

**TÜRKİYE PUBLIC AND MUNICIPAL RENEWABLE ENERGY PROJECT
(PUMREP)**

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

**15,59 MWm / 13,00 MWe Solar (Photovoltaic) Power Plant Project
of Kayseri Water and Sewerage Directorate (KASKI)**

APRIL 2026

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Abbreviations

AF	Associated Facility
CCTV	Closed-Circuit Television
DG	Directorate General
E&S	Environmental and Social
EHS	Environmental, Health and Safety
EHSG	Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
ESA	Environmental and Social Assessment
ESAP	Environmental and Social Action Plan
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESS	Environmental and Social Standards
ETL	Energy Transmission Line
E&S	Environmental and Social
FI	Financial Intermediary
GFI	Ground Fault Interrupter
GIIP	Good International Industry Practice
GM	Grievance Mechanism
IFIs	International Financial Institutions
IA	Impact Area
KASKI	Kayseri Water and Sewerage Directorate
ILBANK	İller Bankası A.Ş.
KPI	Key Performance Indicator
MTA	Directorate of Mineral Research and Exploration
OHS	Occupational Health and Safety
O&M	Operation and Maintenance
PAP	Project Affected People
PDR	Project Description Report
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
Project	Public and Municipal Renewable Energy Project
PUMREP	Public and Municipal Renewable Energy Project
RD	Regional Directorate
RE	Renewable Energy
SCADA	Supervisory Control and Data Acquisition
SEA/SH	Sexual Exploitation and Abuse and Sexual Harassment
SEP	Stakeholder Engagement Plan
SPP	Solar Power Plant
Sub-project	BAĞPINAR SPP Project of Sub-borrower KASKI
WB	World Bank

Glossary of Terms

Associated facilities	<p>Facilities or activities that are not funded as part of the Sub-project and are:</p> <ul style="list-style-type: none"> (a) directly and significantly related to the project; (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. <p>For facilities or activities to be Associated Facilities, they must meet all three criteria.</p>
Contractor	A person or organization providing services to an employer at the client worksite in accordance with agreed specifications, terms and conditions.
Excavated material	Materials/soils that are generated as a result of excavation and other similar activities carried out prior to construction
Legally protected area	<p>Designated terrestrial, aquatic or marine ecosystems managed under the related legislation to protect and sustain the biodiversity features, natural and associated cultural resources.</p> <p>Legally protected areas of Türkiye include a diversity of natural ecosystems and associated features ranging from coastal zones to mountains, deltas, forests, plains, steppe, lakes, river systems, deep valleys, canyons, and glaciers.</p>
Material borrow site	Sites, where loose material containing gravel, sand, silt, and clay, which is formed by the natural and geological processes of rock fracturing, fragmentation, alteration, transportation, and/or in-situ sedimentation, and which has the characteristics of slope debris, are extracted to be used as fill material.
Off-site accommodation	Accommodation of workers at hotels, rented housing, etc. available in the vicinity of Sub-project area.
On-site accommodation	Accommodation of workers at temporary exploration camps, construction camps, dormitories, etc. established for the Sub-project on site.
Risk	A combination of the likelihood of an occurrence of a hazardous event and the severity of injury or damage to the health of people caused by this event.
Topsoil	Part of soil that provides organic and inorganic materials, air and water required for vegetative growth, and is required to be stored separate from the subsoil.

EXECUTIVE SUMMARY

Türkiye Public and Municipal Renewable Energy Subproject (PUMREP) is financed by the World Bank (WB) to support the deployment of Renewable Energy (RE) technologies in municipalities and to scale up renewable energy in the public sector. İller Bankası A.Ş. (ILBANK) and the WB have established a support system for developing cities to identify, prepare, finance and finance investments for metropolitan municipalities to plan for and invest in a sustainable future, and to develop their urban planning capacities for this purpose. One of the areas of support is in the areas of institutional capacity building and Energy Efficiency and Renewable Energy.

Within the scope of PUMREP, the General Directorate of Water and Sewerage Administration of Kayseri Metropolitan Municipality (KASKİ) plans to establish a ground-mounted solar power plant (SPP) sub-project, named the KASKİ Bağpınar SPP, with a connection capacity of 13,000 kWe on the plots listed in Table 1.

Table 1. Location and Connection Power Information of the Planned Plant

No	Power Plant Name	Connection Power	District/Neighborhood	Block/Parcel	Area(m ²)
1	KASKİ-BAĞPINAR	13,000 kWe	Melikgazi İlçesi /Bağpınar Mahallesi	15740/175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 189, 190, 191, 192, 193	156.260,29

The Sub-project has been classified as having a Moderate level of risk according to ILBANK's E&S Risk Screening under its ESMS. As part of the Sub-project, an Environmental and Social Management Plan (ESMP) has been prepared in line with ILBANK's ESMS, the WB Environmental and Social Framework (ESF), relevant Environmental and Social Standards (ESSs), WBG General EHS Guidelines, Industry Sector Guidelines, and Türkiye's national legislation. This ESMP aims to enhance sub-borrowers' capacity and awareness while ensuring compliance with these standards and regulations, as is required for internationally financed subprojects.

Under national legislation, the sub-project has received a "Positive EIA" decision (Annex B Positive EIA Certificate) in October 2025 pursuant to the National EIA Regulation (Official Gazette No. 31907 dated July 29, 2022). Additionally, a non-agricultural use permit has been obtained for the area where the sub-project is planned to be constructed (Annex B Non-Agricultural Use Permit).

The "KASKİ Bağpınar Solar Power Plant" subproject, owned by the Kayseri Water and Sewerage Authority (KASKİ), is located in Kayseri Province, Melikgazi District, Bağpınar Neighborhood, Block 15740, Parcels 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 189, 190, 191, 192, 193. The land where the sub-project will be implemented is owned by the government land and has been allocated to KASKİ for a period of 2 years; during this period, the preliminary allocation will be converted into a definitive allocation upon the preparation of the investment project, its inclusion in the investment program, and the commencement of facility construction.

Subproject block 15740 and 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 189, 190, 191, 192, 193 parcels, covering an area of 156,260,29 m². The land is owned by the government land, and a preliminary allocation has been made to KASKİ for the implementation of the GES project. Therefore, no additional land acquisition or expropriation will be required during the construction and operation phases

of the sub-project. The title deed for the sub-project area is provided in Appendix B, and the allocation letter is provided in Appendix C. The sub-project area is shown in Figure 1.



Figure 1. Subproject Area

The environmental and social risk rating of the subproject is assessed as “**Moderate**” as the environmental and social risks for the construction works are temporary and site specific and the subproject construction area is not located in environmentally and socially sensitive area. Therefore, environmental, and social risks can be mitigated by applying good construction practice guidelines and mitigation measures identified in this ESMP. This ESMP has been prepared for this subproject in line with the overarching ILBANK ESMS and WB ESF, covering risks and mitigation measures specific to this subproject area.

The sub-project site is located in the Bağpınar neighborhood. Because the sub-project site is situated away from the Bağpınar neighborhood center and in an area with low urban density, it eliminates many environmental and social risks. The nearest settlement to the sub-project area is a livestock farm located 900 m away. The sub-project area is situated 17,500 m from the city center of Kayseri and 1,000 m from the Bağpınar neighborhood. The nearest settlement to the sub-project area is the Bağpınar neighborhood. Access to the sub-project area is provided via the D260 ring road to the north and the connecting road, Street 2533. Since the roads to be used for logistics and material supply during the mobilization, construction, and operation phases do not pass through the center of the Bağpınar neighborhood, they will not affect the residential areas or social facilities in the neighborhood center. The sub-project area consists of a rocky terrain with soil in places and contains no trees. Therefore, topsoil removal work will be completed on the soil areas prior to the construction phase, and the subsoil and topsoil will be stored separately without being mixed.

As a result of the site visit, two solar power plant sites owned by third parties were identified near the sub-project area. One of these is located to the north of the sub-project area and the other to the south; both are 400 meters away from the sub-project area. In the Project Presentation Document prepared for the sub-project and during the EIA process, it was determined that there is no special plant community within the

sub-project area, and it was noted that there were no objections to the removal of existing plant species in the area.

The primary risks to be encountered during the mobilization and construction phases of the subproject include dust generated by earth-moving operations, disturbances caused by noise pollution, and traffic congestion and the risk of accidents on the 2533 Street connection of the D26 bypass road, which will be used for transportation.

1. INTRODUCTION

1.1. Background

The Public and Municipal Renewable Energy Project (PUMREP) (hereinafter referred to as the “Project”) aims to increase the use of renewable energy through self-generation in public facilities. The Project will contribute to expanding the market for distributed RE in public facilities, helping to demonstrate leadership in the public sector to use sustainable energy solutions to fulfill the country's climate mitigation commitment and increase energy security.

PUMREP is financed by the World Bank (WB) to support the deployment of RE technologies in municipalities. İller Bankası A.S. (ILBANK) acts as the Financial Intermediary (FI). The project will be implemented through 4 components:

Component 1: Renewable energy investments in central government facilities

Component 2: Renewable energy investments in municipalities

Component 3: Technical assistance and project implementation support

Component 4: Emergency Response Component (CERC).

The General Directorate of the Kayseri Water and Sewerage Administration (KASKİ) (hereinafter referred to as the “Sub-Borrower”) has applied to İLBANK for sub-financing under Component 2 of the KASKİ BAĞPINAR GES 13.00 MWe project (hereinafter referred to as the “Sub-Project”). The Sub-Project is located in Bağpınar Neighborhood, Melikgazi District, Kayseri Province, on blocks 15740 and parcels 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 189, 190, 191, 192, and 193 in the Bağpınar Neighborhood of Melikgazi District, Kayseri Province.

ILBANK has established an Environmental and Social Management System (ESMS) effective on 24th of Dec 2023. The ESMS is aligned with the requirements of World Bank (WB) Environmental and Social Framework (ESF, 2018) including Environmental and Social Standards (ESSs) forming part of the ESF, and E&S polices and standards of other International Financial Institutions (IFIs) ILBANK collaborates with. It will be applicable to all ILBANK projects and Sub-project financed through International Financial Institutions (IFIs).

The ESMS aims to ensure systematic identification, assessment, management, monitoring, and reporting of the environmental and social (E&S) risks and impacts of the projects and Sub-project financed by the International Finance Institutions (IFIs). This process will be implemented on an ongoing basis throughout their loan duration in line with the requirements of the national legislation, international agreements and conventions ratified by Türkiye and E&S standards of lending IFIs (World Bank for the PUMREP). As a critical element of the ESMS, ILBANK has adopted and published an E&S Policy¹ applicable to all ILBANK projects and Sub-project financed through IFIs.

Within the scope of the ILBANK’s ESMS and World Bank Environmental and Social Framework (ESF), Sub-project are classified as High Risk, Substantial Risk, Moderate Risk or Low Risk taking into account relevant potential risks and impacts, such as the type, location, sensitivity and scale of the Sub-project; the

¹ <https://www.ilbank.gov.tr/sayfa/ilbank-environmental-and-social-policy>
<https://www.ilbank.gov.tr/sayfa/ilbank-cevresel-ve-sosyal-politika-dokumani>

nature and magnitude of the potential E&S risks and impacts; the capacity and commitment of the Sub-borrower; and other relevant areas of risks that may result in unintended impacts.

ILBANK considers financing the Sub-project under the PUMREP. In line with the ESMS, ILBANK carried out an E&S screening and risk classification of the Sub-project and rated the activity as having “Moderate” E&S risk. The Sub-borrower has retained a third-party consultancy company for the preparation of the E&S instruments required as per the E&S risk category assigned to the Sub-project.

This Environmental and Social Management Plan (ESMP) has been prepared by Liv Engineering & Consultancy for the Sub-project in line with the applicable E&S requirements as set out in Section **Hata! Başvuru kaynağı bulunamadı.**

A stand-alone Stakeholder Engagement Plan (SEP) has also been developed for the Sub-project.

1.2. Objective of the ESMP

This ESMP has been prepared to detail the measures to be taken during the implementation and operation (throughout the sub-financing agreement life cycle) of the Sub-project to eliminate or offset adverse E&S impacts, or to reduce them to acceptable levels; and the actions needed to implement these measures.

1.3. Overview of E&S Requirements Applicable to the Sub-Project

The Sub-project will be implemented in compliance with the requirements of the applicable national legislation and international agreements and conventions to which Türkiye is a party of, and in accordance with the following international requirements:

- ILBANK Environmental and Social Management System (ESMS)
- WB Environmental and Social Framework (ESF, 2018) and the Environmental and Social Standards (ESSs) forming part of the ESF,
- WB Group General Environmental, Health and Safety Guidelines (EHSGs) (2007)
- GIIP
- WB Group EHSGs for Electric Power Transmission and Distribution (2007)

Table 2 identifies the relevance of the WB ESSs to the Sub-project.

Table 2. Relevance of the WB ESSs to the Sub-project

ESSs	Definition	Relevance to the Sub-project
ESS 1	Assessment and Management of E&S Risks and Impacts	Relevant
ESS 2	Labor and Working Conditions	Relevant
ESS 3	Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4	Community Health and Safety	Relevant
ESS 5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
ESS 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
ESS 7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not relevant in Türkiye
ESS 8	Cultural Heritage	Relevant
ESS 9	Financial Intermediaries	Not relevant to Sub-project
ESS 10	Stakeholder Engagement and Information Disclosure	Relevant

When national requirements differ from the levels and measures presented in the EHSGs, the Sub-project will achieve or implement whichever is more stringent.

1.4. Review and Update

This ESMP will be reviewed and updated by the Sub-borrower during Sub-project implementation as necessary, to reflect changes in national legislative framework, ILBANK's policies and other developments or in specific circumstances such as in case there are changes in the organization structure, following significant incidents, following incorporation of new tools, software or database into the ILBANK E&S Risk Management System, etc.

The Sub-borrower will notify ILBANK of any updates to the ESMP.

The Sub-borrower will ensure that changes to the ESMP do not result in deviation from the requirements set forth by the national legislation and the E&S requirements applicable to the Sub-project.

1.5. Implementation Arrangement

The Sub-borrower will hold ultimate responsibility for implementation of this ESMP by the Sub-borrower and contractor teams (engaged in connection with the Sub-project – including sub-contractors) throughout the sub-financing agreement life cycle.

The Sub-borrower will ensure that adequate financial and human resources for effective ESMP implementation are available at Sub-borrower, supervision consultant and contractor organizations throughout the sub-financing agreement life cycle.

The Sub-borrower will decide on the arrangements for the operation of the Sub-project and be responsible for ensuring that operations are compliant with the national legislation and Operation ESMP.

The Sub-Borrower must ensure that all failures that may occur during the 1-year operational phase (during the defect liability period) are covered by the contractor and subcontractor organizations.

The roles and responsibilities of the Sub-borrower, contractor, and sub-contractor teams regarding the ESMP implementation are described in Chapter **Hata! Başvuru kaynağı bulunamadı..**

2. SUB-PROJECT DESCRIPTION

2.1.Sub-project Information

The sub-project activity subject is related to the establishment and operation of a photovoltaic (PV) solar power plant (SPP).

Key technical information on the Sub-project is summarized in **Table 3**. Further information on the construction and operation phase activities and facilities is provided in the following sections in this Chapter.

Table 3. Key Technical Information on Sub-Project

Information	Remarks/ Notes
Technology	Photovoltaic
Installed Power	15,59 MWp
Connection Power	13,00 MWe
Annual Electricity Generation	25.320,00 kWh
Solar Panel Type	Monocrystalline
Annual Carbon Emission Reduction	10.215 Tons CO ₂ /Year
Lifetime Carbon Emission Reduction	255.365 Tons / for 25 Years
Households Powered	8.107 / 3 MWh per house annually
Economic Life of the Power Plant (Operation Duration)	Min 25 Years

2.1.1. Sub-project Location

The sub-project is located in Kayseri Province, Melikgazi District, Bağpınar Neighborhood, 15740 Block, Parcels No 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 189, 190, 191, 192, 193. The land belongs to the Treasury and has been provisionally allocated to KASKİ for the implementation of the sub-project. During this period, the provisional allocation will be converted into a definitive allocation upon the preparation of the investment project, its inclusion in the investment program, and the commencement of facility construction. No additional land acquisition or expropriation will be required during the construction and operation phases of the sub-project. The title deed for the sub-project area is provided in Appendix B. Since the power transmission line will also pass underground through the same land, no land acquisition will be required for the power transmission line either.

Information on the Sub-project location is presented in **Table 4**.

Table 4. Sub-project Location

Information	Remarks/ Notes
Province	Kayseri
District	Melikgazi
Neighborhood/ Village	Bağpınar Neighborhood
Land Area (ha)	15740/175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 189, 190, 191, 192, 193 156.260,29 ha parcel area.

Land Use Type according to Title Deed	Raw Soil
Current Land Use	Rocky terrain covered with soil.
Other Nearby Facilities and Activities	Third party-owned solar power plant (400 m, north) Third party-owned solar power plant (400 m, south) Livestock Farm (900 m) Bağpınar Neighborhood Mosque and Residence (1000 m) Nearest House in Bağpınar Neighborhood (1100 m) Livestock Farm (1100 m) Livestock Farm (1200 m) Gas Station (1300 m) Livestock Farm (1600 m)

A map of the Sub-project location is presented in **Figure 2**.

Figure 2. Map of Sub-project Location



Table 5. Coordinates of the Sub-project Area

Unit	Coordinates (WGS84 in decimals)	
	Y	X
Sub-project Area	35.643901	38.819971

2.1.2. Site Access Route

The sub-project area is bounded by Street 2533, which branches off the D260 ring road to the north and extends eastward. Access to the sub-project area is via Street 2533, which branches off the D260 ring road. The roads to be used for logistics and material supply during the mobilization, construction, and operation phases will not pass through the center of the Bağpınar neighborhood. There is a third-party solar power plant site (see Figure 3) located on the access road leading from Street 2533 to the sub-project area. The road leading to the sub-project area continues parallel to this solar power plant facility.

Figure 3. Subproject Access Road and Bağpınar Neighborhood Location



2.1.3. Energy Transmission Line (ETL)

The subproject involves the construction of a 20 meter long underground power transmission line (ENH). Technical details regarding the ENH are provided in Table 6. A map showing the ENH route and the national grid connection point is provided in **Hata! Başvuru kaynağı bulunamadı.Hata! Başvuru kaynağı bulunamadı..**

The electricity generated by the newly established Bağpınar Solar Power Plant subproject will be connected to the national power grid via the existing Bağpınar DM-2 TR7628 substation in the same region, using a 20 meter underground power transmission line within the solar power plant site, in accordance with relevant regulations.

No additional overhead power transmission lines will be constructed as part of the sub-project. The underground power transmission line (ETL) will be connected to the distribution center (Bağpınar GES ÖTM TÖTR15) to be established within the sub-project area. Therefore, no expropriation or land acquisition will be required (**Hata! Başvuru kaynağı bulunamadı.**).

There are two existing solar power plant sites located near the subproject area that belong to third parties. The power transmission lines for these solar power plant sites run through the Bağpınar solar power plant site in a north-south direction. KASKİ has held discussions with the operators of the existing solar power

plant sites and, through an official letter, it has been agreed that this power transmission line will be removed from the construction site during the Bağpınar solar power plant construction phase. Prior to the start of the construction phase, the power transmission lines belonging to the third-party solar power plant sites will be removed from the construction area and rerouted via a different path.

Status of land acquisition for the ETL is described below in Section 3.4.

Table 6. Technical Information on the ETL

Information	Açıklamalar/ Notlar
Transformer station (for national grid connection)	Bağpınar DM-2 TR7628 Transformer station will be used.
Length of the route (km)	Underground energy transmission line (20 meters)
Voltage level (kV)	-
Number of ETL towers (pylons)	None
Total footprint area per each ETL tower (m ²)	None
Number of parcels subject to expropriation	None
Number of parcels subject to easement rights	None



KASKI BAĞPINAR TEK HAT

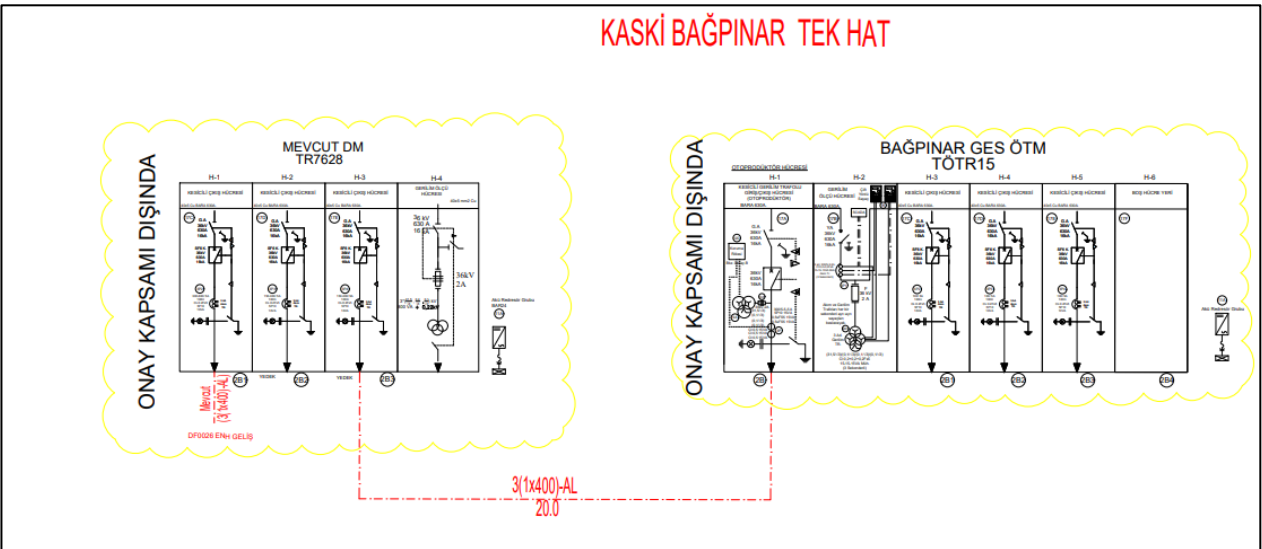


Figure 4. Map of ETL Route

2.1.4. Associated Facilities

There are not any associated facilities of the Sub-project.

2.1.5. Sub-project Impact Area

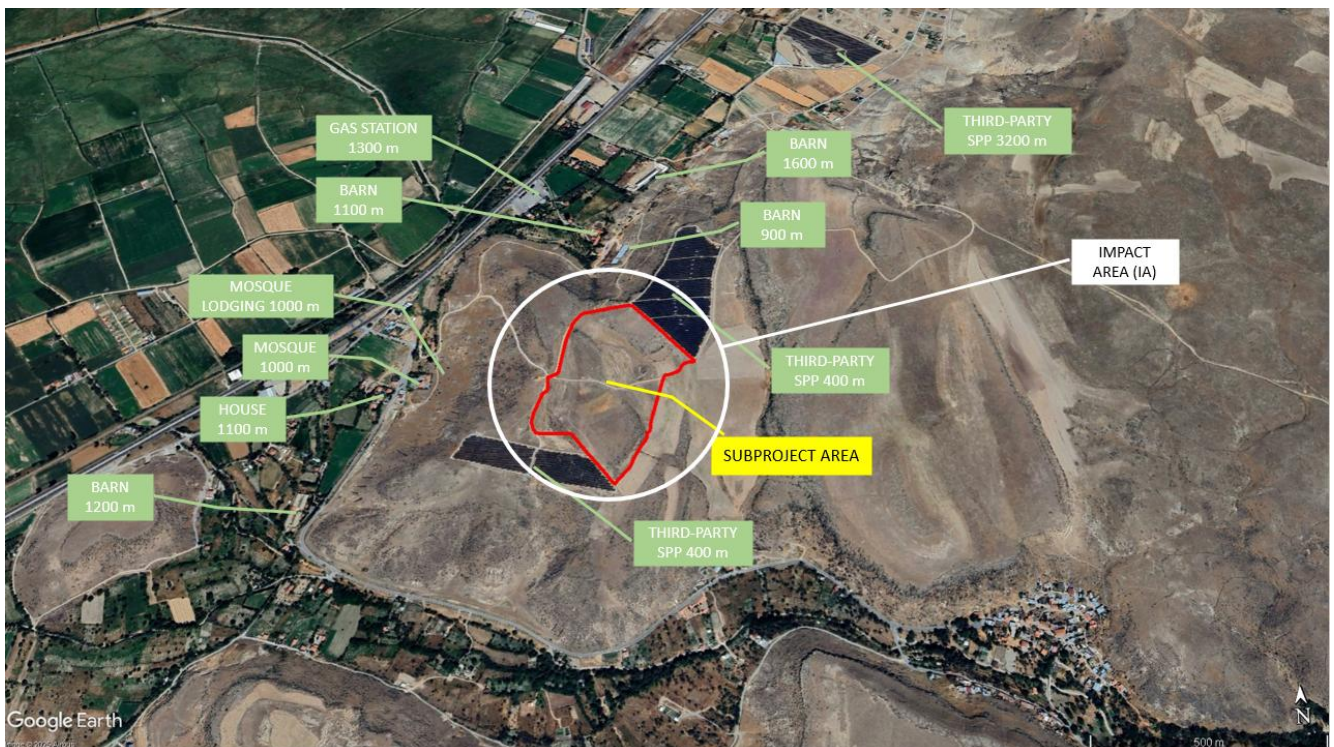
According to the WB ESSs, “where the project includes specifically identified physical elements, issues and facilities likely to generate impacts, environmental and social risks and impacts will be defined as the project impact area (IA).” Thus, the IA of the subproject consists of urban or rural areas likely to be affected by the project, its activities and the facilities directly owned, operated, or managed (including by contractors/subcontractors).

The impact area of the subproject covers the following environmental and social aspects:

The sub-project area, surrounding settlements, and access roads were evaluated to determine the Impact Area (IA). When a circle with a radius of 400 m was drawn around the sub-project area to determine the Impact Area (IA), the closest settlements were two livestock farms located within the boundaries of the Bağpınar neighborhood.

In addition, the residential area closest to the sub-project is the Bağpınar neighborhood. However, since the households in the neighborhood are not located along the access road leading to the sub-project site, they do not pose a traffic risk. Considering the potential environmental and social impacts of the sub-project, it has been determined that the local residents living in the center of the Bağpınar neighborhood will not be affected by dust and noise from topsoil removal operations or by traffic risks. For this reason, the households in the neighborhood have not been included in the Impact Area. On the other hand, the solar power plant sites near the sub-project area have been included within the project’s Impact Area due to potential dust, noise, and traffic impacts.

Figure 5. Map of Settlements and Livestock Farms Near the Sub-Project Area



2.1.6. Environmental and Social Baseline

This section contains information on the environmental and social conditions of the sub-project's Impact Area. Some of this information is based on telephone interviews conducted on June 16, 2025, with officials from Kayseri KASKİ and the head of the Bağpınar neighborhood.

Table 7 provides a summary of the baseline field surveys conducted as part of the EIA study.

Table 7. Summary of Baseline Field Studies

Subject	Date of the Field Study	Experts who Participated in the Field Study
Environmental and Social Field Survey & Telephone Interview with the Neighborhood Muhtar of Bağpınar	16.06.2025	Environmental Engineer/Expert Social Expert

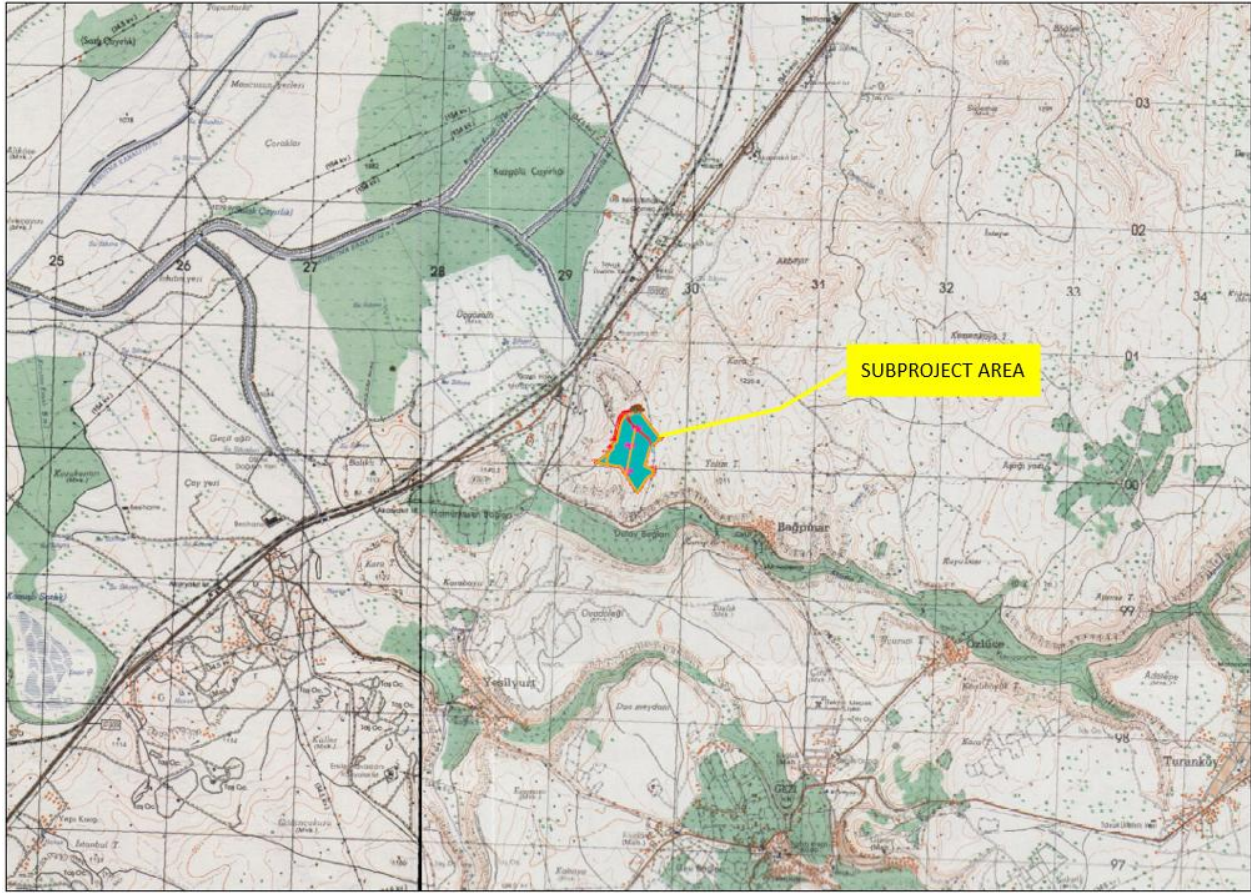
2.1.6.1. Physical Environment

The sub-project area was examined by an environmental specialist and a social specialist, and the current environmental and social conditions were characterized based on literature reviews and observations from site visits. No survey was conducted for the sub-project area. An interview with the head of the Bağpınar neighborhood and data obtained from the institution were used as references.

2.1.6.2. Topography

The sub-project site is located in the Bağpınar Neighborhood of Melikgazi District, Kayseri Province, at coordinates 38.819971 and 35.643901, 17,5 km northeast of the city center. The sub-project area is accessible by road and is situated on a flat plain with a slope of 0°–20° and an elevation of 1,168 meters. The sub-project area and its surroundings feature a sloping topography. The study determined that there is no potential for rainfall-induced mass movement (landslides, rockfalls, subsidence, craters, soil erosion) or potential for flooding or avalanches in the project area and its immediate surroundings. This finding can be seen in the topographic map of the sub-project area, which is derived from the approved Geotechnical Investigation Report and presented below.

Figure 6. Topographic Map



2.1.6.2.1. Geology

The lithological units observed in the sub-project area consist primarily of carbonate rocks deposited during the Upper Devonian to Upper Cretaceous age range. In this study, the works of Lengeranlı et al. (1986) and Ayhan and Lengeranlı (1986) were extensively utilized, particularly in the identification of Paleozoic-aged carbonate rocks and the determination of their distribution. The stratigraphic sequences of these rock groups, defined tectonostratigraphically as the Siyah Aladağ Nappe and the Beyaz Aladağ Nappe, are as follows (for the Siyah Aladağ Nappe): the Upper Devonian Harabe Formation, the Carboniferous Köşkdere Formation, the Lower Permian Sarıoluk Formation, the Upper Permian Zindandere Formation, and the Jurassic-Lower Cretaceous Uzunkoltepe Limestone; (for the Beyaz Aladağ Nappe); the Middle-Upper Triassic Karaköy Limestone, the Jurassic-Lower Cretaceous Uzunkoltepe Limestone, and the Upper Cretaceous Zigaderesi Limestone. In addition to these, rocks belonging to the Upper Cretaceous-aged ophiolitic series, Upper Miocene-Pliocene-aged volcanic rocks, and Miocene-aged clastic rocks constitute the other rock units observed in the region (see Figure 7 for the subproject area geological map).

The seismic hazard level (PGA475) for the sub-project area is 0.215 (see

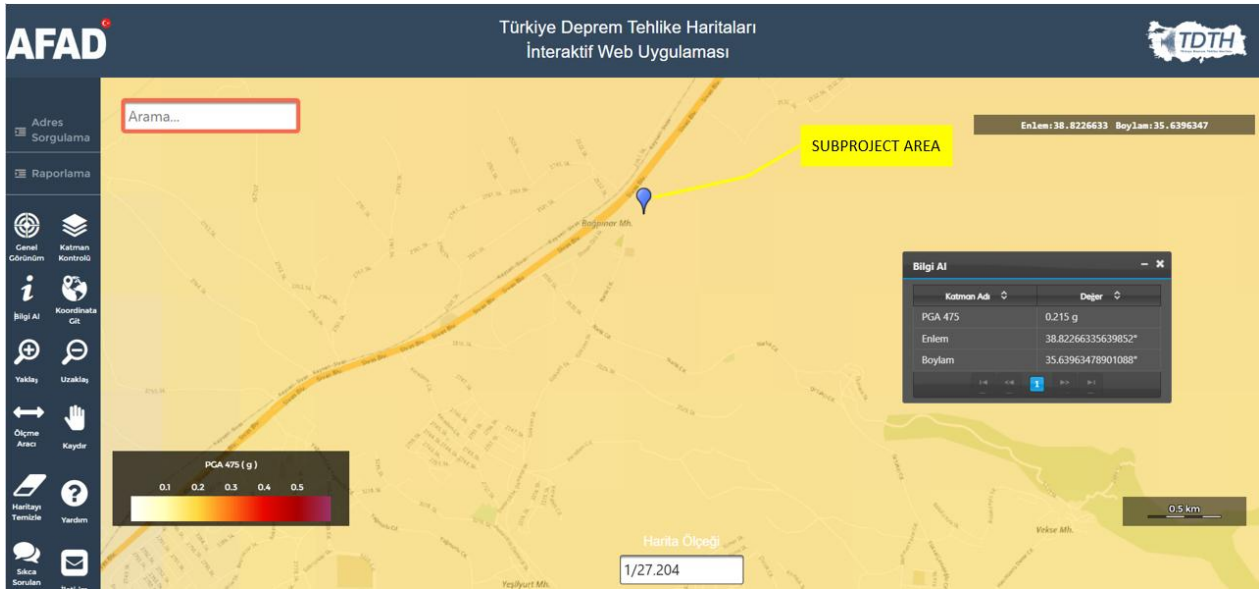
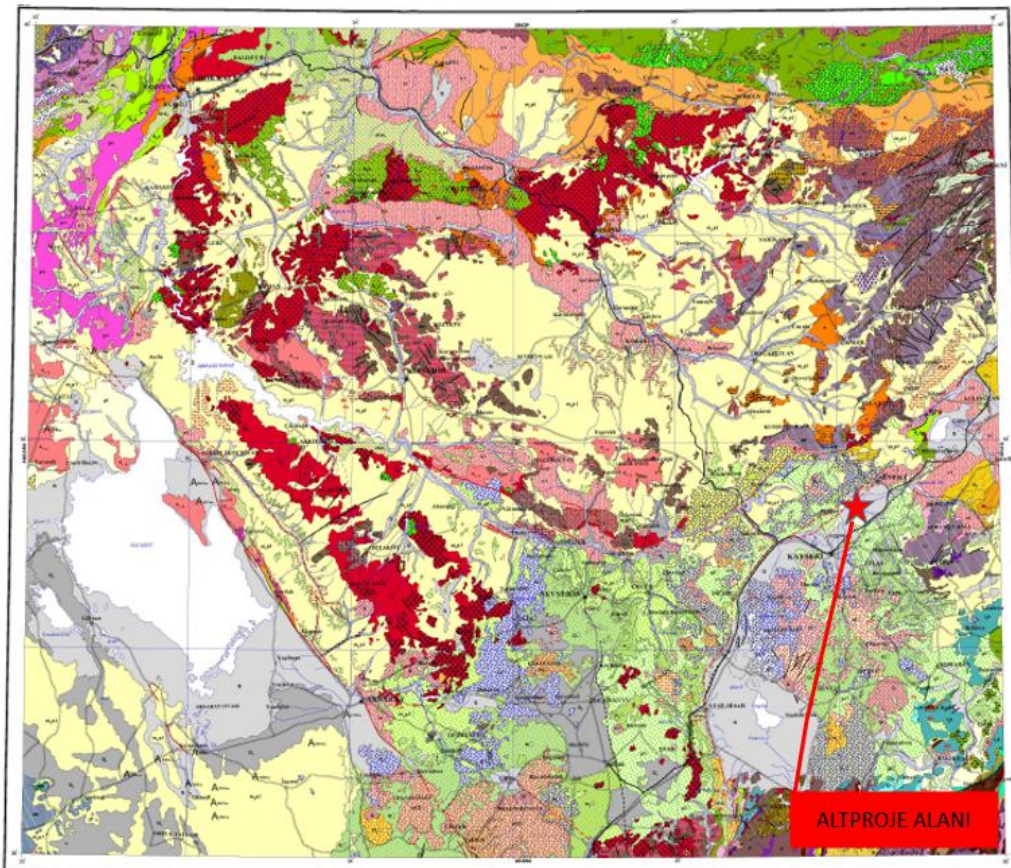


Figure 88); therefore, the seismic risk is low.

Figure 7. Geological Map of the Subproject Area



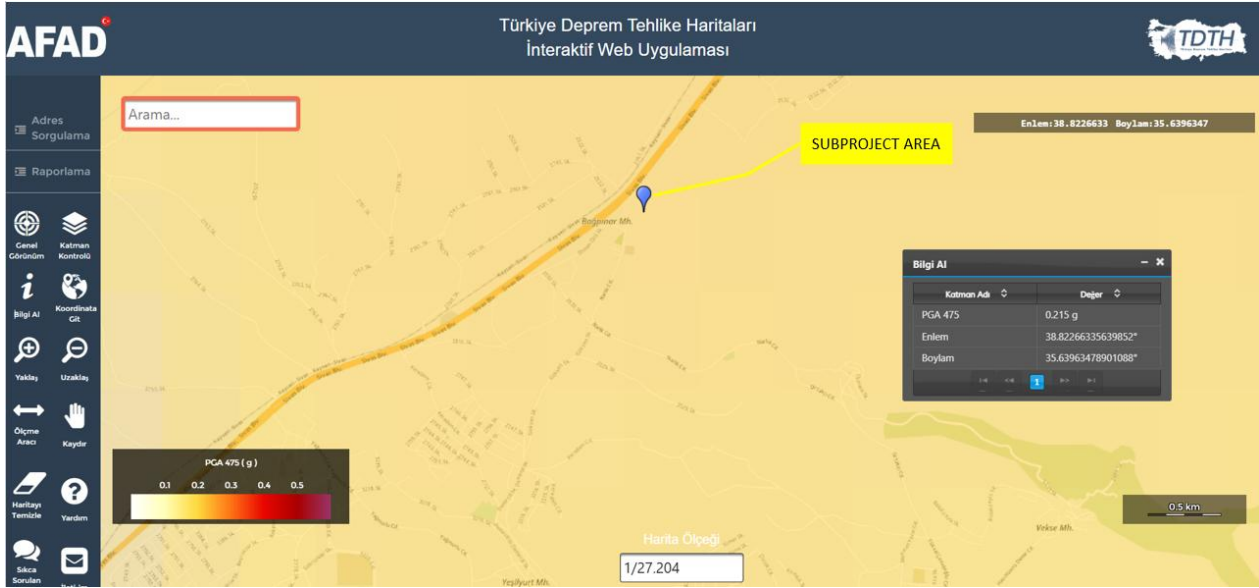


Figure 8. Türkiye Earthquake Hazard Map

2.1.6.2.2. Meteorology and Climatic Characteristics

The sub-project area is located in the Bağpınar neighborhood within the boundaries of Melikgazi District. According to data from the General Directorate of Meteorology, summers in the district are hot and dry, while winters are cold and rainy. This climate reflects the characteristics of the continental climate typical of the Central Anatolia Region. The hottest months are July and August (41,5°C). The coldest months are December, January, and February. Precipitation generally occurs during the fall and spring seasons. The district's monthly average precipitation is approximately 21.3 mm. Kayseri Province receives approximately 3,282.57 hours of sunshine annually, with a monthly average of 107.77 hours.

2.1.6.2.3. Air Quality

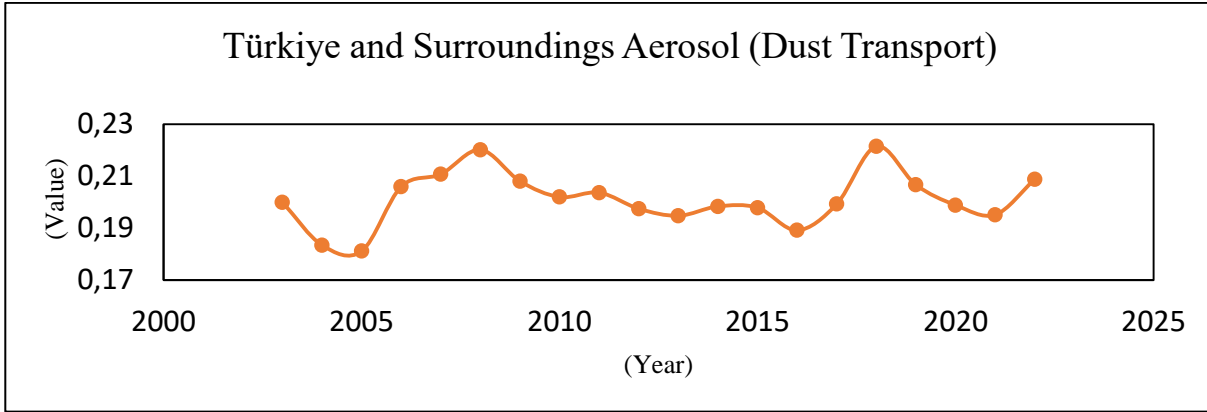
According to data from the Central Station, the Ministry of Environment, Urbanization, and Climate Change's continuous monitoring center, the air quality level in Melikgazi District is "MODERATE (56)".

Table 8. Air Quality Monitoring Table

Measurement	Value
PM	1010 $\mu\text{g}/\text{m}^3$
NO	210 $\mu\text{g}/\text{m}^3$
CO	170 $\mu\text{g}/\text{m}^3$

Aerosol (Dust Transport) Analyses of the General Directorate of Meteorology for Türkiye and its Surroundings covering the years 2003-2022 are given below. The average dust value for the region is given as 0.2012.

Figure 9. Aerosol (Dust Transport) Analyses



2.1.6.2.4. Noise

Noise sources in the vicinity of the sub-project area were identified as consisting solely of two solar power plants (located 400 m and 400 m away).

2.1.6.2.5. Water resources

As a result of surveys conducted in the sub-project area, it was determined that there are no nearby water sources. The nearest water source outside the project area is the Sarımsaklı Reservoir, located 10,7 km away.

The sub-project is located on land owned by KASKİ, and there are two solar power plants on parcels adjacent to the sub-project area.

2.1.6.2.6. Natural Hazards (such as flooding, landslides, fire etc.)

The Kayseri Provincial Directorate of Disaster and Emergency Management has stated that there is no decision designating the area where the sub-project will be implemented as a disaster-prone zone under Law No. 7269. It has been noted that no disaster-related projects are planned for the area in question.

2.1.6.3. Biodiversity

Floristic Assessment

The Red Book of Turkish Plants (October et al., 2000), the Convention on the Conservation of European Wildlife and Natural Habitats (Bern), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the IUCN Red List website (<http://www.iucnredlist.org>), and the website listing threatened plant species and their threat categories (www.tehditaltindabitkiler.org.tr).

Based on the assessment conducted during the fieldwork, the project area and its immediate surroundings are generally characterized by a terrestrial ecosystem type. The European Nature Information System (EUNIS) Habitat Classification was used to classify the habitat types within the terrestrial ecosystem.

Three different Eunis habitat classes are observed within the subproject area and its immediate surroundings. Field surveys have also revealed the presence of sparse coniferous forests, juniper (*Juniperus* sp.) thickets, abandoned mine sites, transportation routes, and agricultural areas with natural vegetation cover within the project area and its immediate surroundings. Consequently, the habitat data collected in the field are consistent with the Eunis habitat classes.

In conclusion, none of the plant taxon identified in the project area and its immediate surroundings fall into the “CR (Critically Endangered); EN (Endangered); VU (Vulnerable)” categories according to IUCN threat

criteria. Furthermore, among the identified plant taxon, there are no “flagship species” representing the Kayseri region and the area, nor any “key species” to be used for monitoring the ecosystem. Therefore, there are no plant taxon that require monitoring.

Prior to the commencement of work under the subproject, the topsoil will be stripped and stored separately from the subsoil material in a designated topsoil storage area. The topsoil contains seeds and vegetative structures and is therefore of great importance for bioremediation. Upon completion of the activities under the subproject, the topsoil will be reused in bioremediation, environmental restoration, and landscaping efforts.

Faunistic Findings and Analysis

Two amphibian species identified within the ecological impact boundaries of the subproject’s implementation area are seasonally found in moist habitats—such as rock crevices and under stones—where they can meet their biological needs. In particular, terrestrial species remain dormant during the day but become active at night, feeding and mating as darkness falls. According to an assessment of the conservation status of the amphibian species identified in the project area, both of the two amphibian species present in the area were determined to fall under the “LC” (Least Concern) category based on the list prepared and updated by the IUCN European Red List. According to the Bern Convention, the two amphibian species are listed in Annex III, i.e., the “List of Protected Species.” Among the two amphibian species identified within the project’s implementation and impact area, there are no endemic species specific to the site.

Protected Areas

When evaluated in accordance with the legal regulations governing ecologically protected areas under the jurisdiction of both the General Directorate of Nature Conservation and National Parks of the Ministry of Agriculture and Forestry of the Republic of Turkey and the Ministry of Environment, Urbanization, and Climate Change of the Republic of Turkey, National Parks (NP), Nature Conservation Areas (NCA), Wildlife Development Areas (WDA), Wildlife Relocation Areas (WRA), Nature Parks (NP), Natural Monuments (NM), Ramsar Sites (RS), Wetlands (W), and Special Environmental Protection Areas (SEPA).

When the subproject area is evaluated in relation to areas not protected by legal regulations, it is not located within any Important Natural Area (INA), Important Bird Area (IBA), or Important Plant Area (IPA). Taking into account the activities and environmental impacts of the project in question, there is no risk of adverse effects on either legally protected areas or INA, IBA, and IPA.

Among the wild animals and faunal taxon identified within the subproject area and its immediate surroundings, there are species that require protection under agreements such as the IUCN, the Bern Convention, the CITES Convention, and Central Hunting Commission Decisions. However, there are no endemic species among these taxon. Furthermore, among the identified wild animals and fauna taxon, there are no “flagship species” representing the Kayseri region and the area, nor any “keystone species” to be used in monitoring the ecosystem. Consequently, there are no species among the identified wild animals and fauna taxon that require monitoring. All personnel working within the scope of the subproject must receive nature education from a qualified biologist. In the event of encountering protected species likely to be found within the subproject area, care must be taken not to harm the animals, and they must be removed from the work area by experts taking the necessary precautions. The protected area closest to the subproject area is the Palas Lake Wetland, located 23.4 km away (see Figure 10).

Figure 10. Palas Lake Wetland Protected Area²



2.1.6.4. Socio-Economic Environment

On June 16, 2025, a field study was conducted on the socio-economic conditions of Bağpınar Neighborhood, and a telephone interview was conducted with the neighborhood head. Much of the information in this section is based on the information obtained from this interview.

2.1.6.4.1. Demography and Population

The sub-project area is located within the boundaries of the Bağpınar neighborhood in Melikgazi District, one of the central districts of Kayseri Province. The sub-project area is 16.5 km from Melikgazi District, 1 km from the Bağpınar neighborhood, and 17.5 km from the city center of Kayseri. The nearest settlement to the sub-project area is the Bağpınar neighborhood, which is under the administration of the Melikgazi District Municipality. According to information provided by the Bağpınar neighborhood head, the neighborhood's population is approximately 300. According to 2024 TÜİK data, the population of the Bağpınar neighborhood is 290. However, during the interview, the neighborhood head noted that residents of Bağpınar living in Kayseri city center and other provinces spend their summers in the neighborhood; consequently, the neighborhood's population exceeds 1,000 during the summer season and drops to around 600 during the winter season. Figure 12 below shows the distance between the sub-project area and the city center of Kayseri, as well as the distance between the sub-project area and the nearest household to that area.

² <https://www.arcgis.com/apps/View/index.html?appid=5f3978146c4643438ab446620e275269>

Figure 11. Closest House to the Subproject Area and Kayseri City Center Map



2.1.6.4.2. Land Ownership Status and Land Use by Affected People

Residents of the Bağpınar neighborhood, where the sub-project will be implemented, are primarily engaged in agriculture and livestock farming. It is anticipated that agricultural lands near the sub-project area will be exposed to the sub-project's impacts, such as dust and noise.

No land expropriation will be carried out for the sub-project activities. The sub-project land belongs to the Treasury and has been provisionally allocated to Kayseri KASKİ. During this period, the provisional allocation will be converted into a definitive allocation upon the preparation of the investment project, its inclusion in the investment program, and the commencement of facility construction.

Figure 12. Map showing the distance of the sub-project area from residential areas.



2.1.6.4.3. Employment and Means of Livelihood

According to information provided by the neighborhood mukhtar of Bağpınar, the primary source of income for most households in the neighborhood is agriculture and livestock farming. Among agricultural activities, viticulture—based on grape cultivation—is the predominant one. The mukhtar also noted that there are residents employed in various public institutions and in the industrial sector.

2.1.6.4.4. Education and Health Services

According to information obtained from the neighborhood mukhtar, there is no school in the neighborhood; children travel to İbrahim Çimen Elementary School in Yeşilyurt Neighborhood, which is part of Melikgazi District, using their own means and the municipal bus, while high school-aged children continue their education at other schools in downtown Kayseri. The neighborhood headman noted that the neighborhood's old school was later converted into a mourning house and is currently used as such.

There is no health care center in Bağpınar Neighborhood. The Bağpınar Neighborhood Head stated that neighborhood residents go to the family health center in Gesi Neighborhood, 5 km away, for primary health care, and travel to the Melikgazi district center and the Kayseri provincial center for secondary and tertiary health care.

2.1.6.4.5. Infrastructure Services

The Bağpınar neighborhood is equipped with drinking water and sewer systems, as well as electrical infrastructure. Household waste is regularly collected and disposed of by the Melikgazi Municipality. The neighborhood head has stated that there is no natural gas infrastructure in the neighborhood.

2.1.6.4.6. Transportation and Traffic

The neighborhood has a public transportation system. The neighborhood head has stated that the Kayseri Metropolitan Municipality's public bus serves the neighborhood with six trips per day.

The sub-project area is bounded by Street 2533, which branches off the D260 ring road to the north and extends eastward. Access to the sub-project area is via Street 2533, which branches off the D260 ring road. The roads to be used for logistics and material supply during the mobilization, construction, and operation phases will not pass through the center of Bağpınar neighborhood.

Figure 13. Access Road of Sub-project Area



2.1.6.4.7. Cultural Heritage (Tangible and Intangible)

In the opinion letter included in Annex A, the Kayseri Regional Directorate for the Protection of Cultural Assets stated that there are no cultural assets within the sub-project area. An Incident Find Procedure has been prepared to be implemented in the event that any cultural heritage artifacts are discovered during the construction phase, and it is presented in Annex H. Construction activities will be carried out in accordance with this procedure.

2.1.6.4.8. Vulnerable and Disadvantage Groups

As a result of the interview conducted with the neighborhood head of Bağpınar, the vulnerable and disadvantaged groups in the neighborhood are listed in Table 9 below:

Table 9. Vulnerable and Disadvantaged Groups of Bağpınar Neighborhood

Group	Number	Explanation
Disabled Individual	2	It was learned that there are two individuals with intellectual disabilities in the neighborhood.
Over 65 Years of Age Living Alone	1	It was learned that there is one man over the age of 65 living alone in the neighborhood.

Immigrants and Refugees	5	It was learned that a total of five refugees—four of whom are Syrian and one of whom is Afghan—live in the neighborhood. The neighborhood headman noted that they all make a living by working as shepherds.
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The roads in the Bağpınar neighborhood will be closed during the sub-project works, but the construction activities will not disrupt the neighborhood’s daily operations. Access and vehicle traffic will not be available from the center of the Bağpınar neighborhood. Therefore, the Vulnerable and Disadvantaged Groups identified in Table 9 will not be adversely affected by the sub-project.

3. SUB-PROJECT DESCRIPTION

3.1. Construction Phase

3.1.1. Construction Activities

Construction activities will be completed in 8 (eight) months. Detailed implementation schedule envisaged for the construction phase activities (including provisional acceptance) is presented in Chapter **Hata! Başvuru kaynağı bulunamadı..**

Construction phase activities are briefly described below:

- Pre-construction activities:

Since the sub-project area is not rugged and consists of rock and soil surfaces, only topsoil stripping and 20 m of power line trenching will be carried out during the site preparation phase. As part of the subproject, the topsoil across the entire construction site will be stripped to a depth of 10–15 cm before construction work begins. As a result, approximately 15,000 cubic meters of topsoil will be stripped from the subproject site, excluding rocky areas. No rock blasting operations will be conducted as part of the subproject. The use of explosives will be prohibited throughout the duration of the subproject. There are no trees in the sub-project area.

- Construction/ installation activities:

The perimeter of the sub-project site will be enclosed with a wire fence. This will prevent unauthorized access to the sub-project site and ensure occupational health and safety as well as public health and safety. A temporary camp area consisting of an office, a cafeteria, restrooms, and a security booth will be established for use by personnel working on the sub-project. The steel structure will be erected by drilling holes into the ground using a pile-driving machine (rock drill) within the sub-project area. Solar panels will be installed on the steel structure. Instead of burying the electrical cables between the panels, they will be laid on the ground surface using cable channels. Once the steel structure and panel installation are complete, the electrical connections will be connected to the distribution center substation to be established within the sub-project site. The electrical connection between the distribution center substation building and the sub-project site will be made using underground cables, requiring approximately 20 meters of excavation.

- Construction machinery and equipment:

During the construction phase of the sub-project, pile driving (rock machine) equipment, graders, water tankers (water trucks), forklifts, cranes, and excavators will be used.

- Water use and wastewater management:

Dust formation is anticipated during the construction phase due to topsoil removal and excavation/filling. In addition, some of the roads providing access to the sub-project area from outside (approximately 2,600 m) are not paved, which will cause dust formation due to vehicle movement and transportation. Vehicle movement within the sub-project area will also cause dust formation. Therefore, as an additional measure, watering will be carried out on the sub-project access road and work area, necessitating a water source and water tanker. Thus, during dry periods, an estimated 60 cubic meters of sprinkler water will be required per day. The contractor will use the water source specified and authorized by KASKİ and will carry out watering at regular intervals on the sub-project access road and work area to prevent dust formation. The nearest surface water source to the sub-project area is the Sarımsaklı Dam Reservoir, approximately 10,7 km away. No adverse effects from the sub-project works are expected to occur at the Sarımsaklı Dam Reservoir.

The sub-project works will not affect groundwater resources. A leak-proof septic tank will be used for wastewater disposal, and wastewater will be collected in the septic tank. Since there will be no on-site accommodation during the subproject's construction phase and the number of workers will be limited to a maximum of 30, daily water use per person is estimated at 100 liters. Daily wastewater generation is estimated at 3 cubic meters. The domestic wastewater treatment plant

located 30 km away from the sub-project work area will handle wastewater disposal. Wastewater will be regularly transported to the wastewater treatment plant by KASKI's vacuum trucks. The drinking water needs of the workers will be met with bottled water.

- Waste and hazardous materials management:

The construction process will generate various types of waste, including general construction debris, packaging materials and small amounts of damaged or unused panels containing hazardous materials. Hazardous materials consist primarily of fuels and oils used for machinery. During the construction phase, it is estimated that an amount of 100 kg of general construction waste, 500 kg of packaging waste, 200 kg of damaged panels containing hazardous materials, and 50 liters of waste oil from machinery will be generated. All waste will be handled in accordance with local regulations and hazardous materials will be properly stored and disposed of in accordance with environmental standards.

- Use of other resources and materials:

There will be no backfilling and no hazardous chemical substances will be used during the construction phase. In case of need, it is envisaged to use concrete in quantities to be procured from local suppliers. The fuel for the construction machinery to be used during the construction phase will be procured from suppliers, no fuel will be stored within the sub-project site and no fuel storage tank will be installed.

- Supply of materials and equipment:

- Panels: Panels will be procured from domestic manufacturers that meet high efficiency and durability criteria. Preference will be given to photovoltaic panels produced in Türkiye to ensure cost advantages and support the local industry.
- Steel Construction: Durable steel structures suitable for field conditions will be sourced from domestic manufacturers. Long-lasting coatings against corrosion and materials in compliance with engineering calculations will be used.
- Inverters: Inverters will be procured from foreign suppliers, considering criteria such as efficiency, warranty period, and technical support. The choice between central or string inverters will be determined based on site requirements.

Other Electrical Equipment (Solar Plant Materials):

- Cables and Cable Management Systems: Locally produced solar cables of appropriate cross-section will be used for both DC and AC sides. Cable trays and conduit systems will also be sourced from domestic suppliers.
- Transformer and Switchgear Equipment: Transformer stations suitable for power transmission lines will be planned using domestic production. Circuit breakers, disconnectors, and other electrical protection systems to be used in the switchyard will be supplied from local manufacturers.
- Grounding and Lightning Protection: Locally produced grounding rods, conductors, and lightning protection systems will be used to ensure the safety of the solar plant.
- Monitoring and Supervisory Control and Data Acquisition (SCADA) Systems: Local software and hardware will be preferred to enable facility performance monitoring.
- Supply Planning: Considering cost, quality, logistics, and procurement timelines, all equipment except inverters will be sourced from domestic manufacturers. For imported inverters, reliable international companies will be selected.

- Test and commissioning:

Before the solar power plant is put into operation, a series of tests and commissioning procedures will be conducted to ensure safe and efficient performance. The key steps include:

- Visual and Mechanical Inspections: Verification of proper installation of panels, mounting structures, cabling, and other equipment.
- Electrical Testing: Insulation resistance tests, continuity checks, and voltage measurements to confirm proper wiring and grounding.
- Inverter Commissioning: Configuration, functional checks, and synchronization of inverters with the domestic grid frequency.
- Performance Testing: Measurement of power output under different conditions to verify system efficiency.
- Protection and Safety Tests: Checking circuit breakers, surge protection devices, and relay settings to ensure electrical safety.
- SCADA and Monitoring System Integration: Testing remote monitoring, data logging, and communication with the grid operator.
- Final Grid Connection and Approval: Coordinating with the utility company for final inspections and obtaining the necessary approvals for grid connection.

All tests will be conducted in compliance with international and local standards to ensure the reliability and long-term performance of the solar power plant.

- Decommissioning of temporary construction facilities:

After the completion of the solar power plant construction, all temporary facilities used during the project will be systematically dismantled and removed. The key steps include:

- Dismantling of Temporary Structures: Offices, storage units and other temporary buildings will be disassembled and removed from the site.
- Removal of Construction Equipment and Materials: Any remaining construction materials, scaffolding, and machinery will be transported off-site or repurposed.
- Site Cleaning and Waste Management: Construction debris and packaging materials will be properly collected, sorted, and disposed of in accordance with WB ESSs and environmental regulations.
- Land Restoration: The project site will be restored to its planned operational state, ensuring compliance with environmental and aesthetic requirements.
- Final Inspection and Handover: A final site assessment will be conducted to confirm that all temporary facilities have been removed and the area is ready for long-term solar power plant operation.

All decommissioning activities will be carried out in accordance with local regulations and Good International Industry Practice.

There will be no activities related to the Subproject outside the scope of the proposed financing.

3.1.2. Construction Facilities

Construction facilities to be used during construction activities are listed in Table 100.

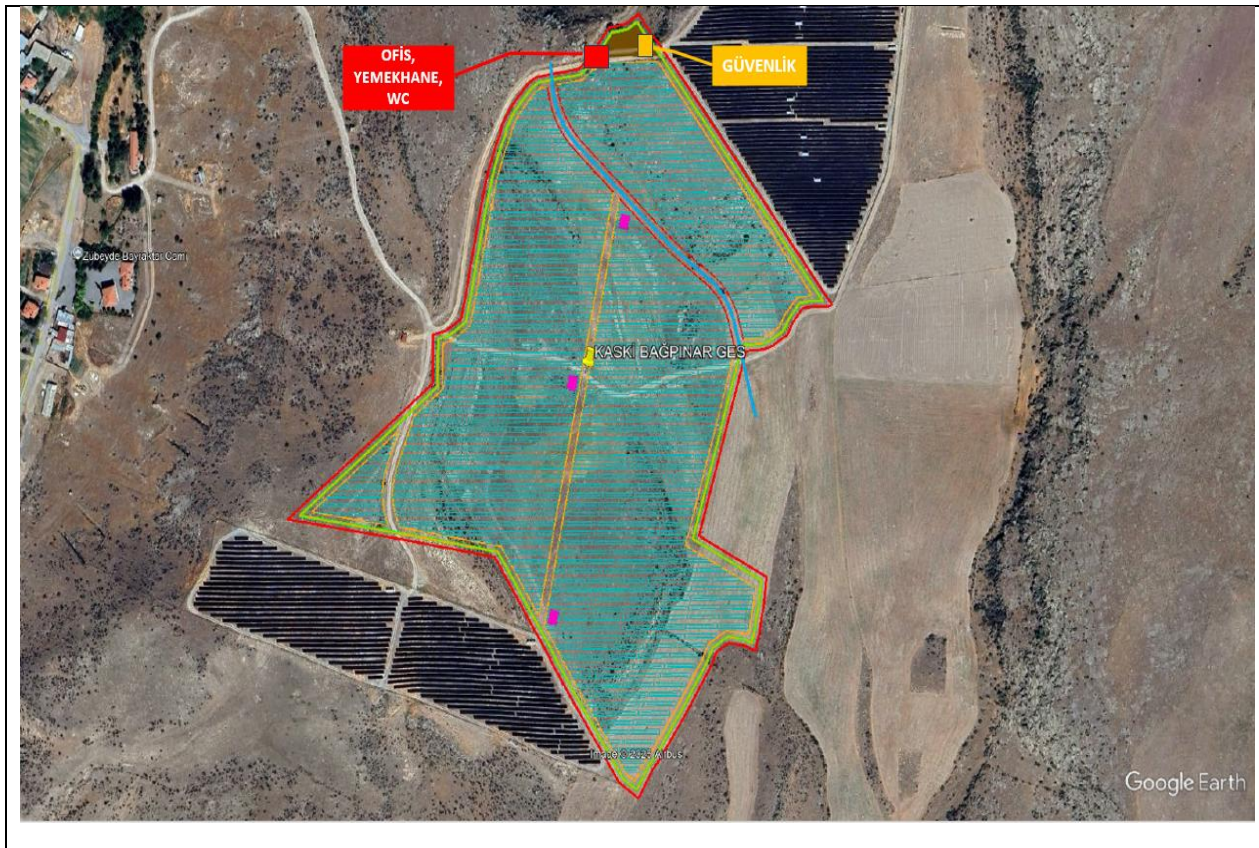
Temporary construction facilities will be dismantled and removed from the site after the sub-project construction phase is completed. Waste generated during the dismantling of temporary construction facilities will be separated according to the ESSs and national legislation and disposed of if necessary.

Table 10. Construction Facilities

Type	On-site or Off-site	Temporary or Permanent	List of Facilities
Construction Camp Site	On-site	Temporary	<ul style="list-style-type: none">• Office container• Toilets and connected septic tank.• Dining hall container• Security lodge

A layout of the construction camp site is presented in Figure 144.

Figure 14. Construction Camp Site Layout



3.2. Operation Phase

3.2.1. Operation Activities

1. Operation and Maintenance (O&M):

- Routine Inspections: Regular checks will be carried out on panels, inverters and electrical components.
- Preventive and Corrective Maintenance: Repair and replacement of defective parts will be carried out when necessary.
- Monitoring Systems: SCADA and Energy Monitoring Systems will be used to monitor plant performance.

2. Panel Cleaning:

- Water-Based or Dry Cleaning: Panels are cleaned with soft brushes, water or robotic cleaners using machines specially built for use with solar panels only. Panel cleaning will be done with water only, no chemical cleaners will be used. It is estimated that the subproject will require 45–50 cubic meters of water annually for cleaning the solar panels.
- Water Source: Water from local sources or storage tanks.
- Cleaning Equipment: Non-abrasive tools (cloths, sponges or brushes, etc.) or robotic systems.

3. Vegetation Control:

- Mowing/Crushing: Regular removal of weeds and vegetation will be ensured.

4. Site Security:

- Fencing and Gates: A secure perimeter will be created with controlled access.
- Security Guards and Closed-Circuit Television (CCTV): On-site guards and surveillance cameras for monitoring.

5. Control Building and Systems:

- Control Room: Monitors plant performance and manages system alarms.
- Communication Systems: Used for coordination and emergencies.

3.2.2. Operation Facilities

Operation facilities are described in Table 111.

Table 11. Operation Facilities

Component	Characteristics
Solar panels	Monocrystalline 545 Wp Panel
Mounting structures	Galvanized Steel and Aluminum Fixed Tilt Structure
Inverters, transformers, etc.	110 kW On-Grid Inverter PID Protective Smart String Inverters, Hermetic Power Transformer Autoproducer Switchgear, DC Solar Cables, AC Cables, Auto TMS, SPP Specialized Electrical Panels with Circuit Breakers and Disconnectors.
Control room, building, system, etc.	Remote Control SCADA System, Energy Monitoring and Management System, Inverter Control Panels Aka Dataloggers, Protection and Security Systems such as Fire Detection and Suppression Systems, CCTV Systems and Alarm Systems. Communication and Remote Internet Access Systems, Backup Power Systems, Climate Control Systems.
Energy monitoring system	SCADA and Datalogger

	Smart Inverter Compatible Energy Monitoring System Tracks the Performance of Solar Panels, Helps in Fault Detection and Maintenance Planning. It Would Monthly Generate Performance Reports.
Grounding system	TT system Grounding Rods, Grounding Conductors, Grounding Busbar, Equipotential Bonding Bar
Lightning protection system	Lightning Rods Mounted on High Metal Poles Which Connected to Power Plant's Grounding Line to Protect and Avoid Lightning-Induced Overvoltage.
Fire preparedness and firefighting facilities	Overcurrent Protection Devices (Fuses and Circuit Breakers) Integrated Equipment, Arc Fault Circuit Interrupters (AFCI), Portable Fire Extinguishers, Automatic Fire Suppression Systems (FM-200, CO2, Water-Based, Or Foam-Based Systems), Water Sprinkler Systems
Security facilities	Shift Patterns On-Site Security Guards, Main Entrance Gates, Security Gates, Vehicle Access Control, Remote Monitoring CCTV Surveillance Systems, Perimeter Lighting, Two-Way Radios.

3.3.Labor Requirements

Number of workers (at peak) that will work on site during the construction and operation phases of the Sub-project are provided in Table 122. During the construction phase of the Subproject, there will be no accommodation on site and workers will be transported to the work site by shuttles.

Table 12. Labor Requirements of the Sub-project

Phase	Number of Workers (including contractors and subcontractors)	Planned Accommodation Arrangement
Construction Workers (at peak)	30 People	Off-site
Operation Workers (at peak)	1 Person	KASKI staff/Off-site

3.4.Land Acquisition Status

The land required for the Kayseri KASKİ Bağpınar Solar Power Plant (13.00 MWe) sub-project was transferred to Kayseri KASKİ by the Treasury in 2024 through a preliminary allocation. Once the project is submitted, the preliminary allocation will be converted into a final allocation. The total area of the land is 156,260.29 m².

In addition, no land acquisition is required for the power transmission line. A 20-meter-long underground power cable will be laid within the same parcel and connected to the transformer building to be constructed within the KASKİ BAĞINAR-GES facility. No land acquisition will be required for the construction and operation phases of the sub-project. Information regarding the sub-project site is provided below:

Land acquisition status of the parcel to be used by the Sub-project is summarized in Table 133.

Table 13. Land Acquisition Status for the Sub-project

Sub-project Component	Lot/ Parcel No.	Current Land Ownership	Type of Parcel (according to Title Deed)	Land Acquisition Method	Title Deed Area of the Parcel (m ²)	Area to be Used by the Sub-project (m ²)	Status of Land Acquisition
SPP Area	15740/175, 176, 177, 178, 179, 180, 181, 182, 183,	Kayseri KASKI	Field	None	156.260,29	156.260,29	The land was provisionally allocated by the Treasury

	184, 185, 186, 187, 189, 190, 191, 192, 193						to Kayseri KASKİ in 2024. Once the project is submitted, the provisional allocation will be converted into a final allocation. The title deeds for the parcels are provided in Annex B.
ETL	15740/182	Kayseri KASKİ	Field	None	2.902,28	20 m	Underground electrical cables (20 m) will be laid within parcel no. 182 of plot 15740 and connected to the KASKİ-Bağpınar GES transformer building.

3.5. Permitting Status

The status of permits, licenses and approvals that need to be obtained before the subproject construction phase starts is presented in Table 144.

Table 14. Status of Permits for the Construction Phase

Permit, License, Approval	Status (In place, Not in place)	Remarks/ Notes
EIA Decision for the Power Plant	In place	Annex II activity as per the EIA Regulation in force (Official Gazette Date: 29.07.2022; Official Gazette No: 31907) The Positive EIA Decision (Date of Decision: October 13, 2025; Decision No. 27332451 220-02 E-2025730) was issued by the Provincial Directorate of Environment, Urbanization, and Climate Change of the Kayseri Governor's Office – Annex A. (*) Decision shall be considered invalid in case the investment is not initiated within 5 years of the Decision without any force majeure.
Zoning plan approval	In place	By Kayseri Metropolitan Municipality Decision No. 2025/220 dated May 12, 2025, a decision was made to amend the zoning

		plan for the parcel containing the sub-project area. The decision is presented in Annex A.
Permit for non-agricultural land use	In place	The opinion of the Provincial Directorate of Agriculture and Forestry of the Kayseri Governor's Office, dated March 28, 2025, and numbered E-87878883-230.99-18696158, has been attached as Annex A.
Cultural Heritage Protection Board	In place	The opinion of the Tourism Affairs Branch of the Provincial Directorate of Culture and Tourism under the Kayseri Governor's Office is presented in Appendix A.

Status of permits, licenses, approvals required for operation phase are listed below:

- Obtaining Construction License and Fire Safety Report from Kayseri Metropolitan Municipality
- Electricity Generation License Application, Call Letter and Connection Agreement with the Relevant Grid Operator
- Preparation of Electrical, Mechanical and Related Engineering Projects for the Approval of the Relevant Energy Company and Obtaining University Expert Approval for Structural Projects.

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

As the Sub-project involves both construction and operation activities, the ESMP consist of two components applicable to respective Sub-project phase, as follows:

- Construction ESMP Matrix
- Operation ESMP Matrix

Roles and responsibilities related to implementation of this ESMP is defined in Section **Hata! Başvuru kaynağı bulunamadı..**

Implementation arrangements for ESMP implementation are described in Section 1.5.

Contractor's E&S management plans and procedures that will support implementation of the E&S assessment documents are listed in Section **Hata! Başvuru kaynağı bulunamadı..**

4.1.E&S Risk and Impacts of the Sub-project

This section identifies potential environmental and social impacts and risks that may arise from Subproject activities during construction and operation phases.

Sub-Project activities are generally categorized as follows:

- Construction phase,
- Operation phase,

The overall potential environmental and social impacts expected for the Subproject are presented below.

4.1.1. Construction Phase

4.1.1.1. Environmental Impacts and Risks

During the construction phase, since the sub-project area consists of rock and soil, excavation and backfilling work will be carried out; topsoil will be stripped and stored separately, and an underground

power transmission line will be constructed. Therefore, environmental impacts will be limited to dust generation, noise, and waste production. Additionally, approximately 2,600 meters of the access road is unpaved, which will cause dust generation during vehicle and cargo transportation.

4.1.1.1.1. Soil Contamination

The sub-project area consists of stone and soil, and failure to respond promptly to accidental fuel and oil spills (caused by fuel and motor oil used in construction machinery) may result in fuel and oil seeping into the soil. The use of heavy machinery during the construction phase may result in accidental fuel and oil spills in the sub-project area, posing a risk of soil contamination. The uncontrolled storage or disposal of solid and/or liquid waste generated within the scope of the sub-project may result in the risk of soil contamination.

4.1.1.1.2. Impacts on Biodiversity

The field studies and literature reviews conducted in the sub-project area, along with the flora and fauna studies and biodiversity assessment, are outlined in the GES Assessment Report. When evaluating the floristic list of the sub-project area and its surroundings, none of the plant species protected and prohibited from trade under CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), signed in Washington on March 3, 1978, are found in the area.

Furthermore, plant species protected under the Convention on the Conservation of European Wildlife and Natural Habitats (BERN), which Turkey officially ratified on January 9, 1984, are not found within the project area.

Among the plant taxon identified in the project area and its surroundings, there are no species classified as “CR (Critically Endangered); EN (Endangered); or VU (Vulnerable)” according to IUCN threat criteria. Furthermore, there are no “flagship species” representing the Kayseri region and the site, nor any “key species” that could be used to monitor the ecosystem, among the identified plant taxon. Therefore, there are no plant taxon that require monitoring.

When evaluated in accordance with the legal regulations under the jurisdiction of both the General Directorate of Nature Conservation and National Parks of the Ministry of Agriculture and Forestry and the Ministry of Environment and Urbanization, the project area is classified as National Parks (NP) and Nature Conservation Areas (NCA) based on ecologically protected areas. Additionally, Wildlife Relocation Areas (WRA), Nature Parks (NP), Natural Monuments (NM), Ramsar Sites (RS), Wetlands (WL), and Special Environmental Protection Areas (SEPA) are also included in this scope. The subproject implementation area and its immediate surroundings constitute a habitat area where reptiles can sustain their populations in rocky steppes, field edges, and agricultural lands that meet their ecological needs. As a result of observations and interviews conducted in the area, 19 reptile species were identified as inhabiting the subproject area and its ecological impact zones. Of these, 1 is a tortoise, 3 are lizards, 7 are skinks, and the remaining 8 are snakes. These include: the Field Skink (*Ophisops elegans*), the Greek Tortoise (*Testudo graeca*), and the Modest Snake (*Eirenis modestus*). These species are not endemic. The Greek Tortoise (*Testudo graeca*) is classified as “VU” (Vulnerable) according to the IUCN. However, the tortoise is a reptile species widely found throughout Turkey.

No species recommended for monitoring have been identified in the subproject area and its surroundings. Furthermore, there are no “key species” that represent the Kayseri region and the project area, nor are there any “key species” among the identified species that could be used to monitor the ecosystem.

The area designated as the sub-project site is characterized by a monotypic habitat and a very sparse vegetation cover, and there are no permanent freshwater bodies within the site or in adjacent areas;

Furthermore, due to the absence of perennial vegetation formations throughout the site and in adjacent areas that could provide birds with opportunities for feeding, resting, sheltering, roosting, or even nesting, the number of bird species that prefer the sections designated as the project site and regularly utilize them is quite limited.

As a result of fieldwork, literature reviews, and interviews conducted within the subproject implementation area and ecological impact boundaries, it was determined that 31 mammal species inhabit the project area and ecological impact areas. As a result of fieldwork, literature reviews, and interviews conducted within the subproject implementation area and ecological impact boundaries, it was determined that 36 mammal species inhabit the project area and ecological impact areas. Of these, 1 is a hedgehog, 2 are insectivores, 1 is a rabbit, 8 are bats, 12 are rodents, 9 are carnivores, and 2 are ungulates.

As a result, among the wild animals and faunal taxa identified in the sub-project area and its surroundings, there are species that require protection under agreements such as the IUCN, the Bern Convention, the CITES Agreement, and Central Hunting Commission Decisions. There are no endemic species among these taxa. Furthermore, among the identified wild animals and fauna taxa, there are no “flagship species” representing the Kayseri region and the area, nor any “keystone species” to be used in monitoring the ecosystem. Therefore, there are no species among the identified wild animals and fauna taxa that require monitoring.

The necessary mitigation measures to prevent or reduce impacts on biodiversity are presented in Sections 4.2 and 4.3 of the Construction and Operation ESMP matrices.

4.1.1.1.3. Dust and Exhaust Gases Emission

During the construction phase, dust will be generated as a result of topsoil excavation. There is a risk that people living in nearby residential areas and two third-party solar power plants located 400 meters away will be adversely affected by the dust. During construction, exhaust emissions will be generated by heavy construction machinery. The primary emissions from vehicle exhaust gases are NO₂, CO, HC, SO₂, and PM. Due to the limited use of vehicles and machinery, exhaust emissions are expected to be minimal.

4.1.1.1.4. Noise Pollution

During the construction phase, there is a risk of noise pollution due to the operation of heavy machinery and, in particular, the driving of steel piles into the ground.

4.1.1.1.5. Impacts Associated with Water, Energy and Raw Materials Use

Worker needs will create water supply requirements. Construction phase activities will require the consumption of resources such as concrete, reinforcement, structural steel, energy, etc. The risk of human pollution from construction camps, due to wastewater production from construction work and workers, may particularly affect groundwater quality.

4.1.1.1.6. Waste

During the construction phase of the Subproject, activities such as procurement, transportation and installation of panels, electrical cables, steel materials and equipment will be carried out. The types of solid waste expected to be generated from these activities include municipal solid waste, packaging waste from system equipment (e.g. wood, cardboard, plastic, etc.), hazardous waste, electronic waste, construction waste (e.g. scrap metal, wood, concrete waste, etc.) and waste system equipment (panels, cables, electronic components). Hazardous and special waste may include contaminated packaging materials and rags contaminated with chemicals (e.g. paints, solvents, panels, inverters, etc.) or oils, waste oils from the operation and maintenance of machinery and vehicles, solvents, accumulators, batteries, filters, machine parts.

There is also a risk of uncontrolled discharge of domestic wastewater generated by the needs of workers.

4.1.1.2. Social Impacts and Risks

4.1.1.2.1. Occupational Health and Safety and Labor

Construction works can cause incidents and accidents that may threaten the health and safety of workers if measures are not taken proactively.

Potential health and safety risks during the construction have been listed below.

- Extreme weather conditions
- Working at height,
- Moving objects and construction equipment
- Hand and Power Tools
- Slips and trips and falls
- Noise vibration and exposure to dust,
- Materials handling and ergonomics,
- Unintended collapse, lifting and rigging bulky materials,
- Electric shock,
- Lack of use of appropriate personal protective equipment,
- Traffic related risks due to increased traffic and commute to work
- Unauthorized access to the facility
- Associated risk of occupational accidents, injuries, and diseases,

Hazards due to unhygienic or unsanitary living conditions, etc. Occupational health and safety risks and mitigation measures will be managed in line with the Subproject's Labor Management Procedure and OHS Management Plan which is in line with national legislation, Occupational Health and Safety Law (Law No: 6331, Effective Date: 20/06/2012) and related OHS Legislation, World Bank ESS2 and World Bank Group General Environmental Health and Safety Guidelines.

4.1.1.2.2. Community Health and Safety

The subproject will benefit the community in terms of improved access to municipal services, which may increase local job opportunities. During the construction period, it is anticipated that approximately 30 people will be employed under the sub-project. If employment is not provided at the local level, there will be an influx of workers into the area. In this case, there may also be a need for accommodation for these workers. The influx of workers and the need for accommodation in the project area can place additional strain on existing infrastructure, increase the risk of sexual exploitation and abuse, sexual harassment, and lead to potential impacts on and conflicts within the existing social structure. Considering that priority will be given to local labor in employment, a labor influx is not expected. Considering the employment of local labor, there will be no need for a camp area for workers. Therefore, potential impacts such as accidents, pressure on existing social infrastructure, sexual exploitation and abuse, sexual harassment (SEA/SH), and diseases will be minimized.

Before construction work begins, the sub-project area will be marked off with wire fencing. To protect materials remaining in the sub-project area at night and to prevent unauthorized entry in general, an unarmed guard will be stationed within the sub-project area.

The sub-project has identified the following potential Community Health Safety (CHS) impacts resulting from the construction phase.

- Accidents caused by unauthorized access of community members (especially children) to sub-project site (both construction and operation phases)
- Road damage in transportation and traffic; increased risk of traffic and road accidents and injuries,
- Emergencies resulting from contextual risks (e.g., earthquakes, fires, etc.)
- Noise and vibration,
- The threat to community culture, safety and security posed by the presence of construction workers and business opportunists,
- Impacts due to labor influx and interaction of temporary workers with the community (such as sexually transmitted diseases (STDs), Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) risk.

4.1.1.2.3. Labor and Working Conditions

A maximum of 30 people will work during the subproject construction phase. Although local employment will be prioritized, there is a small risk of an influx of workers. Priority will be given to local labor in employment, a labor influx is not expected. Therefore, there will be no need for accommodation. Workers will be transported to the area. Transportation will be provided for the workers.

Considering that priority will be given to local labor in employment, a labor influx is not expected. Considering the employment of local labor potential impacts such as accidents, pressure on existing social infrastructure, sexual exploitation and abuse, sexual harassment (SEA/SH), and diseases will be minimized.

Working will need to comply with World Bank standards (ESS 2).

4.1.1.2.4. Traffic

The sub-project site is located 17,500 meters from the city center of Kayseri and 1,000 meters from the Bağpınar neighborhood. The nearest settlement to the sub-project site is the Bağpınar neighborhood. Access to the sub-project area is provided via the D260 ring road to the north and the connecting road, Street 2533. Since the roads to be used for logistics and material supply during the mobilization, construction, and operation phases do not pass through the center of the Bağpınar neighborhood, they will not affect the residential areas or social facilities in the neighborhood center.

4.1.1.2.5. Loss of Land and Livelihoods

As no land acquisition process will be carried out within the scope of the subproject, no negative impact on land is expected. However, the land is vacant, and there are no activities taking place on it. Therefore, there will be no negative impact on livelihoods.

4.1.1.2.6. Vulnerable Groups

The subproject will not have any adverse social impact on the lives of specific vulnerable groups, such as people with disabilities, children, the elderly, refugees, and groups dependent on local livelihoods. The subproject will have no impact on daily life and routines in the nearest settlement.

4.1.1.2.7. Cultural Heritage

As stated in the Environmental and Social Baseline section, there are no registered cultural heritage sites in and near the subproject area. Therefore, no negative impact on cultural heritage is expected during the construction phase. However, if any findings are identified during construction activities, the Chance Find Procedure will be applied (see Annex H).

4.1.1.2.1. Technical and Social Infrastructure Services

Considering the existing Environmental and Social Baseline data and the construction duration of the subproject, no negative impact on technical and social infrastructure services in the region is expected during the construction phase of the subproject.

4.1.2. Operation Phase

4.1.2.1. Environmental Impacts and Risks

During the operation phase, environmental impacts and risks will be limited to the production of domestic waste and domestic wastewater generated by 1 personnel working at the facility.

4.1.2.1.1. Waste

There is a risk that the wastes (electronic wastes, panels, inverters, cables, electronic components) generated after maintenance-repair and breakdowns are not regularly stored and disposal processes are not carried out in accordance with national legislation and World Bank ESSs.

In addition, there is a risk that the domestic waste generated by 1 personnel working at the facility will not be collected by the municipality and the domestic wastewater will be discharged uncontrolled and cause environmental pollution.

4.1.2.2. Social Impacts and Risks

Due to the location and nature of the sub-project, social impacts and risks during the operational phase are limited.

4.1.2.2.1. Occupational Health and Safety

Potential health and safety risks for the operational phase of the subproject are listed below:

- Working at height: Risk of falling from height during maintenance and repair of panels
- Electricity: Risk of electric shock, arc flash and insulation breakdown in cables and failure to follow “Lock Out Tag Out Procedure”
- Material handling: Physical and ergonomic risk when replacing panels or transporting battery systems.

- Risks associated with use of machinery and equipment used in repair and maintenance work.
- Fire: Risks of short circuit fires, battery explosions, etc.
- Unauthorized access to the facility
- Risk associated with occupational accidents, injuries, and illnesses.

4.2. Construction ESMP Matrix

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
<ul style="list-style-type: none"> ESS2 - Labor and Working Conditions 					
1.	Working Conditions	Employees	<ul style="list-style-type: none"> Toolbox trainings will be implemented on weekly basis to consist of the OHS Plan and Labor Conditions. Labor Management Plan will be implemented for recruiting and managing all employees. Child labor forced labor and unregistered labor will be prohibited as of the Labor Management Plan. Employees will be provided with documented information that is clear and understandable, regarding their rights under national labor law; including collective agreements, their rights related to hours of work, wages, overtime, compensation, and benefits as of startup of working relationship and when any material changes occur. The Grievance Mechanism for employees will be implemented. The employees will be informed about the grievance mechanism at the time of recruitment, and it will be made easily accessible to them. 	Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities) Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities) KASKI (monitoring E&S performance and reporting to ILBANK)	<ul style="list-style-type: none"> C-ESMP Workers Grievance Mechanism Safe work procedures Sub-contractor agreement templates Employment templates Induction Training Plan Employment records LMP
2.	General OHS Risks	Employees	<ul style="list-style-type: none"> A complete risk assessment document addressing the Sub-project specific risks and defining mitigation measures will be prepared. All employees including the subcontractors will receive necessary OHS training covering the risks. Personnel who have not been trained in OHS and are not aware of all risks will not be allowed to enter the work site. 	Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction	Risk Assessment document OHS Management Plan OHS Training Plan Emergency Preparedness and

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> All Sub-project management plans including safe work procedures and emergency action plans will be prepared. Safety procedures and appropriate Personal Protective Equipment (PPE) will be used when working at height. OHS Trainings will include the safety procedures. In case of any OHS incidents and/or accidents, the Contractor will immediately (within 24 hrs) inform ILBANK PMU and follow up with completing ESIRT forms, as instructed by ILBANK. This will include root cause analysis and corrective action plan. 	activities) Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities) KASKI (monitoring E&S performance and reporting to ILBANK)	Response Plan
3.	OHS - Physical Hazards: Electrical Hazards	Employees	<u>General Measures</u> <ul style="list-style-type: none"> Ensure that all energized electrical devices and lines are marked with warning signs Ensure that the devices are locked (de-charging and leaving open with a controlled locking device) and labeled (warning sign placed on the lock) during service or maintenance. Ensure that all electrical cords, cables, and hand power tools are checked for frayed or exposed cords. Also, ensure that the manufacturer's recommendations for the maximum permitted operating voltage of portable hand tools are followed Ensure that all electrical equipment used in environments that are or may be wet is double insulated/grounded; use equipment with ground fault interrupter (GFI) protected circuits. Ensure that power cords and extension cords are protected against damage from traffic by shielding or suspending above traffic areas Ensure that high-voltage equipment and service rooms where access is controlled or prohibited are properly labeled ('electrical hazard') 	Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities) Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities) KASKI (monitoring E&S	Risk Assessment document OHS Management Plan OHS Training Plan Emergency Preparedness and Response Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> • Ensure that "No Approach" zones are established around or under high voltage lines. • Ensure that construction vehicles or other vehicles with rubber tires that come into direct contact with or arc across high-voltage cables are taken out of service for 48 hours. • Ensure that all buried electrical cables are thoroughly identified and marked prior to any excavation work. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> • Relevant safety procedures will be established, and employees will be trained on these procedures to prevent the risk of electric shock and injury to employees during the installation of electrical equipment. • Safety fences will be constructed around electrical areas and no materials will be stored in or near these areas. • Contractor and subcontractor electricians will be well trained and those without a certificate of professional competence will not be employed in electrical work. • Electricians will be provided with suitably insulated Personal Protective Equipment (PPE) and work tools and will be made aware of the risk of electric shock and protection techniques. • First aid workers trained in first aid in case of electric shocks will be employed by the contractor and subcontractor. • Work will not be carried out in rainy weather conditions. • Warning signs will be placed in areas with electrical hazards and all safety measures (e.g. hard barriers) will be implemented to prevent workers from being exposed to these areas. • Toolbox talks will provide information about assembly work and electrical hazards and unqualified personnel will not be assigned to electrical work. 	performance and reporting to ILBANK)	
4.	OHS - Physical Hazards: Industrial Vehicle Driving and Site Traffic	Local communities Employees	<p><u>General Measures</u></p> <ul style="list-style-type: none"> • Ensure that industrial vehicle operators are trained and certified in the safe use of specialized vehicles such as forklifts, including safe loading/unloading, load limits. 	Contractor (preparation of management plans and procedures, implementation of	Risk Assessment document OHS Management Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> • Make sure drivers undergo medical supervision regularly. • Ensure that moving equipment with restricted rear visibility is equipped with audible back-up alarms and employ banksmen/flagmen when required. • Ensure that rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures, and control of traffic patterns or direction are established. • Ensure that deliveries and movement of private vehicles are restricted to defined routes and areas, with 'one-way' movement preferred where appropriate. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> • All vehicles used in transportation activities shall comply with the speed limits specified in the Road Traffic Regulation. • Vehicle speed will be limited to 30 km/h on unpaved roads. • Safe traffic control measures such as road warning signs, speed humps and flag staff will be used where necessary, especially at the transition from the ring road to the side access road. • Any damage to the side access road will be repaired and restored. • An emergency response plan will be prepared, and necessary protocols will be established for possible infrastructure failures, accidents or natural disasters that may occur during construction. • Heavy construction machinery working in the subproject area will not be operated or maneuvered without a flagman or signaler. • All drivers will receive road safety training. 	<p>E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities)</p> <p>KASKI (monitoring E&S performance and reporting to ILBANK)</p>	<p>OHS Training Plan</p> <p>Emergency Preparedness and Response Plan</p>
5.	OHS - Physical Hazards: Ergonomics, Repetitive Motion, Manual Handling Lifting	Employees	<p><u>General Measures</u></p> <ul style="list-style-type: none"> • Ensure that mechanical assists are used to eliminate or reduce the effort required to lift materials, hold tools and work objects, and that more than one person is lifting if weights exceed thresholds. • Ensure that tools are selected and designed that reduce force requirements and holding times and improve postures. • Ensure that user-adjustable workstations are provided. 	<p>Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities)</p>	<p>Risk Assessment document</p> <p>OHS Management Plan</p> <p>OHS Training Plan</p>

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> Ensure that rest and stretch breaks are incorporated into work processes and job rotation is in place. Ensure quality control and maintenance programs are in place that reduce unnecessary forces and effort. Ensure that additional special circumstances, such as left-handed people, are considered. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> For manual handling and lifting, workers will be informed of the carrying capacities set out in the regulation and will be provided with the means to transport materials that are not suitable for manual handling. Site workers will be provided with information and training on manual handling, including healthy lifting techniques. Implementation of safe transportation techniques will be ensured. Manual handling operations will be kept to a single level, ground conditions will be improved, and environmental conditions will be enhanced. The ground will be kept clear of obstacles. Appropriate Personal Protective Equipment (PPE) and safety equipment will be used. 	<p>Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities)</p> <p>KASKI (monitoring E&S performance and reporting to ILBANK)</p>	
ESS3 - Resource Efficiency and Pollution Prevention and Management					
	Air Emissions and Ambient Air Quality				
6.	Emissions to air due to construction activities	Local communities Employees Flora & Fauna	<p><u>General Measures</u></p> <ul style="list-style-type: none"> Ensure use of dust control methods, such as covers, water suppression, or increased moisture content for open storage piles. Ensure use of water suppression for control of loose materials on paved or unpaved road surfaces. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> Modern equipment and vehicles in compliance with relevant emission standards will be used during construction works. 	<p>Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit</p>	Stakeholder Engagement Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> Exhaust emission measurements of work machines and vehicles will be carried out on time and vehicles exceeding the limit values will not be used in the subproject. Measures will be taken to prevent and/or reduce dust formation during topsoil stripping works and dust suppression methods will be applied with water tankers. In case of dust formation on the side access road providing access to the subproject area, water suppression method will be applied with water tankers. Daily watering will be carried out using water tankers to prevent dust from forming. In addition, even if watering has not been done, it will be ensured that watering is carried out again in response to complaints regarding dust formation. Speed limit will be applied for Transport Trucks. A grievance mechanism will be implemented. 	and review of E&S management documents, as well as construction monitoring and reporting activities) KASKI (monitoring E&S performance and reporting to ILBANK)	
	Wastewater and Ambient Water Quality				
7.	Generation and discharge of wastewater due to construction activities	Surface water resources	<p><u>General Measures</u></p> <ul style="list-style-type: none"> Ensure water is used efficiently to reduce the amount of wastewater generation Ensure that waste minimization and process modification, including reduction of the use of hazardous substances, is carried out to reduce the load of pollutants requiring treatment. Septic will be used for wastewater disposal and treatment, ensure that the following requirements are met: <ul style="list-style-type: none"> Properly designed and installed in accordance with local regulations and guidance to prevent any hazard to public health or contamination of land, surface or groundwater. Well maintained to allow effective operation. 	Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities) Supervision Consultant (audit and review of E&S management documents, as well as construction	Waste management plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> ○ Installed in areas with sufficient soil percolation for the design wastewater loading rate. ○ Installed in areas of stable soils that are nearly level, well drained, and permeable, with enough separation between the drain field and the groundwater table or other receiving waters. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> ● Domestic wastewater generated in the subproject area will be collected in sealed septic tank located in the camp site. ● KASKI's vacuum trucks will regularly transfer the wastewater to the WWTP. ● Kayseri Wastewater Treatment Plant located 30 km from the subproject area will be used to treat all wastewater generated. ● No uncontrolled wastewater discharge will be allowed during the subproject lifetime. 	<p>monitoring and reporting activities)</p> <p>KASKI (monitoring E&S performance and reporting to ILBANK)</p>	
	Waste Management				
8.	Generation of waste during construction activities	Local communities Employees Flora & Fauna	<p><u>General Measures</u></p> <ul style="list-style-type: none"> ● Establish waste management priorities at the outset of activities based on an understanding of potential Environmental, Health, and Safety (EHS) risks and impacts and considering waste generation and its consequences. ● A waste management hierarchy that considers prevention, reduction, reuse, recovery, recycling, removal and finally disposal of waste will be established. ● Ensure that waste segregation and storage in temporary waste storage areas is managed according to the standards set out in the GIIP and relevant legislation. ● Ensure that waste is classified and labeled according to waste codes. ● Ensure that data and information is collected on waste streams generated under the project, including characterization of waste streams by type, quantity and potential use/disposal. 	<p>Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities)</p> <p>KASKI</p>	<p>Waste management plan</p> <p>Stakeholder Engagement Plan</p>

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> • Ensure that raw materials or inputs are substituted with less hazardous or toxic materials or with materials for which processing produces lower waste volumes. • Ensure that good housekeeping and operational practices, including inventory control, are established to reduce the amount of waste from materials that are outdated, out-of-specification, contaminated, damaged or in excess of facility needs. • Ensure that the generation of hazardous waste is minimized by implementing strict waste segregation to avoid mixing of non-hazardous and hazardous waste to be managed. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> • A covered temporary waste storage area will be established within the subproject area, which will not be affected by weather conditions, in order to accumulate wastes under appropriate conditions. • Personnel responsible for the temporary waste storage area will be assigned and identification signs will be posted indicating the types of waste to be generated and the responsible personnel. • All waste generated during the construction phase will be sorted and labeled according to type and class and stored in the temporary waste storage area. • The contractor will have a waste disposal protocol with licensed recycling and disposal company. • All waste will be included in the recycling and disposal process through licensed recycling companies within the period specified in the regulations for waste types. • Separate sections will be created in the temporary waste storage area for different waste types and measures will be taken to prevent hazardous wastes from reacting. • Fire risk and precautions will be taken into consideration in the temporary waste storage area and fire extinguishing equipment will be kept in accessible locations. • All waste generated during the subproject will be recycled or disposed of and no waste will be buried, incinerated or disposed of uncontrolled. 	(monitoring E&S performance and reporting to ILBANK)	

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> Domestic waste generated during the construction phase of the sub-project will be collected and disposed of by waste collection vehicles belonging to the Melikgazi municipality. 		
9.	Generation of hazardous waste during construction activities	Soil Quality Employees Flora & Fauna	<ul style="list-style-type: none"> Ensure that operators are trained on release prevention, including drills specific to hazardous materials as part of emergency preparedness and response training. Ensure a description of response activities in the event of a spill, release or other chemical emergency, including: <ul style="list-style-type: none"> Internal and external notification procedures Specific responsibilities of individuals or groups Decision process for assessing severity of the release and determining appropriate actions. Facility evacuation routes Post-event activities such as clean-up and disposal, incident investigation, employee re-entry, and restoration of spill response equipment. Ensure that appropriate PPE (footwear, masks, protective clothing and goggles in appropriate areas), emergency eyewash and shower stations, ventilation systems and sanitary facilities are provided. Ensure that contaminated waste (contaminated soil, contaminated materials, etc.) generated after spill and release response is transferred to the Hazardous Waste Storage Area in the temporary waste storage area to prevent further contamination. Ensure that monitoring and record-keeping activities and accident and incident investigation reports, including audit procedures designed to verify and record the effectiveness of the prevention and control of exposure to occupational hazards, are kept on file for at least five years. 	Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities) Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities) KASKI (monitoring E&S performance and reporting to ILBANK)	Waste management plan
	Noise				
10.	Noise generation due to construction	<ul style="list-style-type: none"> Local community 	<u>General Measures</u> <ul style="list-style-type: none"> Manage the potential impact of noise, selecting equipment with lower sound power levels. 	Contractor (preparation of management plans and procedures,	Stakeholder Engagement Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		<ul style="list-style-type: none"> Project Site Surroundings Fauna species 	<ul style="list-style-type: none"> All Sub-project personnel including direct and contracted workers will be trained on the implementation of ESMP. Ensure implementation of Sub-project-specific SEP in order to address any noise-related grievance and plan/take corrective actions, where necessary. Ensure consultation with PAPs prior to the start of and during the construction activities to be conducted at this location in order to inform stakeholders about the scope and duration of the activities and mitigate the potential impacts for the period of construction. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> Night work will not be allowed during the construction phase of the subproject. Working hours will be between 09:00 in the morning and 18:00 in the evening. The livestock farms in the surrounding area and the residents of the Bağpınar neighborhood will be informed about the timing and content of the construction activities covered by the SEP. The machinery and equipment used during land preparation and construction works will not be operated at the same point but distributed homogeneously over the area. Regular and periodic maintenance of work machines and equipment and daily checks will be carried out in each shift. All vehicles used in transportation activities shall comply with the speed limits specified in the Road Traffic Regulation. A grievance mechanism will be established to receive grievances from local communities. 	<p>implementation of E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities)</p> <p>KASKI (monitoring E&S performance and reporting to ILBANK)</p>	
ESS4 - Community Health and Safety					
	Traffic Safety				
11.	Road safety	Local Communities Road Users Road Infrastructure	<p><u>General Measures</u></p> <ul style="list-style-type: none"> Monitoring the licensing and professional competence of the drivers employed in the sub-project. Avoiding dangerous routes and times of day to reduce the risk of accidents. 	Contractor (preparation of management plans and procedures, implementation of	Traffic Management Plan Stakeholder Engagement Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> • Ensure use of speed control devices (governors) on trucks, and remote monitoring of driver actions • Roads passing through settlements will be avoided whenever alternative routes are available. If sub-project traffic routing through the settlements is not avoidable, all necessary traffic management measures will be taken. The local communities and if necessary local authorities will be informed about the transportation routes and schedule. • Scheduling of traffic will be undertaken to avoid the peak hours on the local road network wherever practicable (e.g. early in the morning with the daylight). Scheduling information and planned traffic disruptions will be communicated well in advance to all related parties including authorities, local communities and nearby businesses. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> • All vehicles used in transportation activities shall comply with the speed limits specified in the Highway Traffic Regulations. • Vehicle speed will be limited to 30 km/h on the site access road. • Safe traffic control measures such as warning signs, speed humps and flagger/marker personnel will be provided along the sub-project access road. • Any damage to the roads will be repaired. • An emergency preparedness and response plan will be prepared, and necessary protocols will be established for possible infrastructure failures, accidents or natural disasters that may occur during construction. • Operators and drivers will receive road safety training and their driving licenses will be registered. • During the logistics process, there will be no material transportation during peak hours due to the high risk of accidents. Material transportation will be carried out at appropriate times when traffic is low, thereby minimizing the risk of traffic accidents. • Signals and flaggers will be deployed to prevent large and long transportation vehicles from causing accidents and traffic congestion at the entrance to the subproject site. 	<p>E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities)</p> <p>KASKI (monitoring E&S performance and reporting to ILBANK)</p>	

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
12.	Sexual Exploitation and Abuse (SEA)/Sexual Exploitation/ Sexual Harassment (SE/SH)	Local Communities	<ul style="list-style-type: none"> • Where possible and feasible, local employment options will be considered at all stages of the sub-project. • All sub-project staff will be trained on Code of Conduct at induction to minimize the impact of cultural differences. • Workers will be trained on SEA/SH and CoC and those involved in sexual exploitation will have their employment contracts terminated. • It will be mandatory for project employees to sign the CoC. • Women's complaints of sexual abuse will be handled in a confidential manner and women staff (e.g. Women Social Workers) will be employed within the grievance mechanism to ensure that these complaints are shared. • The content of E&S trainings to be provided to project employees will include Sexual Exploitation and Sexual Harassment • Guards who will perform their duties unarmed will receive training on public health safety and behavioral rules. 	<p>Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities)</p> <p>KASKI (monitoring E&S performance and reporting to ILBANK)</p>	Stakeholder Engagement Plan GM
13.	Impacts on vulnerable and disadvantaged individuals and groups	Local Communities	<ul style="list-style-type: none"> • Although the subproject does not pose significant risks to vulnerable groups, additional stakeholder engagement measures will remain in place. Support will be provided in accordance with the project specific SEP, such as transportation to stakeholder engagement activities. 	<p>Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit and review of E&S management</p>	Stakeholder Engagement Plan GM

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
				documents, as well as construction monitoring and reporting activities) KASKI (monitoring E&S performance and reporting to ILBANK)	
14.	Grievance Mechanism	Local Communities Employees	<ul style="list-style-type: none"> As indicated in the Roles and Responsibilities table; KASKI will establish a Grievance Mechanism for the project and ensure its effective operation throughout the life cycle of the project with İLBANK. SEP to be updated annually and if there are significant changes in the Project. The implementation of the Stakeholder Engagement Plan (SEP) and Grievance Mechanism will be the responsibility of KASKI PIU. Visibility of the SEP and Grievance Mechanism will be ensured, including contact details of staff responsible for grievance handling. Posters and brochures will be prepared to increase the accessibility of the complaint mechanism and the visibility of the project and will be distributed to all residents of the Bağpınar neighborhood and workers at nearby livestock farms. All records received through the grievance mechanism and other channels will be recorded in a grievance log for the duration of the project. Brochures and posters containing information about the complaint mechanism will be posted at the Bağpınar neighborhood mukhtar's office and information will be provided. 	Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities) Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities) KASKI (monitoring E&S performance and reporting to ILBANK)	Stakeholder Engagement Plan GM
ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement					

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
15.	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Local Communities	<ul style="list-style-type: none"> Measures will be taken to ensure that construction activities do not restrict or hinder the social and economic lives of the local community. No land expropriation will take place under this sub-project. No entry will be made onto private or public lands outside the project work area, and all necessary measures will be taken to prevent this. The sub-project area will be fenced off and clearly demarcated. Prior to the commencement of construction activities, the staff and management of neighboring solar power plants will be informed. 	<p>Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities)</p> <p>KASKI (monitoring E&S performance and reporting to ILBANK)</p>	Stakeholder Engagement Plan GM
ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources					
16.	Natural habitats	Flora and Fauna Species Birds, Reptiles - Frogs and Mammals	<ul style="list-style-type: none"> No work will be carried out outside the designated Subproject area and natural habitats will not be harmed. Before the subproject construction works start, the area will be inspected and checked for the presence of stray and wild animals within the work area. The efforts to encourage species to leave the area should be carried out gradually at the beginning of the work. If any living creatures are encountered, they will be taken out of the work area and the area will be secured with fencing. 	<p>Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities)</p> <p>Supervision</p>	C-ESMP

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<ul style="list-style-type: none"> In order to reduce negative effects such as damage to nests and young individuals due to the removal of topsoil, and the displacement of bird, reptile-amphibian, and mammal species due to dust and noise, irrigation will be carried out and visual inspections will be conducted in the sub-project area prior to the commencement of topsoil removal activities. To minimize potential negative impacts such as damage to nests and young individuals caused by topsoil removal, and the displacement of bird, reptile, amphibian, and mammal species due to dust and noise, irrigation will be carried out and visual inspections will be conducted in the sub-project area before topsoil removal activities begin. Regular watering should be carried out to prevent dust formation. Noise should not exceed the limits set by the Ministry and the IFC and should remain within the standards set by the Ministry. Nighttime construction activities should be avoided unless necessary. Ensure that efforts to remove species from the area are carried out gradually at the outset. Ensure that initial fieldwork is carried out gradually to allow wildlife species to disperse naturally from the area. During soil stripping operations, if any vertebrate species are observed in the area during the breeding season, an investigation should be carried out by a team under the supervision of a vertebrate expert, and activities should commence only after transportation and relocation have been completed. During topsoil stripping activities, if any vertebrate species are observed, especially during the breeding season, the area must be examined by a qualified team under the supervision of a vertebrate expert. Construction activities may only continue after the individuals have been safely relocated using appropriate methods. Topsoil stripped during the construction phase will be stored within the subproject area. The topsoil stored within the subproject area will be compacted, kept to a height of no more than 2 meters, and watered to encourage grass growth. 	<p>Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities) KASKI (monitoring E&S performance and reporting to ILBANK)</p>	
ESS8 - Cultural Heritage					
17.	Impacts on cultural heritage		<ul style="list-style-type: none"> If archaeological remains are encountered during the construction works, the works will be stopped, and the relevant institutions will be contacted in 	Contractor (preparation of	Chance Find Procedure

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<p>accordance with the Chance Find Procedure in the ESMP. The Contractor shall immediately (within 24 hours) notify the Employer and ILBANK of such a finding.</p> <ul style="list-style-type: none"> Project employees, including contractor and subcontractor employees, will be trained on the Chance Find Procedure on the procedures to be followed in case of any findings. The relevant Preservation Board or Museum Directorate will be informed immediately, and the security of the area will be ensured by the Contractor. Construction work will not continue until official notification is received. 	<p>management plans and procedures, implementation of E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit and review of E&S management documents, as well as construction monitoring and reporting activities)</p> <p>KASKI (monitoring E&S performance and reporting to ILBANK)</p>	
ESS10 - Stakeholder Engagement and Information Disclosure					
18.	Stakeholder Engagement and Information Disclosure	Local community	<ul style="list-style-type: none"> Communities in the vicinity of the work area will be informed prior to commencement of works through consultation meetings, leaflets and information signage. Construction sites and access roads will be separated from other areas with appropriate signboards, signs and fences to limit the staff and vehicle access to the other areas. Information sharing and consultation activities will be carried out with communities and other stakeholders in line with the Stakeholder Engagement Plan (SEP). Local culture and values of the project area will be taken into consideration in all phases of the sub-project and employees will be trained on codes of conduct. 	<p>Contractor (preparation of management plans and procedures, implementation of E&S requirements, and execution of construction activities)</p> <p>Supervision Consultant (audit and review of E&S management documents, as well</p>	SEP Grievance Mechanism

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
				as construction monitoring and reporting activities) KASKI (monitoring E&S performance and reporting to ILBANK)	

4.3. Operation ESMP Matrix

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
ESS2 - Labor and Working Conditions					
1.	General OHS Risks	PIU Employees Maintenance Personnel	<ul style="list-style-type: none"> • A complete risk assessment document addressing the Sub-project specific risks and defining mitigation measures will be prepared. • All employees of the PIU and contractor companies that will work during the operation period will receive the necessary OHS training covering the risks. • Personnel who have not been trained in OHS and are not aware of all risks will not be allowed to enter the work site. • All Sub-project management plans including safe work procedures and emergency action plans will be prepared. • Safety procedures and appropriate Personal Protective Equipment (PPE) will be used when working at height. • OHS Trainings will include the emergency procedures. • In the event of an occupational safety and health (OHS) incident resulting in loss of life, loss of a limb or an eye, or temporary incapacity lasting more than 72 hours, the Contractor shall immediately (within 24 hours) notify İLBANK PMU and follow up by completing the ESIRT forms as instructed by İLBANK. This shall include a root cause analysis and a corrective action plan. 	KASKI	Risk Assessment document OHS Management Plan OHS Training Plan Emergency Preparedness and Response Plan
2.	OHS - Physical Hazards: Electrical Hazards	PIU Employees Maintenance Personnel	<p><u>General Measures</u></p> <ul style="list-style-type: none"> • Ensure that all energized electrical devices and lines are marked with warning signs • Ensure that the devices are locked (de-charging and leaving open with a controlled locking device) and labeled (warning sign placed on the lock) during service or maintenance. • Ensure that all electrical cords, cables, and hand power tools are checked for frayed or exposed cords. Also, ensure that the manufacturer's recommendations for the maximum permitted operating voltage of portable hand tools are followed 	KASKI	Risk Assessment document OHS Management Plan OHS Training Plan Emergency Preparedness and Response Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			<ul style="list-style-type: none"> • Ensure that all electrical equipment used in environments that are or may be wet is double insulated/grounded; use equipment with ground fault interrupter (GFI) protected circuits. • Ensure that power cords and extension cords are protected against damage from traffic by shielding or suspending above traffic areas • Ensure that high-voltage equipment and service rooms where access is controlled or prohibited are properly labeled ('electrical hazard'). • Ensure that "No Approach" zones are established around or under high voltage lines. • Ensure that construction vehicles or other vehicles with rubber tires that come into direct contact with or arc across high-voltage cables are taken out of service for 48 hours. • Ensure that all buried electrical cables are thoroughly identified and marked prior to any excavation work. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> • Relevant safety procedures will be established, and employees will be trained on these procedures to prevent the risk of electric shock and injury to employees during the installation of electrical equipment. • Safety fences will be constructed around electrical areas and no materials will be stored in or near these areas. • Contractor and subcontractor electricians will be well trained and those without a certificate of professional competence will not be employed in electrical work. • Electricians will be provided with suitably insulated Personal Protective Equipment (PPE) and work tools, and will be made aware of the risk of electric shock and protection techniques. • First aid workers trained in first aid in case of electric shocks will be employed by the PIU. • Work will not be carried out in rainy weather conditions. 		

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			<ul style="list-style-type: none"> Warning signs will be placed in areas with electrical hazards and all safety measures (e.g. hard barriers) will be implemented to prevent workers from being exposed to these areas. Toolbox talks will provide information about assembly work and electrical hazards and unqualified personnel will not be assigned to electrical work. 		
3.	OHS - Physical Hazards: Ergonomics, Repetitive Motion, Manual Handling Lifting	Maintenance Personnel	<p><u>General Measures</u></p> <ul style="list-style-type: none"> Ensure that mechanical assists are used to eliminate or reduce the effort required to lift materials, hold tools and work objects, and that more than one person is lifting if weights exceed thresholds Ensure that tools are selected and designed that reduce force requirements and holding times and improve postures Ensure that user-adjustable workstations are provided Ensure that rest and stretch breaks are incorporated into work processes and job rotation is in place Ensure quality control and maintenance programs are in place that reduce unnecessary forces and effort Ensure that additional special circumstances, such as left-handed people, are considered <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> For manual handling and lifting, workers will be informed of the carrying capacities set out in the regulation and will be provided with the means to transport materials that are not suitable for manual handling. Site workers will be provided with information and training on manual handling, including healthy lifting techniques. Implementation of safe transportation techniques will be ensured. Manual handling operations will be kept to a single level, ground conditions will be improved and environmental conditions will be enhanced. The ground will be kept clear of obstacles. 	KASKI	Risk Assessment document OHS Management Plan OHS Training Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			<ul style="list-style-type: none"> Appropriate Personal Protective Equipment (PPE) and safety equipment will be used. 		
ESS3 - Resource Efficiency and Pollution Prevention and Management					
Wastewater and Ambient Water Quality					
4.	Wastewater generation and discharge during operation	Surface water resources	<p><u>General Measures</u></p> <ul style="list-style-type: none"> Ensure water is used efficiently to reduce the amount of wastewater generation Ensure that waste minimization and process modification, including reduction of the use of hazardous substances, is carried out to reduce the load of pollutants requiring treatment. Septic system constructed for construction phase will be used for wastewater disposal and treatment, ensure that the following requirements are met: <ul style="list-style-type: none"> Properly designed and installed in accordance with local regulations and guidance to prevent any hazard to public health or contamination of land, surface or groundwater. Well maintained to allow effective operation. Installed in areas with sufficient soil percolation for the design wastewater loading rate. Installed in areas of stable soils that are nearly level, well drained, and permeable, with enough separation between the drain field and the groundwater table or other receiving waters. <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> Domestic wastewater generated in the subproject area will be collected in sealed septic tank constructed for construction phase. KASKI's vacuum trucks will regularly transfer the wastewater to the WWTP. <p>Kayseri Wastewater Treatment Plant located 30 km from the subproject area will be used to treat all wastewater generated.</p> <ul style="list-style-type: none"> No uncontrolled wastewater discharge will be allowed during the subproject lifetime. 	KASKI	Waste management plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
Waste Management					
5.	Waste generation during operation	Local communities Flora & Fauna	<p><u>General Measures</u></p> <ul style="list-style-type: none"> • Establish waste management priorities at the outset of activities based on an understanding of potential Environmental, Health, and Safety (EHS) risks and impacts and considering waste generation and its consequences • Ensure that a waste management hierarchy is established that considers prevention, reduction, reuse, recovery, recycling, removal and finally disposal of waste • Ensure that waste segregation and storage in temporary waste storage areas is managed according to the standards set out in the GIIP and relevant legislation • Ensure that waste is classified and labeled according to waste codes. • Ensure that data and information is collected on waste streams generated under the project, including characterization of waste streams by type, quantity and potential use/disposal. • Ensure that raw materials or inputs are substituted with less hazardous or toxic materials or with materials for which processing produces lower waste volumes. • Ensure that good housekeeping and operational practices, including inventory control, are established to reduce the amount of waste from materials that are outdated, out-of-specification, contaminated, damaged or in excess of facility needs • Ensure that the generation of hazardous waste is minimized by implementing strict waste segregation to avoid mixing of non-hazardous and hazardous waste to be managed <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> • A covered temporary waste storage area that will not be affected by weather conditions will be established outside the sub-project area (in an area to be determined by KASKI) in an area owned by 	KASKI	

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			<p>KASKI for the accumulation of wastes under appropriate conditions.</p> <ul style="list-style-type: none"> • Personnel responsible for the temporary waste storage area will be assigned and identification signs will be posted indicating the types of waste to be generated and the responsible personnel. • All waste generated during the operation phase will be sorted and labeled according to type and class and stored in the temporary waste storage area. • KASKI will have waste protocols with licensed recycling and disposal companies. • All waste will be included in the recycling and disposal process through licensed recycling companies within the period specified in the regulations for waste types. • Separate sections will be created in the temporary waste storage area for different waste types and measures will be taken to prevent hazardous wastes from reacting. • Fire risk and precautions will be taken into consideration in the temporary waste storage area and fire extinguishing equipment will be kept in accessible locations. • All waste generated during the subproject will be recycled or disposed of and no waste will be buried, incinerated or disposed of uncontrolled. • Domestic waste generated during the operation phase will be collected and disposed of by waste collection vehicles belonging to the Melikgazi municipality 		
ESS4 - Community Health and Safety					
6.	Sexual Exploitation and Abuse (SEA)/Sexual Exploitation/ Sexual Harassment (SE/SH)	Local Communities	<ul style="list-style-type: none"> • All project staff will be trained on Code of Conduct at induction to minimize the impact of cultural differences. • Project staff will be trained on SEA/SH and CoC and those involved in sexual exploitation will have their employment contracts terminated. • It will be mandatory for project employees to sign the CoC. 	KASKI	Stakeholder Engagement Plan GM

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			<ul style="list-style-type: none"> • Women's complaints of sexual abuse will be handled confidentially. • The content of E&S trainings to be provided to project employees will include Sexual Exploitation and Sexual Harassment 		
7.	Risks of unauthorized access of community members, especially children, to the subproject site	Local Communities	<ul style="list-style-type: none"> • The subproject site will be fenced to prevent unauthorized access and ensure security. • The subproject site will be monitored 24 hours a day with security cameras and in case of security problems, the personnel in charge will intervene in case of violations. • Guards who will perform their duties unarmed will receive training on public health safety and behavioral rules. • Children will be prevented from crossing the fence and entering the subproject area by security cameras. Unauthorized entries will be intervened immediately. • Physical security checks will be carried out at regular intervals to prevent damage to the fence and security problems. • Consultation meetings will be held in the nearest settlement, Bağpınar neighborhood, and local communities will be informed, especially about children not entering the sub-project area and the danger of electricity. 	KASKI	Stakeholder Engagement Plan
8.	Grievance Mechanism	Local Communities PIU Employees	<ul style="list-style-type: none"> • As indicated in the Roles and Responsibilities table; KASKI will establish a Grievance Mechanism for the project and ensure its effective operation throughout the life cycle of the project with ILBANK. • SEP to be updated annually and if there are significant changes in the Project. • The implementation of the Stakeholder Engagement Plan (SEP) and Grievance Mechanism will be the responsibility of KASKI PIU. • Visibility of the SEP and Grievance Mechanism will be ensured, including contact details of staff responsible for grievance handling. • In order to increase the accessibility of the complaint mechanism and the visibility of the project, posters and brochures will be 	KASKI	Stakeholder Engagement Plan GM

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			<p>prepared and distributed to all residents of the Bağpınar neighborhood and employees of nearby livestock farms.</p> <ul style="list-style-type: none"> All records received through the grievance mechanism and other channels will be recorded in a grievance log for the duration of the project. 		
ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources					
9.	Natural habitats	Flora and Fauna Species Birds, Reptiles - Frogs and Mammals	<ul style="list-style-type: none"> During operations, animals identified in the sub-project area will be safely removed from the sub-project site. Pesticides will not be used in plant control. 	KASKI	-
ESS10 - Stakeholder Engagement and Information Disclosure					
10.	Stakeholder Engagement and Disclosure	Local community	<ul style="list-style-type: none"> Interaction / communication will be established with communities, and adequate timing will be planned for engagement activities. Additionally, regular consultations will be carried out with the authorities and communities regarding the project management. 	KASKI	Stakeholder Engagement Plan SEP

4.4. Monitoring and Reporting

The Sub-borrower will conduct internal monitoring of Sub-project's E&S performance and submit Periodic Monitoring Reports to ILBANK in line with the sub-financing agreement requirements. The information to be provided as part of reporting for the respective monitoring period will include the following:

- Up-to-date information on sub-project construction progress, work plan and adequate technical staff,
- The status of compliance with legal requirements, permits required and the outcome of inspections by national authorities and the status of fines imposed by national authorities,
- Details of how the requirements of the IFI standards (e.g. WB ESSs) are being met on the basis of compliance with Sub-project level Environmental and Social Action Plans (ESAPs),
- Incident and accident reports and statistics,
- Current Sub-project level E&S organization and capacity (including information on capacity building and training),
- Progress with Sub-project level stakeholder engagement activities and management of grievances, and
- Records on E&S non-conformities identified and general status of Corrective Action Plan implementation at Sub-project level (in case of non-conformities).

Key performance indicators (KPIs) of this procedure will be monitored, verified, and evaluated within the scope of the Sub-project monitoring stage. The KPIs for both construction and operation phases of the Sub-project are presented in Table 155.

Table 15. Key Performance Indicators for Both Construction and Operation Phases of the Sub-project

Monitoring Focus	KPI
Documentation	
Following ESMP Project specific plans will be developed and be in place.	Full compliance with Sub-project's ESMP
Air Quality	
Non-Compliance with air quality standards	Zero grievances per year
Community grievances	Minimization and continued improvement in the number of air quality related community grievances
Violation on speed limit	Minimization and continued improvement in the number of reported violations on speed limit
Noise	
Noise and Vibration incidents	Minimize and continued improvement in number of reported noise and vibration related incidents
Non-Compliance with Project standards	Zero Non-Compliance Reports (NCRs) per year
Number of noise-related community grievances	Zero grievances per year
Community grievances	Minimization and continued improvement in the number of noise related community grievances
Water / Wastewater	
Spill incident	Minimization and continued improvement in the number of the reported water quality related incidents.

Monitoring Focus	KPI
Non-Compliance with Sub-project standards	Zero NCRs per year
Wastewater collection system	Zero grievances per year
Waste	
Waste Generation	Minimization of total waste generated Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)
Waste Disposal	Increase in the ratio of recovered/reused/recycled waste to total waste generated
Soil Quality	
Spill incident	Minimization and continued improvement in the number of the reported soil quality related incidents
Non-Compliance with Sub-project standards	Zero NCRs per year
Soil quality accidents	Zero accident per year
Number of soil-related community grievances	Zero grievances per year
Traffic	
Number of non-compliances against the mitigation controls identified in Traffic and Transport Management Plan	Decreasing number/ continuous improvement in number of reported non-compliances
Number of drivers found to be exceeding speed limits or driving unsafely	Zero exceedance per year
Number of road traffic accidents involving: Accidental injuries and deaths, Spillages (such as cargo or fuel), Wildlife-vehicle collisions.	Zero accidents per year
Number of traffic-related grievances	Zero grievances per year
Health, Safety and Environment	
% of scheduled HSE Inspection	>90
% of attendance at HSE meetings	>90
% of closing of NCRs	100
Reporting safe observations	100%
Reporting unsafe observations	100%
Reporting near misses	100%
Reporting number of incidents	100%
Reporting number of accidents	100%
Reporting day-loss	100%
% of Toolbox attending	>90
% of Risk Assessment compliance	>90
% of Legal Requirements compliance	100%
Results of scheduled audits	>85
HSE training carried out to training matrix. > 90% of all training to matrix	>90
% of attendance at scheduled trainings	>90
Engagement in HSE program by individual managers and supervisors	>90
Engagement in HSE program by contractor's	>90
Labor and Working Conditions	
Number of worker grievances closed out within the target timeframe	100% compliance with labor laws and regulations

Monitoring Focus	KPI
	Zero unresolved health and safety incidents within the target timeframe 100% availability of required PPE 90% or higher worker satisfaction rate
Community Health and Safety	
Number of communicable and non-communicable diseases and injuries.	Negative Trend/No significant increase in communicable and non-communicable disease and injury rates per 1,000 residents per annum.
Number of community health safety & security grievances from local communities as recorded in the grievance management system.	Decreasing number/ continuous improvement in number of grievances
Number of reported community health & safety incidents	Zero incidents per year
Number of reported air quality or noise incidents	Zero incidents per year
Direct and indirect threats posed by construction activities against traffic and pedestrians	Zero number of drivers found to be exceeding speed limits or driving unsafely. Zero accidental injuries and deaths, Zero traffic-related grievances
Access to the Construction Site - Security Fence/ Protection Tape	Zero Number of unauthorized accesses to the Sub-project area
Trainings	
Training records	Trainings on ESMP and SEP documents. Providing all trainings (including GM, GBV, SEA/SH) to all employees. 100% of scheduled training sessions conducted. 80% or higher participant satisfaction rate Zero participants without completion certificates if applicable
Disclosure	
Grievance Records, Disclosure meeting participant records, ESMP, SEP, GM will be disclosed at Project web site in two languages. (English and Turkish).	All grievances closed-out within the target timeframe ESMP, Project specific SEP and GM will be prepared and disclosed at the Project web site
Grievance mechanism	
Grievance Records, GM disclosure	All grievances closed-out within the target timeframe. GM disclosure to the PAPs, stakeholders GM disclosure at Sub-project web site
Cultural Heritage	
Existence of a Chance Find	Zero Grievance Records

Table 16. Construction Environmental and Social Monitoring Table

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Monitoring/Key Performance Indicators (KPIs)	Cost (If not included in the Sub-project Budget)
C 1	Working Conditions General OHS Risks Lifting Risks Electric Shock Risks Fire Risks Manual Handling Risks	Use of PPE OHS Trainings Number of OHS non-compliances	Subproject Area	OHS Checklist OHS Training Records Fire Extinguishing System Records Daily field visual observations Accident records Near-miss records Grievance records Monthly report	Daily visual observations Monthly report	National OHS Legislation WB ESS 2	KASKI Supervision Consultant Contractor	% of Planned OHS Audits % of participation in OHS meetings Rate of closure of Non-Compliance Reports (NCR) % Reporting of safe and unsafe observations % of toolbox participation Results of audits OHS trainings conducted according to the training matrix Number of closed corrective actions	Included in the Subproject Cost
C 2	Waste management Waste Storage Area Waste management practices	Adequate waste storage conditions Spills	Temporary Waste Storage Area	Visual observations Waste records Record of Spills	Daily visual observations Monthly document record control Monthly report	Waste Management Regulation WB ESS 3 GIIP	KASKI Supervision Consultant Contractor	Amount of waste stored Amount of waste disposed	Included in the Subproject Cost

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Monitoring/Key Performance Indicators (KPIs)	Cost (If not included in the Sub-project Budget)
C 3	Dust from construction activities and vehicle traffic	Grievances related to dust and emissions	Sub Project Site Subproject surroundings	Grievance records Visual observations	Daily visual observations Monthly report	WB ESS 3 National Legislation GIIP	KASKI Supervision Consultant Contractor	Number of grievances received Number of grievances closed Number of open grievances	Included in the Subproject Cost
C 4	Wastewater Pollution	Wastewater	Septic Tanks	Wastewater receipts (sewerage septic tank receipt)	Monthly report	Regulation on Urban Waste Water Treatment WB ESS 3	KASKI Supervision Consultant Contractor	Amount of treated wastewater	Included in the Subproject Cost
C 5	Noise Pollution	Grievances related to disturbances caused by noise	Sub Project Site Subproject surroundings	Grievance records Noise measurement results in case of grievances	Monthly report	Environmental Noise Control Regulation GIIP WB ESS 3	KASKI Supervision Consultant Contractor	Number of grievances received	Included in the Subproject Cost
C 6	Traffic risks	Damage to roads Emergency records Traffic accident records	Sub Project Site Subproject surroundings	Grievance records	Daily visual observations Monthly report	Traffic management plan Emergency Response Plan WB ESS 4	KASKI Supervision Consultant Contractor	Number of grievances received	Included in the Subproject Cost
C 7	Sexual Exploitation and Abuse (SEA)/ /Sexual Exploitation/ Sexual Harassment (SE/SH)	Employee code of conduct Grievance mechanism	Sub Project Site Subproject surroundings	Review of grievance records Code of Conduct Training Plan to include SEA and SE/SH topics	Daily report	WB ESS 2 WB ESS 4 Sub management Plan	KASKI Supervision Consultant Contractor	Number of grievances received Grievance Mechanism	Included in the Subproject Cost

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Monitoring/Key Performance Indicators (KPIs)	Cost (If not included in the Sub-project Budget)
				Visual observations Meetings with Muhtars in the Area of Impact					
C 8	Cultural Heritage	Chance Finds	Sub Project Site	Chance Find Procedure	Daily visual observations Monthly report	WB ESS 8 Sub management Plan	KASKI Supervision Consultant Contractor	Number of Chance Finds	Included in the Subproject Cost

Table 17. Operation Environmental and Social Monitoring Table

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Monitoring/Key Performance Indicators (KPIs)	Cost (If not included in the Sub-project Budget)
O 1	Working Conditions General OHS Risks Lifting Risks Electric Shock Risks Fire Risks Manual Handling Risks	Use of PPE OHS Trainings OHS Non Compliances	Subproject Area	OHS Checklist OHS Training Records Fire Extinguishing System Records Daily field visual observations Accident records Near-miss records Grievance records	Daily site visual observations Monthly report	National OHS Legislation WB ESS 2	KASKI	% of Planned OHS Audits % of participation in OHS meetings Reporting of safe and unsafe observations % of toolbox participation Number of closed corrective actions	Included in the Operating Cost

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Monitoring/Key Performance Indicators (KPIs)	Cost (If not included in the Sub-project Budget)
				Monthly report				Results of audits OHS trainings	
O 2	Waste management Waste Storage Area Waste management practices	Adequate waste storage conditions	Temporary Waste Storage Area	Visual observations Waste records	Daily visual observations Monthly report	Waste Management Regulation WB ESS 3 GIIP	KASKI	Amount of waste stored Amount of waste disposed	Included in the Operating Cost
O 3	Sexual Exploitation and Abuse (SEA)/ /Sexual Exploitation/ Sexual Harassment (SE/SH)	Employee code of conduct Grievance mechanism	Sub Project Site Subproject surroundings	Review of grievance records Code of Conduct Training Visual observations	Daily report	WB ESS 2 WB ESS 4 Sub management Plan	KASKI	Number of grievances received Grievance Mechanism	Included in the Operating Cost

4.5. List of Associated Plans and Procedures

The E&S management plans and procedures to be prepared by Contractor/s are listed in Table 188.

Table 18. Plans and Procedures Associated

Management Plan or Procedure	Relevant Sub-project Phase (Construction only, Operation only, both Construction and Defect Liability Period (DLP))
Waste Management Plan	Construction
Traffic and Safety Management Plan	Construction/Operation
Community Health, Safety and Security Plan	Construction/Operation
Workforce Management Plan	Construction
Occupational Health and Safety Management Plan	Construction/Operation
Emergency Response and Action Plan	Construction/Operation
Stakeholder Engagement Management Plan and Grievance Mechanism	Construction/Operation
Chance Find Procedure	Construction

The plans/procedures will be reviewed and revised in any major change and/or at least every 6 months.

4.6. Management of Change

Sub-borrower shall notify ILBANK of material changes in Sub-project (including those that stem from Sub-borrower and/or contractor activities) using ILBANK's Change Notification Form template (Annex I). Such changes may include, inter alia, the following:

- Administrative/ organizational structure changes at the decision-making level
- Changes in assigned environmental, social and/or OHS staff
- Legislative changes impacting Sub-project implementation (e.g. new permitting processes).
- Design changes (e.g. any changes in the Sub-project description, footprint such as new temporary or permanent sites/facilities – on-site or off-site, changes in number of workforce involved, changes in on-site/off-site worker accommodation arrangements).
- Schedule changes.
- Changes related to E&S issues (e.g. new biodiversity features or cultural heritage assets identified, additional resettlement need, etc.)

Contractor or construction supervision consultants' changes at any phase of the Sub-project requiring (i) E&S commitments and E&S roles and responsibilities to be clarified with the new contractor or supervision consulting firm, and (ii) contractor E&S training to be reorganized and redelivered to new contractor or supervision consulting firm's staff.

5. CAPACITY DEVELOPMENT AND TRAINING

5.1. Organizational Capacity

The organization structure of the PIU to be established by the Sub-borrower is presented in Figure 155. The PIU will have qualified staff and resources to the satisfaction of ILBANK.

Figure 15 . Organization Structure – Project Implementation Unit (PIU)

Project Implementation Unit Personnel List
Contract Management
Deputy General Manager
Procurement Unit
Branch Manager
Construction Technician
Technical Management
Department Head
Technical Unit
Branch Manager - Civil Engineer
Civil Engineer
Civil Engineer
Electrical Technician
Electrical - Electronics Engineer
Mechanical Engineer
Mapping Technician
Financial Management
Branch Manager
Financial Unit
Officer
Monitoring and Evaluation
Civil Engineer
OHS
Occupational Health and Safety and Civil Defense Branch Manager
Social Specialist
Social Specialist/Sociologist
Environmental Specialist
Environmental Engineer

The Sub-borrower will maintain the PIU by ensuring that there is qualified staff assigned and serving on the duty throughout the sub-financing agreement life cycle.

At minimum, the E&S team at the Sub-borrower PIU will include the following personnel who shall support management and monitoring of Sub-project E&S risks and impacts and ensure full compliance with the ESMP and other relevant E&S instruments:

- **Environmental Specialist(s):** to address environmental risks and impacts identified under the Environmental and Social Assessment (ESA) reports, such as Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), etc.
- **Social Expert/ Grievance Mechanism (GM) Focal Point:** to address social risks and impacts under the ESA reports, land acquisition, and labor issues, including stakeholder engagement and grievance redress; and
- **Occupational Health and Safety (OHS) Specialist(s):** to address OHS risks and impacts within the scope of ESIA and ESMP management plans and national regulations.

If the necessary staff is not available within its own organizational structure, the Sub-borrower shall receive support/ consultancy services from outside.

Contractors

The Sub-borrower will require awarded contractors to establish and maintain throughout the contract duration an organizational structure with qualified staff and resources.

This will be achieved through assigning the following personnel under the contractor's organization:

- Environmental Specialist(s)
- Social Specialist(s) who will also act as the GM Focal Point
- Occupational Health and Safety (OHS) Specialist(s)

If the necessary staff is not available within its own organizational structure, contractors shall receive third-party support/ consultancy services.

5.2.Roles and Responsibilities

The roles and E&S related responsibilities of the Sub-borrower and other key parties are described in **Hata! Başvuru kaynağı bulunamadı..**

Table 19. Roles and E&S related Responsibilities of Key Parties associated with ESMP Implementation

Party	Role	Key Responsibilities
Financial Intermediary		
İLBANK	FI	<ul style="list-style-type: none"> To fulfill the Sub-project implementation support role to ensure that is carried out in line with ILBANK ESMS and WB ESF, Visit Sub-project site/s on occasion, and as required, as part of Sub-project supervision, monitoring and auditing. Reviewing, approving, and disclosing ESMP on ILBANK's official website. Reviewing the Environmental and Social Monitoring Reports (ESMRs) which will be prepared by the Sub-borrower.
Sub-borrower		
Kayseri Water and Sewerage Directorate (KASKI)	Sub-borrower Management	<ul style="list-style-type: none"> Hold ultimate responsibility for the E&S performance of the Sub-project to the satisfaction of the ILBANK, including the performance of Sub-project contractors throughout the sub-financing agreement life cycle. Establish Project Implementation Unit (PIU) following the execution of sub-financing agreements to carry out operational and administrative tasks to oversee the implementation of the E&S instruments and monitoring progress; allocate resources for the recruitment of in-house environmental, social and OHS staff under the PIU Ensure that ESMP, SEP and other E&S management plans and procedures required by ILBANK is prepared within the timeframes agreed with ILBANK and allocate adequate financial and human resources – either from the Sub-borrower's own resources or from the Sub-project loan and implement. Cooperate with the ILBANK representatives to discuss and agree on the ESAP and other E&S covenants for incorporation into sub-financing agreements to be executed between the ILBANK and the Sub-borrower (with support from RD E&S team as necessary) Ensure that EHSS requirements of ILBANK are incorporated into relevant contractor tender and agreement documents to be prepared in collaboration with the construction supervision consultant Hold and use the authority and responsibility to stop any Sub-project related work activity if it poses an imminent danger to health, safety, or the environment. Allocate resource to ensure monitoring of Sub-project E&S performance and reporting to ILBANK at IFI standards in line with the sub-financing agreement conditions Facilitate monitoring visits and audits by ILBANK and their consultants Notify the ILBANK RD – E&S Teams of any significant E&S incident or accident within maximum 24 hours of the accident/incident; contractually require the supervision consultants and/or contractors to promptly report such incident and accidents (timeframe to be defined by ILBANK) (Annex F) Prepare and submit a detailed E&S Incident Investigation Form, supplemented by an RCA to be conducted pursuant to GIIPs, to ILBANK within 15 days of the accident/incident date for significant accidents or incidents (in line with the template presented in the E&S Supervision, Monitoring and Reporting Procedure). The investigation will be supplemented by a Root Cause Analysis (RCA) (Annex G).
	E&S Team - Environmental staff - Social staff - OHS staff	<ul style="list-style-type: none"> Participate in the training to be organized by ILBANK as part of ILBANK ESMS Training Procedure implementation. Ensure that satisfactory ESMP, SEP and as required other E&S assessment documentation required by ILBANK is prepared by qualified independent specialists and submitted to ILBANK for appraisal and credit decision-making for Moderate risk Sub-project where the Sub-borrower has limited E&S capabilities, coordinate commissioning independent third-party specialists (such as external E&S consultancy companies, individual consultants) to carry out the E&S

Party	Role	Key Responsibilities
		<p>assessment and prepare the E&S documentation required for ILBANK’s appraisal and credit decision-making processes</p> <ul style="list-style-type: none"> • Provide ILBANK with relevant adequate information to undertake the E&S due diligence in accordance with the ESMS (e.g., duly completed Sub-borrower questionnaire and supporting documentation to be requested by ILBANK in accordance with the E&S Screening and Risk Classification and ESDD procedures) • Support the Sub-borrower management as required in the review and evaluation of ESAP and other E&S covenants for incorporation into sub-financing agreements to be executed between the ILBANK and the Sub-borrower. • Ensure compliance of Sub-project operations (including contractor activities on site) with national legislation and E&S requirements of the lending IFIs as included in the sub-financing agreements, ESAP and Sub-project-specific E&S documentation (such as ESMP, SEP and other E&S management plans and procedures required by ILBANK) • Undertake monitoring of Sub-project E&S performance and reporting to ILBANK at IFI standards in line with the sub-financing agreement conditions • Ensure implementation of corrective actions in case of E&S non-compliances in coordination and agreement with ILBANK DG and RD E&S teams over reasonable timeframes • Coordinate the construction supervision consultants, contractors and/or external E&S consultants for collection of the monitoring data and compilation of or providing input to periodic monitoring reports as necessary and appropriate. • Allow ILBANK representatives (including individual consultants) to access Sub-project facilities and records.
Construction Supervision Consultants	Management and E&S staff	<p>Carry out the following tasks on behalf of the Sub-borrowers:</p> <ul style="list-style-type: none"> • Participate in the training sessions to be organized by Sub-borrowers in line with the requirements of ILBANK ESMS Training Procedure • Supervise the construction works of contractors on-site, including implementation of Sub-project-specific E&S requirements (requirements stemming from ESMP, SEP and other E&S management plans and procedures required by ILBANK as applicable) by contractors on a daily basis. • Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the sub-financing agreements between the Sub-borrower and ILBANK. • Support the Sub-borrowers for the supervision and review of E&S management documentation prepared by construction contractors and submit them to Sub-borrowers upon finalization. • Review monthly self-monitoring reports prepared by the construction contractors for early identification of E&S issues and/or non-compliances and submit them to municipalities/municipal utilities upon finalization. • Identify E&S non-compliances on site and enforce construction contractors to undertake corrective actions within defined and agreed timeframes. • Support the Sub-borrowers (as requested) in the preparation of periodic E&S monitoring reports to be submitted to ILBANK in line with the ILBANK E&S Supervision, Monitoring and Reporting Procedure • Notify the Sub-borrower of any significant E&S incident or accident that have taken place in Sub-project related operations within 24 hours.
Construction Contractor	Management and E&S staff	<ul style="list-style-type: none"> • Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the construction contracts. • Participate in the training sessions to be organized by Sub-borrowers in line with the requirements of ILBANK ESMS Training Procedure • Prepare Sub-project-specific E&S management plans and procedures prior to start of construction works as required by the construction contracts. • Comply with the requirements of national legislation and implement the E&S requirements as set out in the sub-financing agreements (executed between ILBANK and the Sub-borrowers) and construction contracts. • Submit periodic (in frequencies to be set by ESAP) E&S self-monitoring reports to the municipalities/municipal utilities through construction supervision consultants (“<i>müşavir</i>”) – in line with the format provided by ILBANK.

Party	Role	Key Responsibilities
		<ul style="list-style-type: none"> • Fill in monthly occupational health and safety (OHS) forms – reviewed by construction supervision consultants. • Implement corrective actions in case of E&S non-compliances under the supervision of Sub-borrower’s construction supervision consultant. • Promptly notify the Sub-borrower of any significant E&S incident or accident that have taken place in Sub-project related operations (ILBANK no later than 24 hours)

5.3. Capacity Building and Training

Sub-borrower staff (trained by ILBANK) will deliver E&S training to contractors. Training contents are summarized in Table 200. Sub-borrower will identify specific training to be conducted in line with these modules and submit this to ILBANK prior to commencement of works.

Sub-borrower will ensure that E&S training programs are expanded to subcontractors by contractors in case their involvement in Sub-project implementation.

Table 20. Training Components for Training of Contractor Staff

Module	Training Name	Training Duration	Key Training Content
Module 1	ILBANK E&S Requirements	1 hour	<ul style="list-style-type: none"> - Overview of ILBANK E&S requirements: <ul style="list-style-type: none"> o ILBANK E&S Policy (including but not limited to the guiding principles on human rights, labor rights and working conditions, community health, safety and well-being, cultural heritage, gender equality, etc.) o External Communications (including stakeholder engagement, grievance management, etc.) o Monitoring, Review and Reporting o Labor Management, Contractor Management - ILBANK Code of Conduct
Module 2	Sub-project-level E&S Requirements for contractors as per sub-financing agreement conditions	3 hours	<ul style="list-style-type: none"> - Sub-project specific requirements: <ul style="list-style-type: none"> o E&S covenants included in sub-loan agreements. o Sub-project ESAP requirements o Sub-project-level E&S assessment and management documentation (such as ESMP, SEP and other E&S management plans and procedures as applicable); o E&S sub-management plans training o Emergency Preparedness and Response Plan including a training program for emergency responders including drills at regular intervals; o Specific training (e.g. special trainings-certificates for workers in electrical work and training on appropriate behavior towards workers and affected communities). - Preparation and implementation of Labor Management Plans.

Training will be provided immediately following the recruitment process and will be refreshed every six months throughout the employment period and will be conducted at various levels. Training will cover employee rights, contractual requirements, Emergencies, Code of Conduct, grievance mechanism and communication channels. Awareness and compliance with rules on gender-based violence, sexual harassment, sexual exploitation, and abuse to be provided in trainings will be included in employee contracts. Trainings can be conducted by external experts or with internal expertise of the PIU and consultants as well as support from ILBANK and WB. Long-term trainings will address specific environmental and social issues and provide possible solutions to the PIU.

The PIU is also responsible for monitoring the Contractor's training related activities. Trainings will be provided after the signing of the work contracts and refresher trainings will be conducted as necessary according to the progress of the work and construction activities. At the end of the training, assessment and evaluation should be carried out to measure the effectiveness of the training and the level of knowledge and competence of the participants. According to the evaluation results, the training program may be changed, the trainers may be changed, or the training may be repeated.

Planned Key Trainings include (but are not limited to):

- o ESMP,
- o Waste Management,

- Energy Efficiency,
- Safe Driving,
- Occupational Health and Safety,
- Chance Find Procedure,
- Orientation on Code of Conduct, GBV and CSI/CT, Grievance Mechanism, Environment, Health and Safety and WB Requirements, and
- First Aid and Emergency Preparedness Trainings

6. IMPLEMENTATION SCHEDULE AND COST ESTIMATES

6.1. Implementation Schedule

Duration of the construction and operation phase activities are listed in Table 211.

Table 21. Duration of Activities

Phase	Remarks/ Notes
Construction Duration (From site mobilization until provisional acceptance)	8 months
Defect Liability Period	12 months
Operation Duration	25 years

6.2. Cost Estimates

All costs related to the implementation of the ESMP are included in the subproject budget.

Estimated sources for budget allocation are listed in Table 222.

Table 22. Estimated Budget Requirement for ESMP Implementation

Cost items	Party	Estimated cost (EURO)
PIU E&S Staff	KASKI	55.000
Training of Construction Workforce	Included in the subproject budget	25.000
Health and Safety training and equipment	Included in the subproject budget	35.000
Complaint Based Measurements and Surveys	Included in the subproject budget	10.000
Accidental Spill and Leakage Management	Included in the subproject budget	15.000
Regular Maintenance of E&S Systems and Implementation of ESMP/ E&S Tools	Included in the subproject budget	10.000
Operation phase staff & OHS System	KASKI	55.000
Total		205.000

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Annex A - Existing Permitting Documentation

- A-1 EIA Decision
- A-2 Non-Agricultural Use Opinion
- A-3 Kayseri Metropolitan Municipality Decision
- A-4 DSİ Opinion
- A-5 DHM Opinion
- A-6 Opinion of the Ministry of Energy and Natural Resources
- A-7 Opinion of the Ministry of Environment, Urbanization and Climate Change
- A-8 Opinion of the Provincial Directorate of Culture and Tourism
- A-9 Opinion of the Cultural Heritage Preservation Board
- A-10 Opinion of the General Directorate of Highways
- A-11 KCETAŞ Opinion Letter
- A-12 BAĞPINAR State Property Allocation Letter
- A-13 Opinion of the Kayseri Regional Forest Directorate

Official correspondence and permissions mentioned in Annex A are not attached to the ESMP but presented separately.

Annex B - Title Deed

The title deeds for the 19 parcels listed in Annex B have not been included in the ESMP but have been submitted separately.

Annex C - Allocation Letter, Application Plan



T.C
KAYSERİ VALİLİĞİ
Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğü



Sayı : E-55154108-756.01[38020108939]-10721091
Konu : Tahsis Yer Teslimi Hk. (38020108939)

16.10.2024

KAYSERİ BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞINA
(Kayseri Su ve Kanalizasyon İdaresi Genel Müdürlüğü)

İlgi : 27.06.2024 tarihli ve 52233 sayılı yazınız.

İlimiz Melikgazi İlçesi, Bağpınar Mahallesinde bulunan ve 1/1000 ölçekli uygulama imar planı dışında kalan mülkiyeti Hazineye ait 15740 ada 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 188, 189, 190 191, 192, 193 parsel numaralı taşınmazların tamamının Başkanlığınız adına "Güneş Enerjisi Santrali kurulmak üzere" tahsisi ilgi yazınızla talep edilmektedir.

Buna göre; söz konusu taşınmazların tamamının 2022/15 ve 2024/7 sayılı Cumhurbaşkanlığı Genelgeleri kapsamında tahsis amacına yönelik yatırımın yapılabilmesine ilişkin olarak alınması gereken tüm izinlerin Kayseri Büyükşehir Belediye Başkanlığınca (KASKİ) alınması, üretilecek elektriğin münhasıran belediye hizmetlerinde kullanılması, ticari amaçla kullanılmaması, üçüncü kişilere ticari ya da gayri ticari amaçla kullanılmaması/devredilmemesi, tahsisli idarenin ilgili mevzuatları ile belirlenen ve alınması zorunlu olan gelirler dışında her ne ad altında olursa olsun herhangi bir ücret alınmaması, ayrıca 6446 sayılı Elektrik Piyasası Kanunu, 5346 sayılı Yenilenebilir Enerji Kaynaklarının Elektrik Enerjisi Üretimi Amaçlı Kullanımına İlişkin Kanun ile Enerji Piyasası Düzenleme Kurumu mevzuatı kapsamında ilgili İdarelerden gerekli izinlerin alınması kaydıyla, 1 Numaralı Cumhurbaşkanlığı Kararnamesininin 101 inci maddesinin birinci fıkrasının (ç) bendi ile 5018 sayılı Kanunun 47 nci maddesi gereğince, "güneş enerjisi santrali kurulmak üzere" Kayseri Büyükşehir Belediye Başkanlığına (Kayseri Su ve Kanalizasyon İdaresi Genel Müdürlüğü - KASKİ) 2 (iki) yıl süreyle ön tahsisi Bakanlık Makamının ekli 14.10.2024 tarihli ve 10653958 sayılı olur ile uygun görülmüştür.

Söz konusu taşınmazların 2 (iki) yıl süre içerisinde yatırım projesinin hazırlanması, yatırım programına alınması ve tesis/bina inşaatına başlanması halinde ön tahsisin hizmet süresince devamı için kesin tahsise dönüştürülmesi yönünde talepte bulunulacaktır. Aksi halde tahsis işlemi herhangi bir işleme ve yazışmaya gerek olmaksızın kendiliğinden kalkmış sayılacaktır.

İdarenin, tahsisli taşınmazı işgal ve tecavüzlere karşı korumak için her türlü tedbiri alması, işgal ve tecavüz halinde idari ve adli yollara başvurusu ve durumu derhal illerde Çevre ve Şehircilik İl Müdürlüğüne (Milli Emlak Müdürlüğü), ilçelerde Kaymakamlıklara (Milli Emlak Şefliği) bildirmesi ve tahsisli taşınmazlarla ilgili olarak harcamalara katılma payı dahil her türlü gideri ödemesi gereklidir.

Söz konusu taşınmazı teslim almak üzere; Kurumunuzu temsilen yetkili personel görevlendirilmesi ve Müdürlüğümüze (Milli Emlak Müdürlüğü) müracaatının sağlanması gerekmektedir.

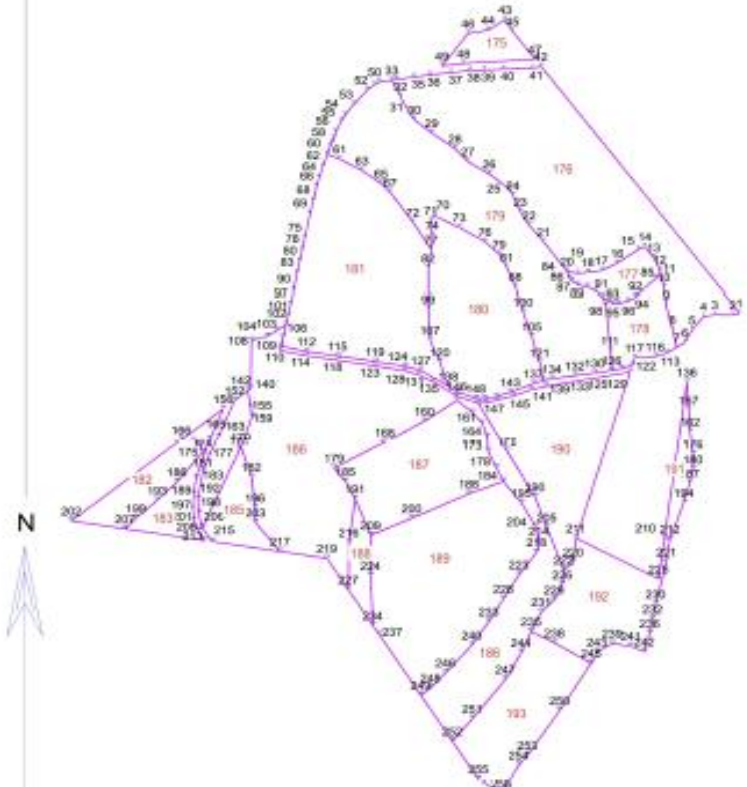
Bilgi edinilmesini ve gereğini arz ederim.

Sibel LİVDUMLU

Bu belge güvenli elektronik imza ile imzalanmıştır.
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İLİ : KAYSERİ
 İLÇESİ : MELİKGAZI
 MAHALLESİ : BAĞPINAR
 PAFTA : K35 - 83
 ADA : 15740
 PARSEL : 175
 PARSEL : 176
 PARSEL : 177
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 PARSEL : 193

APLIKASYON KROKİSİ



YERİNE NO	P	S
1	48841 188	428841 202
2	48841 189	428841 203
3	48841 190	428841 204
4	48841 191	428841 205
5	48841 192	428841 206
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99	48841 286	428841 300
100	48841 287	428841 301

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Annex D - Site Photographs

Photo No: 01	
Date: 16.06.2025	
Location: Bağpınar Neighborhood	
Details/Notes: Subproject Area	
Photo No: 02	
Date: 16.06.2025	
Location: Bağpınar Neighborhood	

Details/Notes:

**Subproject
Area**



Photo No: 03

**Date:
16.06.2025**

**Location:
Bağpınar
Neighborhood**

Details/Notes:

**Subproject
Area**



Photo No: 04

Date:
16.06.2025

Location:
Bağpınar
Neighborhood

Details/Notes:
Subproject
Area



Annex E - Baseline Measurements

Annex F - E&S Incident Notification Form Template

1) Incident Details			
Date of Incident: [Please indicate]		Time of Incident: [Please indicate]	
Location of the Incident:		[Please indicate]	
Full Name of Sub-borrower:		[Please indicate]	
Date Reported to ILBANK: [Please indicate]		Reported to ILBANK by: [Please indicate]	Date Reported to ILBANK: [Please indicate]
Date Reported to WB: [Please indicate]		Reported to WB by: [Please indicate]	Date Reported to WB: [Please indicate]
Full Name of the Contractor of the Sub-project:		[Please indicate]	
Full Name of the Sub-contractor involved in the incident:		[Please indicate]	
2) Type of incident (please check all that apply) ³			
<input type="checkbox"/> Fatality <input type="checkbox"/> Lost time injury <input type="checkbox"/> Displacement without due process <input type="checkbox"/> Child labor <input type="checkbox"/> Forced labor <input type="checkbox"/> Disease outbreaks		<input type="checkbox"/> Acts of violence/protest <input type="checkbox"/> Unexpected impacts on heritage resources <input type="checkbox"/> Unexpected impacts on biodiversity resources <input type="checkbox"/> Environmental pollution incident <input type="checkbox"/> Dam failure <input type="checkbox"/> Other	
3) Description/Narrative of Incident			
<p><i>For example:</i></p> <p>I. What is the incident? [Please briefly describe]</p> <p>II. What were the conditions or circumstances under which the incident occurred (if known)? [Please briefly describe]</p> <p>III. Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions? [Please briefly describe]</p> <p>IV. Is the incident still ongoing or is it contained? [Please briefly describe]</p> <p>V. Have any relevant authorities been informed? [Please briefly describe]</p>			
4) Actions taken to contain the incident			
Short Description of Action	Responsible Party	Expected Date	Status

³ See Annex 2 for definitions.

For incidents involving a Contractor:

Name of Contractor:

Have the works been suspended? Yes No

Note: Please attach a copy of the instruction suspending the works

5) What support has been provided to affected people

[Please briefly describe]

ANNEXES

Annex 1: Supporting documents

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

- Copy of the social security registration records of the victims and involved persons
- Copy of the instruction suspending the works
- Statement of victims
- Statement of witnesses
- Copies of notifications done to the relevant authorities
- Copies of legal investigation reports of relevant authorities
- Copies of E&S training records of the affected and involved persons
- Copies of OHS training records of the affected and involved persons
- Photographs related to the incident
- Others

Annex 2: Incident Types

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

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

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

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

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

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

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

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

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

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

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

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

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

Annex G - E&S Incident Investigation Form Template

1) Investigation Findings						
<p><i>For example:</i></p> <ul style="list-style-type: none"> I. <i>where and when the incident took place,</i> II. <i>who was involved, and how many people/households were affected,</i> III. <i>what happened and what conditions and actions influenced the incident,</i> IV. <i>what were the expected working procedures and were they followed,</i> V. <i>did the organization or arrangement of the work influence the incident,</i> VI. <i>were there adequate training/competent persons for the job, and was necessary and suitable equipment available,</i> VII. <i>what were the underlying causes; where there any absent risk control measures or any system failures.</i> 						
2) Corrective Actions from the investigation to be implemented (to be fully described in Corrective Action Plan)						
Action	Responsible Party		Expected Date			
3a) Fatality/Lost Time Injury Information						
Fatality <input type="checkbox"/>			Lost Time Injury <input type="checkbox"/>			
Immediate cause of fatality/injury for worker or member of the public (please check all that apply) :⁴						
<input type="checkbox"/> Caught in or between objects <input type="checkbox"/> Struck by falling objects <input type="checkbox"/> Stepping on, striking against, or struck by objects <input type="checkbox"/> Drowning <input type="checkbox"/> Chemical, biochemical, material exposure <input type="checkbox"/> Falls, trips, slips <input type="checkbox"/> Fire & explosion <input type="checkbox"/> Electrocutation <input type="checkbox"/> Homicide			<input type="checkbox"/> Medical Issue <input type="checkbox"/> Suicide <input type="checkbox"/> Project Vehicle Work Travel <input type="checkbox"/> Non-project Vehicle Work Travel <input type="checkbox"/> Project Vehicle Commuting <input type="checkbox"/> Non-project Vehicle Commuting <input type="checkbox"/> Vehicle Traffic Accident (Members of Public Only) <input type="checkbox"/> Other			
Name	Age/ Date of Birth	Nationality	Gender	Date of Fatality/ Injury	Cause of Fatality/ Injury	Affected Party (Employee/ Public)
			<input type="checkbox"/> Female <input type="checkbox"/> Male			<input type="checkbox"/> Sub-borrower employee <input type="checkbox"/> Contractor employee <input type="checkbox"/> Sub-contractor employee <input type="checkbox"/> Public

⁴ See Annex 1 for definitions

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

- | | |
|--|--|
| <input type="checkbox"/> No Compensation Required | <input type="checkbox"/> Contractor Insurance |
| <input type="checkbox"/> Workman’s Compensation/National Insurance | <input type="checkbox"/> Other |
| <input type="checkbox"/> Contractor Direct | <input type="checkbox"/> Court Determined Judicial Process |

Name	Compensation Type	Compensation Amount (TRY)	Responsible Party

4) Supplementary Narrative

Annex 1: Definition of fatality/injury immediate causes

1. **Caught in or between objects:** caught in an object; caught between a stationary object and moving object; caught between moving objects (except flying or falling objects).
2. **Struck by falling objects:** slides and cave-ins (earth, rocks, stones, snow, etc.); collapse (buildings, walls, scaffolds, ladders, etc.); struck by falling objects during handling; struck by falling objects.
3. **Stepping on, striking against, or struck by objects:** stepping on objects; striking against stationary objects (except impacts due to a previous fall); Striking against moving objects; Struck by moving objects (including flying fragments and particles) excluding falling objects.
4. **Drowning:** respiratory impairment from submersion/emersion in liquid.
5. **Chemical, biochemical, material exposure:** exposure to or contact with harmful substances or radiations.
6. **Falls, trips, slips:** falls of persons from heights (e.g., trees, buildings, scaffolds, ladders, etc.) and into depths (e.g., wells, ditches, excavations, holes, etc.) or falls of persons on the same level.
7. **Fire & explosion:** exposure to or contact with fires or explosions.
8. **Electrocution:** exposure to or contact with electric current.
9. **Homicide:** a killing of one human being by another.
10. **Medical Issue:** a bodily disorder or chronic disease.
11. **Suicide:** the act or an instance of taking, or attempting to take, one’s own life voluntarily and intentionally.
12. **Others:** any other cause that resulted in a fatality or injury to workers or members of the public.

Vehicle Traffic

13. **Project Vehicle Work Travel:** traffic accidents in which project workers, using project vehicles, are involved during working hours and which occur in the course of paid work.
14. **Non-project Vehicle Work Travel:** traffic accidents in which project workers, using non-project vehicles, are involved during working hours and which occur in the course of paid work.
15. **Project Vehicle Commuting:** traffic accidents in which project workers, using project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
16. **Non-project Vehicle Commuting:** traffic accidents in which project workers, using non-project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
17. **Vehicle Traffic Accident (Members of Public Only):** traffic accidents in which non-project workers/members of the public are involved in an accident while travelling for any purpose.

Annex 2: Supporting documents

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

- Copy of the social security registration records of the victims and involved persons
- Copy of the instruction suspending the works
- Statement of victims
- Statement of witnesses
- Copies of notifications done to the relevant authorities
- Copies of legal investigation reports of relevant authorities
- Copies of E&S training records of the affected and involved persons
- Copies of OHS training records of the affected and involved persons (such as basic OHS training, induction training, visitors training, job-specific training, refreshment training, etc.)
- Photographs related to the incident
- Health examination records of the affected and involved employees
- Copies of Personal Protective Equipment delivery forms (signed copies)
- Root Cause Analysis completed for the incident
- Information/documentation related to any judicial process
- Others

Annex 3: Corrective Action Plan template

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

Annex H - Chance Find Procedure

Chance Find Procedure

Introduction

This document describes the Chance Find Procedure for subproject, outlining the procedures that will be followed in case of chance finds occur during the construction activities associated with the subproject.

Scope

This Chance Find Procedure (CFP) will be implemented for Kayseri Water and Sewerage Directorate (KASKI)-BAĞPINAR SPP sub-project in order to manage any chance finds that may be encountered during the construction activities. The purpose of the CFP document is to:

- outline the applicable legislation and standards relevant to this procedure;
- define roles and responsibilities;
- define project commitments, operational procedures, training requirements and guidance relevant to this procedure; and
- define monitoring and reporting procedures.

Although there are no known archaeological sites or remains within the subproject area, it is considered that there may be a potential to encounter archaeological findings during the construction of the subproject. Activities which have high potential to lead to discover or adversely affect the archeological resources are;

- topsoil stripping
- excavation and earthworks

This CFP is prepared in order to provide information to the contractors and employees regarding the actions to be taken in case of an archaeological chance find procedure.

Legislation and Standards

Legislation and standards that apply to the project comprise the following:

- World Bank Environmental and Social Standard (ESS) 8: Cultural Heritage
- applicable Turkish laws and national standards
- other commitments to and requirements of Turkish government authorities
- other industry guidelines with which the project has committed to comply

In Türkiye, movable and immovable cultural and natural assets are protected and preserved by the Law on Preservation of Cultural and Natural Assets (Law No. 2863) published in the Official Gazette dated 23.07.1983 and numbered 18113. Law 2863 establishes legal protection for the following:

- all natural assets and immovable cultural assets constructed up until the end of the 19th century,
- any immovable cultural asset from after the end of the 19th century, identified by the Ministry of Culture and Tourism as an important asset worthy of preservation,

- all immovable cultural assets located within archeological sites,
- buildings/areas that have witnessed significant historical events during the National War and the foundation of the Turkish Republic and dwellings that have been used by Mustafa Kemal ATATÜRK, regardless of time and registration.

The Ministry of Culture and Tourism is the responsible body to take decisions for protection of cultural heritage in Türkiye at the national level. As part of the Ministry, the High Commission for the Protection of Cultural Assets is responsible for protecting and restoring immovable cultural assets. Implementation of the decisions and regulations issued by the Ministry are undertaken by local administrations. At local level, there are Cultural Assets Protection Regional Boards defined by the Ministry of Culture and Tourism, which are responsible for preservation, registration and classification of cultural heritage within their respective jurisdictions. The relevant Regional Board for the project is the Kayseri Cultural Heritage Protection Regional Board Directorate.” According to Law 2863, all the natural and cultural assets qualified for legal preservation are properties of the State. Therefore, regional boards have the power and authority to provide legal protection to the preservation sites and to approve or reject all the activities, which have potential negative impacts on the preservation sites such as construction, demolition and excavation activities.

Roles and Responsibilities

Principal roles and responsibilities for the implementation of this procedure are outlined below.

Role	Responsibilities
Contractor - Project Manager	<ul style="list-style-type: none"> • Overall responsibility for the development, review, approval and coordination of the numerous activities required to initiate, conduct and complete construction. • Ensure that this procedure is prepared, and updated as required, based on the activities undertaken as part of the project. • Ensure that adequate resources are made available to implement the procedures and guidelines outlined in this procedure.
Contractor - Environmental and Social (E&S) Expert	<ul style="list-style-type: none"> • Initiation, development, implementation and coordination of the CFP during construction. • Ensure that adequate training is given to all site personnel and sub-contractors, covering the procedures and guidelines outlined in this procedure. Establish appropriate control procedures and conduct audits as necessary. • Consultation with and reporting to relevant government bodies in case of potential archeological chance finds. • Record all confirmed chance finds by filling up the “Chance Find Reporting Form” and maintain copies in a log-book. Ensure that the chance finds log-book is up to date.
Contractor - Site Manager	<ul style="list-style-type: none"> • Day-to-day implementation of the provisions of the CFP in the field during construction. • Notify the E&S Expert regarding potential chance finds during construction.
Employees	<ul style="list-style-type: none"> • Understand and comply with archeological chance finds procedures and guidelines outlined in this procedure. • Reporting of the potential chance finds to the Site Manager.

Impact Avoidance and Mitigation

In the event of an archaeological discovery, the following actions will be implemented:

- All staff involved in land clearance and excavation activities will take the responsibility for managing archaeological protection and will be trained in these aspects by the E&S Expert.
- In case any potential chance find is encountered, all construction activities will cease immediately in the vicinity of the chance find.
- The Site Manager will be contacted immediately. The discovered site location, the characteristics of the potential archaeological material and photos will be recorded by the Site Manager, who in turn will inform the E&S Expert.
- Kayseri Museum Directorate will be notified at the latest within three days after the chance find is encountered. Contact details of the Kayseri Museum Directorate are given below:
Address: Cumhuriyet Mahallesi Kaleiçi Çarşı Kümeevler No:1/1 Melikgazi/KAYSERİ
Telephone: 0 352 222 21 49
E-mail: kayserimuzesi@kultur.gov.tr
- The site and its vicinity will be secured 24 hours a day against damage or loss, until inspection by the authority.
- The E&S Expert will fill up a “Chance Find Report Form” for each confirmed chance find and inform the Project Manager about the date that the construction work can resume, which is determined by the authorities concerning the conservation of the heritage.
- Further steps to be followed and proper plan to be implemented for the management of the finds (Changes in the layout, conservation, preservation, restoration and salvage) will be decided and reported in writing by the authorities in charge.
- Photographs of the potential artifacts that are likely to be encountered in the construction site are presented in the following pages to be used during the training of the relevant staff.

Verification and Monitoring

E&S Expert/s will record all cases of archaeological chance finds. He/she will fill up a “Chance Find Reporting Form” for each chance find confirmed by the authority and maintain copies in a logbook. A sample of a reporting form which can be used to record chance finds is included below. The chance find logbook will be summarized on an annual basis and records included in semi-annual monitoring reports to verify that correct management procedures have been followed. Action items will be taken in cases of non-adherence to this CFP.

Reporting

Contractor will comply with reporting requirements including chance finds defined in site-specific ESMP (contractor will develop monthly and quarterly monitoring reports and submit to Kayseri Municipality/KASKI through supervision consultant; Kayseri Municipality/KASKI will examine submit the reports to ILBANK quarterly (and monthly if requested by ILBANK); ILBANK will inform the World Bank by providing regular semi-annual monitoring reports.

KASKI-BAĞPINAR SPP SUBPROJECT

Chance Find Reporting Form

REGISTRATION

Name of recorder::

Date and time of discovery:

Site Name:

Coordinates

X

Y

Description of find:

Photograph:

Estimated weight and dimensions:

CONTACT PERSON

Name/Title/Duty:

Date and Time:

Contact information:

Details of conversation:

DECISIONS

Any protection measures to be implemented:	
Movable or immovable: If moved, please specify the new location.	
Further actions required:	
Recommence date and time:	
Notes:	
SUBMISSION	
Name:	Date:

Annex I - Change Notification Form

Değişiklik Bildirim Formu	
Sub-project Name	
Sub-project Location	
Sub-project Phase	<input type="checkbox"/> Pre-construction
	<input type="checkbox"/> Construction
	<input type="checkbox"/> Operation
Name of the Institution Notifying the Change	
Date	
Category of the Change <i>(please select all that apply)</i>	<input type="checkbox"/> Legislative Change
	<input type="checkbox"/> Design Change
	<input type="checkbox"/> Schedule Change due to E&S factors
	<input type="checkbox"/> Project Schedule Changes due to technical, financial, legal or administrative factors
	<input type="checkbox"/> Changes due to E&S issues encountered at Sub-project implementation
	<input type="checkbox"/> Contractor or Construction Supervision Consultant Change
	<input type="checkbox"/> Other <i>(please specify below)</i>
Detailed Description of the Change(s)	
Documents Submitted with Change Notification Form	
Name of the Staff Notifying the Change	
Position of the Staff Notifying the Change	
Signature	