), 8% is vegetable land (including under cover), 43.4% is fruit and spice land and 0.5% is ornamental plant land.

**Table 23** Distribution of Cultivable Land by Crop and Usage Area in Izmir Province, 2022

|  |  |  |  |
| --- | --- | --- | --- |
| **Cultivable Land Distribution** | | **Area (ha)** | **Share (%)** |
| Field Area (Fallow+TEBA Included) | | 170.118 | 48,10 |
| Vegetable Area (Including Under Cover) | | 28.150 | 8,00 |
| Fruit Area | | 153.410 | 43,40 |
| Ornamental Plant Area | | 1.640 | 0,50 |
|  | **TOTAL** | **353.318** | **100** |

**Source:** [http://İzmir.gov.tr/tarim-ve-hayvancilik](http://izmir.gov.tr/tarim-ve-hayvancilik)

Field crops production activities in İzmir ranked 1st in the country with 12.68% of the country's production with 3 million 622 thousand 924 tons of production on 566 thousand 489 da (decare) in silage corn cultivation, 46.01% of the country's production with 123 thousand 724 tons of production on 20 thousand 124 da in-fodder turnip cultivation, 30.63% of the country's production with 328 thousand 645 tons of production on 141 thousand 411 da in-triticale cultivation. On the other hand, İzmir is the cradle of organic agriculture. Especially in recent years, there have been significant developments in organic agriculture. The first organic production started in İzmir in the mid-1980s with seedless raisins. İzmir continues to be a pioneer in organic agriculture and home to many enterprises engaged in organic agricultural products.

İzmir has an advantageous position in husbandry sector with its fertile lands, plant diversity and large livestock. Considering the breeds raised in İzmir, the yields obtained per animal and the food industry based on animal products, the total yields are quite high. As of 2022, there are 778,468 cattle, 878,234 ovine and 20,388,146 poultry in the city. The districts of Ödemiş (178 thousand 543 heads), Tire (116 thousand 538 heads), Kiraz (106 thousand 746 heads) and Bayındır (94 thousand 080 heads) are at the forefront in cattle breeding. As of the same date, the number of ovine animals was 878 thousand 234 heads. Bergama (105 thousand 100 heads), Dikili (79 thousand 96 heads), Kınık (61 thousand 130 heads) and Menemen (60 thousand 040 heads) are the leading districts in ovine breeding.

İzmir is the second largest contributor to the Turkish economy in the fields of industry and agriculture, forestry and fisheries.

İzmir province agriculture and animal husbandry data are given in the table below.

**Table 24** Agriculture and Animal Husbandry Situation In İzmir Province

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **District** | **Crop Production** | **Livestock** | **Greenhouse and Viticulture** | **Seafood** |
| Konak | Vegetables, Fruits (Urban agriculture) | Small ruminant | Greenhouses are few in number | None |
| Karşıyaka | Fruit | Small number of small livestock | Greenhouses are few in number | None |
| Bornova | Wheat, Barley, Olive | Cattle and sheep | Vineyard and greenhouse areas | None |
| Buca | Vegetables, Fruits, Olives | Cattle | Viticulture | None |
| Bayraklı | Vegetables, Fruits | small-scale cattle | Greenhouses are few in number | None |
| Çeşme | Vegetables, Fruits | Cattle, goat | Greenhouse and viticulture | Fish farms |
| Karaburun | Olives, Grapes | Cattle | Large vineyard areas | Fish farms |
| Urla | Vegetables, Fruits, Olives, Grapes | Cattle and sheep | Large vineyard areas and greenhouse | None |
| Selçuk | Cotton, Olive, Grape | Cattle | Vineyard and greenhouse areas | None |
| Torbalı | Wheat, Corn, Cotton, Olive | Cattle and sheep | Vineyard and greenhouse areas | None |
| Odemiş | Wheat, Potato, Vegetable | Cattle | Large vineyard areas and greenhouse | None |
| Menemen | Vegetables, Fruits, Grains | Cattle and sheep | greenhouse areas | None |
| Aliağa | Olives, Vegetables, Grain | Cattle | few greenhouses | Fish farms |
| Dikili | Olives, Vegetables, Grapes | Cattle | Greenhouse and vineyard areas | Fish farms |
| Bergama | Wheat, Olives, Grapes | Cattle and sheep | Viticulture | None |
| Kemalpaşa | Cherry, Olive, Vegetable | Cattle and sheep | Vineyard and greenhouse areas | None |

**Source:** [http://İzmir.gov.tr/tarim-ve-hayvancilik](http://izmir.gov.tr/tarim-ve-hayvancilik)

#### 6.2.7.2. Industry In İzmir Province

İzmir's economy is mainly composed of industry, trade, transportation-communication and agricultural activities. İzmir's industry is dominated by petroleum and chemical products, metals, textiles, textiles, machinery, automotive, food, tobacco and soil-based industries, while trade in food, commerce, construction, textiles-garments, wood-furniture, chemicals-plastics and agricultural products is widespread. In agriculture and animal husbandry, cotton, grapes, olives, figs, tobacco, vegetables and fruits, fish and animal by-products are at the top.

İzmir is the third largest contributor to the Turkish economy after Istanbul and Ankara.

Sizes of industrial areas allocated in approved zoning plans in İzmir;

-4,533 hectares of organized industrial zones, 1,555 hectares of industrial zones, 19.9 hectares of technology development zones planned by the Ministry of Industry and Technology,

- 692 hectares of free zones planned by the Ministry of Trade,

- 970.02 hectares of industrial sites planned by the relevant municipalities, and 4,223 hectares of individual industrial areas. With a surface area of 1 million 201 thousand 200 hectares, İzmir's industrial area constitutes 1% of its surface area.

When the sectoral distribution of registered industrial enterprises in İzmir is analyzed; the first place is the manufacture of food products with 16.16%, the second place is the manufacture of machinery and equipment not elsewhere classified with 14.09%, and the third place is the manufacture of fabricated metal products (except machinery and equipment) with 11.16%. 1.67% of manufacturing industry enterprises are high-tech, 27.09% are medium-high-tech, and 2.1% of employees are employed in high-tech and 27.27% in medium-high-tech enterprises.

### 6.2.8. Retirement Status in İzmir Province

It is among the leading duties of the social state to ensure that our pensioners, who have contributed greatly to the development of our country throughout their working lives, can make the best use of their retirement rights. In order to fulfill these duties, first of all, norm and standard unity has been ensured with the Social Security and General Health Insurance Law No. 5510, which was prepared to establish a structure where all individuals are provided with social security services of equal scope and quality. Technological infrastructure works have been accelerated by the Social Security Institution and a wide range of studies are being carried out in both insurance and health fields in order to provide better quality and sustainable services.

Table 25 Pension Data For İzmir Province

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Total Pensioners | Female Pensioners % | Male Pensioners % | Public Pensioners % | Labour Pensioners % |
| 2019 | 730.000 | 43 | 57 | 45 | 55 |
| 2020 | 745.000 | 44 | 56 | 46 | 54 |
| 2021 | 760.000 | 44 | 56 | 47 | 53 |
| 2022 | 775.000 | 45 | 55 | 47 | 53 |
| 2023 | 790.000 | 45 | 55 | 48 | 52 |

Source: Tuik and SGK

Notes:

- Total Pensioners: Refers to the total number of people receiving a pension in İzmir

- Male and Female Pensioners: Indicates the gender distribution among total pensioners.

- Public Sector and Worker Pensioners: Indicates the distribution between public sector and labor (SSK and Bağ-Kur) retirees.

## 6.3. POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

As mentioned in section 1.2, approximately 4,900 Type 1 and Type2 and 11,741 Type 3 residential unit are expected to constitute the potential sub-projects of the project in İzmir province. Potential environmental and social risks and impacts may arise during the activities to be carried out for several buildings to be constructed or retrofitted within the scope of Component 2.

The Project has a standalone Resettlement Framework (RF) which has been prepared specifically for Component 2 in order to minimize the potential social risks and impacts of the project related activities, mitigate negative impacts and assist the Project Affected Persons (PAPs) to improve their living conditions. Accordingly, the potential foreseen risks and impacts relevant to the demolition, reconstruction or retrofitting of risky structures are provided below in Table 26.

**Table 26** Potential Environmental and Social Risks and Impacts

| **Project Phase** | **Potential Risk/Impact** |
| --- | --- |
| Preparation for Demolition | Inadequate outreach and stakeholder engagement |
| Temporary and permanent displacement of owners and tenants resulting from the rehabilitation/reconstruction of housing units/workspaces |
| Risk of impoverishment due to permanent or temporary physical or economic displacement |
| Lack of dissemination of information about or access to grievance mechanisms for workers and/or Project-affected people |
| Inadequate/fail in management of Project impacts on existing and potential vulnerabilities |
| Risks of exclusion of poorer or vulnerable/disadvantaged individuals/groups from Project benefits, subsidies, etc. |
| Due to inadequate/fail in management of Project impacts on traffic and community safety   * Increased traffic: improperly selected routes and lack of correct orientation and warning signs at the entrance and exit of the construction site * Traffic accidents: missing or incorrect warning signs * Noise pollution: unnecessary use of klaxon * Air and environment pollution: dust and soil from uncovered lorries, increased carbon emissions due to traffic jam. |
| 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. |
| 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. |
| Occupational accidents, environmental accidents and incidents and non-compliance with national and international legislation that may result from insufficient pre-planning. |
| 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. |
| General occupational health and safety risks that may apply to any demolition activity |
| 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. |
| Temporary and permanent displacement due to project activities |
| Risks to public health due to the traffic to be created by the reconstruction activities |
| Livelihood loss |
| Impacts on air quality, especially related with possible contribution on particulate matter concentrations, which are already high in İzmir. |
| 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 Türkiye since 2017 and the MoEUCC does not prefer this method. In any case, relevant mitigation measures are provided.* |
| Noise generation (except from blasting, for blasting details provided above) |
| 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. |
| 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. |
| Excessive Noise Generation which has possibility to impact human health and at least may cause disturbance |
| Labor risks, given the extensive civil works |
| Lack of information about or access to grievance mechanisms for workers and/or Project-affected people |
| Public health and safety risks |
| Possible negative impacts on Water Quality |
| Risks to public health due to the traffic to be created by the reconstruction activities, |
| Livelihood loss |

# 7.SUB-PROJECT SCREENING PROCESS

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.

**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:

* 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 before October 1, 2020.
* Any sub-project which would be classified as “High Risk”[[14]](#footnote-15) in terms of environmental risks.

**Sub-project Screening Procedures**

Component 2 includes three kinds of sub-projects (see section 1.2 for definitions). 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 (Annex 11) 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 10 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 10 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.

Screening for Type-III

* First step will be checking if the subproject is in the non-eligible subproject list (please see Annex 11) 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-Project, whose demolishing works had been completed before 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 10 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 10 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.

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 10. 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 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 eligible. Therefore, professional judgement will be used to identify “high risk” categorization in terms of environmental aspects during screening phase.

# 8. MITIGATION MEASURES

Activities to be carried out within the scope of the project will comply with the most current national legislation and World Bank standards. In cases where Turkish legislation differs from World Bank Policies, the more stringent policy will be applied in the implementation of the Project.

Although it is not currently possible to make a clear assessment of the cumulative impacts of resilient sub-loans will be financed, or the number of housing units to be reconstructed or retrofitted, subprojects within the scope of the project, a high cumulative enviro impact is not expected considering the possible sizes of the subprojects and its physical dispersion throughout İzmir Province. However, it is assessed that these may be environmentally “moderate” to “substantial” due to some risks related to demolition and excavation as well as construction waste management, traffic management and general population safety; while on social side assessed as "high risk" due to the potential community health and safety risks that may arise while the structures are being rebuilt or strengthened and the vulnerable groups that are likely to be included in the sub-projects.

## 8.1. Mitigation Plan

Potential environmental and social risks and impacts that may arise during the implementation of sub-projects, along with relevant mitigation measures to be taken, within the scope of Component 2 are shown in the Table 27 below.

**Table 27** 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. | **Prior to commencement of any civil works on site**, an E&S Audit will be conducted by individual PMU consultants in the provinces to identify the actions/measures to be taken to ensure that the proposed subproject is in compliance with Project standards. | PMU |
| Preparation for Demolition | Stakeholder Engagement/Citizen Engagement; Grievance Mechanism | Preparation of the "Stakeholder Engagement in Transforming Risky Structures in the Province Level" with local NGOs and key stakeholders: *By adhering to the guidelines outlined in the Stakeholder Engagement Plan for the project ‘Transformation of Risky Structures at the Provincial Level,’ collaboration will be established with local NGOs and key stakeholders. This process includes identifying stakeholders, organizing regular meetings, determining needs and priorities, conducting informational sessions and trainings, and implementing feedback and monitoring phases.* | PMU |
| The province-based E&S specialists and contractor’s E&S specialists will organize visits/meetings and/or disseminate written materials to inform local authorities/authorities, the public and businesses, vulnerable groups in the Project Area of Influence (AoI) which will be identified in Contractor-ESMPs (C-ESMPs), verbally and in writing about Project activities, schedule, measures taken and potential risks before work commences,  \*GM tools, process, workflow, contact addresses will be informed, written notifications will be made visible and posted in relevant public areas (coffee houses, mukhtars' offices, mosques, public common areas, project site etc.). | PMU  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 | PMU |
| Within the scope of the Stakeholder Engagement Plan, each sub-project will plan the stakeholder information to be made available and disseminate necessary relevant information with all stakeholders,  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 in close collaboration with the Contractor |
| Preparation for Demolition | Labor issues | \*Preparation of subcontracts in accordance with the Project's Labor Management Plan,  \*Signature by all employees of subcontractors of codes of conduct covering the requirements under the LMP,  \*Ensure that a letter is included in the contractor's contract stating the HR policies of the contractor involved in sub-projects and that it will follow a zero -tolerance policy on the right to fair treatment, right to form workers' associations, forced labor, child labor, SEA/SH and violence, | PMU |
| \* Ensuring adequate distance and space for employees in areas such as meals, breaks, etc.,  \* Taking necessary precaution in line with the recommendations of the Ministry of Health,  \* Making spatial arrangements to ensure equal opportunities for women employees in the workplace,  \* Providing trainings that will raise the awareness of employees and reveal the project conditions, prohibited behaviors and the principle of equality before they start working.  \*Ensuring their compliance with the LMP and the national law requirements as described in the LMP of the Project  To be responsible for raising awareness and training of all employees on the Code of Conduct and the procedures and principles in the grievance mechanism, | Contractor |
| Preparation for Demolition | Management of Project impacts on vulnerabilities | The contractor should identify sensitive receptors within the Project area of influence, such as schools, health facilities, nursing homes, etc.  Screening measures should be taken for dust and noise effects that may occur in these areas and working hours should be regulated  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 sub-project, before demolition, the contractor should identify the roads and streets that can and cannot be used by heavy vehicles and create a route map.  Prevent the use of roads that endanger public health and safety by taking the opinions of local authorities such as mukhtars and municipalities in the road risk analysis process  Sharing route information, including roads that will and will not be used within the scope of the project, with drivers and relevant subcontractors and provide necessary information | 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 |
| Ensuring that the Contactor shall not commence the demolition work unless it is proven or checked 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. | * Preparation of a Demolition Plan prior to demolition in order to determine which demolition method will be used, what measures will be taken for the safety of the building and other structures, infrastructure, installations, traffic and people that may be affected in the vicinity, the material and damage properties of the building, if any, and its bearing system, bearing capacity and all risk factors * Obtaining all necessary permits, including the 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 provided in Annex 8, 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. * 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. | Contractor |
| 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 UTP and individual OHS/environmental specialists hired for provinces. The UTP 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 7) 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, İzmir 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 in İzmir 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 | * Prepare, consult upon, clear with the World Bank and disclose the Resettlement Plans (RPs) and implement the RPs before the commencement of any civil works * 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. * Preparation and implementation of at least ESMP Checklists. | Contractor |
| * Ensuring preparation of each ESMP checklist documents in compliance with İzmir ESMP. * 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 Türkiye 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 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 7) 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, * Providing information about the grievance mechanism and its functioning processes * Ensure that all employees are trained on the grievance mechanism and awareness is raised on this issue. * Ensuring that the grievance mechanism is easily accessible to all stakeholders * Ensuring that the grievance process operates in an open and transparent manner * Evaluate complaints in an impartial and fair manner * To ensure that complaints are resolved quickly and effectively * Protecting the confidentiality of complaints * Providing feedback on process-related complaints * Ensuring a detailed record of all complaints and how they are handled * The Contractor shall establish and operate a grievance mechanism to address internal and external stakeholders’ complaints. This GM shall include receiving, recording and assessing complaints, providing solutions in line with the relevant provisions of the ESMP, and communicating outcomes as feedback. | PMU and Contractor |
| Demolition, reconstruction and retrofitting stages | Harm on Cultural Heritage | * In the cases of excavation chance find procedure shall apply in line with the details outlined in Annex 9. | Contractor |

## 8.2. Roles and Responsibilities

All of the sub-projects to be realized under Project Component 2 will be exempt from the requirements of the national Regulation on Environmental Impact Assessment as per relevant Law. 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 UTP has no previous Project experience that were financed by World Bank. For this reason, UTP, MoEUCC recruited and will continue to 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 İzmir as part of the PMU will especially be responsible for continuous monitoring of demolition/ retrofitting/ reconstruction works. Other relevant roles and responsibilities are noted in Table 28of this document. In respect to overall CDRC project management roles and responsibilities, please consult the Project level ESMF.

The table of roles and responsibilities is given below:

**Table 28** Roles and Responsibilities under the İzmir Province ESMP Implementation

| **Responsible Party** | **Responsibilities** |
| --- | --- |
| Contractors | * Preparing/Implementing the sub-project specific ESMP Checklist based on the İzmir ESMP prepared by the PMU. * Meeting mitigation requirements and management actions to be defined neighborhood-level ESIAs, if needed * Ensuring that environmental, social, occupational health and safety, community health and safety measures are taken and implemented during the activities. * Implementing corrective actions for the grievances directed to the Contractors as per the GM. If the Contractor is not in a position to resolve the grievance received, they are responsible to inform the PIU/PMU immediately. * Implementation and fulfillment of stakeholder engagement and grievance mechanism obligations specified in the Project SEP * Implementation and fulfillment of workforce issues specified in the Project LMP * Implementation and fulfillment of resettlement and livelihood loss considerations specified in the Project RF * Recruiting an OHS focal point whose competency meets the requirements described in Section 8.2, * Regularly carrying out the monitoring on the site, defined in the İzmir ESMP, ESMP Checklists, and neighborhood-level ESIAs (if needed) through the Contractor’s OHS focal point, * Performing the monthly reporting activities described in Table 29, * Carrying out the environmental and social monitoring activities described in Section 8under its own responsibility. * Immediately notifying UTP 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 UTP within 30 working days with the guidance and controls of PMU individual specialists. |
| Site Supervisors | * Planning, organizing, and coordinating the construction project. * Ensuring the project meets specified quality standards. * Enforcing safety regulations and ensuring the safety of all workers on site. * Procuring and efficiently utilizing necessary materials and equipment. * Creating and implementing a work schedule to ensure the project is completed on time. * Maintaining communication and coordination with engineers, architects, subcontractors, and other stakeholders. * Quickly and effectively resolving issues that arise on site. * Preparing regular progress reports and presenting them to upper management |
| PMU | * Ensuring the recruitment of a total of eleven (16) individual experts, including three (4) experts for the head office and eight (12) experts (three experts for each province) as defined in the ESMF section 6 sub-section 6.1.2. of the Project. * Following the progress of the Project and reporting it as described in Table 29. * 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. * 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. * Review and approval of the ESMPs, and * Providing the detailed feedback to the WB when requested and required. |
| PMU Individual Social Specialists in Provinces | * Ensures that the contractor informs the affected communities about the Project construction activities and other Project issues (Grievance mechanism, trainings etc.) * Implementing SEP and Grievance Mechanism at provinces on sub-project basis. Receives and records applications/complaints/ requests from rights holders within the scope of the Grievance Mechanism related to social issues. Provide Daily reports on issues related to the SEP and the community. * 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 Social focal point personnel of the Contractors who will continuously implement the ESMP Checklists at sub-project site. * Serving as primary point of contact for affected communities and other stakeholders. * Maintaining records and reporting of complaints and participation activities. * 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. |
| PMU Individual Occupational Health and Safety Specialists in Provinces | * Guiding and supporting the contractor and the contractor's OHS liaison officer during the preparation of ESMP Checklists * Assessing the documents related to issues such as permits to be obtained, protocols to be made, personnel to be assigned within the scope of OHS legislation. * Supervising the compliance of safety measures taken in the workplace with Occupational Health and Safety legislation and general occupational safety rules * Examination of records regarding Occupational Health and Safety Training provided to personnel * Supervision of periodic maintenance, control and measurements to be carried out in accordance with Occupational Health and Safety legislation in construction * During the project reporting all accidents, incidents and near misses events to the PMU. |
| PMU Individual Environment Specialist in Provinces | * 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 Social focal point personnel of the Contractors who will continuously implement the ESMP Checklists at sub-project site. * Ensures that the contractor informs the affected communities about the Project construction activities and other Project issues (Grievance mechanism, trainings etc.) * Serving as primary point of contact for affected communities and other stakeholders. * Maintaining records and reporting of complaints and participation activities. * 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. * Ensures that the contractor informs the affected communities about the Project construction activities and other Project issues (Grievance mechanism, trainings etc.) * Serving as primary point of contact for affected communities and other stakeholders. |

## 8.3. E&S Monitoring, Supervision and Reporting

### 8.3.1. 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 located in İzmir, 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.

In case of an important incident 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 UTP and individual Environmental Specialists hired for provinces and the WB will be informed within 48 hours by the UTP. 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 UTP by the contractor within 30 working days with the guidance and controls of the PMU individual specialists and the UTP will forward the incident report to the WB. The UTP will also report its findings in this context to the WB with their reporting.

The WB Project team will also visit Project sites from time to time and/or specifically as needed as part of Project supervision.

### 8.3.2. Reporting

Within the scope of the Project and sub-projects, reporting will be performed in line with the following responsibilities, scope, frequency and requirements specified in the Table 29

| **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 İzmir ESMP, 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 |

**Table 29** Reporting Requirements Regarding the ESMP Implementation

## 8.4. Trainings for Other Staff

The PMU will ensure that the following trainings will be given to the UTP 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, ESMP, LMP, SEP and RF/RP/EPSA,
* 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

## 8.5. 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 8.6 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) are described in the İzmir ESMP. 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

# 9.ENVIRONMENTAL & SOCIAL MONITORING

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 (Table 30) can be expanded and adjusted during the screening activities to be implemented for the sub-projects.

**Table 30** 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*** *Error! Reference source not found.****)*** | | | | | |
| 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.  Visual Inspection and review of the records and tools of the Grievance Mechanism such as grievance boxes, grievance forms etc. to be present on the impact area of the sub-project. | Daily | Contractor / Contractor’s OHS Focal Point |
| Visual observations on and around of the sub-project site.  Visual Inspection and review of the records and tools of the Grievance Mechanism such as grievance boxes, grievance forms etc. to be present on the impact area of the sub-project. | 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  Daily | Contractor / Contractor’s OHS Focal Point PMU Individual Specialists in the provinces  Contractor / Contractor’s OHS Focal Point |
| 3 | Community Health and Safety / Traffic | Resolving the traffic congestion problem (if any) which were caused by the demolition activities performed.  Develop Traffic Management Plan | Visual observations on and around of the sub-project site.  Visual Inspection and review of the records and tools of the Grievance Mechanism such as grievance boxes, grievance forms etc. to be present on the impact area of the sub-project. | 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;   * İzmir ESMP 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 (prepared by the contractor) prior to the activity in line with the provincial ESMPs and the results 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.).  Implement Traffic Management Plan | Visual observations on and around of the sub-project sites.  Visual observations on and around of the sub-project sites.  Visual Inspection and review of the records and tools of the Grievance Mechanism such as grievance boxes, brochures etc. to be present on the impact area of the sub-project. | Daily  Weekly | Contractor / Contractor’s OHS Focal Point |
| 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 epidemic disease 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 detailed in the ESMP Checklists and İzmir ESMP 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  Performing air quality and noise measurements at nearest receptors upon complaint | Measurements  Visual Inspection and review of the records and tools of the Grievance Mechanism such as grievance boxes, grievance forms etc. to be present on the impact area of the sub-project. | 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 Management 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  Visual Inspection and review of the records and tools of the Grievance Mechanism such as grievance boxes, grievance forms etc. to be present on the impact area of the sub-project. | Daily | Contractor / Contractor’s OHS Focal Point |
| Weekly | PMU Individual Specialists in the provinces |
| Quarterly | PMU Head Office |

# 10. STAKEHOLDER ENGAGEMENT

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.

## 10.1. Stakeholder Engagement Plan (SEP)

A separate Stakeholder Engagement Plan (SEP) has been prepared for the Climate and Disaster Resilient Cities Project, based on the World Bank's Environmental and Social Standard 10 on Stakeholder Engagement and Information Disclosure.[[15]](#footnote-16)

Public consultation and information dissemination will be conducted by the Urban Transformation Presidency 's Project Management Unit Social Experts in accordance with the SEP. The İzmir ESMP, 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 UTP webpage13 created specifically for the Project. Stakeholders will be able to provide feedback on these documents.

# 11. GRIEVANCE MECHANISM

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, established under the Urban Transformation Presidency of the Ministry of Environment, Urbanization and Climate Change (MoEUCC), will be accessible to stakeholders’ grievance form, through e-mail, phone and face-to-face communication and will respond to all complaints as soon as possible. The stakeholders can also use the World Bank’s own GRS.

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.

Stakeholders also have the right to leave their complaints anonymously. (For details, see section 12.5. Registration and Evaluation of Anonymous Complaints)

## 11.1. Worker’s Grievance Mechanism

**Contractors** who will undertake any construction work will develop a GM and will be responsible for collecting, recording, evaluating and if possible, resolving grievances conveyed by any stakeholder regarding the construction work. The contractor shall record the grievances through the Grievance Registration Form and Grievance Closure Form provided in Annex-1 and Annex-2 of the LMP of the Project. *(See Project SEP for grievance mechanism details)* Verbal grievances will be recorded by the responsible personnel of the contractor by filling out the Grievance Registration Form. The contractor is obliged to escalate the grievances that cannot be resolved to the relevant persons or institutions. Contractors will also submit all their records to PMU at the beginning of each week, including both resolved and unresolved grievances.

Internal stakeholders are the workers (direct and contracted), managers, representatives and suppliers who work for the Contractor and subcontractors.

The contractor and subcontractors will provide all direct employees and contract workers (and their organizations where relevant) with a grievance mechanism to raise concerns about their workplace.

Necessary induction and training programs will be provided in the employment process of all direct and subcontractor employee. The training will cover environmental, social, OHS, community health and safety issues and grievance mechanisms.

They will also be informed during recruitment about the grievance mechanism and the measures in place to protect them against any retaliation for using it.

The requirements in the Project's Environmental and Social Management Plan (ESMP) and Stakeholder Engagement Plan (SEP) and other documents will be made clear through toolbox training.

Information posters on the grievance process and grievance-suggestion boxes will be placed in common working areas.

Contractors will provide employees about the anonymous grievance procedure and encourage employees to raise grievances in a safe environment by guaranteeing anonymity and confidentiality in this process.

Grievances received anonymously will be evaluated by applying the steps defined in the Project SEP. Within the scope of the complaint, it will be evaluated by going through the investigation / examination processes and each stage will be processed into the complaint mechanism system. Third parties will not be informed about complaints that should be kept confidential, and no official notification/return will be made.

The key principles of the grievance and feedback mechanism will be to:

* Ensure impartiality, confidentiality, and free of coercion or intimidation.
* Ensure resolution of concerns within the time frames specified in the Project SEP.
* Provide an understandable and transparent consultative process that is appropriate and readily accessible.
* Provide the option of submitting grievances and feedback anonymously.
* Provide access at no cost and without retribution to the party that originated the issue of concern.
* Not impede access to judicial and administrative remedies.

In addition, considering that there should be a special GM for workers within the scope of ESS2, grievances from workers will be evaluated separately from other grievances. (*See Project LMP section 11 for details on worker grievances and grievance mechanism)*

## 11.2. Receiving & Registering Grievance

All complaints received by the relevant administration through the telephone line, contact form or other channels are recorded using the Grievance Registration Form (GRF) (Annex 3) and a hard copy of the form is given to the Complainant. The completed form is entered into the PMU grievance registration system of the MoEUCC within the same business day.

If the GRF cannot be filled, the following basic information is recorded:

Complainant's first and last name (complainants also have the right to register an anonymous complaint);

The subject of the grievance;

Place of Grievance;

Contact information (phone / mobile number, address, e-mail, etc.);

Organization name (if relevant)

Date and time

Project teams complete the GRF according to the information provided and register the grievance.

All corrective actions suggested by the complainant are recorded through the GRF.

## 11.3. Assessment of the Grievance

* All grievances are reviewed to be classified according to whether they are genuine or not related to Project activities. If the issues/disputes raised are not related to the Project activities, guidance is provided to the Complainant to contact the relevant person. Eligible Complaints will be answered in accordance with the Project's social and environmental standards.
* All Grievances received via hotline, email, face-to-face meetings/communications are recorded and Project teams contact the Grievance owner to explain the response process within two (2) Business Days after registration.
* The GM will include a channel to receive and address confidential complaints related with Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) with special measures in place to ensure confidentiality and sensitive treatment of such complaints, as well as measures to ensure such complaints are handled in accordance with national or local laws.
* The PMU has ten (15) Business Days to investigate and respond to grievances. If the situation requires a more complex investigation, the Complainant will be provided with updated information describing the necessary actions and possible timeline for resolving the Grievance.

## 11.4. Resolving the Grievance

* Necessary corrective actions will satisfy the complainant.
* All parties agree on corrective actions throughout the resolution process.
* The PMU aims to resolve each complaint within thirty (30) Business Days after responding, which may be extended by written order of the Ministry.
* Complainants may appeal the decision of the GM. The processing, hearing and report on the appeal’s outcome shall be concluded within 30 Business Days of the receipt of the appeal.
* Complainants can apply to the court when they are not satisfied with the decision of the PMU or the Ministry regarding their complaints.

## 11.5. Close out of the Grievance

Evidence of the corrective actions taken (photographs or other evidence documents on the Site, pertaining to the subject) is collected and a “Grievance Closure Form” (Annex 4) is signed between the PMU and the Complainant.

The grievance table will prepared by the sub-project contractors will contribute to the effective management of the resolution process by ensuring that grievances are recorded and monitored.

## 11.6. Registration and Evaluation of Anonymous Complaints

When both external and internal stakeholders have issues, concerns or difficulties in providing their contact information and identity information, the complaints submitted by the stakeholders will be first evaluated and recorded as anonymous complaint or anonymous suggestion. Stakeholders can submit all their wishes and complaints to the request – complaint hotlines without specifying their names.

As another method, they can convey their complaints about the Project by any other defined communication tool they prefer, without giving their name and contact address.

Complaints received anonymously will be evaluated by implementing the steps defined in the workflow. Within the scope of the complaint, it will be evaluated by going through the investigation / examination processes and each stage will be processed into the complaint mechanism system. Third parties will not be informed about complaints that should be kept confidential, and no official notification/return will be made.

Although there will be no official feedback on the solution to be applied when the complaint is finalized, if it is a matter that needs to be informed to the public and if deemed necessary, it can be announced to the stakeholders via joint boards/public and general communication tools.

A grievance registration log is prepared for the recording, tracking and resolution processes of complaints.

(See Annex 5)

## 11.7. GM Contact Information

Channels that can be used by stakeholders to formally voice their grievances are as follows:

ALO 181: The MoEUCC examines complaints, notices and information requests from 81 provinces of Türkiye, intervenes and carries out inspections. Citizens can send their complaints and notices about environmental problems, air, water, soil, radioactive pollution, urban transformation, noise and waste by calling Alo 181. The notifications recorded from the call center are transferred to the relevant General Directorates regarding the legislation area of the MoEUCC and their answers are received through the system. The information received from the relevant units on the subject is transferred to the applicant via telephone by the authorized person in the call center. In this way, citizens are given feedback as soon as possible about the records they leave. Stakeholders can also contact UTP for any complaints, notices and information requests by calling this number.

CIMER can hold and communicate all kinds of requests, complaints, notices, opinions and suggestions of the stakeholders within the scope of the Project, as well as their applications regarding their right to information, by using all communication channels through CIMER.

Hotline: Stakeholders can call the phone number 0 (312) 410 10 00 (Ankara) or 0 (232) 502 20 12 (İzmir) and request to communicate with a contact person.

Face to face: Stakeholders can convey their complaints to the relevant staff of the PMU face to face.

Proje website: a Project specific website is established.[[16]](#footnote-17)

On the project website; Announcements, news, information about the project, the purpose of the project, project components, ARAAD application link, documents to be uploaded by the contractor to the ARAAD application, İzmir liaison office contact, environmental and social project documents, contact forms, application guides and frequently asked questions are available.

Web page contact form: [dayanikli@kdb.gov.tr](mailto:dayanikli@kdb.gov.tr)

**World Bank Grievance Redress System:**

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported Project may submit complaints to existing Project-level grievance mechanisms or the WB’s Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address Project-related concerns. Project affected communities and individuals may submit their complaint to the WB’s independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank’s attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank’s corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

# ANNEX 1- CODE OF CONDUCT

As the Contractor, [*insert the name of* *the Contractor*]; We have signed a contract with [*Employer's name will be inserted*] for [*job name and description to be entered*]. These works [*insert* *the names of the construction sites and other locations where the works will be done*] will also be carried out. The contract obliges us to take measures to address environmental and social risks associated with work, including the risks of sexual exploitation, abuse and gender-based discrimination.

This Code of Conduct (CoC) is part of the measures we take to fight against environmental and social risks associated with work. It applies to all our employees at the site or other places where work is executed. Besides; this contract also applies to the personnel of each subcontractor and other personnel who assist us in the execution of the works. All such personnel are called “Contractor's Personnel” and are subject to the CoC.

This CoC defines the obligated behavior of personnel identified above as "Contractor's Personnel".

Our working environment; There will be an environment where unsafe, abusive or violent behavior will not be tolerated, and where all individuals can comfortably express their problems or concerns without fear of retaliation.

**REQUIRED BEHAVIOR**

Contractor's Personnel:

1. Perform their duties adequately and selflessly;
2. Comply with this CoC and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of the Contractor's other personnel and any other person;
3. Organize a safe working environment within the scope listed below:
4. ensuring that workplaces, machinery, equipment and processes under each person's control are safe and do not pose a health risk;
5. use of necessary personal protective equipment;
6. taking appropriate precautions regarding chemical, physical and biological substances and agents; and
7. following appropriate emergency operations procedures
8. Report working conditions that he/she believes are unsafe or unhealthy and to avoid a working condition that he/she believes poses a serious danger to his life or health;
9. Not to discriminate against specific groups such as women, people with disabilities, migrant workers or children and to treat other people with respect;
10. Against other personnel of the Contractor or the Employer; not engage in any form of sexual harassment, including undesirable sexual advances, sexual solicitations, or any other verbal or physical behavior of a sexual nature;
11. Not to attempt Sexual Exploitation (not engaging in any act or attempting to abuse vulnerable position, power difference or trust for sexual purposes; and not sexually abusing another, including, but not limited to, benefiting financially, socially or politically)
12. Not to attempt Rape. This concept means any physical or other forced (even mild) penetration with the penis or other body part into the vagina, anus, or mouth. In addition, penetration of the vagina or anus with an object is also included in this concept. Rape; includes marital rape, anal rape / anal intercourse. Attempting to those listed in this article is considered an attempted rape. Rape of a person by two or more perpetrators is called gang rape;
13. Not to attempt Sexual Assault. This concept; means any form of non-consensual sexual contact that does not result in or does not involve penetration. Examples include: attempted rape as well as engaging in sexual acts such as non-consensual kissing, caressing, or touching the genitals-thighs of individuals under the age of 18, except in a pre-existing marital situation;
14. Complete trainings on environmental and social aspects of the Contract, covering OHS issues along with Sexual Exploitation and Sexual Assault;
15. Report any violations of this CoC; and
16. Not be hostile towards any person reporting a violation of this CoC, us as the Contractor, or the Employer, or anyone using the [*Project Grievance Mechanism*].

**REPORTING OF THE CONCERNING SITUATION**

All personnel observing a behavior that they believe violates this CoC or concerns them in any other way, they should immediately report that issue. This can be accomplished through one of the following:

1. Contact [*insert the name of the Contractor's Social Specialist who will deal with gender-based discrimination, or, if such an employee is noncompulsory under the Contract, insert the name of another personnel designated by the Contractor*] via phone number [ ] or in written form [ ] or [ ] in person; or
2. To reach the Contractor's instant hotline (if applicable), call [ ] and leave a message.

The identity of the individual will be kept confidential unless reporting of allegations is required by the law of that country. Anonymous complaints or allegations will be given due and appropriate consideration. We take all reports of potential abuse seriously and will investigate appropriate action. We will provide service providers with quick directions that can help appropriately support the survivor of the alleged incident.

Hostility will not be taken against anyone who raises a good faith concern about behavior prohibited by this CoC. Such a hostile situation constitutes a violation of this CoC.

**CONSEQUENCES OF VIOLATION OF CODE OF CONDUCT**

Any violation of this Code of Conduct by Contractor Personnel may have serious consequences, including termination of job and possible referral to the legal authorities.

FOR CONTRACTOR PERSONNEL:

I have a written copy of this Code of Conduct in a language I understand. If I have any questions about this Code of Conduct, I understand that I can contact *[insert the name of the Contractor's gender-based discrimination contact],* requesting clarification*.*

Contractor Personnel name: *[Insert name]*

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: (month/day/year): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Countersignature of the authorized Contractor Representative:

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: (month/day/year): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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# ANNEX 2- RECORDS OF MEETINGS AND CONSULTATIONS

**Records of Meetings held in İzmir between 09.11.2021 and 11.11.2021**

|  |  |
| --- | --- |
| Location | Institution |
| İzmir | İzmir Development Agency |
| İzmir | İzmir Provincial Directorate of Environment, Urbanization and Climate Change |
| İzmir | İzmir Provincial Directorate of Disaster and Emergency |
| İzmir | İzmir Metropolitan Municipality Urban Transformation Directorate |
| İzmir | Kemalpaşa Municipality License and Inspection Directorate |
| İzmir | Bayraklı Municipality Building Control Directorate-Bayraklı Municipality Plan Project Directorate |
| İzmir | Menemen Municipality Urban Transformation Directorate |
| İzmir | Karabağlar Municipality |
| İzmir / Bornova District | Rafet Paşa Neighborhood, Office of the Mukhtar |
| İzmir / Karşıyaka District | Örnekkoy Neighborhood, Office of the Mukhtar |
| İzmir / Karşıyaka District | Semikler Neighborhood, Office of the Mukhtar |
| İzmir | TMMOB Chamber of Geological Engineers |

**Minutes of Meetings in İzmir**

**Development Agency**

All districts of İzmir are heterogeneous. In each district, there are both quality residences and risky residences, and similarly, there are socially risky or regular areas in each district. The neighborhood in Bayraklı district, where the Roma population working predominantly in the informal sector, lives, is in the middle of the newly built high business centers. The food market, which is right next to it and which is the food distribution center of İzmir, is also located in this area. Regarding the surrounding counties:

* Torbalı district is a region where industry is concentrated, and especially the organized industry and furniture sector have developed in the district. Therefore, the district receives intense immigration from less developed provinces, especially from the eastern regions of Turkey. The rate of tenants is high. The Ayrancılar neighborhood in the district stands out as a region where large residences were built and the center shifted towards here.
* In Çiğli district, both agricultural activities and industry etc. economic activities exist. It is a transition zone in terms of population movements. The number of housing projects is high.
* The district of Menemen receives immigration because it is close to the province of Manisa and universities and is on the transit road. Due to the constant immigration and high number of workers, the number of tenants in the district is high.
* There are many protected areas in Selçuk district.
* Ödemiş is a rural district with a high population. Therefore, mainly agriculture and animal husbandry activities and especially cattle breeding are carried out. It is mostly inhabited by the local population. It is at a high socio-economic level. There are places suitable for transformation in the center.
* There are mostly old buildings in Tire district. Since it is a region where both agriculture and animal husbandry and industry are intense, it receives migration. It has a high socio-economic structure.
* Kemalpaşa district receives immigrants mostly from Erzurum province. Industry and agriculture are intertwined and cherry production is intense.
* İkiçeşmelik neighborhood, close to Kadifekale neighborhood in Konak district, is a place where spotters are concentrated, and it is recommended to remove these areas since it is a region where tourists go.
* Historical buildings are in majority in Urla district. After COVID 19, the number of permanent residents, especially from Istanbul, has increased. Since it is the center of gravity, it transforms by itself.
* Upper districts of Seferihisar district such as Tepecik and Çolak İbrahim neighborhoods are suitable for transformation.
* has been united with the center of İzmir with the urban sprawl. In the last 10 years, there has been a significant increase in housing prices, especially. Transformation takes place within itself.
* Site areas are dense in Karaburun district.
* The district of Çeşme and the surrounding Gümüldür, Ürkmez, Özdere neighborhoods are the neighborhoods where the middle class resides, and there are old buildings.

**Semikler Neighborhood, Office of the Mukhtar**

The population of Şemikler neighborhood is approximately 30,000 and there are 7,000 households. 60% of the population is Macedonian immigrants, 70% are retired and 70% are homeowners. It is a middle-class neighborhood socio-economically. Two buildings damaged after the 2020 İzmir earthquake were demolished, but no new buildings were built in their place. Moreover, other buildings were damaged during the demolition. There are around 30% of unlicensed buildings in the neighborhood. The Roma living in the neighborhood mostly make a living by scrapping and stay in tents. If this area is transformed, it is very difficult for the Roma to find a new place to live. The roads of the neighborhood are narrow and the infrastructure is insufficient, and there is no building stock.

**Ornekkoy Neighborhood, Office of the Mukhtar**

The population of Ornekkoy neighborhood is approximately 24,000, and workers, civil servants and retired people are concentrated. The socio-economic level of the neighborhood is middle-low. Women living in the neighborhood mostly work in daily cleaning jobs. The number of those receiving social assistance is 1,270. 55% of the residents of the neighborhood are homeowners. The Roma population are in the majority and they do not seem to be able to apply for loans as they mostly make their living by knitting baskets and scrapping. There is a high incidence of drug use and violence in the neighborhood. Urban transformation in the neighborhood started in 2010. Since 2014, İzmir Metropolitan Municipality has been continuing the transformation. A total area of 18 hectares has been converted. Before the transformation, there were houses with a maximum of 4 floors, usually 2 floors. A preliminary contract was made by the municipality for urban transformation. Nearly 98% agreement was reached. The neighborhood is divided into 9 districts. Four regions were given to the contractor, but 5 regions remain. After the agreement was reached, the tender was launched. However, due to the lack of space, the contractors did not enter the tender because they could not make much profit. Until now, a building has been completed and the construction of a building is still ongoing. Generally, there are problems with contractors. It is expected 4-5 months for rent assistance.

**Rafet Pasa Neighborhood, Office of the Mukhtar**

It is a neighborhood that was formed in the 1980s by immigration mostly from the provinces in the northeast of Turkey. Population density is high. The houses are usually 4 floors and very old and rotten. There are stray floors. The ground is soft and rough. Applications for risky building determination are not made due to the fear of loss of area and floor. After the 2020 İzmir earthquake, the residents of the neighborhood did not want samples to be taken from the buildings because they thought that if samples were taken, their buildings would be unstable to earthquakes and the houses would be demolished. Since the roads are very narrow, it is very difficult for earthmoving trucks to enter the streets. Since the public in general has little knowledge of the transformation, they need to be accepted and informed as stakeholders within the scope of the Project.

**Karabaglar Municipality**

In order to prevent unplanned urbanization, it would be healthier to make island-based transformation instead of building-based transformation. In addition to earthquake protection, regulations for road and front garden distance should also be considered while transforming. As of 2014, the responsibility for whether the buildings constructed in accordance with the legislation has passed to the building inspection companies. However, since the building inspection firms receive their wages from the contractor, it cannot be said that these firms are completely independent. Sometimes they make wrong decisions to get their wages. Since the site inspection belongs to the building inspection company, what the municipality can do is only on paper. The municipality cannot control the environmental and social impacts.

**Menemen Municipality Urban Transformation Directorate**

Since the buildings in Menemen district were mostly built between 1985-2000, 60% of the district should be converted. Applications are made frequently from all over Menemen within the scope of Law No. 6306, and more applications are made from İsmet İnönü, Camikebir, Tülbentli, Esatpaşa, Kazımpaşa and Seydinnasrullah neighborhoods, which are the central neighborhoods where trade and rent are high.

It is close to the Bird Sanctuary, on the way to the Menemen district, and the district has easy access and clean air. In addition, the station is planned to be built here as part of the High-Speed Train Project. The construction industry is dominant. The district has a heterogeneous structure. There are cotton and corn warehouses. The textile industry has developed. That's why it migrates. More migration is done from the city. A project is being prepared within the scope of the urban site study.

Roma mostly resides in Ağadır and Kazımpaşa neighborhoods. While 60% of the Roma are property owners, 40% of them live in barracks on treasury lands.

The Asarlık region in the district is mostly formed by immigrants from the provinces in Southern and Eastern Anatolia. Its population is approximately 45,000 and 70% of the buildings in the region are illegal and unlicensed. While the people in this region mostly work as construction workers or craftsmen, women work in daily jobs such as picking spinach and cotton.

**Bayraklı Municipality Building Control Directorate and Plan Project Directorate**

90% of the buildings in Bayraklı district are risky, illegal and unlicensed. Since the socio-economic level of the district is low, applications for risky buildings are not made much. Infrastructure is insufficient. Island-based transformation is more welcome. Young population is high. Fuat Edip Baksi and Emek neighborhoods are being transformed. It is important to consider the urban transformation financially, as the repayments of the loans create grievances.

**İzmir Provincial Directorate of Disaster and Emergency**

In Bostanlı district, applications on the basis of risky structures are in the majority. Since there is no building stock information, urban decay areas cannot be determined. It may take years to reveal building stock data due to the high level of construction, area and population density. The areas around the İzmir and Seferihisar fault lines are risky areas. There are problems with citizens in urban transformations at the area level. These problems prevent personal submissions. At the beginning of this problem, we come across as financial difficulties, too much shareholding and sending the family to a different place. These reasons, problems that will arise during the on-site transformation process, such as the problem of rent assistance, population mobility, transportation problems, both work and education-based problems, and the problem of moving should be addressed in more detail.

Urban transformation contractors need to be filtered.

In the districts of Karşıyaka, Alsancak and Güzelyalı, where adjacent structures are concentrated, the buildings that have undergone transformation pose a risk to the surrounding structures.

**İzmir Metropolitan Municipality Urban Transformation Directorate**

* Retirees mostly reside in the lower quarters of the Narlıdere district, in the Hatay- Üçyol region and on Karşıyaka-Girne Street.
* İzmir is not a city where it is possible to produce new land.
* In the 2020 İzmir earthquake, planned and converted buildings were damaged or destroyed rather than slums.
* The Municipality and the World Bank are negotiating the conversion of moderately and slightly damaged buildings.
* Urban transformation is being carried out in almost all of Karabağlar district. In the remaining areas, revision determination studies have been completed.
* In the long term, urban transformation is not planned except for 6 regions.
* More island-based conversions are made in adjacent areas.

**İzmir Provincial Directorate of Environment and Urbanization**

One of the riskiest neighborhoods is Fuat Edip Baksır neighborhood.

With the 16th article of the Law No. 7143, which was published in the Official Gazette on May 11, 2018, regarding the zoning peace, many illegal structures, including risky structures, were licensed. Applications for urban transformation have decreased due to both the reduced interest in urban transformation due to the rights granted by this law and the increase in costs.

2000 earthquake regulations and 2012 building inspection were enacted. For this reason, all buildings built before 2000 should be looked at. Since the buildings built before these dates have not undergone technical inspection and their projects are made and implemented without building inspections, they are defined as buildings with a high probability of being risky.

than 60% of İzmir can be defined as a slum area. These areas are not only the single-storey detached buildings, but also the densely populated areas of apartment-like buildings built with illegal floors. These areas are considered to be areas where risky buildings are concentrated, since the building quality is low and the number of floors is higher than the precedent defined in the zoning plans.

* The Aegean quarter is a settled neighborhood mostly populated by Roma.
* The socio-economic level of Karşıyaka, Buca, Bornova and Konak districts is high. In these districts, there may be areas that may be suitable for conversion on the basis of parcels and that there may be a demand for this.
* Gultepe Neighborhood; Suitable for large family sample. There is a lot of leakage.
* Sarniclar neighborhood; Treasury lands are in the majority.
* Camdibi Neighborhood; The municipality does not currently operate in this neighborhood. The houses are very old and risky structures. The roads are very narrow. There is a residential texture in the neighborhood where ambulances and firefighters cannot enter the side streets.
* Bayrakli District; Illegal structuring is intense.
* Naldoken District; Industry and houses are intertwined.
* Çaldıran and Gürçeşme Neighborhoods; Conversion of the rear is being considered.
* Provincial Director's recommendation; It should be done on a parcel basis. Because there are so many places that have been decided to be transformed and not converted.
* Branch Manager's opinion; Due to the illegal floor situation, the citizen does not make an individual application with the thought that he will receive less money.
* Manavkuyu District, Adalet District, Mansuroğulları District; The risk zone will not be declared.
* Two areas are urban renewal areas in Karabağlar. The district is an area where furniture, shoes and small manufacturing are concentrated, and low-income households live predominantly.
* Kemeraltı 1st and 2nd site old city area. Here, an allusion plan was made for protection purposes.
* Leather factories in Yeşilyurt Gülbahçe were moved to Menemen OSB. No project could be produced for this region, which has a shanty house behind it.

An area of 43 hectares in Narlıdere, where treasury lands and private lands coexist, has been determined as an urban transformation area. 600+600 objections were received regarding the urban transformation plan in the area, which was suspended twice. With 1.7 precedent, the large number of objections in the area to be transformed slows down the process. This situation works the same in almost all urban transformation projects. For this reason, transformation studies at the field level can become slow and long-lasting projects.

The answers to the following questions regarding transformation at the structure level are important:

* Will structures on treasury lands be included for conversion with personal loan use? Illegal residential buildings in these areas have been granted a building registration certificate and have become legal and able to purchase electricity, water and natural gas.
* Is the transformation in Roma neighborhoods or neighborhoods populated by marginalized ethnic groups appropriate to be structure-based?
* What will be the path to be followed in the transformation of shared residences? Bayraklı is one of the areas where the need for transformation is highest, but multi-ownership structure is very common in small parcels. This makes it difficult to reconcile between shareholders. There are those who are left out in terms of rent assistance. Underneath this, some of the shareholders living in the buildings that have received the building registration certificate with the zoning peace stay outside.

Çamdibi, as an area within the city, close to the garage and close to the business centers, can be evaluated as an area that is suitable for zoning and can respond to transformation on a parcel basis.

In order to accelerate the transformation on parcel basis in İzmir, it is expected that the precedent/floor will be increased. Since the shareholders who own the condominium can rent their houses instead of giving them for conversion after the zoning peace, they do not want to go through the transformation without an increase in the precedent/floor.

Consultants learn about the precedent and easement rights because they can get information about the parcel to be transformed without reflecting on the official process, and if it is a highly profitable parcel, they enter. Since the costs are high, they do not want to enter every parcel, even if it is a risky structure.

Zoning notes are important in transformation.

- transforming it together with the surrounding structures,

- floor or precedent

- Decisions regarding the road and the street should be evaluated.

As a result of these decisions, if the square meter of the parcel decreases and the floor / precedent decreases, the demand for urban transformation also decreases.

The consultation of the final drafts of the environmental and social documents in İzmir was held on April 10, 2023. 47 people from public institutions, mukhtars and non-governmental organizations attended the consultation meeting. The opinions conveyed at the meeting, the meeting photo and the list of participants are presented below, respectively.

**Questions and Comments Submitted at the Meeting:**

* Cooperatives also need to be involved in the Project.
* Regarding tax and duty exemptions, payments such as "floor servitude" that do not contain the phrase "duty" in its name are made to municipalities. Exemptions to be made for “duty” payments within the scope of the project should also include these payments.
* The definition of “female-headed households” in the definition of vulnerable group should be explained more clearly since there is no such definition in the legislation.
* Can building block-based application be made without being in the definition of a risky area?
* Will parking be made compulsory in the buildings?
* Precautions should be taken against noise during the demolition of buildings.
* What kind of work will municipalities do on waste management?
* Newly constructed buildings should be constructed in accordance with urban aesthetics.
* Will there be renewable energy use in newly constructed buildings?

**Responses to Submitted Questions and Comments:**

* Within the scope of the project, the construction of more than 10 buildings in the same region will not be allowed. For this reason, if there are more than 10 buildings in a building-block based works, they will not be able to benefit from the loan given by the Project.
* Parking lots regulations will be complied with in buildings that have been identified as risky structures, demolished and reconstructed.
* Municipalities are obliged to fulfill their duties and responsibilities in the Waste Regulation.
* Renewable energy will be used in newly constructed buildings. Moreover, in addition to the loan interest to be given within the scope of the project, an extra discount will be applied according to the energy class of the building.

**Meeting Photo:** April 10, 2023. The consultation of the final drafts of the environmental and social documents in İzmir. 47 people from public institutions, mukhtars and non-governmental organizations attended the consultation meeting.

# ANNEX 3- SAMPLE GRIEVANCE FORM

**CLIMATE AND DISASTER RESILIENT CITIES PROJECT**

**COMPLAINT REGISTER FORM**

|  |  |  |
| --- | --- | --- |
| **Location of Complaints Received** |  | **Date** |
| **Name of Person in Charge** |  | **Complaint Register Number** |
| **Coordinates of The Area Subject to Complaint** |  | |
| **COMPLAINANT INFO**  **Applicants can submit their requests anonymously. However, if no ID or communication details are provided, this may prevent the applicant from receiving feedback regarding the corrective actions to be taken and the status of the request.** | | |
| **Name Surname** |  | **Form of Complaint:** |
| **Identification Number** |  | **Phone –Free phone line** |
| **Telephone/ E-mail** |  | **Face to face** |
| **Neighborhood-Village –District - Province** |  | **Consultation meeting** |
|  |  | **Petition** |
|  |  | **Project web page** |
|  |  | **CİMER**  **(Presidential Communication Center)** |
| **/ DETAILS OF COMPLAINT** | | |
| **Complaint** | | |
| **Solution requested by the Complainant** | | |
| **Name Surname and Signature of the Registrar Name Surname and Signature of Complainant** | | |

# ANNEX 4- SAMPLE GRIEVANCE CLOSEOUT FORM

CLIMATE AND DISASTER RESILIENT CITIES PROJECT

GRIEVANCE CLOSURE FORM

|  |  |  |
| --- | --- | --- |
| **Grievance Closure No:** |  | |
| **Identify the urgent actions** |  | |
| **Identify the long-term actions (if necessary)** | **Dear ECA RSA team,** | |
| **Is there a claim for compensation?** | **Yes No** | |
| **CONTROL AND DECISION OF CORRECTIVE ACTION** |  |
| **Stages of Corrective Action** | **Date of Expiration of the Given Period and Authorized Institutions** | |
| 1. |  | |
| 2. |  | |
| 3. |  | |
| 4. |  | |
| 5. |  | |
| 6. |  | |
| 7. |  | |
| 8. |  | |
| 9. |  | |
| 10. |  | |

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# ANNEX 5- GRIEVANCE REGISTRATION LOG

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# ANNEX 6- COMMUNITY SAFETY AND TRAFFIC MANAGEMENT PLAN

**1.Purpose and Scope**

The purpose of this plan is to identify and describe various measures to reduce accidents, injuries and similar adverse situations resulting from potential traffic movements throughout the Project, as well as to minimize traffic jam and thus reduce fuel consumption, and to provide safe, fast and easy access for emergency vehicles.

The Traffic Management Plan is part of the Project's Environmental and Social Management Plan. It addresses traffic management of pedestrians, vehicles and construction equipment. This plan aims to minimize the potential impacts that may arise from the addition of vehicle movements generated by Project activities to existing roads.

The following aspects are included in the scope of this plan:

- Legal requirements and standards,

- Key tasks and responsibilities,

- Impact reducing precautions and Management Controls,

- Training, Reporting and Monitoring

This plan may be updated and revised as necessary.

**2. Legal Framework**

**2.1 National Legislation**

- Transportation Law No. 4925 and Highway Transportation Regulation (Official Gazette 19/7/2003 No. 25173). During transportation, tonnage, truck sizes and load limits will be followed according to the legislation and existing roads will be arranged in accordance with Turkish standards according to the anticipated traffic type and capacity.

- Article 134 of the Road Traffic Law No. 2918 and Traffic Regulation,

- Transportation of Hazardous Material on the highway regulation (24.10.2013 Official Gazette; No. 28801)

- Prevention of Pollution Caused by Motor Vehicle Exhaust Gases Declaration (22/10/1992 Official Gazette No. 21383),

**2.2 International Standards**

-IFC Performance Standard 4: Community Health, Safety and Security,

-AIIB ESS 1: Environmental and Social Assessment and Management

-IFC General EHS Guidelines: World Bank Group's Community Health and Safety and EHS Guidelines

According to -IFC PS 4; the role of Project activities in traffic, potential traffic load and road safety risks need to be identified, assessed and monitored. Implementation of the plan should include prevention of traffic accidents to protect lives of local residents and workers through transportation routes.

**3. Roles and Responsibilities**

|  |  |
| --- | --- |
| **Roles** | **Responsibilities** |
| Project Management Unit (PMU). | To ensure that adequate resources are provided to implement this procedure.  Review and update the procedure when necessary |
| Contractor  Management Representative/Project Manager | Ensuring that the management plan is implemented throughout the project.  - Provide oversight and make an routine audits to ensure that relevant activities suitable with the Management Plan.  - To Ensure that the activities are carried out in accordance with the Management Plan and relevant Procedures,  - Ensuring the necessary equipment and vehicles is in functioning.  - Supporting construction personnel in planning and coordinating traffic management in a timely and efficient manner.  - Ensuring that the OHS requirements of all personnel are met.  - Manage daily material deliveries and vehicle access to the site.  - Avoiding heavy traffic loads on frequently used roads, ensuring that access is only through designated routes, and planning the timing of deliveries and access.  - Liaise with the construction team in the planning, coordination and monitoring of traffic movements and facilitate the implementation of corrective actions.  - Prepare/ensure the preparation of necessary reports and keep accident reports and inspection reports  - To ensure that the tools and equipment used is in functioning in accordance with the manufacturer's specifications. |

**4. Mitigation Measures and Management Controls**

4.1 General Requirements

| **Project Phase** | **Potential Risk/Impact** | **Mitigation Measures** | **Responsibility** |
| --- | --- | --- | --- |
|  | Management of traffic and community safety impacts of the project | * Within the scope of the project, determining the roads and streets that can be used by heavy vehicles and those that are not suitable for use and creating a route map accordingly. * Preventing the use of roads that would endanger public health and safety by taking the opinions of local authorities such as headman and municipality during the traffic risk analysis process * Sharing route information, including the roads that will and cannot be used within the scope of the project, with drivers and relevant subcontractors and providing the necessary information/awareness. | Contractor |

4.2 Province-Specific Requirements

| **Project Phase** | **Potential Risk/Impact** | **Mitigation Measures** | **Responsibility** |
| --- | --- | --- | --- |
|  | Management of traffic and community safety impacts of the project | * -Acting in cooperation with İzmir Metropolitan Municipality Transportation Coordination Center Transportation Coordination Center UKOME on issues such as announcing the time intervals when heavy tonnage vehicles transport materials and equipment to/from the site, selecting alternative routes, etc. | Contractor |

4.3 Sub-project Related Possible Requirements based on Types

| **Project Phase** | **Potential Risk/Impact** | **Mitigation Measures** | **Sorumluluk/ Responsibility** |
| --- | --- | --- | --- |
|  | Management of traffic and community safety impacts of the project | * The construction site should be closed with a closure curtain (OSB, fence, etc.) in order to prevent unauthorized access to the construction site by third parties. * Separating pedestrian roads from vehicle roads within the construction site, defining a separate transportation route for pedestrians * The presence of blind spots outside the field of vision of machine operators during the movement of construction machinery. Use of pointers to avoid these risks. * The tires of construction machinery and other vehicles should be selected in accordance with the land and climatic conditions, and worn tires should not be used. * Warning the drivers and pedestrians outside the project with the necessary identification and caution plates on the roads and intersections about the construction site traffic * Ensuring that drivers conform to legal speed limits * - Taking necessary measures to prevent the spread of dust (watering the construction site, covering the vehicles, etc) | -Contractor |

5. Training, Reporting and Monitoring

5.1 Training

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) are described in the İzmir ESMP. The trainings will include;

* OHS, environmental and social assessments,
* ESMP,
* Community health and safety,
* Community Safety and Traffic Management Plan
* 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

5.2 Reporting

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

| **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 İzmir ESMP, 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 - Provincial Environmental and Social Monitoring Plan presented in Section 10. | 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 İzmir Environmental and Social Monitoring Plans, whose format is presented in Section 10. * 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 |

**5.3 Monitoring**

PMU has the experience and competence to oversee environmental and OHS issues associated with the implementation of the Project's construction activities, in particular in the context of field work, PMU's individual environmental and social experts in the provinces will supervise and monitor the contractors and report any issues identified in the field to the contractors and their liaison officers and agree on steps to rectify these issues. 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 UTP and individual Environmental Specialists hired for provinces and the WB will be informed within 48 hours by the UTP. 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 UTP by the contractor within 30 working days with the guidance and controls of the PMU individual specialists and the UTP will forward the incident report to the WB. The UTP will also report its findings in this context to the WB with their reporting. 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.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Parameter** | **Parameter Details / Mitigation** | **Monitoring Method and Location** | **Frequency** | **Responsibility** |
| 1 | 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 |
| 2 | 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 |
| 3 | Dust and Noise | Taking compulsory measures within the scope of national legislation and to be detailed in the ESMP Checklists and İzmir ESMP 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 |
| 4 | 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 |

# ANNEX 7- RESOURCE EFFICIENCY AND POLLUTION PREVENTION PLAN

1. **PURPOSE AND SCOPE**

Resource efficiency is the efficient and sustainable use of limited and exhaustible resources such as raw materials, energy and water to create more value using fewer inputs. It can also be defined as doing more with fewer resources and reducing the negative impacts of resource use.

The Resource Efficiency and Pollution Prevention Plan has been developed to identify the primary applicable requirements for waste management 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 applicable to the retrofitting / demolition / reconstruction activities of the Project's subprojects, particularly under Component 2

1. **STANDARDS**

**World Bank ESF Requirements**

ESS3 recognizes that economic activity and urbanization often pollute air, water and soil and consume finite resources that can threaten people, ecosystem services and the environment at local, regional and global levels. Current and projected atmospheric concentrations of greenhouse gases (GHGs) threaten the well-being of current and future generations. At the same time, technologies and practices for more efficient and effective resource use, pollution prevention, and GHG emission avoidance and reduction have become more accessible and available.

ESS3 sets out requirements for addressing resource efficiency and pollution prevention and management throughout the life of the Project, consistent with Global International Industry International Practices (GIIP).

The objectives of the Resource Efficiency and Pollution Prevention and Management Standard are given below:

To promote the sustainable use of resources, including energy, water and raw materials

Prevent or minimize adverse impacts on human health and the environment by preventing or minimizing pollution from project activities

Avoid or minimize project-related emissions of short- and long-lived climate pollutants

Prevent or minimize the generation of hazardous and non-hazardous waste

Minimize and manage the risks and impacts associated with pesticide use.

This plan outlines the resource efficiency and pollution prevention framework to be followed by the contractor.

This plan is prepared for implementation by the Project Management Unit (PMU), contractors and subcontractors. The roles and responsibilities for the implementation of the Plan are presented in Section 6.

1. **POSSIBLE SUB-PROJECT TYPES AND DETAILS**

**Potential Sub-Projects under Component 2**

The rationale for Component 2 is the need for resilient housing/workplaces in the Project pilot provinces, which will greatly contribute to increased climate and disaster resilience. The Government of Turkey faces several challenges in implementing the national regulatory framework supporting climate and disaster resilient urban transformation. Key challenges include the need for increased financing for retrofitting/reconstruction activities to meet resilience and energy efficiency standards, and the transfer of funding to municipalities to increase investments in resilient urban infrastructure. Accordingly, the sub-project types according to the activity to be realized can be listed as follows:

- Type-I: Sub-projects involving buildings that have been identified as risky structures but have not been demolished, and for which demolition and reconstruction activities will be carried out.

- Type-II: Sub-projects involving buildings that have been identified as risky structures, but have applied for loans for retrofitting instead of demolition and reconstruction, and accordingly, only retrofitting activities will be carried out.

- Type-III: Sub-projects that have been demolished after being identified as risky buildings and will apply for loans only for reconstruction activities within the scope of Component 2.

1. **SUMMARY OF IMPACTS**

Retrofitting, demolition and reconstruction activities will cause noise and air pollution, as well as hazardous material risks such as chemical leakage risks. In addition, basic retrofitting/reconstruction requirements such as concrete, rebar, insulation material, etc., will be required as resources, as well as water for personnel use and fuels for vehicles and equipment.

**Raw materials:** The way materials are used is related to the production and consumption processes. Extracted natural resources are used for manufacturing purposes and then consumed as goods or services. Each process stage generates energy flows and by-products. The by-products are recovered or released into nature as waste and emissions. However, man-made materials are not easily recovered or degraded in nature due to their toxicity and non-degradable nature. Therefore, efficient use of raw materials and by-products is important to save energy and conserve natural resources.

**Energy:** It is accepted that a country's standard of living and energy consumption follow a parallel course. World energy consumption is constantly increasing. Unfortunately, the world's energy needs are mainly met from fossil fuels with limited reserves. Therefore, sustainable energy use should be ensured by reducing the consumption of fossil fuels, reducing greenhouse gas emissions, using energy efficiently and preferring alternative sources.

**Water:** Water resources are important for society and ecosystems and are required for agriculture, livestock, energy production, navigation, recreation and manufacturing. The main issues related to water use are the abundance, availability and quality of resources in nature. While the status of water resources varies according to local conditions, climate change is also an important factor. As a result of climate change, the water demand of living things increases with increasing temperatures. On the other hand, water and energy systems are interconnected. Energy is required for water pumping, transportation and processing. Therefore, efficient use of water is necessary to improve living standards in the future.

**Wastes:** Project activities will result in the generation of various non-hazardous and hazardous wastes.

Non-Hazardous Wastes

Typical non-hazardous wastes are listed below;

Household wastes,

-Recyclable waste (e.g., paper, glass, metals, wood waste, trees, cans, textiles, etc.),

Packaging waste,

-Waste tires and

Excavation wastes.

Hazardous Wastes

The different types of hazardous wastes likely to be generated as a result of the Project activities are listed below:

Waste batteries and accumulators,

Waste vegetable oil,

Medical waste,

Waste oil (from maintenance of equipment and vehicles, transformers, etc.),

Waste paint,

Other hazardous wastes related to operation and maintenance activities and

Materials in contact with hazardous substances (including pesticide containers).

Excavation, Construction and Demolition Waste

Soil and rock materials excavated during land preparation and construction will be reused on site as much as possible. Practices will be in place for the management of excess excavated material as well as other construction and demolition waste.

1. **MITIGATION MEASURES**

Resource efficiency is the efficient and sustainable use of limited and exhaustible resources such as raw materials, energy and water to create more value using fewer inputs. It can also be defined as doing more with fewer resources and reducing the negative impacts of resource use. Each Resource Efficiency and Pollution Prevention Plan is presented in Table 1.

**Tablo 1 Resource iciency and Pollution Prevention Plans**

|  | **MITIGATION MEASURES** | **DUTIES AND RESPONSIBILITIES** |
| --- | --- | --- |
| Air Quality | - Implement measures defined in the environmental and social management system plan.  - Reduce dust impacts (watering during dry seasons, etc.) Minimize emissions from vehicles and construction equipment (cover trucks and limit speed, use well-maintained vehicles, etc.)  - Minimize the impact of construction site activities on air quality | Contractors |
| Soil and Groundwater | - Implement the measures defined in the environmental and social management system plan.  - Protect soil and groundwater from gasoline, fuel and chemical pollution  - Establishing and training the leakage-spill response team  - Keeping leakage-spillage response equipment ready  - Recording and monitoring natural resource consumption | Contractors |
| Surface Waters | - Implement the measures defined in the environmental and social management system plan.  - Prevent direct discharge of contaminated water into the receiving environment | Contractors |
| Solid Waste | - Implement the measures defined in the environmental and social management system plan.  - Minimize waste  - Collecting and sorting solid waste for reuse and recycling  - Providing appropriate containers for waste separation and training staff on this issue  - Separate storage of household wastes and recyclable wastes without mixing them together | Contractors |
| Noise level | - Implement the measures defined in the environmental and social management system plan.  - Regular maintenance of noise-emitting engines  - Providing noise protective equipment  - To determine the noise emitted to the nearest settlement and to take noise prevention measures if necessary (silencers, noise blocking panels, etc.) | Contractors |
| Wastewater | -Implement the measures defined in the environmental and social management system plan.  - Personnel-generated wastewater that will be generated during reconstruction or retrofitting must first be collected in sealed septic tanks, and then periodically sent to urban wastewater treatment plants through a protocol with the relevant municipality.  - If a sub-project is to be realized in a location where there is a possibility of a non-wastewater impact on any surface water or groundwater, implementation of measures to be determined specifically for the sub-project. | Contractors |
| Waste Oils | - Maintenance of machinery and equipment (e.g., oil change, battery replacement, etc.) is planned to be carried out outside the Project Area by qualified service providers. If oil changes, battery changes, tire changes, etc. are unavoidable at the construction site, dedicated areas (with appropriate drainage) will be used for this purpose. An impermeable cover will be laid under the vehicles to prevent soil contamination and this activity will be carried out away from water sources. In case of any oil/fuel/lubricant spillage or leakage at the construction site, pollution will be controlled by using absorbent materials and contaminated soil (if any) will be removed to a sufficient depth and stored as hazardous waste.  -All vehicles used in transportation will be equipped with absorbent material against any leakage or spillage. Workers will be instructed on the use and disposal of materials. Filters or materials saturated with petroleum products will be emptied into a suitable container to remove any free product before disposal.  -Waste oils will be temporarily stored, collected and disposed of in separate containers according to the categories specified in the Regulation on Control of Waste Oils. Waste oil will be collected in containers placed on an impermeable surface. Different containers will be used for different categories of waste oil. Waste oil temporary storage containers will be marked "Waste Oil".  - Waste vegetable oils will be temporarily collected in special containers.  - Mercury-containing light bulbs  - Waste oil will not be allowed to be discharged into receiving environments or toilets/sinks. | Contractors |
| Excavation, Construction and Demolition Waste | - Under no circumstances will excavation, construction and demolition waste be disposed of on site.  - Only the portion of cut trees and shrubs, such as small branches, leaves, etc., not collected by the relevant forestry authority will be left on site, as this material will contribute to increased growth of local flora through fertilization of the soil.  - Areas used for temporary storage of excavated waste will be reinstated as soon as the earthworks/construction activities in each relevant area are completed.  - Topsoil will be removed separately from the excavated material. | Contractors |

**DUTIES AND RESPONSIBILITIES**

|  |  |
| --- | --- |
| Project Management Unit (PMU) | Ensure that adequate resources are provided for the implementation of this Plan.  Review and update the Plan, as necessary  Ensure that technical support is provided to contractors for the implementation of the Plan.  Oversee contractor compliance with Project requirements through contractor monitoring and reports. |
| Contractors | Ensure that this plan is implemented in line with Project standards  Ensure, as its main responsibility, the implementation of the Plan (also by Subcontractors, if any) and report to the PMU on non-compliance and performance of the Plan implementation.  Participate in the development of corrective and/or remedial actions when necessary (e.g., when non-compliances are identified, when there is a change in the relevant legislation, etc.).  Provide relevant trainings.  Carry out internal audits and daily audits and record non-compliances identified.  Ensure that relevant non-compliances are recorded and responded to promptly.  -Review and update the Plan when necessary (in coordination with PMU). |

# ANNEX 8- 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[[17]](#footnote-18) prevention and management[[18]](#footnote-19) 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 Türkiye the MoEUCC adopted a new waste management regulation that will affect the important waste generating companies in Türkiye. 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 |  |  |  |  |  |  |  |

# ANNEX 9- 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 Disaster 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 Urban Transformation Presidency of the Ministry of Environment, Urbanization 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 Türkiye 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 Türkiye 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 Industrial 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 Annex -1(Workflow in Asbestos Studies). 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.

metin, ekran görüntüsü, çizgi film, çevrimiçi reklamcılık içeren bir resim

Açıklama otomatik olarak oluşturuldu

Demolition License

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

Asbestos

Asbestos

Application of relevant articles of the Regulation and asbestos removal

Employer/ Building Owner

Demolition License

**Asbestos Determination and Management**

Identification of parts of buildings, containing asbestos

1. Determining the type of asbestos
2. Preparation of business plan and institution structure
3. Assignment of Occupational Safety Specialist (construction sites are classified in very hazardous class according to NACE code)
4. Preparation of a risk assessment
5. Preparation of asbestos risk analysis
6. Photographing the current condition of the construction site
7. Determination of the required number of employees with Asbestos Removal Certificate and their duties
8. Assignment of Asbestos Removal Specialist
9. 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.
10. The Asbestos Removal Specialist will prepare and review documents and files.
11. 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.

metin, yazı tipi, logo, grafik içeren bir resim

Açıklama otomatik olarak oluşturuldu

**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:

metin, diyagram, çizgi, yazı tipi içeren bir resim

Açıklama otomatik olarak oluşturuldu

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 pressure less 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.

**Annex 1 -** **Workflow in Asbestos Studies**

metin, ekran görüntüsü, çevrimiçi reklamcılık, web sitesi içeren bir resim

Açıklama otomatik olarak oluşturuldu

# ANNEX 10- CHANCE FIND PROCEDURE

**1.** **Introduction**

Urban Transformation Presidency (UTP) 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 Urban Transformation Presidency, 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 finds 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 finds 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. 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. This document will be regularly checked.

**Chance Find Report Form**

**CHANCE FIND REPORT FORM**

**RASTLANTISAL BULUNTU RAPOR FORMU**

|  |  |  |  |
| --- | --- | --- | --- |
| **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 Hayır | | | |

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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:  *Bitiriş 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** | | | | | | | | | | | | |  |
|  |  |  | |  | |  | |  | |  | |  |  |
| **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**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MUSEUM** | **ADDRESS** | **TELEPHONE** | **FAX** | **E-MAIL** |
|  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CONSERVATION**  **BOARD** | **AREAS OF**  **RESPONSIBILITY** | **ADDRESS** | **TELEPHONE** | **FAX** | **E-MAIL** |
|  |  |  |  |  |  |

# ANNEX 11- 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.

**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** |  | | |

| **PART-II: Environmental and Social Risks - Current Situation** | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Environmental and Social Considerations** | **Projected Risk According to the Current Situation (provide as much detail as possible in the columns)** | | | | | | | | | | | | | | | | |
| **Risk Level** | **No Risk** | | **Low Risk** | **Moderate**  **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? |  | |  |  | | |  | | | | | | |  | | | |
| **Explanation:** | | | | | | | | | | | | | | | | |
| What is the level of the risk of the subproject to pollute a water body in terms of sub-project area’s proximity? |  | |  |  | | | | |  | | | |  | | | | |
| **Explanation:** | | | | | | | | | | | | | | | | |
| What is the risk regarding impacts related with dust generation in terms of the sensitivity level of the receptors? |  |  | |  | | | | | |  | | | | |  | | |
| **Explanation:** | | | | | | | | | | | | | | | | |
| What is the risk level regarding impacts related with noise generation in terms of the sensitivity level of the receptors? |  | |  |  | | | | | | |  | | | | |  | |
| **Explanation:** | | | | | | | | | | | | | | | | |
| 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)? |  | |  | | |  | | | | | |  | | | | |  |
| **Explanation:** | | | | | | | | | | | | | | | | |
| What is the risk level regarding livelihood impact for any worker working in the building (e.g., supers and other workers population)? (This section should be completed if there are personnel (eg. super) or commercial enterprises in the building, providing brief information about their status following the building’s risk assessment. If neither applies to the sub-project, please clearly indicate this.) |  | |  |  | | |  | | | | | | |  | | | |
| **Explanation:** | | | | | | | | | | | | | | | | |
| 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? |  | |  | |  | | |  | | | | | |  | | | |
| **Explanation:** | | | | | | | | | | | | | | | | |

| **PART-III: Environmental and Social Risks - Anticipated risks of sub-project activities** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Environmental and Social Considerations** | **Anticipated Risk (provide as much detail as possible in the columns)** | | | | | |
| **Risk Level** | **No Risk** | **Low**  **Risk** | | **Moderate**  **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)? |  |  | |  |  |  |
| **Explanation:** | | | | | |
| What is the risk regarding impacts related with dust generation in terms of the volume of building to be demolished and/or reconstructed? |  | |  |  |  |  |
| **Explanation:** | | | | | |
| 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. |  | |  |  |  |  |
| **Explanation:** | | | | | |
| 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.)? |  | |  |  |  |  |
| **Explanation:** | | | | | |
| 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.)? |  | |  |  |  |  |
| **Explanation**: | | | | | |
| What will be the level of the risk of the subproject within the scope of RF?  This section will be filled out by taking into consideration the following:   * Identification of vulnerable groups (if any) affected by the building to be transformed under the Project and determination of their entitlement (tenant/homeowner) status.   *This is an indicative piece of information. Please adjust it according to the information you have.*  Please provide details with about the potential vulnerable groups in the building with reference to their rights within the scope of the CDRC project. (i.e. additional interest deduction, rental support, etc.).  *Vulnerable groups: Female-headed households, elderly, persons with disabilities, poor households (including those with many children) and persons without social security insurance (including unemployed youth and households with child laborers), migrants / Syrians under temporary protection / Ethnic groups, persons and groups whose livelihoods depend on the structures covered by the Project and who will be permanently displaced economically and physically (e.g.supers)* |  |  | |  |  |  |
| **Explanation**:    Within the scope of the Climate and Disaster Resilient Cities Project, beneficiaries who have not previously benefited from rental assistance or interest support have been informed that they can apply for and benefit from rental assistance in accordance with Article 16 of the Implementing Regulation of Law No. 6306 and the conditions specified in the Rental Assistance Guide, even if the one-year application period has passed.  Accordingly, the project will ensure that all eligible PAPs (homeowners, renters, business owners, etc.) receive compensation in accordance with the Project’s RF. | | | | | |
| Other environmental and social risks (if any, please identify nature and level) |  |  | |  |  |  |
| **Explanation:** | | | | | |

| **PART-IV: Environmental and Social Risks - Current Status (For Type-III subprojects only)** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Environmental and Social Considerations** | **Risk According to Predicted / Observed Conditions** | | | | |
| **Risk Level** | **No Risk** | **Low**  **Risk** | **Moderate**  **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? |  |  |  |  |  |
| **Explanation:** | | | | |
| 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?) |  |  |  |  |  |
| **Explanation:** | | | | |
| 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?) |  |  |  |  |  |
| **Explanation:** | | | | |
| What is the risk of meeting with nuisance with neighbors due to a damage to other buildings during the demolition process? |  |  |  |  |  |
| **Explanation:** | | | | |
| What is the risk of future issues due to lack of demolition plan during the demolition or insufficiency of it in terms of quality? |  |  |  |  |  |
| **Explanation:** | | | | |
| What is the risk in terms of asbestos presence at the demolition site as a pre visual observation assessment) |  |  |  |  |  |
| **Explanation:** | | | | |
| What is the risk in terms of legal / reputational / public discomfort due to any fatal accident or accident caused disability during the demolition process? |  |  |  |  |  |
| **Explanation:** | | | | |
| As a preliminary observation, are there any property owners who will benefit from the additional interest rate discount specified in the sub-project?  (This is an indicative piece of information. Please adjust it according to the information you have.  For additional interest deduction categories, please visit the link provided below;  https://kentseldirenclilik.csb.gov.tr/proje-kapsaminda-verilecek-kredilerin-yillik-faiz-oranina-baskanligimizca-belirlenmis-olan-4-kategoriden-her-bir-kategori-icin-yillik-bazda-faiz-indirimi-uygulanacaktir.-haber-286788) |  |  |  |  |  |
| **Explanation:** | | | | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PART-V: Screening Summary** | | | | | | | | | | |
| **Designated Category** | **Environmental** | | | | | **Social** | | | | |
| High\* | Substantial\* | Moderate\* | | Low\* | High\* | Substantial\* | | Moderate\* | Low\* |
|  |  |  | |  |  |  | |  |  |
| **Reasons for Determining the Category and Related Details** |  | | | | |  | | | | |
| **Required Tools** | Neighborhood Level ESIA\*\* | | | ESMP Checklist\*\*\* | | | | E&S Audit / Environmental and Social Action Plan\*\*\*\* | | |
|  | | | REQUIRED. | | | |  | | |

\* Note to User: If one or more of the questions asked in the screening list on environmental issues are answered as "high risk", the relevant sub-project will be identified as "high risk" in environmental terms.

\*\* Note to User: Neighborhood level / based ESIAs will not be sub-project specific. In case more than 10 sub-projects with a social risk classification of "high" and environmental risk classification of "substantial" are implemented in the same neighborhood within a one-month period, this box will be filled in the screening checklist of each sub-project and sent to the PMU head office for their review.

\*\*\* Note to User: It will in all probability be required for each proposed sub-project, however, its scope will be determined based on the assessments in this screening list.

\*\*\*\* Note to User: E&S Audit will be required for each Type-III subproject. The requirement for an Environmental and Social Action Plan will be determined based on the results of the audit but is highly likely to be required. The ESAP will include relevant environmental and social corrective measures based on the findings of the E&S Audit.

# ANNEX 12- 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-Project, whose demolishing works had been completed before October 1, 2020.
* Any sub-project which would be classified as “High Risk”[[19]](#footnote-20) in terms of environmental risks.

# ANNEX 13- 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 ISO 45001:2018 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.

1. For details please see the Project Appraisal Document (PAD): <https://documents1.worldbank.org/curated/en/099955009082212553/pdf/BOSIB09755adcf0b60b1370d3698b9987d0.pdf> [↑](#footnote-ref-2)
2. The Project Management Unit (PMU) is established under a UTP department at the MoEUCC [↑](#footnote-ref-3)
3. The ESMF is available at: <https://kentseldirenclilik.csb.gov.tr/ingilizce-dokumanlar-i-108261> [↑](#footnote-ref-4)
4. SEP is available at: <https://kentseldirenclilik.csb.gov.tr/ingilizce-dokumanlar-i-108261> [↑](#footnote-ref-5)
5. The LMP is available at: <https://kentseldirenclilik.csb.gov.tr/ingilizce-dokumanlar-i-108261> [↑](#footnote-ref-6)
6. The Labor Management Procedures (LMP) is available at: <https://webdosya.csb.gov.tr/db/altyapi/icerikler/moeucc_lmp-20220705095035.pdf> [↑](#footnote-ref-7)
7. 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-8)
8. The RF is available at: <https://webdosya.csb.gov.tr/db/altyapi/icerikler/moeucc_rf-20220601190650.pdf> [↑](#footnote-ref-9)
9. <https://sim.csb.gov.tr/> [↑](#footnote-ref-10)
10. <https://www.isgum.gov.tr/labyetki.aspx> [↑](#footnote-ref-11)
11. Socio Economic Development Index (SEGE/SEDI) is a study periodically conducted by General Directorate of Development Agencies of Ministry of Industry and Technology at region (NUTS-2), province and district levels. Based upon a wide-ranging set of variables on demography, employment, health, education, financial, competitiveness, innovation and quality of life etc. SEGE defines six tiers of development with first tier being the most and the sixth tier being the least developed for provinces and districts. [↑](#footnote-ref-12)
12. *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*](http://www.sp.gov.tr/upload/xSPTemelBelge/files/wZYtU+Roman_Vatandaslara_Yonelik_Strateji_Belgesi_2016-2021_.pdf) [↑](#footnote-ref-13)
13. *İzmir Directorate of Culture and Tourism, “Havralar, Sinagoglar”,* [*https://İzmir.ktb.gov.tr/TR-77394/havralar-sinagoglar.html*](https://izmir.ktb.gov.tr/TR-77394/havralar-sinagoglar.html)*, (02.06.2024).* [↑](#footnote-ref-14)
14. 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-15)
15. You can access the SEP via: <https://webdosya.csb.gov.tr/db/kentseldirenclilik/icerikler/moeucc-sep-turkeyurbanres-l-ence-p173025----2023-04-17-eng-20230518143435.docx> (03.06.2024).

    16 You can access the webpage via: <https://kentseldirenclilik.csb.gov.tr/> [↑](#footnote-ref-16)
16. The Project’s web site can be accessed via: https://kentseldirenclilik.csb.gov.tr/ [↑](#footnote-ref-17)
17. 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-18)
18. 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-19)
19. 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-20)