TÜRKİYE PUBLIC AND MUNICIPAL RENEWABLE ENERGY PROJECT (PUMREP)

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

976.64 kWp / 720 kWe Solar (Photovoltaic) Power Plant Project of Kalaba Municipality

JULY 2025

Document History

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Abbreviations

AFAD	Disaster and Emergency Management Authority
AoI	Area of Influence
CITES	Convention on the International Trade in Endangered Species of Wild Flora and Fauna
CSR	Corporate Social Responsibility
EIA	Environmental Impact Assessment
EHS	Environmental Health and Safety
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Monitoring Report
ESMS	Environmental and Social Management System
ESS	Environmental and Social Standard
ETL	Energy Transmission Line
E&S	Environmental and Social
EU	European Union
FI	Financial Intermediary
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
GM	Grievance Mechanism
GMCP	Grievance Mechanism Contact Person
IFIs	International Finance Institutions
ILO	International Labor Organization
ILBANK	Iller Bankası A.S.
KPIs	Key Performance Indicators
LOTO	Lockout Tagout
MoEUCC	Ministry of Environment, Urbanization and Climate Change
MTA	General Directorate of Mineral Research and Exploration
MW	Medium Voltage
OG	Official Gazette
OHS	Occupational Health and Safety
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
PUMREP	The Turkish Public and Municipal Renewable Energy Project
RCA	Root Cause Analysis
RE	Renewable Energy

SEA/SH	Sexual Exploitation and abuse/ Sexual Harassment
SEP	Stakeholder Engagement Plan
SPP	Solar Power Plant
Sub-Project	976.64 kWp / 720 kWe Solar (Photovoltaic) Power Plant Project of Kalaba Municipality
TAP	Türkiye Portable Battery Manufacturers and Importers Association
TurkStat	Turkish Statistical Institute
UICN	International Union for the Conservation of Nature
WB	World Bank
WBG	World Bank Group
WHO	World Health Organization

Glossary of Terms

Associated facilities	Facilities or activities that are not funded as part of the Subproject and are: (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. For facilities or activities to be Associated Facilities, they must meet all three criteria.
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	Designated terrestrial, aquatic or marine ecosystems managed under the related legislation to protect and sustain the biodiversity features, natural and associated cultural resources. 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.
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 Subproject area.
On-site accommodation	Accommodation of workers at temporary exploration camps, construction camps, dormitories, etc. established for the Subproject 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

The Public and Municipal Renewable Energy Project (PUMREP), financed by the World Bank (WB) with İller Bankası A.Ş. (ILBANK) as the Financial Intermediary (FI), marks a significant step towards sustainable energy solutions and enhanced energy security for the public sector in Türkiye. The primary objectives of the PUMREP include scaling up renewable energy use in public sector buildings and municipalities, reducing energy bills, and demonstrating leadership in the public sector's commitment to sustainable energy solutions and climate mitigation. The sub-project to be financed under PUMREP include the installation of renewable energy facility by Kalaba Municipality with a capacity of 976.64 kWp / 720 kWe. This sub-project is located in the Kalaba Town of the Avanos district in Nevşehir province.

Kalaba Municipality will manage all works related to the construction and operation of this sub-project, ensuring effective implementation and operation of the renewable energy facilities under the PUMREP.

Kalaba Municipality's 976.64 kWp, 720 kWe Solar Power Plant Project is planned to be established in Nevşehir province, Avanos district, Kalaba Town, Yeni Neighborhood, block 277 / parcel 1. Within the scope of the PUMREP (Project) sub-project area where the solar power plant will be established is public treasury land and has been allocated to Kalaba Municipality by the National Real Estate Directorate. The land ownership allocation document is included in Annex-C. With the commissioning of the sub-project, approximately 66.42% of the total electricity consumption of Kalaba Municipality will be met.

Sub-project will be interconnected via a single substation located within 286/1 parcel, which is lot 277 of block 1 and the energy will be transmitted through a 691 m 36 kV Energy Transmission Line (ETL). The ETL is one of the sub-project component.

The sub-project is in the Moderate Risk category according to the Risk Classification conducted within the scope of the ILBANK Environmental and Social Management System (ESMS) and the World Bank Environmental and Social Framework (ESF). One of the tasks within the scope of the subproject is the preparation of this Environmental and Social Management Plan (ESMP) in accordance with ILBANK's ESMS and WB ESF, applicable Environmental and Social Standards (ESSs), World Bank Group (WBG) General Environmental Health and Safety (EHS) Guidelines and Industrial Sector Guidelines, and national legislation in force in Türkiye.

The ESMP outlines the necessary measures and guidelines to ensure that the environmental and social impacts of the subproject are effectively managed throughout the construction and operation phases. This plan is important to ensure that the projects comply with national and international environmental and social requirements..

Within the scope of the EIA regulation published in the Official Gazette dated 25.11.2024 and numbered 29186, the subproject received an "EIA Out of Scope" decision on 18.01.2022 from the Nevşehir Governorship Environment and Urbanization Provincial Directorate as its capacity is below the threshold values given in the regulation (See Annex B).

The closest settlement to the area where the facility will be built is Yeni neighborhood, 2.1 km away.

As part of stakeholder engagement efforts, a public consultation meeting was held on 10.06.2025 at Kalaba Municipality Condolence House with the participation of local community members, mukhtars, and relevant stakeholders.

During the meeting, the project scope, potential environmental and social impacts, proposed mitigation measures, and the grievance mechanism were presented to the participants.

Information was provided during the public consultation meeting on the sub-project's location, installed capacity, economic lifespan, and its anticipated benefits at both the local and national levels. Potential environmental impacts during the construction phase—such as dust, noise, and traffic—were also discussed.

In addition, attendees were informed about the grievance mechanisms available in case they wish to raise concerns or complaints related to the sub-project.

The meeting was attended by 29 municipal staff members and 11 local residents. At the end of the session, questions from the local community were answered, and participants were given the opportunity to express their views, suggestions, and concerns.

The meeting helped to improve community awareness of the project and ensure that their feedback will be considered during implementation. A record of the meeting and participant list is provided in Annex K.

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 distributed renewable energy (RE) market in public facilities help demonstrate leadership in the public sector to use sustainable energy solutions to deliver on the country's climate mitigation commitment and enhance energy security.

The PUMREP is financed by World Bank (WB) to support introducing RE technologies in municipalities. Iller Bankası A.Ş. Department of International Relations (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: Contingent Emergency Response Component (CERC).

Kalaba Municipality (here in after referred to as "the Sub-borrower") has applied to ILBANK for sub-financing of Kalaba Municipality 976.64 kWh/720 kWe SPP (Solar Power Plant) (here in after referred to as "the Sub-project") under Component 2. The sub-project is located in insert Nevşehir Province, Avonos District, Kalaba Town.

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 Subproject financed through International Financial Institutions (IFIs).

The ESMS is aimed at ensuring systematic identification, assessment, management, monitoring, and reporting of the environmental and social (E&S) risks and impacts of the **projects and Subproject 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 Policy**[1] applicable to all ILBANK projects and Subproject financed through IFIs.

Within the scope of the ILBANK's ESMS and World Bank Environmental and Social Framework (ESF), Subproject 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 Subproject; the 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 ÇA Engineering for the Subproject in line with the applicable E&S requirements as set out in Section 1.3. List of the Individuals/Organizations that Prepared or Contributed to the ESMP development is presented in Annex A.

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

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

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 Subproject 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 Subproject

The Subproject 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:

- 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
- ILBANK Environmental and Social Management System (ESMS)
- WBG EHS Guidelines for Electric Power Transmission and Distribution (2007)

Table 1 identifies the relevance of the WB ESSs to the Subproject.

Table 1. Relevance of the WB ESSs to the Subproject

ESSs	Definition	Relevance to the Subproject
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 Subproject
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.

A summary of the national legislation and international standards applicable to the management of environmental, social, health, and safety aspects of the sub-project is provided in Annex J

1.4. Review and Update

This ESMP will be reviewed and updated by the Sub-borrower during Subproject 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 update 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 Arrangements

The Sub-borrower will hold ultimate responsibility for implementation of this ESMP by the Sub-borrower and contractor teams (engaged in connection with the Subproject – 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 Subproject and be responsible for ensuring that operations are compliant with the national legislation and Operation ESMP.

The roles and responsibilities of the Sub-borrower, contractor and sub-contractor teams regarding the ESMP implementation are described in Chapter 5.

This ESMP provides instructions, responsibilities and guidelines to the responsible parties, as well as a set of mitigation, monitoring and institutional measures to be taken during the construction and operation of the sub-project to prevent or reduce potential adverse environmental and social impacts to acceptable levels. Technical parameters for all monitoring requirements are defined, along with appropriate responsibilities and reporting procedures. In addition, a Grievance Mechanism (GM) for receiving and evaluating all grievances, concerns and comments regarding the sub-project is specified in the sub-project specific SEP. The ESMP has identified mitigation measures and monitoring activities to reduce and avoid impacts and risks associated with the sub-project. A summary of mitigation measures is provided in Table 23 and Table 24.

During the construction and operation phases, PIU assigned by Kalaba Municipality will ensure compliance with national and international legislation.

2. SUBPROJECT DESCRIPTION

2.1. Subproject Information

The sub-project activity subject is related to the establishment and operation of "Kalaba Municipality Solar Power Plant (976.64 kWp/ 720 kWe)" by Kalaba Municipality on lot 277 of block 1 within the borders of Kalaba Town, Avanos District, Nevşehir Province.

Lot 277 of block 1 where the sub-project subject activity will be carried out is a land. The subproject was determined as out of the scope of EIA according to the Turkish EIA Regulation published in the Official Gazette dated 25.11.2014 and numbered.

Continuously increasing energy demand and the constant increase in electric unit costs increases the institution's expenses very seriously.

Meeting the energy need with renewable energy is one of the most important needs of our future. Especially choosing solar energy technology makes it stand out due to its price/performance situations in terms of installation, maintenance, repair, operation and cost compared to other energy sources.

Kalaba Municipality 976.64 kWp/720 kWe SPP project aims to reduce the budget allocated for electricity by Kalaba Municipality by meeting 66.42% of the electricity usage of Kalaba Municipality. I This will enable the municipality to allocate its energy budget more efficiently and direct resources to other needs. At the same time, it will protect the environment and human health with a sustainable energy source.

Key technical information on the Subproject is summarized in **Table 2**. Further information on the construction and operation phase activities and facilities in the following sections in this Chapter.

Table 2. Key Technical Information on Subproject

Information	Remarks/ Notes
Technology	**Photovoltaic**
Installed Power	976.64 kWp
Connection Power	720 kWe
Annual Electricity Generation	1541 MWh
Solar Panel Type	545 wp (Monocrystalline panel)
Annual Carbon Emission Reduction	955 ton
Lifetime Carbon Emission Reduction	23,875 ton
Households Powered	616
Economic Life of the Power Plant (Operation Duration)	25 years

2.1.1.Subproject Location

Information on the Subproject location is presented in The land determined for the 976.64 kWp/720 kWe SPP project planned to be carried out by the Kalaba Municipality (277 block, 1 parcel) belongs to the Kalaba Municipality. It is registered as a land in the land registry. There is no agricultural or animal husbandry activity within the undisturbed green area. The lands to the west and south of the parcel in question are used for pasture purposes. The land determined for the 976.64 kWp/720 kWe SPP project planned to be carried out by the Kalaba Municipality (277 block, 1 parcel) belongs to the Kalaba Municipality.

Table 3.

The land determined for the 976.64 kWp/720 kWe SPP project planned to be carried out by the Kalaba Municipality (277 block, 1 parcel) belongs to the Kalaba Municipality. It is registered as a land in the land registry. There is no agricultural or animal husbandry activity within the undisturbed green area. The lands to the west and south of the parcel in question are used for pasture purposes. The land determined for the 976.64 kWp/720 kWe SPP project planned to be carried out by the Kalaba Municipality (277 block, 1 parcel) belongs to the Kalaba Municipality.

Table 3. Subproject Location

Information	Remarks/ Notes
Province	Nevşehir
District	Avanos
Neighborhood/ Village	Kalaba Town
Land Area (ha)	13.96
Land Use Type according to Title Deed	Land
Current Land Use	There is no activity such as animal husbandry, grazing, agriculture, housing, etc. in the subproject area by any legal or illegal land ownership/shareholding, official or unofficial user, official or unofficial tenant, etc. The subproject area is owned by the Kalaba Municipality and the land had not been used for agriculture or livestock farming before it was planned as an SPP site.
Other Nearby Facilities and Activities	There are no other industrial or commercial activities operated/run or planned by the Sub-borrower itself or other public or private third parties in the vicinity of the Sub-project or its components/associated facilities.

A map of the Subproject location is presented in **Figure 1**.

Figure 1. Map of Subproject Location

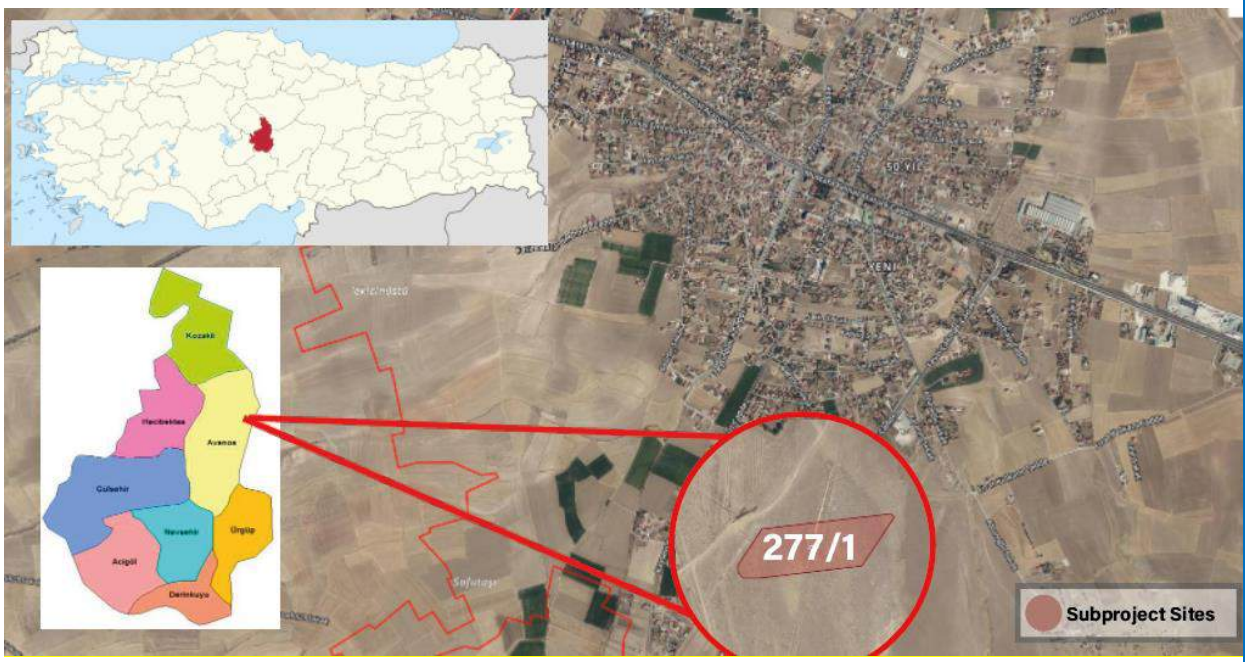


Table 4. Coordinates of the Sub Project Area

Unit	Coordinates (WGS84 in decimals)	
	Y	X
277/1	38.9454	35.0089
	38.9455	35.0089
	38.9453	35.0067
	38.9448	35.0063
	38.9447	35.0063
	38.9446	35.0064
	38.9446	35.0067
	38.9448	35.0084
	38.9454	35.0089

2.1.2.Site Access Route

Access to the sub-project site is provided by the Kayseri-Kırşehir highway, Avanos junction. The access to subroject site is provided by approximately 850 m stabilized road from the Avanos road. The existing road is sufficient for construction and operation activities. Therefore, there is no need to construct a new road for the sub-project. The road to be used to transport the equipment to the site passes through the settlement, as seen in Figure 2.

During the installation phase, precautions will be taken to ensure that the local people are not affected by the emissions that will occur and the traffic, and are given in the ESMP Matrix.

Figure 2. Subproject Sites Access Route

2.1.3.Energy Transmission Line (ETL)

Technical information on the ETL is presented in **Table 5**. A map showing the ETL route and the national grid connection location is provided in **Figure 3**.

Kalaba Municipality solar energy project plant will be connected to the grid with a 691-meter long transmission line in accordance with the permits given by MERAM EDAS. The energy transmission line to be built does not pass through private land along its route. It passes through the development road located within the parcel Lot 1 of block 286. The property of Lot 1 of block 286 belongs to the Kalaba Municipality. Lot 1 of block 286 is given in title deed Annex B.

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

Table 5. Technical Information on the ETL

Information	Remarks/ Notes
Status of ETL	Underground

Transformer station (for national grid connection)	
Length of the route (km)	0.69
Voltage level (kV)	36 kV
Number of ETL towers (pylons)	The energy transmission line is an underground line.
Total footprint area per each ETL tower (m^2)	
Number of parcels subject to expropriation	There is no need for expropriation.
Number of parcels subject to easement rights ("*irtifak hakkı*")	Allocated

Figure 3. Map of ETL Route

2.2. Subproject Impact Area

According to WB ESSs, "where the project involves specifically identified physical elements, matters and facilities that are likely to create impacts, environmental and social risks and impacts shall be identified in the context of the project's Area of Influence (AoI)". Thus, AoI of the project consists of urban or rural areas likely to be affected by the project, its activities and facilities that are directly owned, operated, or managed (including by contractors). The subproject AoI consists of environmental and social aspects in the surrounding settlements. Accordingly; the subproject's area of influence has been examined in two scopes as environmental and social.

The environmental impact area; It has been concluded that the dust emission, exhaust gases from vehicles and environmental noise arising from the subproject activities will be reduced within 100 meters according to the calculations made (See Sections 4.1.1.1.3 and 4.1.1.1.4). Sub-project AoI is given in the Figure 4.

In determining the social impact area; The potential for significant negative impacts on livelihoods due to land acquisition or expropriation with the establishment of the sub-project, the risk of road safety to local communities due to the traffic volume created by the use of access roads to the sub-project sites, contribution to local employment, contribution to the local economy, and the need for basic consultancy for sensitive and disadvantaged groups are examined in detail in the SEP report. As can be seen from the figure, the nearest settlement to the sub-project area is 50. Yıl and Yeni neighbourhoods, which is 2.10 km away. However, the nearest sensitive receptor to the sub-project site is 500 meters away.

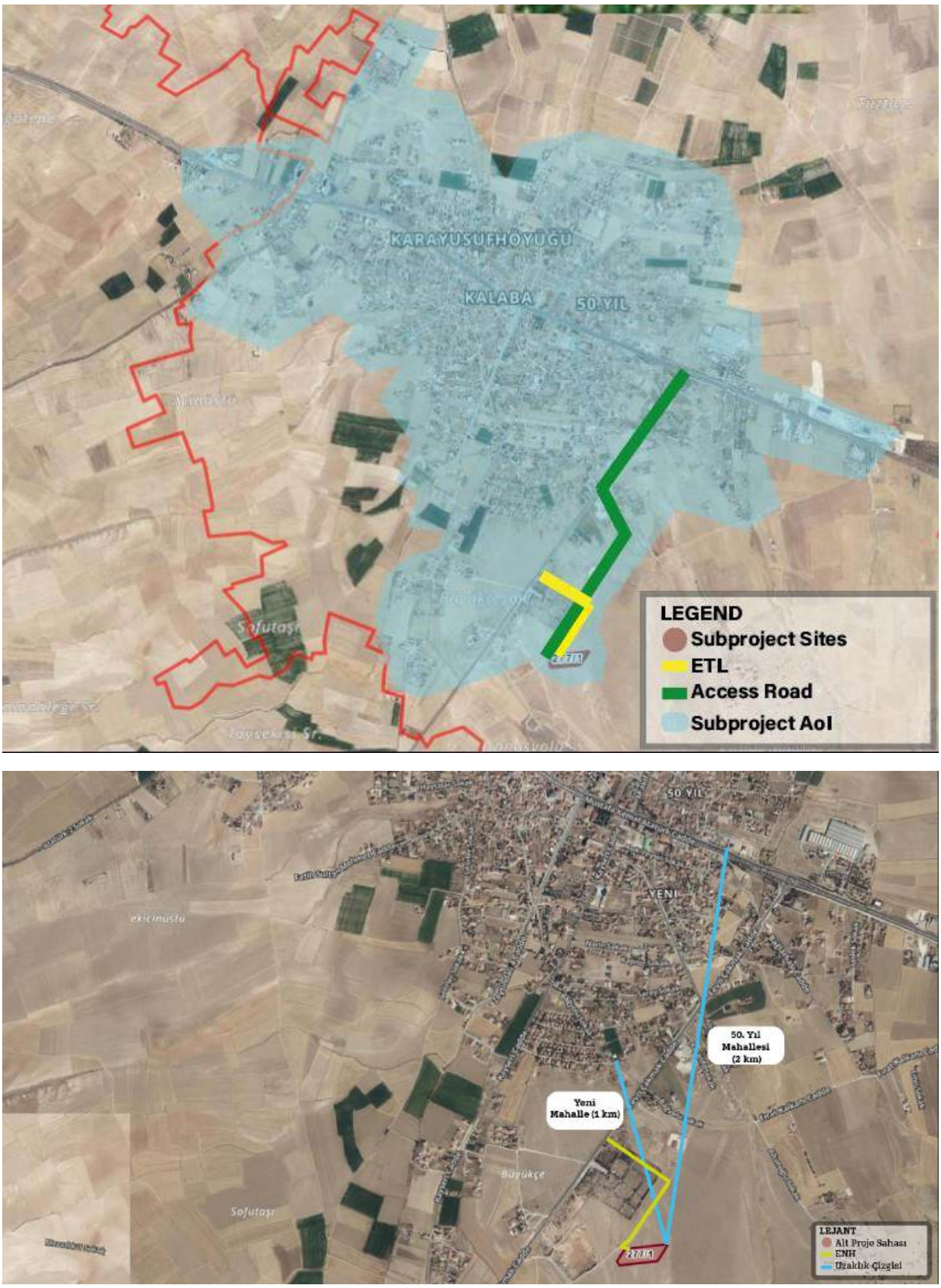


Figure 4. Sub-project Site AoI

2.3. Environmental and Social Baseline

During the field visit conducted on 23.09.2024, interviews were conducted with the Yeni neighbourhood mukhtar, 3 residents of the Yeni neighbourhood.

Consultations were held with local people regarding their level of knowledge about the sub-project, the usage status of the sub-project area, their opinions and suggestions regarding the sub-project. Information was also obtained from the neighbourhood mukhtar (Yeni Neighborhood) where the sub-project area is located, regarding the demographic structure of the neighbourhood, socio-economic status, livelihoods, existence of agricultural animal husbandry activities, current status of infrastructure services, especially education and health. The soil structure of the sub-project area and the flora species growing in the field were also examined by ÇA Engineering Agricultural Engineer. In addition to the information obtained, interviews were held regarding their level of knowledge about the project, their opinions and suggestions.

In the context of the interviews; Table 6 presents a summary of the baseline field studies conducted as part of the ESMP study.

Table 6. Summary of Baseline Field Studies

Subject	Date of the Field Study	Experts who Participated in the Field Study
The level of knowledge about the project	23.09.2024	Elif Tuna PULAŞ, ÇA Engineering Environmental Expert
The demographic structure of the neighborhoods,		
The usage status of the sub-project area		
The socio-economic status of the local people		
Agricultural and animal husbandry activities carried out in the neighborhood		
The status of infrastructure services, access to education and health opportunities		
Opinions, suggestions and concerns about the sub-project, information about vulnerable groups		
Biodiversity and soil structure studies	23.09.2024	Mehmet SÜMER, ÇA Engineering Agricultural Engineer

2.3.1.Physical Environment

2.3.1.1. Topography

The province of Nevşehir is located on a very large plateau within the Central Anatolian Volcanic Complex. This area, which also includes Cappadocia, which has historical and touristic importance, is bordered from the north by Kızılırmak, the longest river in Türkiye. The mountains are generally concentrated in the north and south of the Kızılırmak valley. The mountains in the province were formed during the Neogene period. During the Alpine folding, the compressions that occurred while the North Anatolian and South Anatolian mountains were being shaped caused local uplifts and subsidence in Central Anatolia. A part of the Nevşehir lands remained under lake waters during the Neogene period. Later, very intense volcanic activity occurred in the region and a large part of the plateau was covered with pyroclastic material from different sources.

The sub-project site is located at an approximate elevation of 1,214 meters within a broad and flat plain. Topographically, the site features a gently sloping and flat terrain, making it suitable for infrastructure projects and land use activities. Geologically, the site is situated on Upper Miocene-Pliocene undifferentiated terrestrial clastics, consisting of

heterogeneous materials such as gravel, sand, silt, and clay, which may result in variable engineering properties of the ground. A water source located approximately 1 kilometer from the site offers a significant advantage for construction activities as well as potential irrigation and environmental needs. The flat topography of the site facilitates planning, project implementation, and site preparation.

2.3.1.2. Geology

The information provided in this section is taken from the Ground Survey report. conducted by Savran Engineering on 02.12.2021 at sub-project area The sub-project area and its surroundings are composed of the Pre-Mesozoic Bozçaldağ Formation, Upper Cretaceous-Paleocene Yüksekli Formation, Altıpınar Formation and Boztepe member and Quaternary-aged Old alluvium. These units and their distributions are presented on the geology map in Figure 5.

Old alluvium

They are old river sediments that surface along the edges of the Kızılırmak River, in the Karacaören plain and along the Domsa stream. They consist of pebbles, sandstone and silt. Their average thickness is 10 meters.

Yüksekli Formation

They consist of whitish-gray, medium-fine grained, trough cross-bedded sandstone, pebbled sandy tuffite, siltstone, claystone and coarse sandstone and conglomerate. The alignment and orientation of the pebbles are observed. Gravel and sand grains are in the form of quartzite, chert, amphibolite, diabase, basalt, gabbro, granite and limestone. The unit was formed in a fluvial and lake environment. It is compatible with the Tuzköy formation at the base. Its average thickness is 200 meters.

Altipınar Formation

There are conglomerates at the base. Coarse-medium grained, thick-medium bedded sandstones, gray-gray colored marls pass to gray-green colored medium-fine grained, thin-bedded sandstone and shales towards the top. Base structures and gradation are normal in sandstone layers and Bouma sequence is seen. The unit was deposited in a marine environment dominated by turbidity currents. It is compatible with the Ayhan formation at the base. Its average thickness is 250 meters. In the samples collected from marl levels; According to fossils of Alveolina spp., Orbitolides spp., tnchania sp., Nummulites sp., Milioldae, Assilina exponels, the age of the formation is Lutetian.

Boztepe Member

The member consists of sandy marl and clayey limestones with a thickness of 1-5 meters and medium thin-bedded fossiliferous clayey limestone alternations with a thickness of 1-2 meters. Marly levels are yellowish in color and have abundant Lucina. Fusiform and cylindrical shaped alveolinas can be seen in the limestone layers. It is transitional with sandstone and shales of the Altıpınar formation at the base. It has a reef character. Its thickness is 50 meters. According to the macro fossils it contains, the age of the Boztepe member is Lutetian.

Bozçaldağ Formation

Bozçaldağ formation consists of gray-gray whitish colored, coarse crystalline, sugar texture, medium thick-bedded and massive marble. It is transitional with the Tamadağ formation at the base. Its thickness is approximately 250 m.

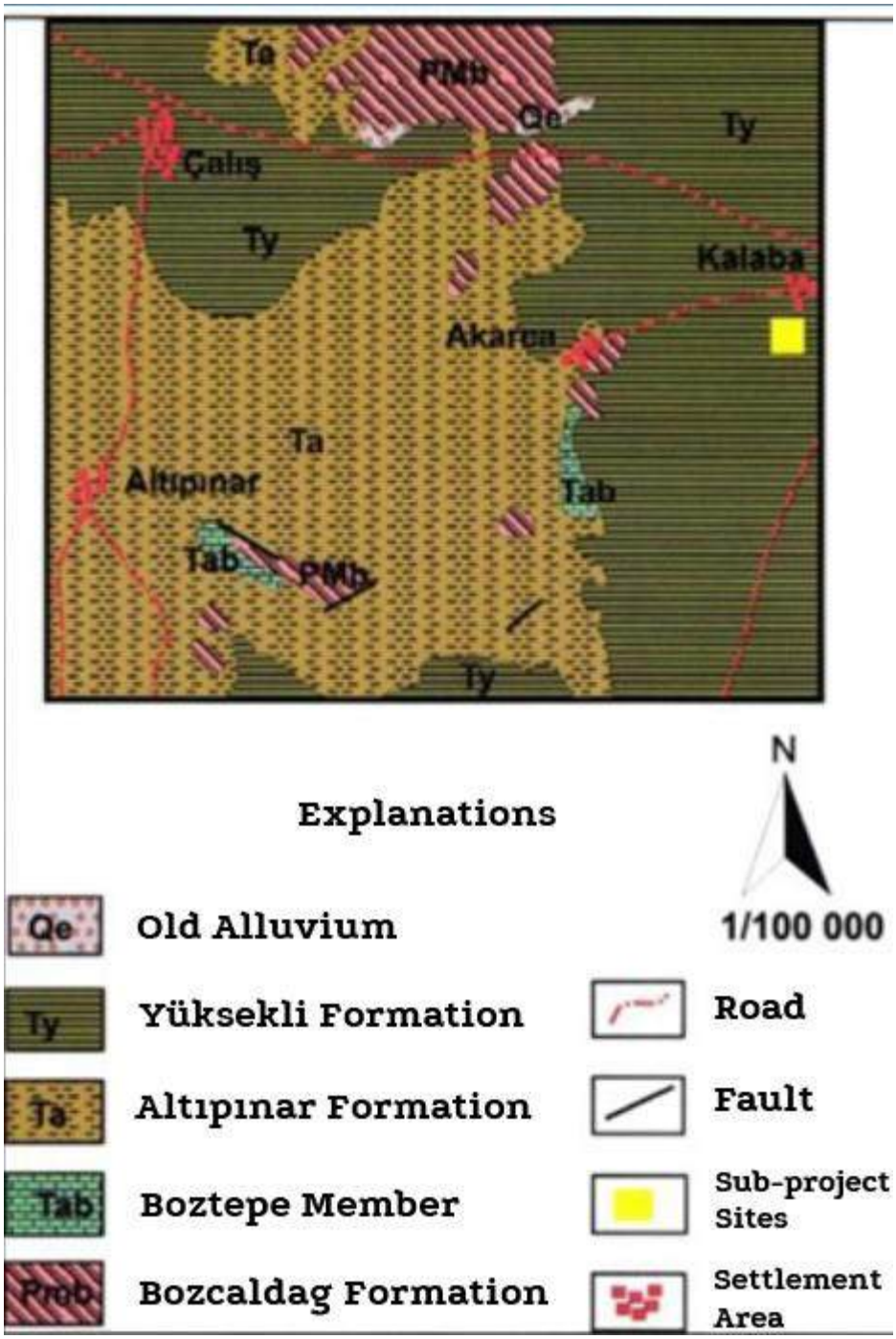


Figure 5. Geology Map

2.3.1.3. Tectonics and Seismicity

The Earthquake Zones Map of Türkiye, which was last put into effect in 1996, was renewed by the AFAD Earthquake Department and published in the Official Gazette dated March 18, 2018 and numbered 30364 (duplicate). The new map given in Figure 6entered into force on January 1, 2019. The new map was prepared with much more detailed data, taking into account the most up-to-date earthquake source parameters, earthquake catalogues and new generation mathematical models. In the new map, unlike the previous map, the highest ground acceleration values are shown instead of earthquake zones and the concept of "earthquake zone" is eliminated.

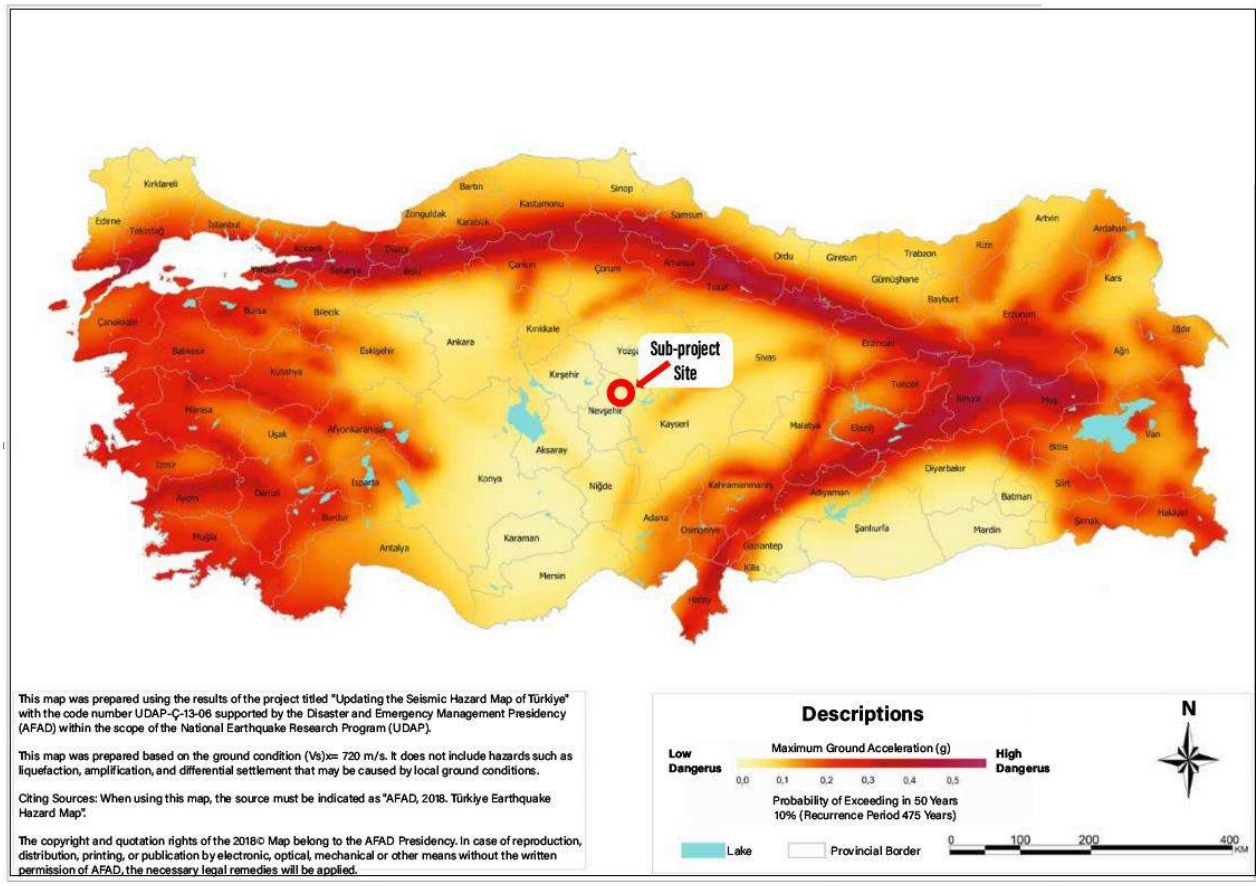


Figure 6. Türkiye Earthquake Map (https://tdth.afad.gov.tr/)

Within the scope of the project, the construction works will be carried out in accordance with the provisions of the Turkish Building Earthquake Regulation, and a carrier system in accordance with the earthquake specifications will be applied according to the ground survey values.

The PGA 475 value of the project area was determined as 0.101 g with the Türkiye Earthquake Hazard Maps Interactive web application (See Figure 7). In this respect; the sub-project area is not directly under the influence of major faults, therefore it is located in a low-risk area in terms of earthquake risk.

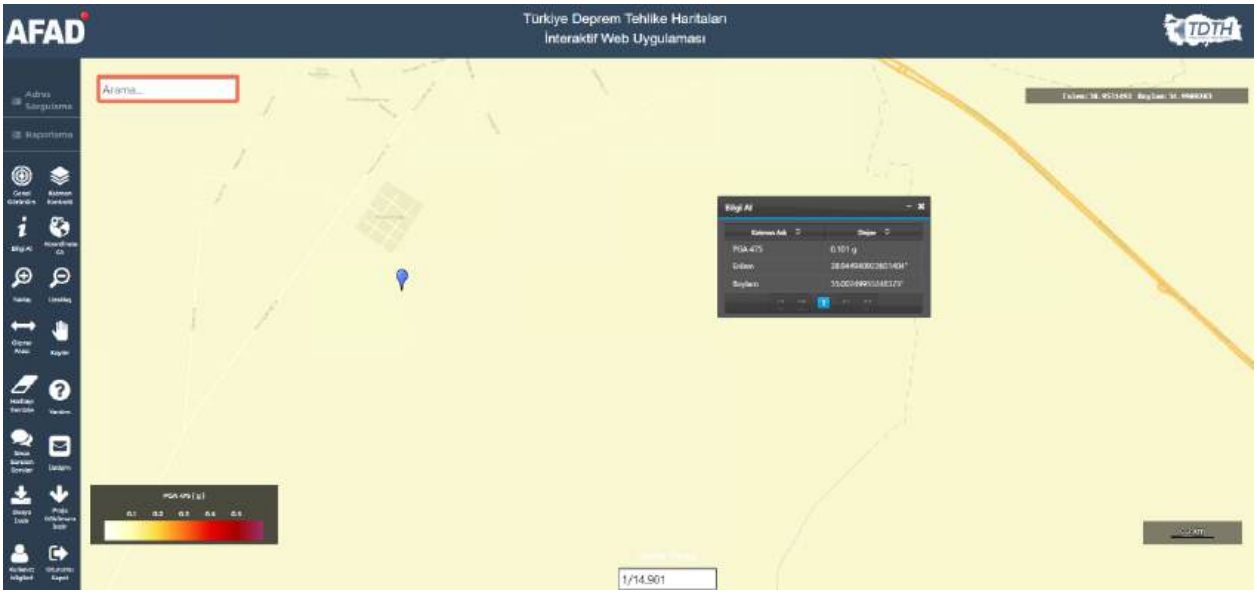


Figure 7. Türkiye Earthquake Hazard Maps Interactive web application (https://tdth.afad.gov.tr/)

2.3.1.4. Soil and Land Composition

The area where the sub-project will be established is considered as a land in the land registry records. All of the areas where the project will be established are private lands and there is no pasture or village legal entity land in any way.

When considering the animal husbandry activities, which are one of the sources of income of the region, it has been observed that the areas selected for the project area were selected in a way that would not affect the animal grazing areas.

In addition, there are pasture lands where animals will graze in the region. Lot 1 of block 277 located in Kalaba town of Avanos district of Nevşehir province is within the scope of the Current Zoning Plan. Therefore, it is not within the scope of the Law on Soil Protection and Land Use No. 5403.

Considering the region where the solar power plant will be installed in the project, the soil structure of this land as a result of the climate (continental), volcanic landforms, rugged areas and the effect of the bedrock is calcareous soil with organic matter on the top (phosphorus deficiency, potassium sufficient, nitrogen high) and lime layers at the bottom (rendzina). These soils do not have a water permeable structure due to the thick lime layer and do not allow minerals such as iron and magnesium to reach plant roots. Due to the dry nature of the soil, they need a lot of irrigation and fertilization, so the land is not suitable for cultivation. It is not possible for these alkaline lands, which are not suitable for cultivation, to become acidic.

2.3.1.5. Meteorology and Climatic Characteristics

The climate in Nevşehir is warm and temperate. There is much more precipitation in winter than in summer. According to Köppen-Geiger, the climate is Csa. The average annual temperature in Nevşehir is 10.6 °C. Average annual precipitation is 438 mm. The driest month of the year is August, with 5 mm of precipitation. The highest precipitation is in April, with an average of 61 mm. August is the hottest month of the year, with an average temperature of 22.6 °C. The average temperature in January is -1.7 °C, which is the lowest average of the year. The amount of precipitation between the driest and wettest months of the year is 56 mm. The average temperature throughout the year varies around 11.2 °C.

2.3.1.6. Air Quality

According to the Nevşehir Province 2022 Environmental Status Report published in 2023; ıt was stated that air pollution in Nevşehir has seasonal characteristics, there is pollution felt and detected due to SO2 in the winter months, late autumn and early spring, the source of air pollution in Nevşehir is not pollution caused by industry and motor vehicles, but air pollution caused by heating, pollutants caused by motor vehicles also have an effect on air pollution, especially the traffic density experienced in the morning and evening hours negatively affects the air, and air pollution caused by industry mainly occurs as a result of wrong location selection, inappropriate fuel use and discharge of waste gases into the receiving environment without taking sufficient technical measures.

Air Quality Monitoring Station (AQMS), which was established in 2006 in the center of our province within the garden of the Meteorology Directorate at the latitude of 38° 36' 57" and longitude of 34° 42' 08", within the scope of "Establishment of Air Quality Monitoring Stations in Provinces Affiliated to the Southern Central Anatolia Clean Air Center Directorate" in 2018, the existing station was revised and established in the Central District at the latitude of 38° 37' 23" (38.623200) and longitude of 34° 42' 05" (34.701400) coordinates; Together with the new AQMS, which was installed within the borders of Avanos District at 38° 42' 58" (38.716158) Latitude and 34° 50' 50" (34.847311) Longitude coordinates, air quality monitoring studies of the province are continuing with SO_2 -CO-PM_{10}-$PM_{2.5}$-NO_X and O_3 analyzers as of 25 July 2019.

The annual averages of the data obtained from the air quality monitoring station in Avanos province are given in Table 7.

Table 7. Annual averages of data from Avanos air quality monitoring station

Pollutant	Amount (µg/m^3)
SO_2	24.11
PM_{10}	46.16
NO_2	28.22
NO_x	44,84

Source: https://webdosya.csb.gov.tr/db/ced/icerikler/nevseh-r_-cdr2022-20231115150735.pdf (Avonos Station)

2.3.1.7. Noise

Although there is no comprehensive and up-to-date data on the noise levels of the sub-project site, as a result of the observations made, the noise sources were determined as noise from vehicles using the Avonos highway, which is approximately 400 meters away from the site, and noise from agricultural machinery.

2.3.1.8. Water Resources

The water resources of Nevşehir province consist of underground, aboveground, dams and artificial ponds. A 100 km section of Kızılırmak passes through the borders of our province. Its flow rate is 2,740 hm³/year.

There are no natural lakes within the borders of Nevşehir province. The existing ponds, Ayhanlar Dam, Damsa Dam, Doyduk Dam, Kumtepe Dam, Özkonak Dam, Sarılar Pond, Taşlıhöyük Pond, Tatlarin Dam and Yalıntaş Pond are ponds built by DSİ entirely for irrigation purposes.

There are sub-basins belonging to Kızılırmak and Konya Closed Basins within the borders of Nevşehir province. The groundwater level in these sub-basins varies according to hydrogeological conditions and topography.

When the subject is evaluated in general, 10,114 documents were evaluated in the inventory study conducted in Nevşehir province[2];

Static levels ranged from 0.00 m to 231.00 m with an average of 40.61 meters,

Dynamic levels ranged from 2.00 m to 240.00 with an average of 52.93 meters,

Well depths ranged from 10.00 m to 300.00 with an average of 105.32 meters,

Well flow rates ranged from 0.05 l/s to 75.9 l/s with an average of 8.28 l/s.

The sub-project area is approximately 1 km away from the Bogazli Stream, which is allocated throughout the country, as the crow flies. In addition, there are also Tüysüzün and Aptalgörmez rivers, which are approximately 4 km to 5 km away from the sub-project area.

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

There is no risk of natural disasters such as landslides, floods, collapses, collapses, creaks and rockfalls in the sub project area. The flood that occurred as a result of excessive rainfall in the region in 2019 affected some houses in Kalaba town. However, the region where the sub-project site is located was not affected.

The factors that cause landslides are strong slopes, heavy and continuous rains, water saturation, rock structure, the posture of the layers, tectonic structure, etc. Landslides can occur as a result of one or more of these. However, there is no fill, lithological units (loose - soft, etc.) and groundwater effect that can cause landslides in the sub-project site.

[2] Nevşehir Provincial Directorate of Environment and Urbanization-2020

2.3.2. Biodiversity

2.3.2.1. Flora

Göreme Hills has been designated as an “Important Plant Area (IPA)” by the World Wildlife Fund (WWF-Türkiye). This area, where human settlements have continued from prehistory to the present, has been able to preserve important steppe plant communities that have survived to the present day, and approximately 650 taxa have been identified within the national park borders. 118 of these are endemic to Türkiye. There are 23 rare plants in Göreme Hills IPA throughout the country. The Göreme Hills sub-project area is approximately 37 km away as the crow flies. However, during the field visit made on 23.09.2024, it was determined that these species were not present in the sub-project area. There are no endemic flora species under protection in the sub-project area.

No endemic flora species were observed in the sub-project area. The flora species encountered in the sub-project area during the joint field visit with ÇA engineering officials and Kalaba Municipality officials on 23.09.2024 are given in Table 8.

Table 8. Sub-project Flora Species

	Risk Categories		Endemism	Detection
	IUCN	BERN		
Vincetoxicum tmoleum	LC	-	-	L, O*
Filago arvensis	LC	-	-	L, O
Amaranthus retroflexus	LC	-	-	L, O
Ziziphora capitata	LC		-	L, O
Chardinia orientalis	LC		-	L, O

*Literature, Observation

2.3.2.2. Fauna

The fauna elements found in a certain region may show seasonal differences due to reasons such as migration and breeding activities. Within the scope of the study, the species that can be found continuously and during migration in the area where the sub-project is located have been prepared considering their habitat requirements. In this context, amphibian, reptile, bird and mammal species are presented in tables and the tables indicate which IUCN category, Annex II and Annex III within the scope of the Bern Convention and CITES lists they are included in. A (-) sign is placed for species that are not included in the Bern Convention Annex II and Annex III lists and in the IUCN.

Species Group	Species	Scientific Name	IUCN Status	Bern Convention
Mammals	Wolf	*Canis lupus*	Least Concern (LC)	Appendix II
	Fox	*Vulpes vulpes*	Least Concern (LC)	-
	Water type (Otter)	*Lutra lutra*	Near Threatened (NT)	Appendix II
	Badger	*Meles meles*	Least Concern (LC)	-
	Weasel	*Martes foina*	Least Concern (LC)	Appendix III
	Rabbit	*Lepus europaeus*	Least Concern (LC)	Appendix III
Birds	Partridge	*Alectoris graeca*	Near Threatened (NT)	Appendix II
	Quail	*Coturnix coturnix*	Least Concern (LC)	Appendix III
	Pigeon	*Columba livia*	Least Concern (LC)	-
	Falcon	*Falco sp.*	Varies by species	Appendix II
Bats	Long-winged bat	*Miniopterus schreibersii*	Near Threatened (NT)	Appendix II
	Horseshoe bat species	*Rhinolophus spp.*	Varies by species	Appendix II
	Pipistrelle bat species	*Pipistrellus spp.*	Varies by species	Appendix II
Reptiles	Turtle	*Testudo graeca*	Vulnerable (VU)	Appendix II
	Lizard	*Lacerta viridis*	Least Concern (LC)	Appendix II
Amphibians	Plain Frog	*Pelophylax ridibundus*	Least Concern (LC)	Appendix III
	Tree Frog	*Hyla orientalis*	Least Concern (LC)	Appendix II

	Taurus Frog	*Bufotes viridis*	Least Concern (LC)	Appendix II

IUCN Status:

- LC: Least Concern
- NT: Near Threatened
- VU: Vulnerable

Bern Convention:

- Appendix II: Strictly protected species.
- Appendix III: Protected species, but with lower priority.

2.3.3.Socio-economic Environment

Environmental and Social Studies are created to identify and evaluate the potential positive and negative impacts of a developed phenomenon, to determine actions to mitigate or compensate for these impacts, and to inform the public and stakeholders so that comments can be made on the development proposal. Socialstudies aim to contribute to the creation of egalitarian and accessible spaces that respond to social and individual needs. In this sense, Social studies can also be defined as a practical impact management tool that aims to develop an approach and method that focuses on life. Social studies is important for the independent social reflections that may occur before the implementation of new projects, processes and policies that concern the society, and for the implementation of the necessary arrangements according to the expectations, needs and priorities of the society, to ensure social peace and for new applications to produce more successful and desired results. In this context, it is also very important for the future of the planned project. As long as social peace cannot be achieved, it may not be possible for the projects to carry out their operating processes healthily and feasibly in the future. Unless the projects and project officials that will take on a new role in the villages, mountains, plains, rivers and cultures where people have lived since their existence are close neighborhoods and in close communication, the management and coordination of social impact will not be successful. This document, prepared within the scope of all these purposes, includes determinations and suggestions that will concretize the connection between the stakeholders and the project and reveal the relationships and current social situations.

The 50. Yıl and Yeni Neighborhoods in the town of Kalaba are a settlement where agriculture and animal husbandry are dominant in terms of their socio-economic structure. Thanks to the fertile agricultural lands, wheat, barley, potatoes and sugar beets are mainly grown, while sheep and cattle breeding activities also constitute an important source of income. Although agriculture-based industrial and commercial activities are limited, the connections with Nevşehir and surrounding districts support economic mobility. The population tends to decrease over time due to the migration of the young workforce to large cities, and the average age is relatively high. Culturally, the town, which preserves the traditional structure of Nevşehir and the Cappadocia region, has a strong social structure in terms of solidarity and community awareness.

A "Stakeholder Engagement Plan" is prepared to determine the possible positive and negative social impacts on the environment arising from the sub-project activities during the construction and operation process of the sub-project, and to determine and evaluate the measures to be taken to prevent or minimize the negative impacts.

2.3.3.1. Demography and Population

Kalaba Town has a population of 1405 people. The ratio of women to men is equal in the town. 35% of the population is young, 45% is middle-aged and 20% is the elderly group.

The Nomenclature of Territorial Units for Statistics (NUTS) is a statistical classification method developed by the European Community Statistical Office (Eurostat) in the 1970s to ensure that regional statistics are produced according to a single spatial classification in the European Union and has been included in EU legislation since 1988. In our country, the use of the Nomenclature of Territorial Units for Statistics began within the scope of the Turkish National Programme for the Adoption of the EU Acquis, which was accepted by the Council of Ministers Decision dated 19 March 2001, and the Accession Partnership Document prepared by the European Commission and accepted at the Environment Council dated 8 March 2001. Within this framework, with the work initiated in 2001 under the coordination of the State Planning Organization (SPO) Undersecretariat and the Turkish Statistical Institute (TurkStat), Statistical Regional Units were defined in Türkiye and this classification entered into force with the Decision of the Council of Ministers dated 28 August 2002.

With this decision, the NUTS began to be used as the implementation ground of regional statistics and regional development policies in the national/regional and EU harmonization process, primarily by Development Agencies. 26 Level II and 12 Level I Regions were established. Level II regions are an appropriate regional scale in national and regional analyses, form the basis for studies carried out in the EU candidacy process and will be able to benefit from structural funds within the scope of the EU harmonization policy convergence target.

Due to the determination of regions on a Level II basis, the Level II regions below have been determined as the basic development planning unit in the context of regional policies in our country. Nevşehir province has the code Level-1 TR7 and Level-2 TR71. Additionally, according to SEGE data, Avanos District ranked 356th in Türkiye with a score of -0.044.

2.3.3.2. Land Ownership Status and Land Use by Affected People

The 976.64 kWp / 720 kWe solar power plant to be established by the Kalaba Municipality is planned in Nevşehir province, Avonos district, Kalaba Town, Yeni Neigborhood, lot 277, parcel number 1. The land ownership belongs to the Kalaba Municipality. The total land area is 13,961 m^2. 10,080 m^2 of the land will be used for the solar power plant. The document showing the zoning status is shared in Annex C. Lot 1 of block 286, where ETL will pass, belongs to Kalaba Municipality. The parcel is used as a cemetery.

2.3.3.3. Employment and Means of Livelihood

Kalaba Town earns its living from agriculture and animal husbandry activities.

2.3.3.4. Education and Health Services

There are two family health centers and primary, secondary and high school level schools in Kalaba Town. There are sufficient opportunities to meet the health and education needs of the local people. The schools and health centre in the town are given in Figure 8.

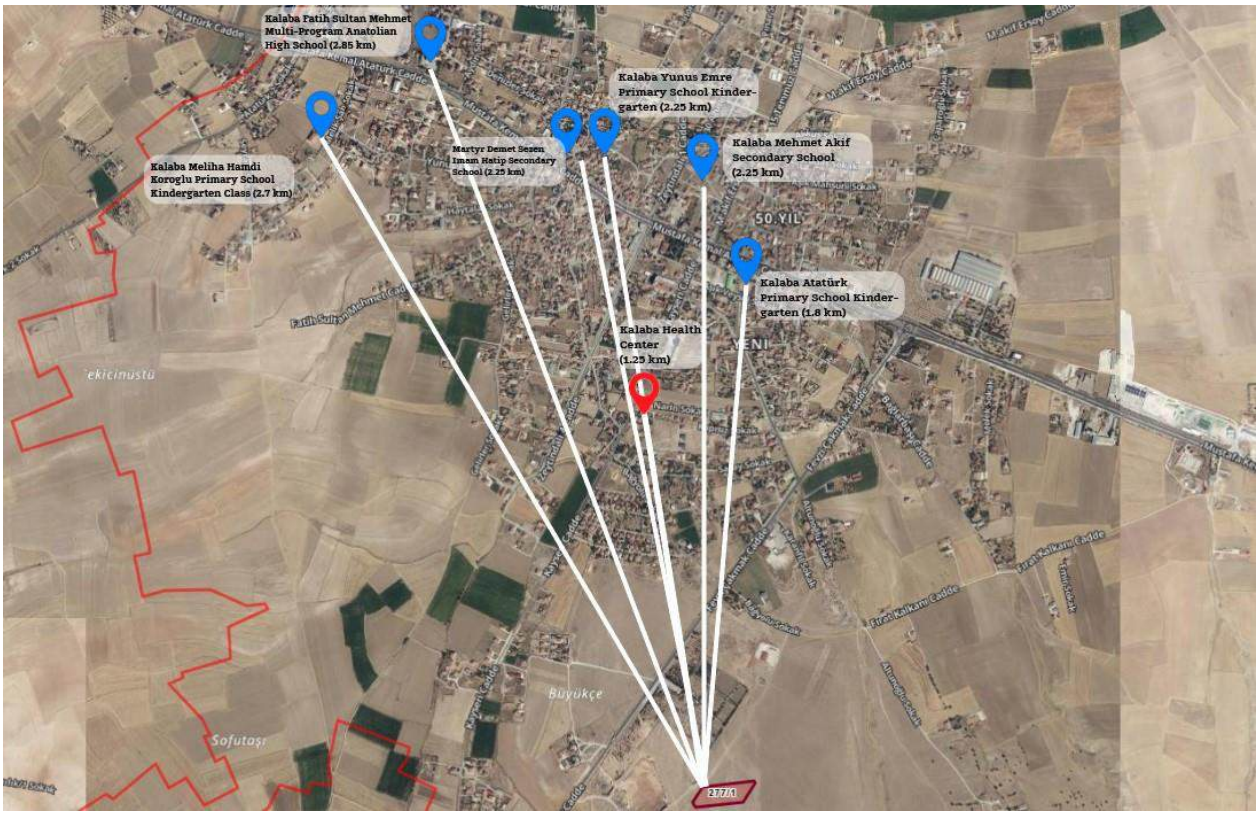


Figure 8. The schools and health centre in the town

2.3.3.5. Infrastructure Services

Kalaba Town has electricity, water, natural gas and internet infrastructure. Maintenance, repair and update operations continue regularly. There is a biological treatment plant with a capacity of 6272 tons/day in Avanos district of Nevşehir province, and Kalaba Municipality wastewater is treated in this facility.

2.3.3.6. Transportation and Traffic

The transportation to the SPP site is provided by the Kayseri-Kırşehir (D260) highway and site transfers will be made via this road. The transportation road to the project site passes through the Kalaba Town. Construction activities may increase traffic loads in and around the construction sites of the sub-projects. Traffic congestion and temporary interruptions resulting from the construction phases of the investments may potentially cause inconvenience, disruption and adverse effects on health and safety. Inadequately trained or inexperienced vehicle drivers may experience accidents with other vehicles, equipment and private vehicles on site. The measures to be taken in this regard are given in the ESMP Matrix. Community Safety and Traffic Management Plans will be prepared that include traffic safety risks,

accident prevention, training programs, relevant stakeholder participation activities and site safety awareness activities and access restrictions.

2.3.3.7. Cultural Heritage (Tangible and Intangible)

Protected areas are defined as “nature parts that are protected for the purposes of protection and study of the natural environment, contain outstanding examples of rare, endangered and endangered ecosystems, species and natural events that are important in terms of science and education, and that absolutely must be protected and are reserved for use only for scientific and educational purposes.” The project area and its immediate surroundings were assessed by taking into account the EIA Regulation, Annex-V Sensitive Areas List, and the existence of “National Parks, Nature Parks, Wetlands, Nature Monuments, Nature Conservation Areas, Wildlife Conservation Areas, Biogenetic Reserve Areas, Biosphere Reserves, Natural Sites and Monuments, Historical and Cultural Sites, Special Environmental Protection Zones, Special Environmental Protection Zones, Tourism Areas and Centers, areas within the scope of the Pasture Law” within the project area and/or its immediate surroundings was revealed.

In addition, there is a town cemetery approximately 200 meters northwest of the subproject area. The measures to be taken to ensure that citizens visiting the cemetery are affected by the subproject activities are given in the ESMP matrix. The map showing the cemetery is added at Figure 9.

Figure 9. Calaba Town Cemetery

According to the map of protected areas, the closest protected area to the project areas is Göreme Hills, located approximately 37 km southwest. The Protected Areas Map is given in Figure 10.

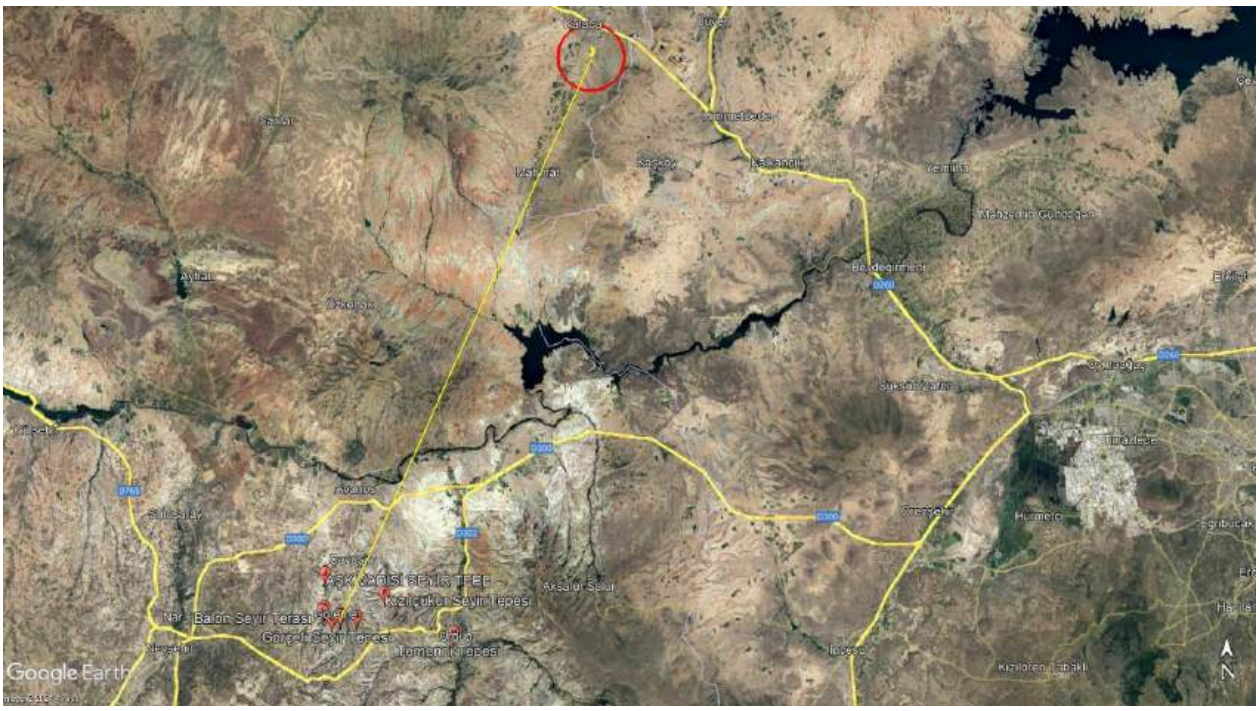


Figure 10. Nearest Cultural Heritage

For the sub-project area; The Institutional Opinion letter of the General Directorate of Cultural Heritage and Museums of the Ministry of Culture and Tourism, Nevşehir Cultural Heritage Protection Regional Board Directorate dated 25.02.2021 and numbered 11558318 is shared in Annex-B.

2.3.3.8. Vulnerable and Disadvantage Groups

The settlements close to the sub-project area are 50. Yıl and Yeni neigborhoods;

- Disabled individuals(physical/mental): Construction activities can disrupt accessibility routes and restrict mobility. They may have special needs for access to participation activities; The number of individials with physically and/or mentally disabled is 5;
- People with chronic illnesses or in need of special care: Construction-related activities (traffic, damage to infrastructure, etc.) can affect access to basic services and routines, exacerbate health problems or cause discomfort.The number of people with chronic diseases is 80,
- **People over 70 years of age:** Construction activities can disrupt older people's daily routines and access to basic services, potentially causing discomfort or stress. They may have special needs for access to participation activities. The number of people over the age of 70 who live alone and need care is 50,
- **Female head of households:** Female heads of households with special needs may have limited participation in consultations. The number of female-headed households is 30 (38 people),
- Responsible for the household income with a lower income compared to the adult breadwinner. The number household where the household head is a child is 2 (7 people);
- Due to unemployment or poverty, there is a lack of access to transportation, which makes it difficult to participate in consultation activities and events. The number of low-income households was determined as 2 households (5 people).

Based on the above data, the Vulnerable and Disadvantage Groups consist of 185 people.

3. SUBPROJECT ACTIVITIES

3.1. Construction Phase

3.1.1.Construction Activities

Construction activities will be completed in 1 month. Detailed implementation schedule envisaged for the construction phase activities (including provisional acceptance) is presented in Chapter 6.

Construction phase activities are briefly described below:

- Pre-construction activities:

  Land leveling will be conducted before starting the power plant construction and installation. Approximately 5 cm of topsoil and stones on the land will be cleared and the land will be prepared flat.

  Before the construction, the survey engineer will determine the points where the columns and the wire fence for land security will be installed. The determined points will be marked appropriately and deviations in the column assembly will be prevented. Topsoil resulting from the surface stripping process will be used for landscaping purposes in SPP area

- Construction/ installation activities:

Pile driving operations will be carried out to place the panel feet.

- Construction machinery and equipment:

1 truck, 1 excavator, 1 crane, 1 pile driver and 1 tanker will be used during the construction process.

- Water use and waste water management:

Drinking and utility water for personnel working during the construction phase will be provided by the Municipality water network. The suppression of dust emissions that will occur during sub-project activities will be carried out by Municipality tankers.

- Waste and hazardous materials management:

  During the construction phase of the sub-project, activities such as vegetation clearance, leveling, construction and assembly of main operating and auxiliary units, supply, transportation and assembly of units and equipment will be carried out. The types of solid waste expected to be generated within the scope of these activities are municipal waste, packaging waste of system equipment (e.g. wood, cardboard, plastic, etc.), hazardous waste, special waste, excavation and construction waste (e.g. scrap metal, wood, concrete waste, etc.) and waste system equipment (PV monocrystalline panels, cables, electronic components). Since the maintenance of the equipment to be used during the construction phase of the activity will be carried out by the authorized service, there will be no hazardous waste generation originating from the machinery and equipment in the activity area. The food needs of the personnel working within the scope of the sub-project will be met by the subcontractor company and there will be no generation of vegetable waste oil. If no subcontractor company is used, vegetable waste oils will be collected separately from other wastes and stored in the temporary waste storage area to be located in the sub-project area and sent to licensed facilities in accordance with the provisions of the "Vegetable Waste Oil Control Regulation" published in the Official Gazette dated 06.06.2015 and numbered 29378..

- Use of other resources and materials:

  Material, energy, water and land use have been and will be optimized throughout the life cycle of the Kalaba Municipality 720 kWe Solar Power Plant. Key measures for implementing resource efficiency that can help minimize negative environmental impacts, reduce costs and maintain the environmental, social and economic sustainability of solar energy production are as follows:

- Optimized Design and Layout: Site selection and design optimization have been carried out to maximize solar energy capture while minimizing land use and environmental impacts. This includes consideration of factors such as availability of solar resources, terrain structure, land use patterns and potential environmental constraints.
- Within the scope of the project, a small amount of concrete will be used during the construction of the foundations of the panels. Within the scope of the project, the SPP field will be covered with gravel. The ready-

mixed concrete needed at this stage will be purchased from the market. In this way, it will contribute to the regional economy. The field coating is the responsibility of the contractor company.

- In addition, it is planned to pour concrete to ensure sealing within the waste panel accumulation area.
- Advanced Solar Panel Technologies: Investments are planned for high-efficiency solar panels that increase energy output per unit area, reduce the ecological footprint and material requirements for a given power output.
- Recycling and Circular Economy Applications: A waste management plan including recycling of wastes will be developed by the contractor during the construction phase and by the Kalaba Municipality during the operation phase for damaged or end-of-life solar panels and components to recover valuable materials such as silicon, glass and metals for reuse in production. The implementation of the recycling plan will be ensured throughout the life cycle of the proposed PV power plant. Adoption of circular economy principles will minimize waste generation and resource depletion.

- Supply of materials and equipment:

Local companies will be given priority in the procurement of panels, steel construction, inverters and other electrical equipment to be used in the sub-project.

- Test and commissioning

The contractor, selected through a competitive bidding process, is responsible for the construction, logistics, design, test and commissioning, and provisional acceptance of the solar plant.

- Decommissioning of temporary construction facilities

Since there will be no accommodation at the Sub-project site, temporary construction facilities will not be established.

There are no activities related to the Sub-Project that are outside the scope of the proposed financing.

3.1.2.Construction Facilities

Construction facilities to be used during construction activities are listed in Table 9.

Table 9. Construction Facilities

Type	On-site or Off-site	Temporary or Permanent	List of Facilities
Waste storage area	On-site	Temporary	• Temporary waste storage area for wastes
Security hut	On-site	Permanent	• For personnel responsible for the security of the sub-project site

3.2. Operation Phase

3.2.1.Operation Activities

The sub-project area will be surrounded by wire fencing and illuminated with lighting poles. There will be security cameras and motion sensors on the lighting poles. There will be a hut with security personnel and a monitoring room in the sub-project area.

- Water use and waste water management:

No chemicals will be used for panel cleaning during the operation phase. The panels will be cleaned with deionized water. Panel cleaning will be done twice a year and approximately 4 m^3/ha water will be used.

Panel waste generated during maintenance and repair on sites will be delivered to licensed companies. Until the panels are delivered, they will be kept under cover in case they need to be kept on site. The points where the disposal of cells containing crystalline silicon is included in the legislation are limited and are in the form of conventional waste disposal. This includes recycling the reusable parts of the waste from PV panels and then disposing of them in regular landfills or removing them through general waste processing.

- Waste and hazardous materials management:

During the operation phase, there may be waste generation from damaged, faulty or end-of-life equipment and materials that can be replaced or checked during maintenance and repair activities to be carried out periodically or in the event of a malfunction. In addition, the supply of new equipment, parts and others will also cause the generation of packaging waste. In addition, personal protective equipment, clothing and cloths used during maintenance and repair activities may also cause limited waste generation. During the operation phase of the sub-project, there will be a limited amount of waste oil generation due to the oil change needs of the equipment. The impact from waste generation is assessed as direct and negative, short-term, local and of low importance.

The facility will be decommissioned at the end of its 25-year economic life. In cases where the panels have reached the end of their lifespan or need to be replaced, the old panels will be revised and new panels will be positioned. The panels will be classified in line with Waste Management Regulation. Accordingly, the dismantled panels will be sent to licensed disposal facilities. Sub-project once the service period is over, the land will be restored to its former state.

3.2.2.Operation Facilities

Operation facilities are described in Table 10.

Table 10. Operation Facilities

Component	Characteristics
Solar panels	*545 Wp (*monocrystalline *panel)*
Mounting structures	
Inverters, transformers, etc.	Transformers (1 piece/1000 kVa) Inverters: 100 kWe (7 pieces) SPP Panel: *AC-TP 800x300x600 AG PANO*
Control room, building, system, etc.	RS-485
Energy monitoring system	SCADA System
Grounding system	*A grounding system designed in accordance with IEEE 80 2000 will be installed to prevent step and touch voltages that may occur due to short circuit fault currents.*
Lightning protection system	Lightning protection will be provided to these areas with the capturing ends to be placed and length determined according to the protection angle in the panels to be installed. These capturing ends will be connected to each other with a conductor and connected to the grounding network.
Fire preparedness and firefighting facilities	Fire extinguisher 6 kg (10 pieces)

Security facilities	CCTV, Security hut

3.3. Labor Requirements

Number of workers (at peak) that will work on site during the construction and operation phases of the Subproject are provided in Table 11. Transportation of personnel working during the construction phase to the sub-project site will be the responsibility of the contractor company. For personnel working during the operation phase, transportation costs will be covered by the Kalaba Municipality.

Table 11. Labor Requirements of the Subproject

Phase	Number of Workers (including contractors and subcontractors)	Planned Accommodation Arrangement
Construction Workers (at peak)	10	Off-site accommodation
Operation Workers (at peak)	2	No accommodation

3.4. Land Acquisition Status

The subproject site ownership belongs to the Kalaba Municipality. The land has been allocated as an SPP site. The allocation document is shared in Annex-B. Before the land was allocated as an SPP site, it was recorded as a residential land. ETL will follow the cadastral road starting from lot 1 of block 277 parcel and then will be connected to the transformer located in lot 1 of block 286 parcel. The ownership of lot 1 of block 286 parcel where the cemetery is located belongs to Kalaba Municipality. There is no need for expropriation within the scope of the sub-project.

3.5. Permitting Status

Status of permits, licenses, approvals required to be in place before start construction is presented in Table 12.

Table 12. 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**	The 976.64 kWp / 720 kWe solar energy land installation Project is not within the scope of EIA as per the legislation, since it is below the 1 MW energy production envisaged in the Turkish EIA Regulation (no: 29186) published on 25.11.2014. The “EIA is Not Required” decision has been added to Annex-B.
Please list any other permits required to start construction of the Subproject.	**In place**	There is no permit required to start the sub-project installation activities.

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

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

- Pre-Construction and Construction ESMP Matrix
- Operation ESMP Matrix

Roles and responsibilities related to implementation of this ESMP is defined in Section 5.2.

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 **Error! Reference source not found.**.

A stand-alone sub-project specific Stakeholder Engagement Plan (SEP), including Grievance Mechanism, has also been developed and will be implemented for the sub-project throughout the sub-financing agreement life cycle.

Detailed procedure for the management of sub-project related grievances is included within the SEP.

No consultation meeting has been held yet within the scope of sub-project. The installation process is planned to be 1 months.

As the sub-project owner, it is Kalaba Municipality's responsibility to manage the environmental and social issues of the sub-project and ensure that the necessary mechanisms are developed and implemented by the Contractor and/or Sub-Contractor.

It is anticipated that some environmental and social impacts may occur during the pre-construction, land preparation, construction and operation phases of the Kalaba Municipality 720 kWe Solar Power Plant Project planned within the scope of the project.

The management of the risks and impacts that may occur on the environmental and social components during the pre-construction, land preparation, construction and operation phases and the relevant mitigation measures defined for these impacts are given in Section 4.2 and 4.3.

It should be noted that for the implementation of the mitigation plans, the strictest national legislation and WB standards will be followed and the most up-to-date legislation will also be taken into account.

Monitoring plays a key role in ensuring the continuity and effectiveness of the implementation of the determined mitigation management strategies. The main purpose of the Monitoring Plan is to provide a basis for evaluating the implementation of the measures and requirements envisaged in this ESMP. Information collected through monitoring can be used to improve management plans at all stages of the sub-project. Although the impact assessment attempts to cover all potential relevant impacts to determine their significance and include appropriate responses for these impacts, unexpected impacts may arise that can be managed or mitigated before they become a problem using information obtained through monitoring. Therefore, monitoring will ensure successful implementation of mitigation/management plans and optimize environmental protection through good practices at all stages of the sub-project.

4.1. E&S Risk and Impacts of the Subproject

This section identifies the potential environmental and social impacts and risks that could arise from the activities of the Subproject either during the construction phase or the operational phase.

The highlighted impacts listed in below are broad and envisaged as cutting across most of the Subproject. The specific potential impacts and risks for each Subproject will be provided in E&S assessment section of its feasibility report.

Typical Subproject activities to be implemented are broadly categorized into:

- Pre-construction and Construction phase,
- Operation phase,

,

4.1.1.Construction Phase

4.1.1.1. Environmental Impacts and Risks

4.1.1.1.1. Waste Management

A temporary waste storage area will be established for waste originating from the installation and personnel at the sub-project site and that needs to be collected on site. The temporary waste storage area to be established will be established in a covered manner in order to protect the waste from external factors. The ground must be made of impermeable material and absorbent material will be provided against leakage or spillage. In addition, it will be surrounded by a grill against spillage and leakage, the liquids accumulated here will be disposed of with appropriate methods and will not be discharged into the receiving environment. At the entrance of the section where hazardous waste is stored; the phrase “Attention! Hazardous Waste” will be placed. Necessary security measures will be taken against emergencies such as fire and it will be structured in a way that will prevent unauthorized entry. Each waste taken to the temporary storage area will be labeled. The label will include; a) The waste code, b) Whether it is hazardous waste or not, c) Hazardous characteristics and risks of the waste for hazardous waste, ç) The date the waste entered the storage area. The waste will be separated into appropriate sections according to their hazardous characteristics and stored separately according to their waste codes. If a container is used, it is essential that the container is placed on an impermeable surface, surrounded by a grid and that absorbent material is kept against leakage and spillage. An employee responsible for the temporary storage area or container will be assigned, and it will be ensured that he/she keeps the entry-exit records and prevents unauthorized entries. The records shall include; a) Amount of entered waste, b) Type/code of entered waste, c) Entry date of entered waste, ç) Amount of exited waste, d) Type/code of exited waste, e) Exit date of exited waste, e) Signature of the control officer, and their sections. The contact information of the responsible personnel shall be indicated on a sign visible from outside the storage area. Hazardous wastes shall be temporarily stored in the temporary storage area for a maximum of 180 days. Non-hazardous wastes shall be temporarily stored in the temporary storage area for a maximum of 1 year. Wastes shall be sent to licensed waste processing facilities before the specified periods expire. In addition, it is mandatory to take additional measures when deemed necessary by the Nevşehir Governorship Provincial Directorate of Environment, Urbanization and Climate Change. Insurance will be made within the scope of Article 16 of the Waste Management Regulation and the financial liability insurances made for temporary storage areas/containers will be renewed every year and submitted to the Nevşehir Governorship Provincial Directorate of Environment, Urbanization and Climate Change.

Domestic Solid Waste

Assuming that the amount of domestic solid waste generated by personnel during the construction and operation phase of the project is 0.96 kg/day per person (average waste amount per person (kg/person-day), TURKSTAT, 2023);

A total of 10 personnel will work during the sub-project construction phase. Accordingly, the amount of waste to be generated daily is;

10 person * 0.96 kg/person = 9.6 kg

Domestic solid waste will be collected in closed and leak-proof garbage bins that will not emit odors. Domestic solid waste will be transported daily to the nearest municipal waste collection center. During the activity; The provisions of the "Waste Management Regulation" and its amendments, which came into force after being published in the Official Gazette dated 21.06.2021 and numbered 31523, will be complied with.

Packaging Waste

It has been accepted that approximately 13.5% of recyclable packaging waste will be generated among domestic solid waste (TurkStat, 2023). Any packaging waste that may be generated will be collected separately from solid waste and will be recycled by giving it to packaging waste collection-sorting facilities that have an environmental license.

When the rate given above is compared to the daily waste amount;

9.6 kg * 0.135 = 1.296 kg

The "Packaging Waste Control Regulation", which came into force by being published in the Official Gazette dated 21.06.2021 and numbered 31523, and the "Waste Management Regulation" and its amendments, which came into force by being published in the Official Gazette dated 12.07.2019 and numbered 30829. “Zero Waste Regulation” and its relevant provisions will be complied with.

Hazardous Waste

Since the maintenance of the equipment to be used during the construction phase of the activity will be carried out by the authorized service, there will be no hazardous waste generation originating from the machinery and equipment in the activity area. If it occurs, it will be collected separately from other wastes within the activity area and a safe place will be created at a point to be collected until it is delivered to the licensed company and the hazardous waste will be stored here. Then, it will be delivered to the licensed company and disposed of. The waste in question will be classified according to their characteristics according to the “Waste Management Regulation” and the label “hazardous or non-hazardous waste and waste code” will be written on the temporarily stored waste, the waste code will be written and the waste will be accumulated in the temporary waste storage area in a way that it will not react with each other. These accumulated wastes will be delivered to companies licensed by the Ministry of Environment, Urbanization and Climate Change. The provisions of the Waste Management Regulation (Amended: Regulation on Amendments to the Waste Management Regulation, Official Gazette, dated 02.04.2015 and numbered 29314) which entered into force upon publication in the Official Gazette dated 23.06.2021 and numbered 31523 will be complied with.

Waste Batteries and Waste Batteries

Batteries used in the field will be reused by ensuring that they are rechargeable. Used batteries will be collected in battery collection boxes and left at collection points belonging to TAP (Portable Battery Manufacturers and Importers Association). The "Regulation on the Control of Waste Batteries and Accumulators" and its relevant provisions, which came into force after being published in the Official Gazette dated 31.08.2004 and numbered 25569, will be complied with.

Medical Waste

Medical waste is not expected to be generated in the project area as the nearest health institution will be visited in case of an accident. In case of occurrence, the relevant provisions of the "Medical Waste Control Regulation", which came into force after being published in the Official Gazette dated 25.01.2017 and numbered 29959, will be complied with.

4.1.1.1.2. Water Supply and Wastewater Management

It is planned that 10 personnel will be employed during the construction phase of the Kalaba Municipality Solar Power Plant Project, and assuming that the drinking and utility water consumption per person is 239 L/day (TurkStat, 2023),

10 people * 239 L/day*person = 2,390 L/day

Within the scope of the project, the Regulation on Waters for Human Consumption, which came into force after being published in the Official Gazette dated 17.02.2005 and numbered 25730, and the "Regulation on Waters for Human Consumption" published in the Official Gazette dated 31.07.2009 and numbered 27305, will be complied with.

The water requirement for suppressing the dust generated in the project area due to construction work will be met by using water trucks filled from the municipal infrastructure of Kalaba Municipality. Drinking water and water used for suppressing dust during construction will be provided from the district water network.

The total construction area within the scope of the project will be approximately 10,080 m². 5 liters of water will be used per square meter. Accordingly, water will be used to prevent dust emissions.

47,488 m^2*5 liters/m^2 = 237,440 L

4.1.1.1.3. Air Quality/Emissions

Air pollution will mainly originate from dust emissions and exhaust emissions as well as Greenhouse Gas (GHG) emissions. Considering the location of the sub-project area, sensitive receptors are not expected to be affected. During the construction phase of the sub-project, the impacts on air quality will mainly originate from dust, exhaust and greenhouse gas emissions:

• Dust emissions during site preparation, excavation, filling and compaction works carried out for construction works.

• Dust emissions from vehicle movements for transporting various construction materials to the project site.

• Exhaust emissions from vehicles used in construction activities.

• Greenhouse gas emissions from small amounts of vehicles and machinery.

Since a limited number of equipment and machinery will be operating on the sites, these air quality impacts will be limited to the area and in the short term. In addition, the recycling wastewater distribution network will follow the cadastral roads and the construction will be carried out in stages. Therefore, the receivers will be limited to those located near the construction sites.

Emission estimates from excavation works are given in Table 13.

Calculation of dust emissions from topsoil stripping

In the calculation of the dust emissions to be generated, the emission factors given in Table 2.7 of the “Regulation on Control of Industrial Air Pollution” (Amended Table: RG-20.12.2014-29211) published in the Official Gazette dated 03.07.2009 and numbered 27277 were used and the results were evaluated within the framework of the same regulation.

The calculations were made using both “uncontrolled” emission factors, considering that the most adverse conditions could occur during dust formation, and “controlled” emission factors, assuming that the necessary control measures were taken. In calculating the amount of dust emissions to be generated within the scope of the sub-project, the worst case was taken into account and the emission factors obtained from Table 12.6 of the "Regulation on Control of Air Pollution from Industrial Sources" were used. Emission factors are given in Table 13.

The area where the SPP project site will be established is 10,080 m^2. In this area, 10 cm topsoil stripping will be used to strip 1,008 m^3 of soil.

(Soil Bulk Density is taken as 1.6 tons/m^3) [3]

1,008 m^3* 1.6 tons/m3=1,612.8 tons

Daily working time is planned as 8 hours. Excavation work is planned as 192 hours in total.

1,612.8 tons/192 hours= 8.4 tons/h

Table 13. Emission Factors to be Used in Dust Emission Mass Flow Calculations

Sources	Uncontrolled	Controlled	Unit
Removal	0.025	0.0125	kg/ton
Loading	0.0100	0.005	
Unloading	0.010	0.005	
Transportation (total round trip distance)	0.7	0.35	kg/km-vehicle
Storage	5.8	2.9	Dust/ha-day

Mass Flow Rate of Dust Emission to Occur During Removal, Loading and Unloading of Vegetal Soil

Uncontrolled; E1 = 8.4 tons/hour x (0.025+0.01+0.01) kg/ton = 0.378 kg/hour

Controlled; E1 = 8.4 tons/hour x (0.0125+0.005+0.005) kg/ton= 0.189 kg/hour

[3]https://gsim2hwnpbvwtwmb1dg11z6.blob.core.windows.net/media/documents/8866271100_202404051549238_Product%20Information%20Sheet%20%28EU_2021_EP%29tr_TR.pdf

Mass Flow Rate of Dust Emission to Occur During the Transportation of Topsoil

Topsoil taken from the field during construction work will be temporarily stored in the topsoil storage area that will also be located within the work area; this distance is an average of 0.5 km round trip. Assuming that each truck used during transportation can carry 25 tons of material and therefore will make 1 trip in approximately 1 working day (25 tons/21.36 tons/hour), the mass flow rate of dust emissions that will occur during transportation is;

Uncontrolled; E2 = (0.7 kg/km) x (0.5 km/1 trip) x (1 trip/1 hour) = 0.35 kg/hour

Controlled; E2 = (0.35 kg/km) x (0.5 km/1 trip) x (1 trip/1 hour) = 0.175 kg/hour

Dust Emission Mass Flow Rate to be Formed During the Storage of Topsoil

Uncontrolled; E3 = (5.8 kg/ha-day)x(1 ha/4 weeks/ 6 days/week/8 hours/day)= 0.03 kg/hour

Controlled; E3 = (2.9/ha-day)x(1 ha/4 week/6 days/week/8 hours/day)= 0.015 kg/hour

Accordingly, the total mass flow rate of dust emission to be formed from the stripping operations of the topsoil to be carried out;

Uncontrolled; ETOTAL-1 = 0.378 kg/h + 0.35 kg/h + 0.03 kg/h ≈ 0.758 kg/h

Controlled; ETOTAL-1 = 0.189 kg/h + 0.175 kg/h + 0.015 kg/h ≈ 0.379 kg/h

When calculating the dust emission to be generated during the topsoil stripping operations, it was taken into account that the works would be carried out under the most adverse conditions. As stated in the “Regulation on Control of Industrial Air Pollution; for newly established facilities, “Calculation of the Contribution Value to Air Pollution” is required if the pollutant mass flow rates are exceeded.

Considering that all the works to be carried out within the scope of the topsoil stripping operations to be carried out at the construction site will be carried out in the same time period (worst case scenario), the dust emission to be generated has been calculated as 0.758 kg/hour for the uncontrolled case and 0.379 kg/hour for the controlled case. Therefore, as stated in “Regulation on Control of Industrial Air Pollution”; since the specified pollutant mass flow rates are not exceeded for the topsoil stripping operation, it has not been deemed necessary to calculate the “Contribution Value to Air Pollution” using an internationally accepted distribution model in the facility impact area.

The construction equipment and transportation vehicles in question will be used at different times during the day.

Emission calculation from vehicles

The provisions of the Exhaust Gas Emission Control and Gasoline and Diesel Quality Regulation, which was published in the Official Gazette dated 11.03.2017 and numbered 30004 and entered into force, and the Exhaust Gas Emission Control Regulation, which was published in the Official Gazette dated 11.03.2017 and numbered 30004, shall be complied with.

During construction, the fuel to be spent is only necessary for the work machines to be used, there will be no fuel consumption for heating etc. The usage periods and fuel consumptions of the work machines to be used during the construction phase of the business are shared in Table 14

Table 14. Usage periods of the work machines to be used in the facility

Machine type	Number	Power (hp/h)	Working Time (h/day)
Crane	1	200	8
Excavator	1	200	8
Truck	1	200	8
Pile Driver	1	90	8
Water Tanker	1	120	8

The fuels to be used in the land preparation and construction phase of the sub-project will be diesel fuel to be used during the work of the construction equipment. Apart from this, there is no other type of fuel to be used in the sub-

project. There will be no fuel storage in the sub-project area and the fuel supply to the construction equipment will be made with fuels supplied from authorized stations. The characteristics of diesel fuel are given below:

Table 15. Diesel Properties

Properties	Diesel	Properties	Diesel
Consistency	Very fluid	Carbon Wastes (%)	Trace
Type	Distilled	Sulfur (%)	0.4-0.7
Color	Amber	Oxygen-Nitrogen (%)	0.2
Density (150c-gr/cm^3)	0.8654	Hydrojen (%)	12.7
Viscosity (380 ^{o}C)	2.68	Carbon (%)	86.4
Pour Point (0^{o}C)	-18	Water and Sediment (%)	Trace
Atomization Temperature (0^{o}C)	Atmospheric	Ash (%)	Trace
Pumping Temperature (0^{o}C)	Atmospheric	Heat Value	9.387

Source: Air Pollution Control and Supervision, Chamber of Chemical Engineering, May, 1999

The emission factors table determined by the EPA (Environment Protection Agency) was used for the construction equipment to be used within the scope of the sub-project.

Table 16. Emission Factors Used in Calculations

Power	Year	CO (g/kWh)	HC (g/kWh)	NOx (g/kWh)	PM (g/kWh)
56 ≤ kW < 130 (75 ≤ kW <175)	2012 and above	5,0	0,19	0,40	0,02
130 ≤ kW < 560 (175 ≤ kW <560	2011 and above	3,5	0,19	0,40	0,02

Source: USEPA StandardsUsing the data in the table above, exhaust gas emissions that will occur during the construction and operation phases are calculated with the formula below and entered into the tables.

Emission Value (kg/h) = Emission Factor x Engine Power (kW) x Number x kg/1000 gr

Table 17. Emission calculations

Equipment to be used	Piece	Hp	kW	Emission Factor (g/kWh)		Emission Value (kg/sa)
Excavator	1	200	149	CO	3,5	0,52
				HC	0,19	0,03
				NOx	0,4	0,06
				PM	0,02	0,003
Crane	1	200	149	CO	3,5	0,52
				HC	0,19	0,03
				NOx	0,4	0,06
				PM	0,02	0,003
Pile Driver	1	90	67,05	CO	5	0,34
				HC	0,19	0,013
				NOx	0,4	0,026

				PM	0,02	0,0013
Truck	1	200	149	CO	3,5	0,52
				HC	0,19	0,03
				NOx	0,4	0,06
				PM	0,02	0,003
Water Tanker	1	120	89,5	CO	5	0,4475
				HC	0,19	0,017
				NOx	0,4	0,036
				PM	0,02	0,002

1 Hp = 0.745 kW. [4]

When emissions from all vehicles are added together;

Table 18. Amount of Emission

Pollutant	Amount (kg/h)	Working Time (h)	Total Amount (kg/8 h)	24 hour emissions
CO	2.3475	8	18.78 kg	18.78 kg/24 h= 0.7875 kg/h
HC	0.12	8	0.96 kg	0.96 kg/24 h = 0.04 kg/h
NOx	0.242	8	1.936 kg	1.936 kg/24 h = 0.08 kg/h
PM	0.0123	8	0.0984 kg	0.0984kg/24 h = 0,004 kg/h

The calculation was made assuming that all vehicles were operating at maximum operating time and in the same month.

Pollutant	Amount (kg/h)	Mass flow rate (kg/hour) given in Annex-2 Table 2.1 of the "Regulation on Control of Air Pollution from Industrial Sources"	Evaluation
CO	0.7875	50	Below the limit value
HC	0.04	2	Below the limit value
NOx	0.08	4	Below the limit value
PM	0.004	1	Below the limit value

The calculated exhaust gas emission amounts were calculated cumulatively assuming that all machinery and equipment operate at the same time and are entered in the table above. When the calculated hourly mass flow rate (kg/hour) value was compared with the mass flow rate (kg/hour) values given in Annex-2 Table 2.1 of the "Regulation on Control of Industrial Air Pollution", it was seen that the emission mass flow rates were below the limit values given in the regulation. The calculations were made based on the assumption that all work machines operate simultaneously and continuously in their areas of use, and in reality, such an application is not very possible. Therefore, the emission levels that will occur in reality will be lower than the emission levels found in the calculations.

Where the requirements in Türkiye differ from the levels and measures presented in the EHS Guidelines, the more stringent (such as the most stringent discharge and emission standards) will be applied in the project specification.

[4] https://sbsolar.com.tr/1kw-kac-hp-bir-beygir-kac-kw?srsltid=AfmBOopeJLuU2e08CtSYKdRWghT6TSx7iJDNzzfTjy0U2vio8kOh7QKR

4.1.1.1.4. Noise

In Türkiye, the Regulation on the Control of Environmental Noise published in the Official Gazette dated 30.11.2022 and numbered 32029 regulates environmental noise. The Regulation sets noise limits applicable to various areas (e.g. industrial areas, residential areas or a combination of both) for three time periods. Similarly, the WBG General EHS Guidelines set noise limits for two types of receptors and two time periods. The Guidelines require that noise levels must not exceed the given levels or cause a maximum increase of 3 dB in background levels at the nearest off-site receptor location.

Table 19. Environmental Noise Level Limit Values (Environmental Noise Control Regulation)

Noise Source	Measured Parameter	Environmental Noise Level		
		Daytime (07:00 - 19:00)	Evening (19:00 - 23:00)	Night (23:00 - 07:00)
Industrial facilities transportation resources	**LAeq,5min.**	**65 dB(A)**	**60 dB(A)**	**55 dB(A)**
Workplaces(2)	LAeq,5min.	Background + 5 dB(A)		Background + 3 dB(A)
In case of more than one workplace	LAeq,5min.	Background + 7 dB(A)		Background + 5 dB(A)
All sources	LCmax	100 dB(C)		

(1) : These limit values are valid as of 31.12.2023. These limit values are valid for each 1/3 octave of the specified frequency range band. In the acoustic reports prepared until this date, environmental noise measurement results and measurement results measures identified are included.

(2) : Each workplace contributing to the background noise level is jointly responsible for meeting this limit value. Each workplace takes necessary measures according to their contribution to noise.

Table 20. IFC General EHS Guides Noise Levels

Buyer	Daytime (07:00 - 22:00)	Night (22:00 - 07:00)
Settlement Areas	**55**	**45**
Commercial/industrial areas	70	70

During the installation of the sub-project, it is inevitable that there will be short-term noises during transportation and assembly periods that will affect the environment. Appropriate time periods can be selected to minimize the disturbance to the environment. In this context, night work will not be carried out. The fact that the power plant will be located 500 m away from the nearest settlement unit shows that the people living in the vicinity will not be adversely affected.

In case of simultaneous operation of noise sources, equivalent noise levels according to distances are given in the table below.

Table 21. Estimated Noise Calculations

Distance (m)	40	50	100	200	300	400	500	750	1000
Equivalent noise level (dB)	64.4	62.3	56.0	49.3	45.3	42.4	40.1	35.8	32.8

The noise level caused by the construction machinery used in the calculations was determined according to the distances. The noise level depending on the machines to be used during the operation phase has been calculated. It is calculated that the noise level that will occur during the operation of electrical devices and inverters will be below the

limit value of 65 dB. The noise levels of the equipment to be used during the preparation of the land within the scope of the sub-project will comply with the provisions of the "Regulation on Noise Emission in the Environment Generated by Equipment Used in Open Areas" prepared by the Ministry of Industry and Trade and entered into force after being published in the Official Gazette dated 30.12.2006 and numbered 26392.

Since the measurement points are (Nevşehir Central Air Quality Monitoring Station and Avanos Air Quality Monitoring Station) located in the city center, the measurement standards are evaluated under "Residential areas". It is seen that the measurement results will not exceed the limit value of "Industrial facilities, transportation sources" specified in the Regulation on Environmental Noise Control. According to this situation, in theory, the noise level that will occur when all machinery and equipment are in operation at the activity site is likely to be around 37 dB when it reaches the nearest residential area. Despite this, working hours will be planned in such a way that the quality of life of the people in the region will not be affected. The evaluation of the measurement results will be made according to the Regulation on the Control of Environmental Noise and the World Bank General EHS Guidelines. The sub-project activities are planned to be completed in 1 month. Within the scope of the sub-project, work will be carried out during the daytime, 6 days a week, 8 hours a day.

The closest settlements to the sub-project site are residences 300 meters and 400 meters away. The expected noise levels at these points are well below the noise limits in the Environmental Noise Control Regulation and IFC General EHS Guidelines.

4.1.1.1.5. Soil erosion, loss and contamination

The major impact on soil could be the potential topsoil loss at the footprint of the Subproject where excavation will be carried out. Excavated soil may be exposed to agents of erosion, mostly water and wind. Due to the involvement of heavy machinery during the construction phase, soil contamination may be seen due to accidental oil leakages in the areas. The impacts on soil will be minimal and localized in the areas where construction will take place only.

The potential impacts of the Subproject on soil environment are summarized below:

- Soil compaction as a result of topsoil stripping, levelling, excavation and filling activities, work of construction machinery,
- Mixing of soil layers as a result of excavation and filling activities,
- Soil contamination as a result of oil or fuel leaks or spillage that may result from incidents and unexpected events,
- Soil pollution which may occur in case of uncontrolled storage or disposal of solid and/or liquid wastes to be generated within the scope of the Subproject, and
- Erosion potential due to earthworks.

4.1.1.1.6. Impacts on Natural Habitats

The vegetation will be cleared so that the area where the construction work is to take place is clear for the construction work to be performed. The construction works will involve land, bush clearing, removal of top soil, excavation and mass haulage. These activities will also expose the land to elements of erosion such as wind and water and thus will trigger the process of land degradation. The impacts may be occurred due to spillage/leakage of chemicals and hazardous materials and poor waste/wastewater handling and disposal. These issues may create negative impacts on ecosystem services from low significance to high significance considering the magnitude (amount of spillage, toxicity level of spilled chemical, etc.) of the impact. The impact of Subproject activities on ecological components is related to the size of the impact and the vulnerability of the recipient.

Dust and exhaust gases emission

During construction, there will be material handling and movement of construction equipment at the Subproject sites. In addition to the fugitive dust emissions, there will be exhaust emissions of heavy construction machinery. Primary emissions from exhaust gases of vehicles are NO_2, CO, HC, SO_2 and PM.

Noise Pollution

During the construction phase noise pollution may occur, necessary precautions has been determined and given in ESMP Matrices and procedures will be followed.

Noise and dust can have various adverse effects not only on human health but also on flora, fauna, and the overall ecosystem. Dust can cover the surfaces of plants, disrupting vital processes such as photosynthesis, respiration, and transpiration. This negatively impacts plant growth and health, while also degrading soil quality and weakening vegetation. Noise, on the other hand, can create both physiological and behavioural effects on fauna. Animals may abandon their habitats due to excessive noise, experience disruptions in their reproductive behaviours, and alter their feeding patterns. Furthermore, noise can interfere with communication systems among animals, hindering essential functions such as hunting and navigation.

These disruptions can have cascading effects on ecosystems where flora and fauna are interdependent. A reduction in animals involved in pollination or seed dispersal may threaten biodiversity within the ecosystem. Therefore, implementing measures to mitigate noise and dust is critical for ensuring the sustainability of ecosystems.

Waste

During construction phase of the Subproject, activities such as vegetation clearance, levelling, construction and installation of main operation and auxiliary units, procurement, transportation and assembly of units and equipment will be carried out. Solid waste types expected to be generated within the scope of these activities are municipal wastes, packaging wastes of system equipment (e.g. wood, cardboard, plastic, etc.), hazardous wastes, nonhazardous wastes (glass, paper, metal, plastic), excavation and construction wastes (e.g. scrap metal, wood, concrete waste, etc.), and waste system equipment (panels, cables, electronic components). Hazardous and non-hazardous wastes may contain chemical substances (e.g. paint, solvent, panels, inverters etc.) or packaging materials and cloths contaminated with oils, waste oils resulting from operation and maintenance of machinery and vehicles, solvents, accumulators, batteries, filters, machine parts.

If waste is not managed and transferred directly to the ecosystem, it will pose serious risks to human and living health, especially to soil and water resources. Classified as non-hazardous waste, plastic, glass, metal, and debris wastes occupy the living spaces of animals and cause habitat loss. Over time, pollutants are observed in soil and water resources as wastes dissolve. It reaches plants, animals, and humans through a life cycle that is in a cycle.

Directly releasing hazardous wastes into the receiving environment mixes with soil and water, destroys vegetation, and causes irreversible effects on animals and microorganisms.

Directly releasing wastes into the receiving environment without distinguishing between hazardous and non-hazardous will pose serious risks to the health of plants, animals, humans, and the environment that share the receiving environment.

Biodiversity

As a result of the interviews and observational analyses conducted with the local people and the Kalaba Municipality officials during the sub-project site visit, no species were encountered other than the flora and fauna species specified in Table 8. Therefore, no biodiversity will be affected by the sub-project activities.

4.1.1.1.7. Climate Change

There is no work that will cause climate change during the land preparation and construction phase of the activity subject to the sub-project, and it is not foreseen that any greenhouse gas formation, greenhouse gas emission and climate change will occur around the sub-project area.

4.1.1.2. Social Impacts and Risks

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.

- Working at height,

- Moving objects,
- Slips and trips,
- Noise vibration and exposure to dust,
- Materials handlings,
- Unintended collapse,
- Asbestos,
- Electricity,
- Traffic related risks due to increased traffic,
- Associated risk of occupational accidents, injuries and diseases,
- Hazards to workers due to unhygienic or unsanitary living conditions, etc.

Details and area specific risks will be obtained during site studies and will be assessed under social impact and risks sections of respective ESA documents. Mitigation measures and occupational health and safety issues are managed in line with the Labor Management Procedure of the Subproject which is in compliance with the national legislation, Occupational Health and Safety Law (Law No: 6331, Date of Enactment: 20/06/2012), World Bank ESS2 and World Bank Group General Environmental Health and Safety Guidelines.

Community Health and Safety

Project will support the Government of Türkiye scale-up renewable energy use in the public sector by focusing on central government buildings and municipalities. However, there may also be impacts arising from accidents, structural failures, release of hazardous materials, impacts on water quality and quantity, pressure on existing social infrastructure and SEA/SH risk due to labor influx, construction impacts on natural resources, exposure of disease. The Subproject identified the following potential Community Health Safety (CHS) impacts due to the construction phase.

- Road damage of transportation and traffic; increased traffic and risk of road traffic accidents and injuries,
- The emergency situations due to contextual risks (i.e., flooding, landslides, earthquakes, fires etc.)
- Access to clean and sustained water sources,
- Damage to existing underground public utility cables and pipes and disruption of services,
- Noise and vibration,
- Increased demand on existing community health and sanitation infrastructure due to influx of temporary workers & camp followers,
- Threat to community culture, safety and security associated with 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), SEA/SH risk),
- Impacts on the accessibility of the community to their houses, business, schools, etc.,
- Impacts on potential vulnerable groups.

Labor and Working Conditions

All needs of the personnel who will work during the construction phase will be met from the administrative building. WC, kitchen, study rooms, rest rooms will be created inside the administrative building. The food needs of the personnel will be met by purchasing services from outside. All services will be provided in accordance with the legislation and the wastes that will occur during or after the services will be collected and disposed of in accordance with the provisions of the legislation.

During this phase, ten employees will be on-site. Insufficient training and lack of emergency response knowledge further increase risks, necessitating proper preparedness and capacity-building programs.

Traffic

Traffic congestion and temporary interruptions from construction phases of the investments and which could potentially cause annoyance, disruption, health and safety impacts, as well as economic impacts. The use of construction vehicles

and machineries in sub project site may cause traffic, reducing movement and flow of vehicles. This is likely to cause an increase in the frequency and severity of accidents.

Loss of Land and Livelihoods

The parcel where the activities will be carried out within the scope of the sub-project belongs to the Kalaba Municipality and there is an existing road to reach the parcel. The road is sufficient for the transportation of materials and equipment to the field and a new road will not be constructed and the existing parcel will be used. Since the ETL will pass through the cadastral road and the parcel belonging to the Kalaba Municipality, no land or livelihood loss is expected. In this context, ESS5 will not be triggered.

Vulnerable groups

Certain vulnerable groups such as disabled people, children or elderly people, women and children heads of households, and chronically ill people living in the 50. Yıl and Yeni neighborhoods, which are the closest settlements to the sub-project site, may be affected by the activities to be carried out during the construction phase.

Subproject specific ESMP along with the SEP will consider any impacts in association with the daily living patterns of potential vulnerable groups (i.e school aged children commuting for school) that may be generated due to civil works.

People with chronic diseases, the elderly and children are expected to be more affected by dust emissions and environmental noise during sub-project activities than other people. Economically, women and children, heads of households, and individuals with low income levels may face economic difficulties in participating in sub-project activities and consultations. Measures to be taken for these groups are given in the ESMP Matrix.

Cultural Heritage

There is no tangible or intangible cultural heritage found within the project site. In case of any detection of chance finds during the construction activities, Chance Find Procedure will be implemented. As the initial stage of baseline studies, literature and surficial studies have been conducted for land. Depending on these studies, potential impact on these sources and related mitigation measures are assessed in ESMP. However, due to the nature of physical cultural resources, buried assets (i.e., graves or mounds) may not be determined during baseline studies. The principal issue is twofold: (i) “chance finds” identification of during construction, and (ii) potential impact of the project on known cultural values. Kalaba Municipality is responsible for the application of the relevant law and regulation given in **Error! Reference source not found.**. Moreover, since there are no tangible cultural heritage assets near the Project area, no impact is expected on the existing cultural assets. If any chance find is encountered during the construction activities of the Project, Chance Find Procedure will be implemented. As part of the regular reporting, Kalaba Municipality will inform İLBANK of the historical and cultural findings, if any, as well as the actions taken. Avoiding or mitigating impacts on physical or cultural resources of the IFI financed projects should be ensured in accordance with ILBANK ESMS. Therefore, İLBANK will not proceed with sub-project funding until all requirements of the Turkish legislation and WB requirements are met. Moreover, during the site studies, mukhtars, local authorities and residents were questioned about the presence of cultural heritage in sub-project AoI. No tangible or intangible cultural heritage assets that may be adversely affected by the sub-project were identified. During the construction phase, excavation activities will take place, which may lead to come across with chance finds as mentioned in above paragraphs and therefore the Chance Finds Procedure (Annex H) will be implemented.

In addition, there is a town cemetery approximately 200 meters northwest of the subproject area. The measures to be taken to ensure that citizens visiting the cemetery are affected by the subproject activities are given in the ESMP matrix.

4.1.2.Operation Phase

4.1.2.1. Environmental Impacts and Risks

4.1.2.1.1. Amounts of Waste to be Generated during the Operation Phase

Domestic Solid Waste

Assuming that the amount of domestic solid waste generated by personnel during the construction and operation phase of the project is 10,96 kg/day per person (average waste amount per person (kg/person-day), (TURKSTAT, 2023);

A total of 2 personnel will work during the sub-project operation phase. Accordingly, the amount of waste to be generated daily is;

2 person * 0,96 kg/person = 1.92 kg/gün

Domestic solid waste will be collected in closed and leak-proof garbage bins that will not emit odors. Domestic solid waste will be transported daily to the nearest municipal garbage collection center. During the activity; The provisions of the "Waste Management Regulation" and its amendments, which came into force after being published in the Official Gazette dated 02.04.2015 and numbered 29314, will be complied with.

Packaging Waste

It has been accepted that approximately 13.5% of recyclable packaging waste will be generated among domestic solid waste (TURKSTAT, 2023). Any packaging waste that may be generated will be collected separately from solid waste and will be recycled by giving it to packaging waste collection-sorting facilities that have an environmental license.

When the rate given above is compared to the daily waste amount;

1.92 kg * 0.135 = 0.26 kg/day.person

2 person* 0,26 kg= 0,52 kg

The "Packaging Waste Control Regulation", which entered into force upon publication in the Official Gazette dated 21.06.2021 and numbered 31523, and the "Zero Waste Regulation" and its amendments, which entered into force upon publication in the Official Gazette dated 12.07.2019 and numbered 30829, and the relevant provisions will be complied with.

Hazardous Waste

There will be waste that will be released as a result of the equipment to be used in the facility reaching the end of its life. The panels have an approximately 10-year product life and a 25-year efficiency guarantee. At the end of 25 years, they will continue to be used with a 20% loss. In cases where the panels have reached the end of their life or need to be replaced, the old panels will be revised and new panels will be positioned. The panels are classified as hazardous waste. Accordingly, the dismantled panels will be sent to licensed hazardous waste disposal facilities. Inverters and fuses are classified as electronic goods and their economic life is over 20 years. Inverters that will be released as a result of replacing the inverters due to any malfunction or the end of their economic life will be sent to licensed companies and disposed of under the code 20 01 36 (Discarded electrical and electronic equipment other than 20 01 21, 20 01 23 and 20 01 35).

The life of the support systems where the panels will be placed is at least 40 years. The support systems that will be exposed are within the scope of non-hazardous waste and will be disposed of by sending them to licensed companies with the code 20 01 40 (Metals). The cables to be used will be selected to be resistant to sun and heat and will have a minimum life of 20 years. The cables that will be exposed will be sent to licensed companies with the code 17 04 11 (cables other than 17 04 10) and disposed of.

Waste Batteries and Waste Batteries

Waste batteries that may be removed from vehicles in the project area will be returned to the vendors and replaced with new batteries. Batteries used in the field will be reused by ensuring that they are rechargeable. Used batteries will be collected in battery collection boxes and left at collection points belonging to TAP (Portable Battery Manufacturers and Importers Association). The "Regulation on the Control of Waste Batteries and Accumulators" and its relevant provisions, which came into force after being published in the Official Gazette dated 31.08.2004 and numbered 25569, will be complied with.

Medical Waste

Medical waste is not expected to be generated in the project area as the nearest health institution will be visited in case of an accident. In case of occurrence, the relevant provisions of the "Medical Waste Control Regulation", which came into force after being published in the Official Gazette dated 25.01.2017 and numbered 29959, will be complied with.

4.1.2.1.1. *Operation Phase Water Supply and Wastewater Management*

It is anticipated that a total of 2 people will work. Since the daily amount of drinking and utility water to be used per person is 239 L/person-day, the total amount of water to be used will be (TurkStat, 2023);

Personnel water usage amount = (Water usage amount per person) x (number of personnel)

Personnel water usage amount = (239 L/person-day) x (2 people)

≈ 478 L/day.

Within the scope of the project, the Regulation on Waters for Human Consumption, which came into force after being published in the Official Gazette dated 17.02.2005 and numbered 25730, and the "Regulation on Waters for Human Consumption" published in the Official Gazette dated 31.07.2009 and numbered 27305, will be complied with.

According to TurkStat, 2023 data, the amount of wastewater per person is calculated as 121L/day. During the operation phase, 2 people will work at the facility. Daily wastewater amount:

121 L/day-person*2 person= 242 L/day

Within the scope of the sub-project, the septic system that will be installed during the construction phase will be used during the operation phase.

Noise

Solar Power Plants photovoltaic (PV) systems do not contain any moving parts as they convert solar energy directly into electricity. In this respect, there is no activity that can create noise during the operation of the solar power plant.

Climate Change

The amount of carbon dioxide (CO_2) emitted by energy sources throughout their life cycle is shown in the Figure 11. Photovoltaic (PV) and concentrated solar energy (CSP) emit less carbon dioxide per MWh than fossil fuels and some renewable energy sources, which shows how positive solar energy is in the fight against climate change and how important its use is.[5]

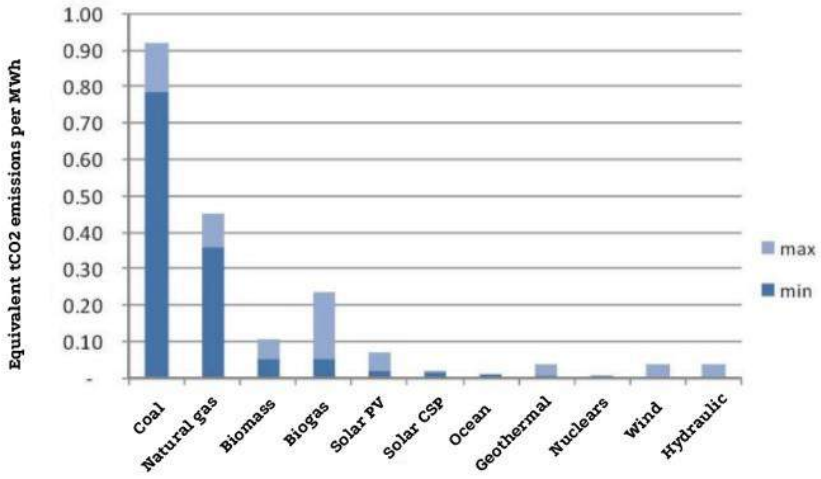


Figure 11. The amount of carbon dioxide (CO_2) emitted by energy sources throughout their life cycle

4.1.2.1. Social Impacts and Risks

Occupational Health and Safety

During operation phase of the subproject, a “Stakeholder Engagement Plan” was developeded to identify potential positive and negative social impacts on the environment and to access the necessary measures for preventing or mitigating adverse effect.

Labor and Working Conditions

All needs of the personnel who will work during the operation phase will be met from the administrative building. WC, kitchen, study rooms, rest rooms will be created inside the administrative building. The food needs of the personnel will be met by purchasing services from outside. All services will be provided in accordance with the legislation and the

[5] Eleco 2014 Elektrik – Elektronik – Bilgisayar ve Biyomedikal Mühendisliği Sempozyumu, 27 – 29 Kasım 2014, Bursa Güneş Enerji Santrallerinin Teknolojik ve Sosyal Etkileri

wastes that will occur during or after the services will be collected and disposed of in accordance with the provisions of the legislation.

4.2. Construction ESMP Matrix

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
1	**ESS2 - Labor and Working Conditions**				
1.1	**OHS - Physical Hazards: Electrical Hazards**	Employees	**General Measures** 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 labelled (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 ('electrical hazard') and service rooms where access is controlled or prohibited are properly labelled. • 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.	-Occupational Health and Safety Management Plan -Emergency Preparedness and Response Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			• Ensure that all buried electrical cables are thoroughly identified and marked prior to any excavation work. **Site-specific Measures** • A "Lockout Tagout" (LOTO) Procedure specific to the subproject should be prepared, personnel should be trained and its implementation should be supervised. • No one whose professional competence in electricity can be documented should be employed in electrical work.		
1.2	**OHS - Physical Hazards: Rotating and Moving Equipment**	Employees	**General Measures** • Design machines to eliminate trap hazards and ensure that extremities are kept out of harm's way under normal operating conditions; i.e. availability of emergency stops dedicated to the machine and placed in strategic locations. • If a machine or equipment has an exposed moving part or an exposed pinch point that could endanger the safety of any worker, ensure that the machine or equipment is equipped with and protected by a guard or other device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards. • Ensure that machinery with exposed or protected moving parts or in which energy can be stored (e.g. compressed air, electrical components) is turned-off, disconnected, isolated and de-energized (Locked Out and Tagged Out) during service or maintenance. • Where possible, ensure that equipment is designed and installed to enable routine servicing, such as lubrication, to be carried out without removing guarding devices or mechanisms.	-OHS Plan -Labour Management Procedure	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			Site-specific Measures • Routine maintenance, repair and inspection of machinery and equipment		
1.3	**OHS - Physical Hazards: Welding and Hot Works**	Employess	**General Measures** • Ensure that appropriate eye protection, such as suitable respiratory protection against welding fumeswelder's goggles and/or a full-face eye shield , is provided for all personnel involved in or assisting with welding operations. • If welding or hot cutting is performed outside of established welding work stations, ensure that special hot work and fire prevention precautions and Standard Operating Procedures (SOPs) are in place, including "Hot Work Permits, stand-by fire extinguishers, stand-by fire watch and maintaining fire watch for up to one hour after welding or hot cutting is finished". Develop specific procedures for hot work on tanks or vessels containing flammable materials.	OHS Plan	Kalaba Municipality Supervision Consultation Contractor
1.4	**OHS - Physical Hazards: Industrial Vehicle Driving and Site Traffic**	Employees, Residents of Kalaba Town	**General Measures** • Ensure that industrial vehicle operators are trained in the safe use of specialized vehicles such as forklifts, including safe loading/unloading, load limits • Make sure drivers undergo medical supervision • Ensure that mobile equipment with restricted rear visibility is equipped with audible reverse alarms and that large vehicles are manoeuvred by signallers and flaggers. Ensure that rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures	Traffic Management Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			(e.g. prohibiting operation of forklifts with forks down), 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 • All sub-project vehicles should be fitted with GPS location/speed tracking devices. **Site-specific Measures** • There is no need for any other measures other than general measures within the scope of the sub-project.		
1.5	**OHS - Physical Hazards: Ergonomics, Repetitive Motion, Manual Handling Lifting**	Employees	**General Measures** • 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 and personnel are trained in manual handling. • Ensure that additional special circumstances, such as left-handed people, are considered •	OHS Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
1.7	**OHS - Chemical Hazards**	Employees	**General Measures** • Ensure that the hazardous substance is replaced with a less hazardous substitute • Ensure that engineering and administrative control measures are in place to prevent or minimize the release of hazardous substances into the working environment, keeping the exposure level below internationally established or recognized limits • Ensure that the number of workers exposed or likely to be exposed is minimal. • Ensure that chemical hazards are communicated to workers through labeling and marking according to nationally and internationally recognized requirements and standards, including International Chemical Safety Cards (ICSC), Material Safety Data Sheets (MSDS/SDSs) or equivalent. Any means of written communication should be in an easily understood language and be readily available to exposed workers and first-aid personnel • Personal Protective Equipment (PPE) that provides protection appropriate to the chemicals used should be provided free of charge to all employees, delivered against signature, and replaced with a new one when necessary. • Ensure that employees are trained in the use of available information (such as MSDSs/SDSs), safe working practices and proper use of PPE **Site-specific Measures** • During the construction phases of the project, mineral oils and chemicals planned to be used for maintenance of equipment (work machines, transformers, heat	OHS Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			exchangers, etc.) will be temporarily stored in a sealed area in accordance with the legislation to prevent them from polluting surface and underground water resources.		
2	**ESS3 - Resource Efficiency and Pollution Prevention and Management**				
2.1.	**Air Emissions and Ambient Air Quality**				
	Emissions to air due to construction activities	Employees , Residents of Yeni and 50.yıl Neighbourhoods , Flora and Fauna	**General Measures** • Ensure use of dust control methods, such as covers, water suppression, or increased moisture content for open storage piles, or controls. • Ensure use of water suppression for control of loose materials on paved or unpaved road surfaces. **Site-specific Measures** • Within the scope of the subproject, no excavation will be carried out other than topsoil stripping. Kalaba Municipality tankers will be used to suppress dust emissions that will occur during stripping operations. • Loading and unloading of trucks will be carried out carefully to prevent the material from being thrown and spread. • Transport trucks will be covered with tarpaulins on public roads, when arriving and leaving the site, • Speed limit will be applied for trucks, • Tires of trucks will be cleaned to prevent sludge from being carried to the roads, • Modern equipment and vehicles will be used to meet the relevant emission standards in construction works,	Air Quality Management Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			• Exhaust systems and emission levels of the equipment and vehicles will be checked regularly, • Good site practices will be implemented by utilizing low-emission construction equipment and vehicles to reduce the release of pollutants into the atmosphere and use of cleaner fuels and technologies during construction to minimize dust and other emissions. • In order to ensure that agricultural areas, natural vegetation and wild forms are minimally affected by dust during construction and transportation, dust that may arise will be prevented with effective interventions such as irrigation,. Irrigation works will be carried out to reduce dust emissions on the roads used by vehicles and the bodies of vehicles carrying excavated materials will be closed. • The construction equipment and transportation vehicles in question will be used at different times during the day.		
	Energy Conservation				
2.2	**Wastewater and Ambient Water Quality**				
2.2.1	Generation and discharge of wastewater due to construction activities	Water resources	**General Measures** • 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 systems will be used for wastewater disposal and treatment, ensure that the following requirements are met:		Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			○ 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. •		
2.3	**Hazardous Materials Management**				
2.3.1	Generation of hazardous waste during construction activities	Employees, Residents of Kalaba Town Flora and Fauna Soil	**General Measures** • Ensure that the types and the quantities of hazardous substances present in the project should be identified. This information should be recorded and should include a summary table with the following information: ○ Name and description (e.g. composition of a mixture) of the hazardous materials ○ Classification (e.g. code, class or division) of the hazardous materials ○ Internationally accepted regulatory reporting threshold quantity or national equivalent of the hazardous materials ○ Quantity of hazardous materials used per month ○ Characteristic(s) that make(s) the materials hazardous (e.g. flammability, toxicity)	• • Emergency Preparedness and Response Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure

			• Ensure that the potential for uncontrolled reactions such as fire and explosion is analyzed
			• Ensure that operators are trained on release prevention, including drills specific to hazardous materials as part of emergency preparedness response training
			• Ensure a description of response activities in the event of a spill, release or other chemical emergency, including:
			  ○ 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 workers are provided with hazard communication and training to prepare them to recognize and respond to chemical hazards in the workplace. Programs should include aspects of hazard identification, safe operating and materials handling procedures, safe work practices, basic emergency procedures, and special hazards unique to their jobs.
			• Ensure that permitted maintenance activities such as hot work or confined space entries are defined and implemented
			• 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		

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			• 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. **Site-specific Measures** • A safe Temporary Waste Storage Area will be established within the site for hazardous waste generated in the sub-project area. Hazardous waste can be stored for a maximum of 6 months, even if the storage area is not full, in accordance with the regulation. When the storage area is full, it will be delivered to the licensed company without waiting for 6 months.		
2.4	**Waste Management**				
2.4.1	Generation of waste during construction activities	Employees, Residents of Kalaba Town Flora and Fauna	**General Measures** • 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	Waste Management Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			• 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 **Site-specific Measures** • The topsoil to be stripped during land preparation will be used in landscaping work in the sub-project area. • Containers will be placed for paper-cardboard, plastic, glass, metal waste and will be collected separately from other waste. The management of the said waste will be carried out by Kalaba Municipality. • Separate containers will be placed for non-cycle other wastes and they will be accumulated in these containers. The wastes in question will be collected by Kalaba Municipality and transported to the Sanitary Landfill.		

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			• All waste will be disposed of in a way that will not harm the ecosystem, human or living health, and in accordance with National Legislation and the World Bank ESS's. • Reusable soil and other materials will be used in sub-project works. • Records regarding waste production, storage and disposal will be kept. • Employees will be provided with training on waste management practices. • Waste panels will be collected at designated points in the sub-project area and then delivered to the licensed company. •		
2.5	**Noise**				
	Noise generation due to construction	• Employees • Residents of Yeni and 50. Yıl Neighborhoods, • Project Site Surroundings • Fauna	**General Measures** • Manage the potential impact of noise, selecting equipment with lower sound power levels • Ensure implementation of Subproject-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 **Site-specific Measures** • A time limit (07:00 am-07:00 pm) will be imposed for the studies.	• Stakeholder Engagement Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			• Residents Kalaba Town will be informed about the timing of construction activities. • Regular and periodic maintenance of work machinery and equipment and daily maintenance will be conducted. • All the vehicles used in transportation activities will comply with the speed limits specified in the Highway Traffic Regulations.		
3	**ESS4 - Community Health and Safety**				
3.1	**Structural Safety of Subproject Infrastructure**				
	Injuries suffered as a consequence of falls or contact with electric	• Residents of Kalaba Town	**General Measures** • Ensure use of buffer strips or methods such as frencing and security gate of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure, as well as nuisance issues related to noise, odors, or other emissions.Ensure incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, wind, flooding, landslides and fire. To this end, all project structures should be designed in accordance with engineering and design criteria mandated by site-specific risks, including but not limited to seismic activity, slope stability, wind loading, and other dynamic loads. •	• ESMP • Community Safety Plan • Emergency Preparedness and Response Plan	Kalaba Municipality Supervision Consultation Contractor
	Burns and smoke inhalation from fires	• Residents of Kalaba Town • Employees	**General Measures** • Ensure use of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials	• ESMP • Community Safety Plan • Emergency	Kalaba Municipality Supervision Consultation

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			incidents or process failure, as well as nuisance issues related to noise, odors, or other emissions • Ensure incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire. To this end, all project structures should be designed in accordance with engineering and design criteria mandated by site-specific risks, including but not limited to seismic activity, slope stability, wind loading, and other dynamic loads • Develop Subproject specific hazard analysis that is required to include management actions applicable to hazardous materials storage and use. • Manage the potential impacts of off-site impacts of releases through measures intended to contain explosions and fires, alert the public, provide for evacuation of surrounding areas, establish safety zones around a site, and ensure the provision of emergency medical services to the public •	Preparedness and Response Plan	Contractor
3.2	**Traffic Safety**				
	Road safety	• Residents of Kalaba Town • Road Users	**General Measures** • Avoiding dangerous routes and times of day to reduce the risk of accidents • 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 Project traffic routing through the settlements is not avoidable, all necessary traffic management	• Traffic Management Plan • Stakeholder Engagement Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			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 **Site-specific Measures** • Traffic flow in accordance with approved traffic circulation projects on the entrance and exit roads to SPP sites; It will be provided with security measures and warning signs. • Damages on the roads will be repaired by contractor		
	Increase in traffic	• Residents of Kalaba Town • Road Users	**General Measures** • Manage the potential impact of increase in traffic, coordination with emergency responders to ensure that appropriate first aid is provided in the event of accidents • Ensure use of locally sourced materials, whenever possible, to minimize transport distances. Locating associated facilities such as worker camps close to sub-project sites and arranging worker bus transport to minimizing external traffic • Ensure employing safe traffic control measures, including road signs and flag persons to warn of dangerous conditions	• Traffic Management Plan • Stakeholder Engagement Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			• Develop sub-Project-specific SEP will be implemented to address any construction transport/traffic related grievance and plan/take corrective actions in line with the Grievance Mechanisms, where necessary. As part of SEP, local communities will be informed about the construction sites, traffic restrictions to be applied for health and safety purposes and duration of such restrictions. **Site-specific Measures** • Community Safety and Traffic Management Plans will be prepared, including traffic safety risks, accident prevention, training programs, relevant stakeholder engagement activities and site safety awareness raising activities and access restrictions.		
3.3	**Transport of Hazardous Materials**				
	Random releases of hazardous substances into the receiving environment	• Residents of Kalaba Town • Employees	**General Measures** • Develop sub-project specific "Hazard Assessment and Management Actions" in order to identify the potential hazard involved in the transportation of hazardous materials and actions/ preventive measures and emergency response procedures by reviewing: ○ The hazard characteristics of the substances identified, ○ The history of accidents, both by the company and its contractors, involving hazardous materials transportation ○ The existing criteria for the safe transportation of hazardous materials, including environmental	• ESMPStakeholder Engagement Plan	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			management systems used by the company and its contractors • Ensure use of Hazardous Materials Transportation Plan for deliveries by vehicles carrying hazardous materials and wastes to avoid risks on the environment, local communities and sub-Project personnel. • Develop Subproject specific Emergency Preparedness and Response Plan that is required to cover: ○ Planning coordination ○ Emergency equipment ○ Training • Ensure that compliance with local laws and international requirements applicable to the transport of hazardous materials • Ensuring adequate transport vehicle specifications • Ensure that Training employees involved in the transportation of hazardous materials regarding proper shipping procedures and emergency procedures • Ensure use of labelling and placarding (external signs on transport vehicles), as required • Providing the necessary means for emergency response on call 24 hours/day		
4	**ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement**				
4.1	**Impact on Kalaba town**				
	Economic displacement and loss of livelihood, Impact on common areas used by local people	• Residents of Kalaba Town • Employees	**General Measures** Land acquisition is not required within the scope of the sub-project. If necessary, the following measures will be implemented in line with ESS5:	Stakeholder Engagement Plan	Kalaba Municipality Supervision Consultation

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			• Land acquisition processes should be conducted transparently, and fair compensation should be provided to affected individuals or communities. • Land valuation should be carried out by independent experts and communicated clearly to the relevant parties. • For sub-project sites, alternative land allocations may be provided to enable local communities to continue their livelihoods, such as farming or livestock grazing. • An independent mediation mechanism should be established for unresolved land disputes. • A grievance mechanism that is accessible to everyone will be set up, and this mechanism will operate in a fast and fair manner. •		Contractor
5	**ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources**				
5.1	**Biodiversity Conservation and Sustainable Management of Living Natural Resources**				
	Disturbance on flora and fauna species	Flora and fauna	**General Measures** • Activities will be minimized when seeds are available (e.g., avoid from stepping on grass or green plants, car washing, activities outside the working area). • A wire fence will be placed to prevent animal entry into the field • **Pre-construction** surveys will be conducted to identify the presence and distribution of these species on the Sub-project site before construction begins. Habitats for these species will be designated, especially their nesting or burrowing sites. Disturbance or destruction of these habitats will be avoided during construction activities.		Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			• Vegetation removal will be minimized by conducting a thorough survey to avoid unnecessary clearing. • Barriers will be installed around known burrows or nesting sites to protect them from disruption during construction. These barriers can be temporary or permanent, depending on the duration of construction activities. • Project construction site and access road will be separated from other areas with appropriate signboards, signs, and fences. personnel and vehicle access to this area will be limited with the construction site. • Habitat degradation will be reduced by keeping vehicles on access roads and minimizing pedestrian traffic in intact areas. • •		
6	**ESS8 - Cultural Heritage**				
6.1	Encountering cultural heritage in topsoil stripping operations Destruction or deliberate damage to cultural heritage	Kayseri Cultural Heritage Protection Regional Board Directorate	• If any chance finds falling within the scope of Law No. 2863 is encountered during the underground applications, the work will be stopped immediately and the Kayseri Cultural Heritage Preservation Regional Board Directorate and the relevant Museum Directorate will be notified and the "Chance Find Procedure"(**Error! Reference source not found.**) will be applied. • To prevent visually unpleasant views during cemetery visits, the prefabricated administrative building will be positioned as a visual buffer between the cemetery and the sub-project area. • Construction phase activities will be suspended during funeral ceremonies. • Cemeteries are areas that the public classifies as sacred. Personnel will also be informed to ensure that these areas are not disrespected. • As part of the regular reporting, Kalaba Municipality will inform İLBANK of the historical and cultural findings, if	Chance Find Procedure	Kalaba Municipality Supervision Consultation Contractor

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			any, as well as the actions taken. •		
7	**ESS10 - Stakeholder Engagement and Information Disclosure**				
7.1	Communication problems with stakeholders	Local Communities Resident of Kalaba Town	• The ESMP, SEP and other relevant project documents and information will be disclosed to project workers, project stakeholders and the public, including contractors. • The public will be informed in advance on traffic route changes, drinking water outages, etc. • Information materials (brochures, etc.) will be prepared. • Platforms/meetings will be organized for information sharing and consultation. • Regular consultations will be held with local authorities and communities regarding the management of the construction. • A grievance mechanism will be established and properly operated, and information about this mechanism will be disseminated to the public. • All stakeholders' concerns will be addressed. • The public will be informed about the work through appropriate notifications in the media and/or public areas (including the worksite). • All details of Gender-Based Violence (GBV) and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) victims will be kept strictly confidential in the Grievance Registry Database.	Stakeholder Engagement Plan	Kalaba Municipality Supervision Consultation Contractor
7.2	Dysfunction of the Grievance Mechanism	Resident of Kalaba Town Employees	• Providing sufficient information to both local people and employees on the use of the Grievance	Stakeholder Engagement Plan	

No	Impact Description	Receptor	Proposed Mitigation Measure			Relevant Plans/Procedures	Responsibility for Implementation of Mitigation Measure
			mechanism, • Providing the necessary training to the Grievance Mechanism Contact Person (GMCP) who will follow up on the receipt, recording, evaluation and reaching a convincing solution for both parties, All details of Gender Based Violence (GBV) and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) victims will be kept strictly confidential in the Grievance Registration Database.				

4.3. Operation ESMP Matrix

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
1	**ESS2 - Labor and Working Conditions**				
1.2	**OHS - Physical Hazards: Electrical Hazards**	Employees	• 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 labelled (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 ('electrical hazard') and service rooms where access is controlled or prohibited are properly labelled. • Ensure that "No Approach" zones are established around or under high voltage lines.	-OHSPlan-Emergency Preparedness and Response Plan	Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			• 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. • A “Lockout Tagout” (LOTO) Procedure specific to the subproject should be prepared, personnel should be trained and its implementation should be supervised.		
1.3	**OHS - Physical Hazards: Rotating and Moving Equipment**	Employees	**General Measures** • Design machines to eliminate trap hazards and ensure that extremities are kept out of harm’s way under normal operating conditions; i.e. availability of emergency stops dedicated to the machine and placed in strategic locations. • If a machine or equipment has an exposed moving part or an exposed pinch point that could endanger the safety of any worker, ensure that the machine or equipment is equipped with and protected by a guard or other device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards. • Ensure that machinery with exposed or protected moving parts or in which energy can be stored (e.g. compressed air, electrical components) is turned-off, disconnected, isolated and de-	OHS Plan	Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			energized (Locked Out and Tagged Out) during service or maintenance. • Where possible, ensure that equipment is designed and installed to enable routine servicing, such as lubrication, to be carried out without removing guarding devices or mechanisms **Site-specific Measures** Routine maintenance, repair and inspection of machinery and equipment		
1.4	**OHS - Physical Hazards: Welding and Hot Works**	Employees	**General Measures** • Ensure that appropriate eye protection, such as welder's goggles and/or a full-face eye shield, is provided for all personnel involved in or assisting with welding operations. • If welding or hot cutting is performed outside of established welding work stations, ensure that special hot work and fire prevention precautions and Standard Operating Procedures (SOPs) are in place, including "Hot Work Permits, stand-by fire extinguishers, stand-by fire watch and maintaining fire watch for up to one hour after welding or hot cutting is finished". • Develop specific procedures for hot work on tanks or vessels containing flammable materials. **Site-specific Measures** • Ensure that appropriate eye protection, such as suitable respiratory protection against welding	-OHS Plan -Labour Management Procedure	Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			fumes welder's goggles and/or a full-face eye shield , is provided for all personnel involved in or assisting with welding operations.		
1.5	**OHS - Physical Hazards: Industrial Vehicle Driving and Site Traffic**	Employees	• Ensure that industrial vehicle operators are trained in the safe use of specialized vehicles such as forklifts, including safe loading/unloading, load limits • Make sure drivers undergo medical supervision • Ensure that mobile equipment with restricted rear visibility is equipped with audible reverse alarms and that large vehicles are manoeuvred by signallers and flaggers. Ensure that rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures (e.g. prohibiting operation of forklifts with forks down), and control of traffic patterns or direction are established • Ensure that rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures (e.g. prohibiting operation of forklifts with forks down), 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 •	Traffic Management Plan	Kalaba Municipality
1.6	**OHS - Physical Hazards: Ergonomics, Repetitive Motion, Manual Handling Lifting**	• Local Communities Resident of Kalaba Town	• Ensure that mechanical assists are used to eliminate or reduce the effort required to lift materials, hold tools and work objects, and that	OHS Plan	

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
		• Employees	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 and personnel are trained in manual handling. • Ensure that additional special circumstances, such as left-handed people, are considered		
1.7	**OHS - Chemical Hazards**	• Local Communities Resident of Kalaba Town • Employees	**General Measures** • Ensure that the hazardous substance is replaced with a less hazardous substitute • Ensure that engineering and administrative control measures are in place to prevent or minimize the release of hazardous substances into the working environment, keeping the exposure level below internationally established or recognized limits • Ensure that the number of workers exposed or likely to be exposed is minimal. • Ensure that chemical hazards are communicated to workers through labeling and marking according to nationally and internationally recognized requirements and standards, including	ESMP	Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			International Chemical Safety Cards (ICSC), Material Safety Data Sheets (MSDS/SDSs) or equivalent. Any means of written communication should be in an easily understood language and be readily available to exposed workers and first-aid personnel • Personal Protective Equipment (PPE) that provides protection appropriate to the chemicals used should be provided free of charge to all employees, delivered against signature, and replaced with a new one when necessary. • Ensure that employees are trained in the use of available information (such as MSDSs/SDSs), safe working practices and proper use of PPE •		
2	**Wastewater and Ambient Water Quality**				
2.1	Generation and discharge of wastewater due to construction activities	• Local Communities Resident of Kalaba Town • Employees • Soil	• It is envisaged that wastewater produced by personnel working at the facility will be managed with a septic system. National and international standards should be followed in wastewater management.. • Spill kits will always be available at construction sites. • Reduction of water consumption, including cleaning activities of PV panels, and minimization of impacts on local water resources will be		Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			ensured throughout the life cycle of the proposed PV power plant. • A Site Closure Plan will be prepared for the phase post-operation phase before the initiation of the post-operation phase. This plan will include procedures on how the equipment will be dismantled and the rehabilitation of the site.		
3	**Hazardous Materials Management**				
3.1	Generation of hazardous waste during construction activities	Local Communities Resident of Kalaba Town Employees	• During the operation phases of the project, mineral oils and chemicals planned to be used for maintenance of equipment (work machines, transformers, heat exchangers, etc.) will be temporarily stored in a sealed area in accordance with the legislation to prevent them from polluting surface and underground water resources.	Waste Management Plan	Kalaba Municipality
4	**Waste Management**				
4.1	Generation of waste during construction activities	• Local Communities Resident of Kalaba Town • Employees	**General Measures** • 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	Waste Management Plan	Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			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 **Site-specific Measures** • Containers will be placed for paper-cardboard, plastic, glass, metal waste and will be collected separately from other waste. The evaluation of the said waste will be carried out by Kalaba Municipality.		

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			• Separate containers will be placed for non-cycle other wastes and they will be accumulated in these containers. The wastes in question will be collected by Kalaba Municipality and transported to the Solid Waste Disposal Facility. • All waste will be disposed of in a way that will not harm the ecosystem, human or living health, and in accordance with local legislation and the World Bank criteria. • Records regarding waste production, storage and disposal will be kept. • Employees will be provided with training on waste management practices.		
5	**ESS4 - Community Health and Safety**				
5.1	**Structural Safety of Subproject Infrastructure**				
	Injuries suffered as a consequence of falls or contact with electric	• Local Communities Resident of Kalaba Town • Employees	• Ensure use of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure, as well as nuisance issues related to noise, odors, or other emissions • Ensure incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis,	Community Safety Plan	Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			wind, flooding, landslides and fire. To this end, all project structures should be designed in accordance with engineering and design criteria mandated by site-specific risks, including but not limited to seismic activity, slope stability, wind loading, and other dynamic loads • Develop sub-project specific hazard analysis that is required to include management actions applicable to hazardous materials storage and use. • Manage the potential impacts of off-site impacts of releases through measures intended to contain explosions and fires, alert the public, provide for evacuation of surrounding areas, establish safety zones around a site, and ensure the provision of emergency medical services to the public		
5.2	**Traffic Safety**				
	Road safety	• Local Communities Resident of Kalaba Town • Employees	• Ensure minimizing pedestrian interaction with construction vehicles • Manage the potential impact of increase in traffic, coordination with emergency responders to ensure that appropriate first aid is provided in the event of accidents • Ensure use of locally sourced materials, whenever possible, to minimize transport distances. Locating associated facilities such as worker camps close to project sites and arranging worker bus transport to minimizing external traffic	• Traffic Management Plan • Stakeholder Engagement Plan	Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			• Ensure employing safe traffic control measures, including road signs and flag persons to warn of dangerous conditions • Develop sub-Project-specific SEP will be implemented to address any construction transport/traffic related grievance and plan/take corrective actions in line with the Grievance Mechanisms, where necessary. As part of SEP, local communities will be informed about the construction sites, traffic restrictions to be applied for health and safety purposes and duration of such restrictions.		
5.3	**Transport of Hazardous Materials**				
	Catastrophic releases of hazardous materials	• Local Communities Resident of Kalaba Town • Employees,	• Develop sub-Project specific “Hazard Assessment and Management Actions” in order to identify the potential hazard involved in the transportation of hazardous materials and actions/ preventive measures and emergency response procedures by reviewing: o the hazard characteristics of the substances identified, o The history of accidents, both by the company and its contractors, involving hazardous materials transportation o The existing criteria for the safe transportation of hazardous materials, including environmental management systems used by the company and its contractors • Ensure use of Hazardous Materials Transportation Plan for deliveries by vehicles carrying hazardous		Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure

			materials and wastes to avoid risks on the environment, local communities and sub-Project personnel.
			• Develop sub-project specific Emergency Preparedness and Response Plan that is required to cover:
			  ○ Planning coordination
			  ○ Emergency equipment
			  ○ Training
			• Ensure that compliance with local laws and international requirements applicable to the transport of hazardous materials
			• Ensuring adequate transport vehicle specifications
			• Ensure that Training employees involved in the transportation of hazardous materials regarding proper shipping procedures and emergency procedures
			• Ensure use of labeling and placarding (external signs on transport vehicles), as required
			• Providing the necessary means for emergency response on call 24 hours/day.		

6	**ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources**				
6.1	Flora and fauna distubance	Flora and Fauna	• Waste management should be carried out in accordance with the legislations and no waste should be left in the open. Devices or applications that produce odors, lights, or sounds that wild vertebrates perceive as threatening should be minimized. Pets that may threaten animals should not be kept and food that will attract wild		Kalaba Municipality

Ref	Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans	Responsibility for Implementation of Mitigation Measure
			animals to the SPP site should not be left in the area.		
7	**ESS10 - Stakeholder Engagement and Information Disclosure**				
7.1	Communication problems with stakeholders	• Local Communities Resident of Kalaba Town • Employees,	• Recruitment policy will include non-discriminatory hiring practices, training programs tailored to the needs of vulnerable groups, implementing and providing support services such as transportation or childcare to facilitate participation in the workforce. • Corporate Social Responsibility (CSR) will be designed and implemented to contribute positively to the communities based on their needs such as improvement of roads and utilities.	SEP	Kalaba Municipality

4.4. Monitoring and Reporting

The sub-borrower will conduct internal monitoring of Subproject'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 the Subproject and progress with Subproject implementation (e.g. status of construction, Subproject timeline, etc.),
- Status of compliance with legal requirements (e.g. Subproject permitting status, status and outcomes of audits done by national authorities, fines imposed by national authorities if any, etc.)
- Details of how the requirements of the IFI standards (e.g. WB ESSs) are being met on the basis of compliance with Subproject level Environmental and Social Action Plans (ESAPs),
- Incident and accident reports and statistics,
- Current Subproject level E&S organization and capacity (including information on capacity building and training),
- Progress with Subproject 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 Subproject level (in case of non-conformities).

Key performance indicators (KPIs) of this procedure will be monitored, verified, and evaluated within the scope of the Subproject monitoring stage. The KPIs for both construction and operation phases of the Subproject are presented in Table *22*.

Table 22 Key Performance Indicators for Both Construction and Operation Phases of the Subproject

Monitoring Focus	KPI
Documentation	
Following ESMP Project specific plans will be developed and be in place.	Full compliance with Subproject's ESMP
Air Quality	
Air Quality incidents	Minimization and continued improvement in the number of the reported air quality related incidents.
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.
Non-Compliance with Subproject standards	Zero NCRs per year
Wastewater collection system	Zero grievances per year
Waste	

Monitoring Focus	KPI
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 Subproject 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	

Monitoring Focus	KPI
Number of worker grievances closed out within the target timeframe	100% compliance with labor laws and regulations 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 Subproject 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
Vulnerable groups:	
Incidents, Grievances, Toolbox talks and trainings, Information/ disclosure	All grievances closed-out within the target timeframe Sufficient information provided to the VGs
Grievance mechanism	
Grievance Records, GM disclosure	All grievances closed-out within the target timeframe GM disclosure to the PAPs, stakeholders GM disclosure at Subproject web site
Cultural Heritage	
Existence of a Chance Find	Zero Grievance Records

Table 23. Construction Environmental and Social Monitoring Table

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
1	Transport	Transportation Security and Transportation Interruptions	*Project site transportation route*	The grievances of the population in the immediate vicinity or the participants in transportation activities , by checking warning and informative signs	*Daily*	• *Zero vehicle accidents* • *Minimization and continued improvement in the number of reported violations on speed limit*	• *World Bank Environmental and Social Standard 4 (ESS4)* • *Regulation on the Transport of Hazardous Materials by Road* • *Road Traffic Regulation* • *Regulation on Traffic Signs*	Kalaba Municipality, Contractor	It will be covered within the scope of the sub-project budget.
2	Ambient air quality	Dust	*277/1 parcel, sub-project area transportation route, energy transmission line route* *Areas close to the sub-project site (Yeni and 50. Yıl Neighborhood)*	Daily site observation, Grievance Mechanism Records	*Daily*	• *Minimization and continued improvement in the number of the reported air quality related incidents.* • *Zero grievances per year*	*World Bank General EHS Guidelines* • *ESS3:*	Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
3		Exhaust Gas Effects	*277/1 parcel, sub-project area transportation route, energy transmission line route* *Areas close to the sub-project site (Yeni and 50. Yıl Neighbourhood)*	Grievance Mechanism Records	*Daily*	• *Minimization and continued improvement in the number of reported violations on speed limit*	• *Industrial Air Pollution Control Regulation*	Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.
4	Environmental noise management	Noise level	*277/1 parcel, sub-project area access route, energy transmission line route* *Areas close to the sub-project site (Yeni and 50. Yıl Neighbourhood)*	According to the complaints of the population in the immediate vicinity	*In case of complaint*	• *Minimize and continued improvement in number of reported noise and vibration related incidents* • *Zero Non-Compliance Reports (NCRs) per year* • *Zero grievances per year* • *Minimization and continued improvement in the number of noise related community grievances*	• *World Bank General EHS Guidelines:* • *WB ESS1* • *WB ESS3* • *Environmental Noise Control Regulation* • *Regulation on the Environmental Noise Emissions Caused by Equipment Used Outdoors* • *Daytime (07:00-19:00): 65 dB(A)*	Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
5	Surface, ground and water quality	Fuel, oil, antifreeze, etc. spills	*277/1 parcel, sub-project area access route, energy transmission line route*	Visual monitoring, Grievance Mechanism Records	*Daily*	• *Minimization and continued improvement in the number of the reported soil quality related incidents* • *Zero NCRs per year* • *Zero accident per year* • *Zero grievances per year*	*World Bank General EHS Guidelines:* *ESS3* • *WB ESS1* • *WB ESS3* • *-Regulation on the Protection of Ground Waters against Pollution and Deterioration* • *Regulation on the Control of Pollution Caused by Hazardous Substances in and around Water Environment* • *Regulation on Wastewater Collection and Removal Systems*	Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
6	Waste Management	Inverters, batteries etc. disposal of sourced electronic waste	*277/1 parcel*	Site inspections, Waste records Grievance Mechanism Records	*Daily*	• *Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)*	- *World Bank General EHS Guidelines* • *WB ESS1* • *WB ESS3* • *Environmental Law* • *Regulation on Waste Management* • *Zero Waste Regulation* • *Regulation on Packaging Waste Control*	Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.
		Hazardous waste	*277/1 parcel*	Site inspections, Waste records Grievance Mechanism Records	*Daily*	• Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)		Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
		Domestic Waste	*277/1 parcel*	Visual monitoring, Waste records Grievance Mechanism Records	*Daily*	• *Minimization of total waste generated* • *Increase in the ratio of recovered/reused/recycled waste to total waste generated*	• *Regulation on Waste Oil Management* • *Regulation on Medical Waste Control* • *Regulation on Control of Waste Electrical and Electronic Equipment* • *Regulation on Control of Waste Batteries and Accumulators* • *Regulation on Control of End-of-life Tires*	Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.
		Packaging Waste	*277/1 parcel*	Visual monitoring, Waste records Grievance Mechanism Records	*Daily*	• *Minimization of total waste generated* • *Increase in the ratio of recovered/reused/recycled waste to total waste generated*		Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
7						•			
	Community Health and Safety	Number of recorded safety incidents involving project workers and local people	*277/1 parcel, sub-project area access route, energy transmission line route*	Grievance Mechanism	Daily throughout the duration of the studies	• *Zero incidents per year* • *Zero number of drivers found to be exceeding speed limits or driving unsafely* • *Zero accidental injuries and deaths,* • *Zero traffic-related grievances* • *Zero Number of unauthorized accesses to the sub-project area*	*WB ESS4* • *Regulation on duties and responsibilities of OHS Specialists* • *Regulation on duties and responsibilities of Occupational Physicians and other medical personnel* • *Regulation on Health and Safety at Construction Works* • *Regulation on Health and Safety Conditions*	Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
							Regarding Use of Work Equipment • *Regulation on Health and Safety Precautions Regarding Working with Chemicals* • *Regulation on Protection of Employees from the Hazards of Explosive Environments* • *Regulation on Health and Safety Regarding Temporary and Time-Limited Works* *11• Regulation on Health and Safety Signs* • *Regulation on Management of Dust* • *Regulation on Material Safety Data Sheets on Hazardous*		

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
							Materials and Mixtures • *Law on Occupational* • *Health and Safety (6331)* • *Regulation on Personal Protective Equipment* • *Regulation on Protection of Workers from Risks Created by Noise* • *Regulation on Risk Assessment for Occupational Health and Safety* • *Regulation on Sub-contractors* • *Regulation on Vocational Training of the Employees Working in Dangerous and Highly Dangerous Workplaces*		

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
							• *Regulation on the Procedures and Principles of Employee Health and Safety Training* • *Regulation on High Current Electrical Facilities* • *Regulation on Manual Handling*		
8	Redress of grievance	Grievance Mechanism	*Kalaba Municipality*	"Grievance Forms" to be left around the construction site will be collected by the responsible person and forwarded to Kalaba Municipality. It will be monitored by Kalaba Municipality through the internet website, telephone and	Daily throughout the duration of the studies	• *All grievances closed-out within the target timeframe* • *GM disclosure to the PAPs, stakeholders* • *GM disclosure at Sub-project web site*	• *World Bank / IFC General EHS Guidelines* • *WB ESS2*	Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
				written applications to Kalaba Municipality. "Grievance Close Out Form" will be kept.					
9	Use of protective equipment, occupational safety training and OHS measures	Worker Safety	*277/1 parcels, sub-project area access route, energy transmission line route*	Visual monitoring,	Daily	• *Zero work accidents*	• *World Bank / IFC EHS Guidelines* • *WB ESS2* • *Regulation on Use of Personal Protective Equipment*	Kalaba Municipality Advisor, Contractor	It will be covered within the scope of the sub-project budget.

Table 24. Operation Environmental and Social Monitoring Table

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
1	Transport	Transportation Security and Transportation Interruptions	*Project site access route*	The grievances of the population in the immediate vicinity or the participants in transportation activities , by checking warning and informative signs	*Daily*	• *Zero vehicle accidents* • *Minimization and continued improvement in the number of reported violations on speed limit*	• *World Bank Environmental and Social Standard 4 (ESS4)* • *Regulation on the Transport of Hazardous Materials by Road* • *Road Traffic Regulation* • *Regulation on Traffic Signs*	Kalaba Municipality,	Kalaba Municipality
2						•			

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
						•			
						•			

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
3	Surface, ground and water quality	Fuel, oil, antifreeze, etc. spills	*277/1 parcel, sub-project area access route, energy transmission line route*	Visual monitoring, Grievance Mechanism Records	*Daily*	• *Minimization and continued improvement in the number of the reported soil quality related incidents* • *Zero NCRs per year* • *Zero accident per year* • *Zero grievances per year*	*World Bank /* IFC*General EHS Guidelines* • *WB ESS3* • *Regulation on the Protection of Ground Waters against Pollution and Deterioration* • *Regulation on the Control of Pollution Caused by Hazardous Substances in and around Water Environment* •*Regulation on Wastewater Collection and Removal Systems*	Kalaba Municipality	Kalaba Municipality

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
4	Waste Management	Inverters , batteries etc. disposal of sourced electronic waste	*277/1 parcel*	Visual monitoring, Waste Records Grievance Mechanism Records	*Daily*	• *Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)*	*-World Bank /* IFC *General EHS Guidelines:* • *WB ESS1* • *WB ESS3* • *Regulation on Waste Management* • *Zero Waste Regulation* • *Regulation on Packaging Waste Control* • *Regulation on Waste Oil Management* • *Regulation on Medical Waste Control* • *Regulation on Control of Waste Electrical and*	Kalaba Municipality	Kalaba Municipality
		Hazardous waste	*277/1 parcel*	Visual monitoring, Waste Records Grievance Mechanism Records	*Daily*	• *Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)*		Kalaba Municipality	Kalaba Municipality

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
		Domestic Waste	*277/1 parcel*	Visual monitoring, Waste Records Grievance Mechanism Records	*Daily*	• *Minimization of total waste generated* • *Increase in the ratio of recovered/reused/recycled waste to total waste generated*	*Electronic Equipment* • *Regulation on Control of Waste Batteries and Accumulators* • *Regulation on Control of End-of-life Tires*	Kalaba Municipality	Kalaba Municipality
		Packaging Waste	*277/1 Parcel*	Visual monitoring, Waste Records Grievance Mechanism Records	*Daily*	• *Minimization of total waste generated* • *Increase in the ratio of recovered/reused/recycled waste to total waste generated*		Kalaba Municipality	Kalaba Municipality

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
						•			
5	Community Health and Safety	Number of recorded safety incidents involving project workers and local people	*277/1 parcel, sub-project area access route, energy transmission line route*	Grievance Mechanism	Daily throughout the duration of the studies	• *Zero incidents per year* • *Zero number of drivers found to be exceeding speed limits or driving unsafely* • *Zero accidental injuries and deaths,* • *Zero traffic-related grievances* • *Zero Number of unauthorized accesses to the sub-project area*	*-World Bank / IFC General EHS Guidelines* • *WB ESS4* • *Regulation on Emergency Situations in Workplaces* • *Regulation on duties and responsibilities of OHS Specialists* • *Regulation on duties and responsibilities of Occupational Physicians and other medical personnel*	Kalaba Municipality	Kalaba Municipality

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
							• *Regulation on Health and Safety at Construction Works* • *Regulation on Health and Safety Conditions Regarding Use of Work Equipment* • *Regulation on Health and Safety Precautions Regarding Working with Chemicals* • *Regulation on Protection of Employees from the Hazards of Explosive Environments* • *Regulation on Health and Safety Regarding Temporary and Time-Limited Works*		

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
							• *Regulation on Health and Safety Signs* • *Regulation on Management of Dust* • *Regulation on Material Safety Data Sheets on Hazardous Materials and Mixtures* • *Law on Occupational* • *Health and Safety (6331)* • *Regulation on Personal Protective Equipment* • *Regulation on Protection of Workers from Risks Created by Noise* • *Regulation on Risk Assessment for Occupational*		

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
							Health and Safety • *Regulation on Sub-contractors* • *Regulation on Vocational Training of the Employees Working in Dangerous and Highly Dangerous Workplaces* • *Regulation on the Procedures and Principles of Employee Health and Safety Training* • *Regulation on High Current Electrical Facilities* • *Regulation on Manual Handling*		

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
6	Redress of grievance	Grievance Mechanism	*Kalaba Municipality*	"Grievance Forms" to be left around the construction site will be collected by the responsible person and forwarded to Kalaba Municipality. It will be monitored by Kalaba Municipality through the internet website, telephone and written applications to Kalaba Municipality. "Grievance Close Out	Daily throughout the duration of the studies	• *All grievances closed-out within the target timeframe* • *GM disclosure to the PAPs, stakeholders* • *GM disclosure at Sub-project web site*	*-World Bank / IFC General EHS Guidelines:* *WB ESS4* • *Regulation on Emergency Situations in Workplaces* • *Regulation on duties and responsibilities of OHS Specialists* • *Regulation on duties and responsibilities of Occupational Physicians and other medical personnel* • *Regulation on Health and Safety at Construction Works* • *Regulation on Health and Safety Conditions Regarding Use of Work Equipment*	Kalaba Municipality	Kalaba Municipality

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
				Form" will be kept.			• *Regulation on Health and Safety Precautions Regarding Working with Chemicals* • *Regulation on Protection of Employees from the Hazards of Explosive Environments* • *Regulation on Health and Safety Regarding Temporary and Time-Limited Works* • *Regulation on Health and Safety Signs* • *Regulation on Management of Dust* • *Regulation on Material Safety Data Sheets on Hazardous*		

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
							Materials and Mixtures • *Law on Occupational* • *Health and Safety (6331)* • *Regulation on Personal Protective Equipment* • *Regulation on Protection of Workers from Risks Created by Noise* • *Regulation on Risk Assessment for Occupational Health and Safety* • *Regulation on Sub-contractors* • *Regulation on Vocational Training of the Employees Working in Dangerous and Highly*		

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)
							Dangerous Workplaces • *Regulation on the Procedures and Principles of Employee Health and Safety Training* • *Regulation on High Current Electrical Facilities* • *Regulation on Manual Handling*		
7	Use of protective equipment, occupational safety training and OHS measures	Worker Safety	*277/1 parcels, sub-project area access route, energy transmission line route*	Visual monitoring,	Daily	• *Zero work accidents*	*World Bank / IFC General EHS Guidelines* • *WB ESS2* • *Regulation on Use of Personal Protective Equipment*	Kalaba Municipality	Kalaba Municipality

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring/Key Performance Indicators (KPIs)	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Cost (If not included in the Subproject Budget)

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 25

Table 25. Plans and Procedures associated

Management Plan or Procedure	Relevant Subproject Phase (Construction only, Operation only, both Construction and Defect Liability Period (DLP))
OHS Management Plan	Construction and Operation
Air Quality Management Plan	Construction only
Traffic Management Plan	Both Construction and Defect Liability Period (DLP)
Emergency Preparedness and Response Plan	Construction only
Stakeholder Engagement Plan	Construction and Operation
Site Closure/Rehabilitation Plan	
Chance Finds Procedure	Construction only
Waste Management Plan	Construction and Operation

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 Subproject (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 Subproject implementation (e.g. new permitting processes).
- Design changes (e.g. any changes in the Subproject 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 Subproject 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 12.** The PIU will have qualified staff and resources to the satisfaction of ILBANK.

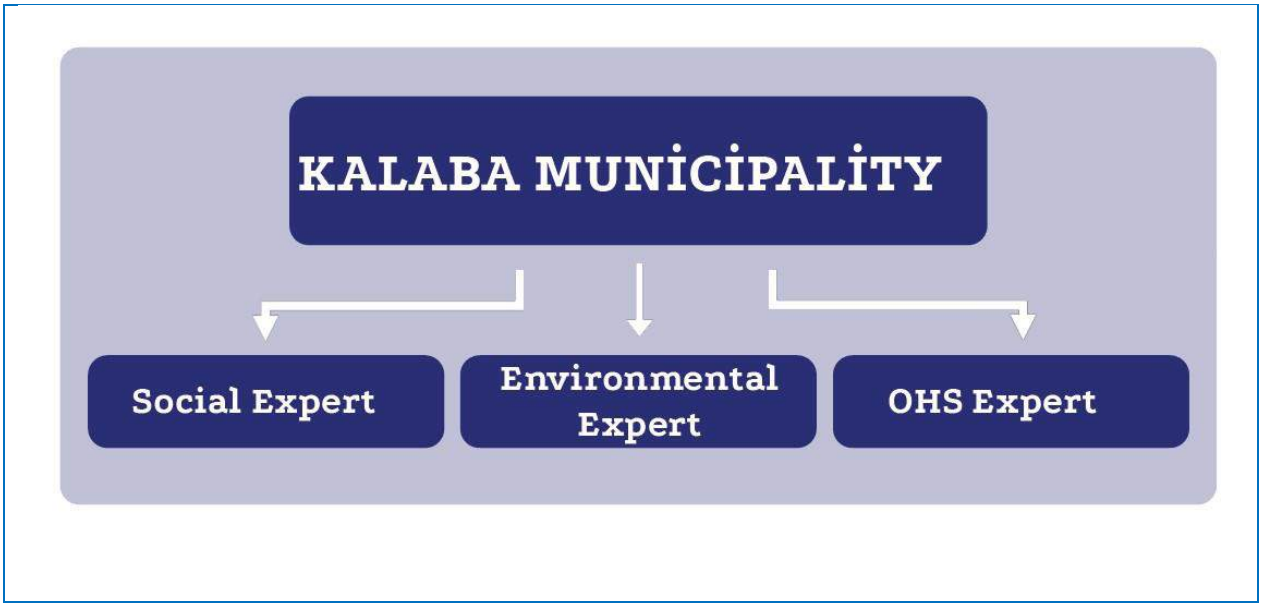


Figure 12. Organization Structure – Project Implementation Unit (PIU)

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 Subproject 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 Management Plan (ESMP).
- **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 mechanism; and
- **Occupational Health and Safety (OHS) Specialist(s)** to address OHS risks and impacts under the ESA reports.

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

There is 1 environmental expert, 1 social expert and 1 OHS expert in Kalaba Municipality.

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 Table 26.

Table 26. Roles and E&S related Responsibilities of Key Parties associated with ESMP Implementation

Party	Role	Key Responsibilities
Sub-borrower		
Kalaba Municipality	Sub-borrower Management	• Hold ultimate responsibility for the E&S performance of the Subproject to the satisfaction of the ILBANK, including the performance of Subproject 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 Subproject 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 Subproject related work activity if it poses an imminent danger to health, safety, or the environment. • Allocate resource to ensure monitoring of Subproject 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	• 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 High and Substantial risk Subproject, as well as for Moderate risk Subproject 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 assessment and prepare the E&S documentation required for ILBANK's appraisal and credit decision-making processes • 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)

Party	Role	Key Responsibilities
		• 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 Subproject 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 Subproject-specific E&S documentation (such as ESMP, SEP and other E&S management plans and procedures required by ILBANK) • Undertake monitoring of Subproject 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 Subproject facilities and records.
Construction Supervision Consultants (“*Müsavir*”)	Management and E&S staff	Carry out the following tasks on behalf of the sub-borrowers: • 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 Subproject-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 Subproject related operations within 24 hours
Construction Contractor	Management and E&S staff	• 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 Subproject-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 (“*müşavir*”) – in line with the format provided by ILBANK. • Fill in monthly occupational health and safety (OHS) forms – reviewed by construction supervision consultants.

Party	Role	Key Responsibilities
		• 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 Subproject related operations (timeframe to be defined by 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 27. For relevant aspects such as OHS, mitigation of environmental impacts, etc., the E&S training programs will be integrated with the technical/ operational training programs (including any practical training where necessary) to be delivered by the contractors to contractor and sub-contractor workers on the operating principles of the power plant, operations involving high voltage equipment, field safety, field maintenance-repair, material replacement, fault detection, and intervention during and after installation and incorporated to the operation manuals to be prepared by the Kalaba Municipality.

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

For relevant aspects such as OHS, mitigation of environmental impacts, etc., the E&S training programs will be integrated with the technical/ operational training programs (including any practical training where necessary) to be delivered by the contractors to contractor and sub-contractor workers on the operating principles of the power plant, operations involving high voltage equipment, field safety, field maintenance-repair, material replacement, fault detection, and intervention during and after installation and incorporated to the operation manuals to be prepared by the Kalaba Municipality.

Table 27. Training Components for Training of Contractor Staff

Module	Training Name	Training Duration	Key Training Content
Module 1	ILBANK E&S Requirements	1 hour	- Overview of ILBANK E&S requirements: 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	Subproject-level E&S Requirements for contractors as per sub-financing agreement conditions	3 hours	- Subproject specific requirements: o E&S covenants included in sub-loan agreements o Subproject ESAP requirements o Subproject-level E&S assessment and management documentation (such as ESMP, SEP and other E&S management plans and procedures as applicable); o Emergency Preparedness and Response Plan including a training program for emergency responders including drills at regular intervals; o Specific training (such as driver training in case of involvement of vehicles or fleets of vehicles in Subproject-operations, training of security forces in the use of force (and where applicable, firearms), and appropriate conduct toward workers and affected communities, etc.). - Preparation and implementation of Labour Management Procedures.

6. IMPLEMENTATION SCHEDULE AND COST ESTIMATES

6.1. Implementation Schedule

Duration of the construction and operation phase activities are listed in Table 28.

Table 28. Duration of Activities

Phase	Remarks/ Notes
Construction Duration (from site mobilization until provisional acceptance)	1 months
Defect Liability Period	1 year
Operation Duration	25 years

6.2. Cost Estimates

All costs for implementing the ESMP are included in the Project budget (see Table 29).

- Allocating resources for project management activities related to overseeing the implementation of the ESMP and coordinating with contractors and stakeholders; hiring Environmental and Social Experts to provide supervision and monitoring.
- Training costs for construction workers and project staff on environmental and social best practices and protocols.
- Investment in health and safety training and equipment for employees to prevent accidents and mitigate occupational health risks.
- Periodic Third-Party Audits and Reviews by independent third parties to assess the effectiveness of the ESMP and identify areas for improvement.
- Renewal of infrastructure necessary to mitigate environmental and social impacts, such as roads or wildlife barriers; setting aside funds to address unforeseen environmental or social issues that may arise during construction such restoration of any damage on roads or public amenities.
- Expenses related to stakeholder engagement and corporate social responsibility programs.
- Budget for investigation of grievances for nuisance from potential noise and dust emissions and taking of additional measures as necessary.
- Budget for management of accidental spills and leakages of oils and chemicals in order to protect soil and groundwater.
- Budget for regular maintenance of the waste storage area, cesspit, fencing.

Table 29. ESMP Cost Breakdown for Implementation and Monitoring

Budget Item	Estimated Amount
Construction Phase	

Environmental Expert	Key Personnel (*)
Social Expert	Key Personnel (*)
OHS Expert	Key Personnel (*)
Monitoring (Measurements and laboratory analyses)	Belongs to the Contractor's Budget (**)
Finance Expert	No Additional Charges (***)
Technical Expert	No Additional Charges(***)
Operation Phase	
Monitoring (Measurements and laboratory analyses)	Included in the operation budget of Kalaba Municipality (**)
Finance Expert	No Additional Charges (***)
Technical Expert	No Additional Charges (***)

(*) The recruitment of experts is financed within the budget for audit consultancy services. The relevant cost estimates are taken into account at the first stage of consultant selection. Contractors are obliged to recruit environmental, social and OHS experts for the implementation and monitoring of the ESMP within the scope and price of their bids. The monthly cost estimate per expert at this stage is €1,000/month.

(**) Laboratory and testing obligations and the relevant reporting responsibility will be included in the employment contract during the construction period and the defects liability period. This responsibility will then be transferred to Kalaba Municipality for the operation phase.

(***) Since Kalaba Municipality's permanent staff will be assigned to these positions, no additional costs will be incurred in the sub-project budget

List of Annexes

Annex A – List of the Individuals/Organizations that Prepared or Contributed to the ESMP

Name of the Individual/ Organization	Company/ Institution	Profession/ Expertise
Emre Satılmış	Kalaba Municipality	Environmental Expert
Murat Yorgancı	Kalaba Municipality	OHS Expert
Gamze Taştak	Kalaba Municipality	Social Expert
Elif Tuna PULAŞ	ÇA Engineering	Environmental Expert

Annex B – Existing Permitting Documentation

GIDANI KORU
SOFRANA SAHİP ÇIK

T.C.
NEVŞEHİR VALİLİĞİ
İl Tarım ve Orman Müdürlüğü

07.01.2021

Sayı : E-17888905-230.04.02-61118
Konu : İmar Planı Yapımı

KALABA BELEDİYE BAŞKANLIĞINA
(Yazı İşleri Müdürlüğü)

İlgi : 25.12.2020 tarihli ve 23752560-656 sayılı yazınız.

İlgi yazınız ile Nevşehir ili, Avanos ilçesi, Kalaba kasabasında kayıtlı ve mülkiyeti Kalaba Belediyesine ait 278 ada 1 parsel ve 277 ada 1 parsel numaralı halihazırda Belediyeniz Uygulama İmar Planı içerisinde yer alan taşınmazlar üzerine Belediyeniz tarafından Güneş Enerjisi Santrali Amaçlı Nazım ve Uygulama İmar Planı yapılacağı ve bu bağlamda kurum görüşümüzün bildirilmesi istenmektedir.

Talep edilen alanlar, Mevcut Uygulama İmar Planı içerisinde kalması nedeniyle ilgili taşınmazlarda Nazım ve Uygulama İmar Planı yapılmasında 5403 sayılı Toprak Koruma ve Arazi Kullanımı Kanunu kapsamında yapılacak herhangi bir işlem bulunmamaktadır.

Bilgilerinize rica ederim.

Okan YILMAZ
İl Müdürü

13.01.2021/52
Fen İşleri sak

Güvenli Elektronik İmzalı
Aslı ile Aynıdır
07.01.2021
Gülhava ANKAT
Evrak Görevlisi

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Belge Doğrulama Kodu : PGLFOAEO Belge Doğrulama Adresi: https://www.turkiye.gov.tr/tarim-ve-orman-bakanligi-ebys

2000 Evler Mahallesi Mustafa Paşanmaz Caddesi No:2 50300 Nevşehir
Tel: 0 (384) 215 20 50 Faks:0 (384) 215 20 55
E-Posta: nevsehir@tarim.gov.tr Kep: tarimvormanbakanligi@hs01.kep.tr

Bilgi için:Abdullah Fatih BOSTANCI
Şube Müdürü V.
Telefon No:(384) 215 20 50-304

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

Sayı : E-22507062-220.03-2732791

Konu : ÇED Kapsam Dışı Hk.

KALABA BELEDİYE BAŞKANLIĞI'NA

İlgi : a) 12.01.2022 tarihli ve 22004456-Bila sayılı yazımız.,
b)Çevrimiçi ÇED süreci yönetim sistemi üzerinden yapılan 18.01.2022 tarihli başvuru.

Nevşehir ili, Avanos ilçesi, Kalaba beldesi, Fevzi Çakmak caddesi, 277 ada 1 parselde Kalaba Belediyesi tarafından yapılması planlanan Güneş Enerji Santrali (0.99 MWp) projesi, 25/11/2014 tarih ve 29186 sayılı Resmî Gazete'de yayımlanarak yürürlüğe giren ÇED Yönetmeliği Listelerindeki eşik değerden az olduğu için kapsam dışı olarak değerlendirilmiştir.

Ancak, planlanan yatırım ile ilgili olarak, 5491 sayılı kanunla değişik 2872 sayılı Çevre Kanunu ile bu Kanuna istinaden çıkarılan Yönetmeliklerin ilgili hükümlerine uyulması ve diğer mer'i mevzuat çerçevesinde öngörülen gerekli izinlerin alınması, ekolojik dengenin bozulmamasına, çevrenin korunmasına ve geliştirilmesine yönelik tedbirlere riayet edilmesi gerekmektedir.

Bilgilerinizi ve gereğini rica ederim.

Mustafa SOLMAZ
Çevre, Şehircilik ve İklim Değişikliği İl Müdürü

15 Temmuz Mah. Alparslan Türkeş Cad. No:1 Merkez/NEVŞEHİR
Tel: (384) 215 10 50 - (384) 215 10 54 Fax: (384) 215 10 56
nevsehircevresehircilik@hs01.kep.tr
e-posta:nevsehir@csb.gov.tr İnternet adresi: www.csb.gov.tr/iller/nevsehir
Bilgi için:Ahmet ADIYAMAN
Çevre Yüksek Mühendisi

RAPOR

Kalaba Belediye Başkanlığının 25/12/2020 tarih ve 656 sayılı yazıları gereğince, Kalaba Belediye Başkanlığı tarafından K.33a061bpafta, 278 ada, 1 parselde ve K34a06a1b pafta, 277 ada, 1 parselde kayıtlı mülkiyeti Belediye ye ait araziler üzerinde Güneş Enerji Santrali Amaçlı Nazım İmar Planı yapılması düşünülen yerlerde Müdürlüğümüz Çevre Sağlığı Birimi Çevre Sağlığı Teknisyenlerince yerinde yapılan incelemede;

Meri Mevzuatlar çerçevesinde ilgili kurumlardan gerekli izinlerin alınması, gerekli sağlık koruma bandı oluşturularak imar planına işlenerek korunması,sağlık tedbirlerinin alınması kaydı ile adı geçen yerde GES Amaçlı Nazım İmar Planı yapılmasında Toplum ve Çevre Sağlığı açısından bir sakıncanın olmadığı kanaatinde olduğumuzu bildirir rapordur.

Ömer Önder İPEK
Çevre Sağlığı Teknisyeni

Mahir GÖLBAŞI
Çevre Sağlığı Teknisyeni

T.C.
NEVŞEHİR VALİLİĞİ
İl Sağlık Müdürlüğü

Sayı : E-93226175-811.01.02
Konu : İmar Planı

KALABA BELEDİYE BAŞKANLIĞINA

İlgi : 04/01/2021 tarihli ve 656 sayılı yazınız

İlgi yazınız gereği İlimiz Kalaba Kasabası Yeni Mahalle Fevzi Çakmak Caddesi Üzeri Mevkiinde Kalaba Belediye Başkanlığı tarafından,Güneş Enerji Santrali yapılmak istenilen yerde; Müdürlüğümüz Bulaşıcı Hastalıklar Çevre Sağlığı Birimi Çevre Sağlığı Teknisyenlerince yerinde yapılan inceleme sonucu düzenlenen 06.02.2021 tarihli rapor ekte gönderilmiştir.raporda belirtilen hususlara uyulması kaydıyla Müdürlüğümüzce uygundur.

Bilgilerinizi ve gereğini arz ederim.

Dr.Rahim ÜNLÜBAY
İl Sağlık Müdürü

Ek: Rapor

28/02.2021
Fen işleri şube

İl Sağlık Müdürlüğü Bulaşıcı Hastalıklar Çevre ve Çalışan Sağlığı Birimi Tel: 0384 213 83 00 Fax: 0384 213 30 06
Telefon: Faks No: 0384 213 30 06
e-Posta: omeronder.ipek@sglik.gov.tr İnternet Adresi: omeronder.ipek@saglik.gov.tr

Bilgi için: Ömer Önder İPEK
Çevre Sağ. Tekn.
Telefon No: (0 000) 000 00 00

T.C.
KÜLTÜR VE TURİZM BAKANLIĞI
Kültür Varlıkları ve Müzeler Genel Müdürlüğü
Kayseri Kültür Varlıklarını Koruma Bölge Kurulu Müdürlüğü

PATARA

Sayı : E-67141141-304.02-1158318

25.02.2021

Konu : Nevşehir İli, Avanos İlçesi, Kalaba Beldesi, 278 Ada, 1 Parsel ve 277 Ada, 1 Parsel Numaralı Taşınmaz Üzerinde Yapılması Planlanan Nazım ve Uygulama İmar Planı Hakkında.[50.02/2263]

KALABA BELEDİYE BAŞKANLIĞINA
(Fen İşleri Müdürlüğü)

Nevşehir İli, Avanos İlçesi, Kalaba Beldesi,Yeni Mahalle, Fevzi Çakmak Caddesi, 278 ada,1 parsel ve 277 ada, 1 parsel numaralı taşınmaz üzerine Kalaba Belediyesi tarafından yapılması planlanan Güneş Enerji Santrali amaçlı Nazım ve Uygulama İmar Planına esas olmak üzere söz konusu taşınmazın 2863 sayılı Kanun kapsamında bulunup bulunmadığının 4706 sayılı kanunun 7 inci maddesi uyarınca en geç iki ay içerisinde bildirilmesi bu süre içinde cevap verilmediği takdirde olumlu görüş verilmiş sayılacağının bilinmesi hususunda ilgi yazınız ve ekleri incelenmiştir.

Müdürlüğümüz arşivinde yapılan incelemede; Nevşehir İli, Avanos İlçesi, Kalaba Beldesi,Yeni Mahalle, Fevzi Çakmak Caddesi, 278 ada,1 parsel ve 277 ada, 1 parsel numaralı taşınmazın; korunması gerekli taşınmaz kültür varlığı olarak herhangi bir tescil kaydının bulunmadığı, herhangi bir sit alanı (kentsel,arkeolojik, tarihi) veya korunma alanı içerisinde yer almadığı tespit edilmiştir. Ayrıca Müdürlüğümüz uzmanları tarafından **15.02.2021** tarihinde yerinde yapılan yüzey incelemesinde de bahse konu parselde korunması gerekli kültür varlığı niteliği taşıyan herhangi bir taşınmaza rastlanılmamıştır.

Sonuç olarak bu alan üzerinde yapılacak olan olası hafriyat çalışmaları sırasında herhangi bir buluntu veya kalıntıya rastlanılması durumunda, 2863 sayılı Yasanın 4. maddesi gereğince çalışmaların durdurularak en yakın Müze Müdürlüğüne veya köyde muhtara veya diğer yerlerde mülki idare amirlerine haber verilmesi koşulu ile uygulamaya gidilmesinde 2863 sayılı Yasa ve ilgili mevzuat kapsamında sakınca bulunmamaktadır.

Gereğini bilgilerinize arz ederim.

Alper YILDIZ
Koruma Bölge Kurulu Müdür V.

25.02.2021/157
Fen İşlerine Sevk

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: 2CB4571E-A6CD-4FB7-B938-42D2EDCD5A84 Doğrulama Adresi: https://www.turkiye.gov.tr/

Tacettinveli Mah. Lalezade Cad. No:6 Kiçikapı Melikgazi/KAYSERİ
Mail: kayserikurul@ktb.gov.tr Kep:kayserikurul@hs01.kep.tr
Tel: 0352 231 16 25 Faks: 0352 231 75 73

Bilgi için:Halime KUTLU
4/B(Sözleşmeli) Arkeolog

Türkiye

Annex C – Title Deed

T.C.
KALABA BELEDİYE BAŞKANLIĞI
Yazı İşleri Müdürlüğü

Sayı : E-23752560-000-1893
Konu : GES Tahsis Yazısı

BELEDİYE BAŞKANLIK MAKAMINA

Beldemiz Yeni Mahalle Fevzi Çakmak Caddesi üzerinde bulunan 277 ada 1 nolu parsel Güneş Enerji Santrali yapım işi için Tahsis edilmesi gerekmektedir.
Olurlarınıza arz ederim.

OLUR
Erdal YORGANCI
Belediye Başkanı

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: db35db13-1ebc-45c5-86bf-f35faaf55f35 Doğrulama Linki: https://www.turkiye.gov.tr/icisleri-belediye-ebys

Adres: Yeni Mahalle Mustafa Kemal Atatürk Cad.No:127 Kalaba Kasabası Avanos Nevşehir
Telefon No: (384)561 21 56 Faks No: (384)561 27 77
e-Posta: info@kalaba.bel.tr İnternet Adresi: http://www.kalaba.bel.tr
Kep Adresi: kalababelediyesi@hs01.kep.tr
Bilgi için: Emre SATILMIŞ
Teknik Personel
Telefon No:

1/1

İli	NEVŞEHİR
İlçesi	AVANOS
Mahallesi	
Köyü	KALABA
Sokağı	
Mevkii	KÖYİÇİ

Türkiye Cumhuriyeti

TAPU SENEDİ

Fotoğraf

Satış Bedeli	Pafta No.	Ada No.	Parsel No.	Yüzölçümü ha	m²	dm²
0,00	K34A06A1B	277	1		13.961,56 m2	

GAYRİMENKULÜN

Niteliği	Arsa
Sınırı	Planındadır Zemin Sistem No : 110334594 QRKodu kullanarak taşınmazın haritasına ulaşabilirsiniz.
Edinme Sebebi	KALABA Köyü 3829 Parsel taşınmazının İmar (TSM) işleminden.
Sahibi	KALABA BELEDİYESİ Tam

Geldisi		Yevmiye No.	Cilt No.	Sahife No.	Sıra No.	Tarihi	Gittisi	
Cilt No.		5679	59	5774		23/09/2020		Cilt No.
Sahife No.		Siciline Uygundur Servis [illegible] Tapu Müdürü						Sahife No.
Sıra No.								Sıra No.
Tarih		NOT: [illegible]						Tarih

D.M.O. Basım İşl. Md. Döner Sermaye İşletmesi tarafından bastırılmıştır. Stok No 129

286/1 Title Deed

Türkiye Cumhuriyeti

TAPU SENEDİ

İli	NEVŞEHİR
İlçesi	AVANOS
Mahallesi	
Köyü	KALABA
Sokağı	
Mevkii	KÖYİÇİ

Fotoğraf

Satış Bedeli	Pafta No.	Ada No.	Parsel No.	Yüzölçümü ha	m²	dm²
0,00	K34A06A1A	286	1		55.792,36 m2	

GAYRİMENKULÜN

Niteliği	Arsa
Sınırı	Planındadır Zemin Sistem No : 110234609 QRKodu kullanarak taşınmazın haritasına ulaşabilirsiniz.
Edinme Sebebi	KALABA Köyü 3829 Parsel taşınmazının İmar (TSM) işleminden.
Sahibi	KALABA BELEDİYESİ Tam

Geldisi		Yevmiye No.	Cilt No.	Sahife No.	Sıra No.	Tarihi	Gittisi	
Cilt No.		5679	59	5786		23/09/2020		Cilt No.
Sahife No.		Siciline Uygundur. Şevki ÇETİN Tapu Müdürü						Sahife No.
Sıra No.								Sıra No.
Tarih								Tarih

NOT : * Mülkiyetin gayri ayni hakkı ile şerhler için tapu kütüğüne müracaat edilmelidir.
** Tebligat Kanunu Hükümleri gereğince adres değişikliği ilgili Tapu Sicil Müdürlüğüne bildirilecektir.

D.M.O. Basım İşl. Md. Döner Sermaye İşletmesi tarafından bastırılmıştır. Stok No 129

Annex D – Site Photographs

Photo No: 01 **Date: 23/09/2024** **Location: 277/1** **Details/Notes:**	
Photo No: 02 **Date: 23/09/2024** **Location: 277/1** **Details/Notes:**	
Photo No: 03 **Date: 23/09/2024** **Location: 277/1** **Details/Notes:**	

Annex E – Baseline Measurements

No measurements have been made yet. Will be updated when they are made.

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]*	**Notification Type**: [*Please indicate; e-mail/phone call/media notice/other]*
Date Reported to WB: [*Please indicate*]	**Reported to WB by**: [*Please indicate]*	**Notification Type**: [*Please indicate; e-mail/phone call/media notice/other]*
Full Name of the Contractor of the Subproject:	[*Please indicate]*	
Full Name of the Sub-contractor involved in the incident:	[*Please indicate]*	

2) Type of incident (please check all that apply)[6]	
☐ Fatality	☐ Acts of violence/protest
☐ Lost time injury	☐ Unexpected impacts on heritage resources
☐ Displacement without due process	☐ Unexpected impacts on biodiversity resources
☐ Child labor	☐ Environmental pollution incident
☐ Forced labor	☐ Dam failure
☐ Disease outbreaks	☐ Other

3) Description/Narrative of Incident

For example:

I. *What is the incident?* [*Please briefly describe*]

II. *What were the conditions or circumstances under which the incident occurred (if known)?* [*Please briefly describe*]

III. *Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions?* [*Please briefly describe*]

IV. *Is the incident still ongoing or is it contained?* [*Please briefly describe*]

V. *Have any relevant authorities been informed?* [*Please briefly describe*]

[6] See Appendix 2 for definitions.

4) Actions taken to contain the incident

Short Description of Action	Responsible Party	Expected Date	Status

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*]

APPENDICES

Appendix 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

Appendix 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

For example:

I. *where and when the incident took place,*
II. *who was involved, and how many people/households were affected,*
III. *what happened and what conditions and actions influenced the incident,*
IV. *what were the expected working procedures and were they followed,*
V. *did the organization or arrangement of the work influence the incident,*
VI. *were there adequate training/competent persons for the job, and was necessary and suitable equipment available,*
VII. *what were the underlying causes; where there any absent risk control measures or any system failures.*

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 ☐ **Lost time injury** ☐

Immediate cause of fatality/injury for worker or member of the public (please check all that apply) [7]**:**

☐ Caught in or between objects
☐ Struck by falling objects
☐ Stepping on, striking against, or struck by objects
☐ Drowning
☐ Chemical, biochemical, material exposure
☐ Falls, trips, slips
☐ Fire & explosion
☐ Electrocution
☐ Homicide
☐ Medical Issue
☐ Suicide
☐ Project Vehicle Work Travel
☐ Non-project Vehicle Work Travel
☐ Project Vehicle Commuting
☐ Non-project Vehicle Commuting
☐ Vehicle Traffic Accident (Members of Public Only)
☐ Other

Name	Age/ Date of Birth	Nationality	Gender	Date of Fatality/ Injury	Cause of Fatality/ Injury	Affected Party (Employee/ Public)
			☐ Female ☐ Male			☐ Sub-borrower employee ☐ Contractor employee ☐ Sub-contractor employee ☐ Public

[7] See Appendix 1 for definitions

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

☐ No Compensation Required
☐ Workman's Compensation/National Insurance
☐ Contractor Direct
☐ Contractor Insurance
☐ Other
☐ Court Determined Judicial Process

Name	Compensation Type	Compensation Amount (TRY)	Responsible Party

4) Supplementary Narrative

Appendix 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 impartment 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.

Appendix 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

Appendix 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

PART A **BÖLÜM A**				
Subproject Location *Altproje Sahası*	District *(İlçe):* Village *(Köy):*	Date *Tarih*	Form No	Project Information *Proje Bilgisi*
Name of person reporting chance find: *Şans bulgusunu rapor eden kişinin ismi*				
Name of contractor employee contacted: *İletişime geçilen yüklenici çalışanının adı:*				
Was work stopped in the immediate vicinity of chance find? ☐Yes ☐No *Şans bulgusunun tam çevresinde iş durduruldu mu?* ☐*Evet* ☐*Hayır*				
Was a buffer zone created to protect chance find? ☐Yes ☐No *Şans bulguyu korumak için tampon bölge oluşturuldu mu?* ☐*Evet* ☐*Hayır*				
NOTIFICATION ***BİLDİRİM***				
Site manager contacted. ☐Yes ☐No *Saha müdürü ile irtibata geçildi.* ☐*Evet* ☐*Hayır*				
The Subproject E&S manager contacted. ☐Yes ☐No *Altproje Çevre Müdürü ile irtibata geçildi.* ☐*Evet* ☐*Hayır*				
CHANCE FIND DETAILS ***ŞANS BULGU AYRINTILARI***				
GPS coordinates *GPS koordinatları*			Photo record ☐Yes ☐No *Fotoğraf Kaydı* ☐*Evet* ☐*Hayır*	

	(HD quality – no cell phone photos) *(HD kalitesinde-cep telefonu fotoğrafı değil)* If not, explain why: *Değil ise nedenini açıklayınız.* Other records ☐Yes ☐No Specify (drawings, HD quality videos, etc.) *Diğer kayıtlar* ☐*Evet* ☐*Hayır* *Belirtin (çizimler, HD kaliteli videolar, vb.)*
Description of chance find: *Şans bulgusunun tanımı:*	
Description of site and vegetation: (e.g. surface sediment type, ground surface visibility, distance to closest watercourse, etc.) *Sahanın / bulgunun ve saha/bulgunun diğer özelliklerinin tanımı: (örn. Yüzey sediman türü, yüzey zemin görünürlüğü, en yakın su yoluna olan mesafe, vb.)*	

PART B **BÖLÜM B**	
NOTIFICATION OF MUSEUM DIRECTORATE ARCHAEOLOGIST ***MÜZE MÜDÜRLÜĞÜ ARKEOLOĞUNA BİLDİRİ***	
The Project Environment Representative contacted museum directorate archaeologist.	☐ Yes ☐No
İzleme arkeoloğu, müze müdürlüğü arkeoloğu ile irtibata geçti.	☐ *Yes* ☐*No*

Date of notification:

Bildirim tarihi:

Name of museum directorate archaeologist:

Müze müdürlüğünün adı ve Müze müdürlüğü arkeoloğunun adı:

Contact number of museum directorate archaeologist:

Müze müdürlüğü arkeoloğunun iletişim numarası:

DECISION OF MUSEUM DIRECTORATE ARCHAEOLOGIST

MÜZE MÜDÜRLÜĞÜ ARKELOĞUNUN KARARI

Date of site visit:

Saha ziyaret tarihi:

Site of no significance - Construction to proceed with no further investigation – End of chance find. *Önemsiz Saha – Bulgu - daha fazla araştırma yapılmadan inşaat devam edilebilir – Şans bulgu prosedürün sonu.* Date of notice to resume work: *İşe devam etme tarihinin bildirisi:*	☐ Site of significance - Further investigation required ☐ *Önemli Saha – Bulgu - Ek araştırma gerekmektedir* Fill out Part C. *Lütfen Bölüm C'yi doldurun.*

Name of museum directorate archaeologist:

Müze müdürlüğü arkeoloğunun ismi:

Contact information:

İletişim numarası:

Site manager and E&S manager contacted	☐ Yes	☐ No

Saha Müdürü ve E&S müdürü ile irtibata geçildi	☐ *Evet*	☐ *Hayır*

PART C **BÖLÜM C**		
FURTHER FIELD INVESTIGATION **EK SAHA ARAŞTIRMASI**		
☐ Site of no significance ☐ *Az önem taşıyan saha/bulgu*	☐ Site of minor significance ☐ *Orta derecede önem taşıyan saha/bulgu*	☐ Site of major significance ☐ *Çok önemli saha/bulgu*
Describe additional work to be conducted: *Yapılması gereken ek islerin tanımı:*		
Date started: *Başlangıç Tarihi:*	Date completed: *Bitiş Tarihi:*	
Date of notice to resume work: *İşe geri dönme tarihi bildirisi:*		
Name of museum directorate archaeologist: *Müze müdürlüğü arkeoloğunun ismi:* Contact information: *İletişim numarası*		
Construction manager contacted *İnşaat müdürü ile irtibata geçildi*	☐ Yes ☐ *Evet*	☐ No ☐ *Hayır*

CHANCE FINDING RECORD

Reporting Period										
Total Incidental Findings										
The Current Situation				This Reporting Period						
IDENTITY (*)	DATE OF THE CHANCE FINDING	LOCATION	SUMMARY OF FINDINGS	NAME OF REPORTED INSTITUTION	DATE PART A WAS COMPLETED	COMPLETION DATE OF PART B	DATE PART C WAS COMPLETED	ACTION TAKEN	OPEN OR CLOSED STATUS	NOTES

Non-Significant Area	Minor Area	Area of Great Importance
• The Environmental Engineer will notify their manager, • The Environmental Engineer will record this decision in Section C of the Chance Find Form within 24 hours, • The Environmental Engineer will keep a copy of the Chance Find Form as a record, No further action will be required, • This step completes the chance find procedure, • Construction activities may continue.	• A rescue excavation will be completed • The Museum Directorate will provide instructions and/or supervision for the rescue archaeological excavation to the Project Environmental Engineer, • The Environmental Engineer will inform their own managers, • Under the guidance of the Museum archaeologist (following instructions from other authorities, Nevşehir Regional Board, etc.), the Project will provide a team of qualified archaeologists to conduct the rescue excavation, • The Environmental Engineer will submit a report to the Museum Directorate, • The Cultural Heritage Protection Regional Board Directorate will officially confirm that the rescue operation is complete and the Environmental Engineer will inform the construction manager that no further action is required, • The Environmental Engineer will inform other managers,	Excavation works will be completed, • The area will be handled in accordance with the "Law on the Protection of Cultural and Natural Assets (2863)", • The Museum Directorate will provide instructions and/or supervision for the salvage archaeological excavation to the Environmental Engineer, and the Project Environmental Engineer will inform the Construction Manager, • When the excavation is completed, the Project Representative will submit a report to the Quality Assurance Manager, • The Project Environmental Engineer will submit a report to the Museum Directorate, • The Cultural Assets Protection Regional Board Directorate will officially confirm that the recovery is complete and inform the Environmental Engineer,

	• The Environmental Engineer will record the decision in Section C of the Chance Finding Form within 24 hours, • The Project Environmental Engineer will keep a copy of the Chance Finding form as a record, • No further action will be required, • This step completes the chance finding procedure • Construction activities can resume.	• The site will be officially registered and protected according to Turkish regulations, • The Environmental Engineer will inform the Construction Manager that no further action is required or that a relocation is required, • The Project Environmental Engineer will record the decision in Section C of the Chance Detection Form within 24 hours, • The Project Environmental Engineer will keep a copy of the Chance Detection form as a record, • No further action will be required, • This step completes the chance finding procedure • Construction activities may restart or relocation may be implemented.

Name	Communication	Address
Nevşehir Museum Directorate	+90 384 213 14 47	350 Evler Neighborhood, Milli İrade Street, Türbe St, No:1 Central/ NEVŞEHİR

Name	Communication	Address
Nevşehir Cultural Heritage Protection Regional Board Directorate	+90 384 213 42 60–213 36 59-213 96 66–212 95 73 iktm50@ktb.gov.tr	Yeni Kayseri Street Atatürk Boulevard No:15 - NEVŞEHİR

Annex I – Change Notification Form

Change Notification Form		
Subproject Name		
Subproject Location		
Subproject Phase	☐	Pre-construction
	☐	Construction
	☐	Operation
Name of the Institution Notifying the Change		
Date		
Category of the Change *(please select all that apply)*	☐	Legislative Change
	☐	Design Change
	☐	Schedule Change due to E&S factors
	☐	Project Schedule Changes due to technical, financial, legal or administrative factors
	☐	Changes due to E&S issues encountered at Subproject implementation
	☐	Contractor or Construction Supervision Consultant Change
	☐	Other *(please specify below)*
Detailed Description of the Change(s)		

Change Notification Form	
Documents Submitted with Change Notification Form	
Name of the Staff Notifying the Change	
Position of the Staff Notifying the Change	
Signature	

Change Notification Form			

Annex J - Institutional and Legal Framework in Türkiye

In Türkiye, institutional framework consists of central and local administrations. Türkiye is structured by provinces according to economical and geographical conditions. Each province is managed by local administrations consisting of municipalities, villages/neighborhoods. Representatives of the administrative structure of municipalities and villages/neighborhoods are mayors and mukhtar, respectively. Ministries, which are central administrative units, provide services to local areas through their local branches including provincial organizations affiliated to governor and district organizations affiliated to district governors.

Environmental impacts, permits, management and inspection of the project is under the scope of authority of MoEUCC, Ministry of Agriculture and Forestry, Ministry of Culture and Tourism, Ministry of Labor and Social Security and Ministry of Health. MoEUCC is the key authority regulating policies and procedures related to conservation and protection of natural environment, management of natural resources and settlements by its general directorates. Those principally related to the Project are given as follows:

- General Directorate of Environmental Impact Assessment, Permit, and Inspection
- General Directorate of Environmental Management
- General Directorate of Protection of Natural Assets
- General Directorate of Infrastructure and Urban Transformation Services
- General Directorate of Land Registry and Cadastral

Provincial, regional and district level administrations are the field organizations of ministries and relevant institutions. The sub-project includes Kalaba Municipality, Kalaba Provincial Directorate of Environment, Urbanization and Climate Change, Nevşehir Provincial Directorate of Agriculture and Forestry, Kalaba District Directorate of Agriculture and Forestry, Nevşehir Cultural Heritage Protection Regional Board Directorate, State Hydraulic Works (DSİ) GAP 12th Regional Directorate.and Yeni neighborhood mukhtar administration have been associated as local administration for the sub-project.

The National Legislation applicable to the management of environmental, social, health and safety aspects of the proposed Project has been identified under this section.

The Environmental Law No: 2872 published in the Official Gazette No. 18132 dated 11.08.1983 and later revised in the Official Gazette No. 28661 and dated 29.05.2013 (Law No. 6486) constitutes the basic legal framework of the environmental legislation in Türkiye and is largely in line with the EU Directive on EIA.

This law is supported by numerous regulations. Article 10 of Environmental Law forms the main framework of the Environmental Impact Assessment (EIA Regulation) published in the Official Gazette No. 31907 dated 29.07.2022. As per the EIA Regulation, the projects that are listed in its Annex-I are subject to a full EIA process and those projects have to receive an “EIA Positive” certificate to proceed with investments. The projects that are listed in Annex-II of the Regulation are subject to a shorter process where the project proponents are required to submit a Project Information File (PIF) to the MoEUCC. MoEUCC gives its “EIA is Necessary” or “EIA is not necessary” decision regarding the project.

Unless the decision that “EIA is Positive” or “EIA is not Required” is made in accordance with the EIA Regulation for the project’s activities, incentive, approval, permit, building license and use permit for such projects cannot be granted, and no investment can be started or tendered for the project. However, this does not preclude applying for the processing of such incentives, approvals, permits, and licenses. As part of the European Union membership process, Türkiye has carried out a variety of organizational and legislative reforms. With these reforms, environmental legislation and environmental protection instruments have been harmonized with international standards. The activities and liabilities to be carried out within the scope of the Project must adhere to the provisions of the relevant Turkish legislation.

Within the scope of the EIA regulation published in the Official Gazette dated 25.11.2024 and numbered 29186, the subproject received an “EIA Out of Scope” decision on 18.01.2022 from the Nevşehir Governorship Environment and Urbanization Provincial Directorate as its capacity is below the threshold values given in the regulation (Annex B*)*

In addition to Environmental Law No: 2872, several associated laws are complementary regarding the protection and sustainability of the environment as well as the protection of health and safety rights of people. Those laws which would be applicable to the proposed Project are listed below:

- Environmental Law No. 2872 (OG No:18132, dated 11.08.1983)
- Expropriation Law No. 2942 (OG No:18215, dated 08.11.1983)
- Forestry Law No. 6831 (OG No:9402, dated 08.09.1956)
- National Parks Law No. 2873 (OG No:18132, dated 11.08.1983)
- Conservation of Cultural and Natural Assets Law No. 2863 (OG No:18113, dated 23.07.1983, and revised through the amendment issued on 27.07.2004)
- Highways Traffic Law No. 2918 (OG No:18195, dated 13.10.1983)
- Soil Conservation and Land Use Law No. 5403 (OG No:25880, dated 19.07.2005)
- Terrestrial Hunting Law No. 4915 (OG No:25165, dated 11.07.2003)
- Animal Protection Law No. 5199 (OG No:25509, dated 01.07.2004)
- Labor Law No. 4857 (OG No:25134, dated 10.06.2003)
- Occupational Health and Safety Law No. 6331 (OG No:28339, dated 30.06.2012)
- Social Insurance and General Health Insurance Law (OG No:26200 dated: 16.06.2006)

The main national laws regarding Public Health and Safety are as follows:

- General Hygiene Law No. 1593
- Law No. 5378 on Disabled People
- Private Security Services Law No. 5188
- Law No. 7269 on Measures to be Taken and Assistance to be Provided Due to Disasters Affecting Public Life

- Building Earthquake Regulation in Türkiye (Official Gazette dated 18.03.2018 and numbered 30364)
- Disaster Regulation for Infrastructures (Official Gazette dated 15.02.2007 and numbered 30364)
- Law No. 4708 on Building Inspection (Construction and Usage Permits)
- Zoning Law No. 3194 (Construction and Usage Permits)
- Law No. 6306 on the Transformation of Areas Under Disaster Risk

The regulations developed under the Environmental Law aim to specify and identify the procedures and principles of the management of environmental aspects. Under the relevant laws, several regulations or communiques are summarized in below.

Table 1. Environmental, Social, Labor, Health and Safety Legislation

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Environmental Permit and Licenses			
Regulation on Environmental Impact Assessment	31907	29.07.2022	Scoping of the Project and evaluation of impacts for the pre-construction, construction and operation stages of the Project.
Regulation on Environmental Permits and Licensing	29115	10.09.2014	Requirements for environmental permits and licenses at all stages of the Project.
Regulation on Environmental Auditing	31509	12.06.2021	Requirements for environmental audits to be performed by either Project Owner or governmental authorities during construction and operation stages.
Regulation on the Implementation of the Law Concerning Private Security Services	25606	07.10.2004	During the construction phase for camp site security and during the operation phase for safety purposes.
Air Quality Control and Greenhouse Gas (GHG) Emissions			
Industrial Air Pollution Control Regulation	27277	03.07.2009	During the construction phase, dust emissions.
Exhaust Gas Emission Control Regulation	30004	11.03.2017	Operation of Project vehicles, machinery, and equipment at all phases of the Project.
Biodiversity Conservation and Protection of Nature			

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Regulation on Protection of Wildlife and Wildlife Development Area	259637	08.11.2004	Measures to be taken for wildlife protection near to the Project area during the planning phase of the Project.
Chemicals and Other Dangerous Substances			
Regulation on Classification, Labelling, and Package of the Materials and Mixtures	28848	11.12.2013	Taking measures for chemicals and mixtures to be used during construction and operation phases.
Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals	30105	23.06.2017	Determination of chemicals to be used during the operation phase.
Regulation on the Control of Polychlorinated Biphenyls (PCBs) and Polychlorinated Terphenyls (PCTs)	26739	27.12.2007	Usage of transformers, capacitors, electrical equipment including voltage regulators, switches, oil used in motors, old electrical devices or appliances containing PCB capacitors, fluorescent light ballasts during the operational phase.
Noise			
Environmental Noise Control Regulation	32029	30.11.2022	Determination of noise emissions and measures to be taken at construction and operation phases.
Regulation on the Environmental Noise Emissions Caused by Equipment Used Outdoors	26392	30.12.2006	Regulating the noise levels caused by noise sources within the Project site at the construction and operation phases.
Soil and Land Use			
Regulation on the Control of Soil Pollution and Lands Contaminated by Point Sources	27605	08.06.2010	Determination of risks of soil contamination at construction and operation phases.
Regulation on Control of Excavated Soil, Construction and Demolition Wastes	25406	18.03.2004	Management of excavated soil and construction and demolition wastes at the source.
Regulation on Protection, Use, and Planning of Agricultural Lands	30265	09.12.2017	Management of change in the land use during the planning phase of the Project.
Waste			
Regulation on Waste Management	29314	02.04.2015	Management of waste from generation to disposal without harming the

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
			environment and human health during construction and operation phases.
Zero Waste Regulation	30829	12.07.2019	General principles regarding the establishment, development, monitoring, financing, recording and certification of the zero waste management system in line with sustainable development goals during construction and operation phases.
Regulation on Packaging Waste Control	30283	27.12.2017	Preventing the formation of packaging waste, reducing the amount of unavoidable packaging waste to be disposed of using reuse, recycling and recovery methods in construction and operation phases.
Regulation on Waste Oil Management	30985	21.12.2019	Waste oils included in the definition of waste oil and the management, recovery, disposal of these wastes, precautions to be taken and notifications to be made
Regulation on Medical Waste Control	29959	25.01.2017	Collection of medical waste in the places where it is produced, temporary storage, transportation to the medical waste processing facilities and disposal
Regulation on Control of Waste Electrical and Electronic Equipment	32055	26.12.2022	Management of electrical and electronic equipment wastes during construction and operation phases.
Regulation on Control of Waste Batteries and Accumulators	25569	31.08.2004	Establishment of a collection system and management for the recovery or final disposal of waste batteries and accumulators.
Regulation on Control of End-of-life Tires	26357	25.11.2006	Establishing a collection and management system for ensuring the necessary regulations and standards in the management of end-of-life tires during the construction and operation phases.
Water and Wastewater			
Regulation on the Protection of Ground Waters against Pollution and Deterioration	28257	07.04.2012	Protection of groundwater sources against pollution during construction and operation phases.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Regulation on the Control of Pollution Caused by Hazardous Substances in and around Water Environment	26005	26.11.2005	Management of hazardous substances during construction and operation phases.
Regulation on Wastewater Collection and Removal Systems	29940	06.01.2017	Procedures and principles regarding the planning, design and project design, construction and operation of wastewater collection and removal systems.
Structural Safety			
Regulation on Structures to be Built in Natural Disaster Areas	26582	14.07.2007	Management of construction works within the scope of the Project.
Regulation on Building Constructions in Earthquake Zones	26454	06.03.2007	Management of construction works within the scope of the Project.
Regulation on Building Earthquake of Türkiye	30364	18.03.2018	Measures to be taken for the design and construction works under the impact of earthquakes and the evaluation of the performance of existing buildings under the impact of earthquakes.
Regulation on the Protection of Buildings from Fire	26735	19.12.2007	Measures to be taken for fire protection during construction and operation phases.
Traffic			
Regulation on the Road Transportation of Hazardous Goods	28801	24.10.2013	Hazardous goods to be transported during construction and operation phase.
Regulation on Highway Traffic	23053	18.07.1997	Regulating speed limits of vehicles and machinery used during construction and operation phases.
Regulation on Traffic Signs	18789	19.06.1985	Regulating the traffic signs to be used during the construction and operation phases

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Health and Safety and Labor			
Regulation on Emergency Situations in Workplaces	28681	18.06.2013	Preparation of emergency plans, prevention, protection, evacuation, firefighting, first aid and similar studies in workplaces.
Regulation on duties and responsibilities of OHS Specialists	28512	29.12.2012	Defines roles and responsibilities of OHS specialists
Regulation on duties and responsibilities of Occupational Physicians and other medical personnel	28713	20.07.2013	Defines roles and responsibilities of Occupational physicians and the medial personnel
Regulation on Health and Safety at Construction Works	28786	05.10.2013	Measures to be taken during construction phase.
Regulation on Health and Safety Conditions Regarding Use of Work Equipment	28628	25.04.2013	Measures to be taken during construction phase related to use of equipment.
Regulation on Health and Safety Precautions Regarding Working with Chemicals	28733	12.08.2013	Measures to be taken during construction and operation phase related to use of chemicals.
Regulation on Protection of Employees from the Hazards of Explosive Environments	28633	30.04.2013	Procedures and principles regarding the precautions to be taken in order to protect the employees from the dangers of explosive atmospheres that may occur in the workplaces in terms of health and safety.
Regulation on Health and Safety Regarding Temporary and Time-Limited Works	28744	23.08.2013	Protection of employees with a temporary or fixed-term employment contract at the same level as other employees in the workplace in terms of health and safety.
Regulation on Health and Safety Signs	28762	11.09.2013	Measures to be taken during construction and operation phases.
Regulation on Management of Dust	289812	05.11.2013	Measures to be taken to combat dust in terms of occupational health and safety to prevent the risks that may arise from dust in the workplaces and to ensure that the workers are protected from the effects of dust.
Regulation on Material Safety Data Sheets on Hazardous Materials and Mixtures	29204	13.12.2014	Preparation of safety data sheets to ensure effective control and surveillance against the negative effects of harmful substances and mixtures on human health and the

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
			environment during construction and operation phases.
Law on Occupational Health and Safety (6331)	28339	20.06.2012	Health and safety measures to be taken during construction and operation stages.
Regulation on Personal Protective Equipment	30761	01.05.2019	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Protection of Workers from Risks Created by Noise	28721	28.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Risk Assessment for Occupational Health and Safety	28512	29.12.2012	Determination of occupational health and safety risks occurring during construction and operation phases.
Regulation on Sub-contractors	27010	27.09.2008	Management of contactors/sub-contractors during construction and operation phases.
Regulation on Use of Personal Protective Equipment in Workplaces	28695	02.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Vocational Training of the Employees Working in Dangerous and Highly Dangerous Workplaces	28706	13.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on the Procedures and Principles of Employee Health and Safety Training	28648	15.05.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on High Current Electrical Facilities	24246	30.11.2000	Covers measures regarding the safe installation, construction, operation and maintenance of high current electrical facilities.
Regulation on Manual Handling	28717	24.07.2013	Defines the safe procedures for safe handling of goods and equipment using manual manpower.
Cultural Heritage			
Law on Protection of Cultural and Natural Assets	18113	23.07.1983	Although there will not be a major excavation on the project site, a

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
			chance finds procedure will be in place at the construction phase.
Regulation on Researches, Drillings and Excavations in relation to the Cultural and Natural Assets	18485	10.08.1984	Defining the procedures and obligations concerning the cultural and natural assets found out during construction.

International Agreements and Conventions:

The international agreements and conventions ratified by Türkiye are listed below:

- Paris Agreement (2021)
- UN Framework Convention on Climate Change (UNFCCC) (2004)
- Rio Declaration on Environment and Development and Statement on Forest Principles (1992)
- Convention on Biological Diversity (Rio Convention) (1992)
- Paris Convention on the Protection of the World Cultural and Natural Heritage (1975)
- Barcelona Convention on the Protection of the Mediterranean Sea Against Pollution (1976)
- The Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) (1981)
- Bern Convention on Protection of Europe's Wildlife and Living Environment (1982)
- Vienna Convention for the Protection of the Ozone Layer (1988)
- Montreal Protocol on Substances Depleting the Ozone Layer (1990)
- Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (1994)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (1996)
- UN Convention to Combat Desertification (1998)
- United Nations Europe Economic Commission Convention on Transboundary Effects of Industrial Accidents (2000)
- Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) (2001)
- Stockholm Convention on Persistent Organic Pollutant (2010)
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) (1972)
- Mediterranean Sea Protocol Concerning Specially Protected Areas and Biodiversity (1988), including related protocols
- International Labor Organization (ILO) Convention on Forced Labor (1930)
- ILO Convention on Freedom of Association and Protection of the Right to Organize (1948)

- ILO Convention on Right to Organize and Collective Bargaining (1949)
- ILO Convention on Equal Remuneration (1951)
- ILO Convention on Abolition of Forced Labor (1957)
- ILO Convention on Discrimination (Employment and Occupation) (1958)
- ILO Convention on Worst Forms of Child Labor (1999)

Annex K - Minutes of Public Consultation Meeting

Türkiye Public and Municipal Renewable Energy Project (PUMREP)

KALABA MUNICIPALITY

SOLAR POWER PLANT PROJECT

Minutes of Public Consultation Meeting

Meeting Date: 10.06.2025

Meeting Time: 15:00

Meeting Venue: Kalaba Municipality Condolence House

T.C. ÇEVRE VE ŞEHİRCİLİK BAKANLIĞI

İLBANK TÜRKİYE'NİN YAPICI GÜCÜ

THE WORLD BANK IBRD • IDA | WORLD BANK GROUP

PUBLIC CONSULTATION

Kalaba Municipality Solar Power Plant Project is among the subprojects within the scope of Türkiye Public and Municipal Renewable Energy Project (PUMREP) which was created to support sustainable development in cities in Türkiye.

The Environmental and Social Management Plan (ESMP) was prepared in accordance with the requirements of ILBANK's Environmental and Social Management System (ESMS), and the national environmental legislation of the Republic of Türkiye. As part of the stakeholder engagement process, a public consultation meeting was held on 10.06.2025 at 15:00 at the Kalaba Municipality Condolence House. In order to announce the meeting to the local people, the meeting information was published on the Kalaba Municipality website, in local and national newspapers, and local people were invited to the meeting with posters hung in the municipality building and brochures distributed to the public.

Meeting Summary

The Minutes of Public Consultation Meeting (MoM) started with the opening speech of the Kalaba Mayor, detailed information was given about the process and content of the reports prepared by the consultant company representative for the implementation of the sub-project. The benefits of the sub-project to the municipality and the local people were mentioned. The meeting was conducted in the form of a verbal presentation due to the unavailability of projection and similar equipment within the municipality's technical capabilities.

Within the scope of the MoM, the area where the sub-project will be established (as a neighborhood, block and parcel), project power, equipment to be used and technical specifications, the annual production of the project were mentioned and information was given that the legislative obligations were met.

A total of 40 people attended the meeting, 29 of whom were municipality members and 11 were local people.

Within the scope of the meeting; the consultant company environmental expert conveyed the environmental and social risks of the sub-project from the content of the ESMP Report, the works planned to prevent the said risks, the effects of the geographical location of the region where the project will be located and the climate conditions on the project and the analyses made on possible natural disasters. In line with the information provided, the meeting was concluded with questions and answers and lasted approximately 1 hour.

Question and Answer Section

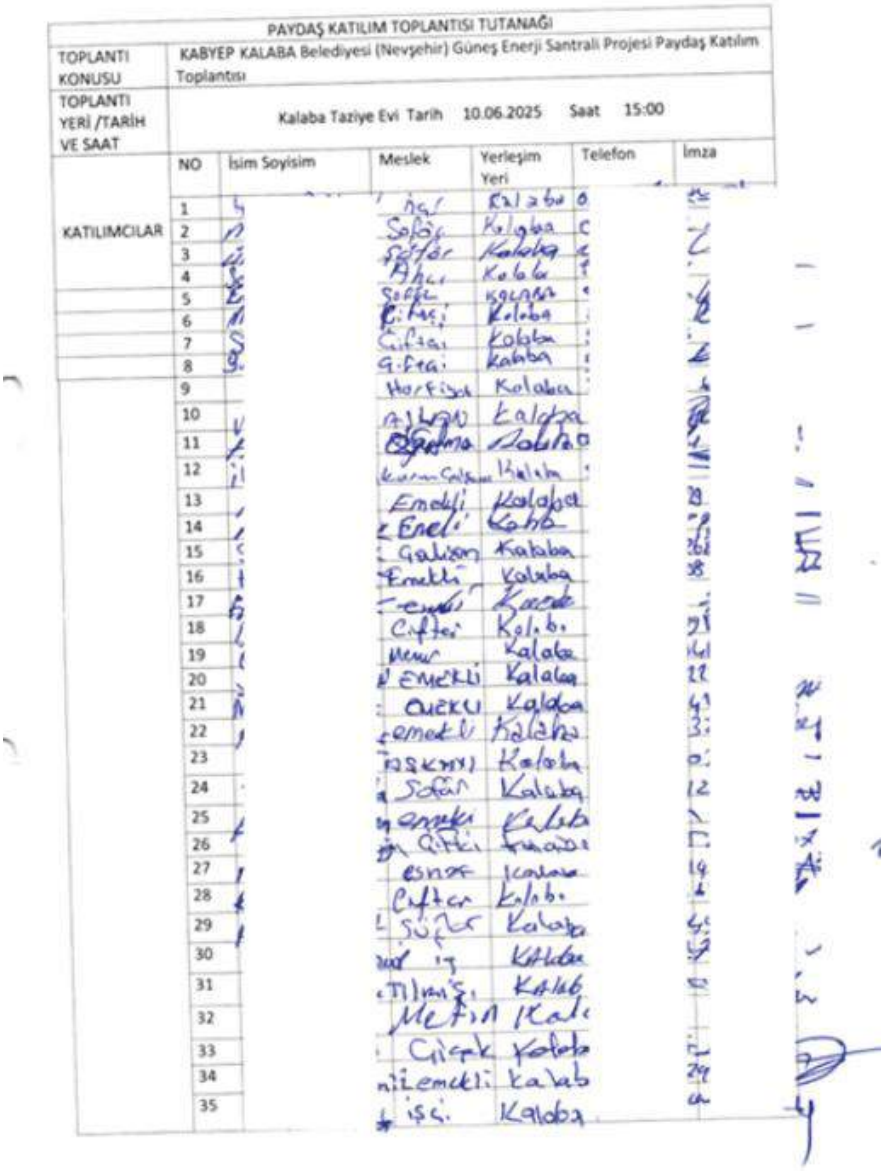
Question 1.	
Name / Occupation	Personnel of Kalaba Municipality
Do the panels cause additional temperature increases in their surroundings?	
Answer 1.	
Name / Occupation	CA Engineering
Yes, the panels convert the sun's rays into energy and emit a very small portion of it as heat. However, this heat usually remains within the wire fence surrounding the field. It is not a situation that will negatively affect daily life or the ecosystem surrounding the field.	

Question 2.	
Name / Occupation	Citizen
Will there be noise during production during the operation phase?	
Answer 2.	
Name / Occupation	CA Engineering
No, no noise is added during the operation phase due to production. There may be very low levels of noise during maintenance or repair operations. This is not at a level and duration that will affect the environment.	

Meeting Conclusion

The Public Consultation Meeting lasted approximately 1 hour, with the consultant company officials providing information about the project and Q&A. Information was provided on the environmental, social and economic dimensions of the Kalaba Municipality SPP project, as well as the next stage of the subproject. The meeting was concluded after consultation with the participants' opinions and suggestions.

Participant List



PAYDAŞ KATILIM TOPLANTISI TUTANAĞI

TOPLANTI KONUSU	KABYEP KALABA Belediyesi (Nevşehir) Güneş Enerji Santrali Projesi Paydaş Katılım Toplantısı
TOPLANTI YERİ /TARİH VE SAAT	Kalaba Taziye Evi Tarih 10.06.2025 Saat 15:00

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PAYDAŞ KATILIM TOPLANTISI TUTANAĞI

TOPLANTI KONUSU	KABYEP KALABA Belediyesi (Nevşehir) Güneş Enerji Santrali Projesi Paydaş Katılım Toplantısı
TOPLANTI YERİ /TARİH VE SAAT	Kalaba Taziye Evi Tarih 10.06.2025 Saat 15:00

	NO	İsim Soyisim	Meslek	Yerleşim Yeri	Telefon	İmza
KATILIMCILAR	36	Ho	Çiftçi	Kalaba	05	
	37	[illegible]	[illegible]PCı	Kalaba	[illegible]	
	38	[illegible]	İşsiz	Kalaba	[illegible]	
	39	[illegible]	Kamu	Kalaba	5	
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ATTACHMENTS

Annex-1: Photo of the Public Consultation Meeting (10.06.2025)

Annex-2: National Newspaper Advertisement (Newspaper Announcement Date –YeniBirlik, 26.05.2025)

YeniBirlik | Dünya | 26 MAYIS 2025 PAZARTESİ | 13

GAZZE'DE BİR ÇOCUK DAHA AÇLIĞA YENİK DÜŞTÜ

Katil İsrail'in Gazze'ye uyguladığı sıkı abluka nedeniyle yetersiz beslenen 4 yaşındaki Muhammed Mustafa Yasin hayatını kaybetti. Sistematik aç bırakma politikası nedeniyle 80 günde 326 Filistinli hayatını kaybetti.

326 FİLİSTİNLİ ACLIKTAN ÖLDÜ

ALTIN PALMİYE KAZANAN PENAHİ:

İRAN'A DÖNECEĞİM

Cannes Film Festivali'nde, "Un Simple Accident" (Basit Bir Kaza) filmiyle Altın Palmiye Ödülü'ne layık görülen İranlı yönetmen Cafer Penahi, ülkesine dönmekten korkmadığını dile getirdi.

BÜYÜK ÖDÜL TRIER'İN FİLMİNİN OLDU

İRAN SINIRA 400 KM'LİK DUVAR ÖRECEĞİNİ AÇIKLADI

KALABA BELEDİYESİ GÜNEŞ ENERJİ SANTRALİ PROJESİ HALKIN KATILIMI TOPLANTISINA DAVET

Kalaba Belediyesi ve İller Bankası A.Ş. tarafından Dünya Bankası Finansmanı ile yürütülecek olan 'Kamu ve Belediye Yenilenebilir Enerji Projesi (KAPYEP)' kapsamında Nevşehir İli Avanos İlçesi Kalaba Beldesi içerisinde yapılması planlanan Kalaba Belediyesi Güneş Enerji Santrali Projesi (GES) için yürütülen Çevresel ve Sosyal çalışmaları için halkı bilgilendirmek, görüş ve önerilerini almak, inşaat ve işletme döneminde paydaşlar ile işbirliği tesis etmek üzere "Halkın Katılımı Toplantısı" düzenlenecektir. Toplantı detayları aşağıda verilmiştir.

Halkımıza saygı ile duyurulur.

Toplantı Yeri ve Saati

Bağlı İl/ İlçesi	Yer	Tarih ve Saat
Nevşehir/ Avanos/ Kalaba Beldesi	Taziye Evi	10.06.2025 / 15:00

Proje Sahibi	Kalaba Belediyesi
Telefon	+90 (384) 561 20 27
E-Posta	info@kalaba.bel.tr
ÇSYP Hazırlayan Kuruluş	ÇA Mühendislik
Telefon	+90 (553) 144 08 75

Resmi İlanlar: www.ilan.gov.tr'de BASIN: 2230032

T.C. İSTANBUL ŞİŞLİ MESLEK YÜKSEKOKULU – ANTİVİRÜS VE VERİ KAYBI ÖNLEME (DLP) YAZILIMI LİSANS ALIM İŞİ İHALESİ

İhale Yeri: İSTANBUL ŞİŞLİ MESLEK YÜKSEKOKULU-KONFERANS SALONU
İhale Tarihi: 02/06/2025
İhale Saati: 11:00
İhale Usulü: AÇIK İHALE

T.C. ESKİŞEHİR 3. AĞIR CEZA MAHKEMESİ İLAN

T.C. GÖLBAŞI (ADIYAMAN) 2. ASLİYE HUKUK MAHKEMESİNDEN İLAN

ESAS NO : 2024/362 Esas

T.C. ESKİPAZAR SULH HUKUK MAHKEMESİNDEN

ESAS NO : 2024/686 Esas

Annex-3: Local Newspaper Advertisement (Newspaper Advertisement Date – Muşkara News -26.05.2025)

6 26 Mayıs 2025 Pazartesi Muşkara Haber www.muskarahaber.com

AK Parti Nevşehir'den tüm ilçelere çıkartma

AK Parti Nevşehir İl Başkanlığı, teşkilat çalışmalarını yerinde görmek, istişare kültürünü sahaya taşımak ve yeni dönemin yol haritasını belirlemek amacıyla Nevşehir'in tüm ilçelerini kapsayan güçlü bir saha programı gerçekleştirdi.

İl Koordinatörü ve Kahramanmaraş Milletvekili Ömer Oruç Bilal Dobgiçin'in katılımıyla yürütülen programda, İl Başkanı Muhammed Feyzi Aygün önculuğunda, ilçe başkanları, Kadın ve Gençlik Kolları başkanları, üç kademe yönetim kurulu üyeleri ve teşkilat mensuplarıyla istişare toplantıları yapıldı.

TEŞKİLATLAR SAHADA, HEYECAN ZİRVEDE

Acıgöl, Avanos, Derinkuyu, Gülşehir, Hacıbektaş, Kozaklı ve Ürgüp ilçelerinde gerçekleşen buluşmalarda, mahalle başkanlarından ana kademe yöneticilere kadar tüm teşkilat birimleri sahaya çıktı. Karşılıklı istişarelerle yürütülen toplantılarda hem yerel sorunlar ele alındı hem de 2024 yerel seçimlerinin ardından belirlenen yeni yol haritası değerlendirildi. Her ilçede hissedilen ortak duygu ise güçlü bir dava şuuru ve teşkilatın diri, dinamik duruşuydu.

"BU DAVA, MASA BAŞINDA DEĞİL, SAHADA BÜYÜR"

Acıgöl'den Kozaklı'ya, Ürgüp'ten Avanos'a kadar, teşkilatla bir araya gelinen her ilçede görüldüğü tablonun, yüreğimi ısıttığı

doldurduğunu vurgulayan İl Başkanı Aygün, "Her bir yol arkadaşımızda; davaya sadakat, millete sevda, hizmete adanmışlık var. Biz masa başında değil, sahada büyüyen bir hareketiz. Çünkü bu dava, lafla değil, emekle; reklamla değil, alın teriyle yürütülür," dedi.

AK Parti teşkilatları olarak pusulalarının milliyet, rotalarının hizmet, hedeflerinin güçlü Türkiye olduğunu belirten Aygün, "Nevşehir'in her sokağında, her hanesinde, her yüreğinde bu hedefe giden bir izimiz olacak. Bu kutlu yürüyüşte yorulmak yok, durmak yok! Çünkü biz, sadece seçim kazanmaya değil, gönül kazanmaya, milletin duasını almaya talibiz. Çünkü biz, 'Birlikte kalır, birlikte yol' diyen bir liderin, Sayın Cumhurbaşkanımız Recep Tayyip Erdoğan'ın izinde yürüyen teşkilatızız. Allah birliğimizi, beraberliğimizi daim eylesin. Rabbim adımlarımızı sabit, niyetimizi hayır eylesin. Nevşehir hazır, teşkilatlarımız dimdik ayakta, biz bu yolda kararlıyız!" ifadelerine yer verdi.

HEDEF: TÜRKİYE YÜZYILINA GÜÇLÜ KATKI

Gerçekleştirilen toplantılar, sadece mevcut durumu değerlendirmekle kalmayıp; gençlik, istihdam, kadın odaklı sosyal projeler ve kırsal kalkınma başta olmak üzere birçok stratejik başlığı da kapsadı. İlçelerde vatandaşla iç içe olan bu buluşmalar, partinin halkla kurduğu gönül bağını da pekiştirdi.

AK Parti Nevşehir teşkilatları, Türkiye Yüzyılı vizyonuyla; sahada, gönülde ve hizmette önculuğuna sürdürmeye devam edecek.

HABER: HİLAL DOĞU

Şiir dinletileri sanatseverlerle buluştu

Nevşehir'de Maarif50 Projesi kapsamında düzenlenen sanat dolu etkinlikler ilgi görmeye devam ediyor.

Türkiye Yüzyılı Maarif Modelinin hedefleri arasında yetkin ve erdemli insan yetiştirmek yer alıyor. Bu amaç doğrultusunda, Nevşehir Valiliği himayelerinde Nevşehir İl Milli Eğitim Müdürlüğünce Maarif50 Projesi kapsamında 'X50 Sanat, X50 Hayat' projesi gerçekleştirmeye devam ediyor. Proje kapsamında, Sevim Erdoğan Öz Ilkokulu tarafından hazırlanan "Türkçe ve İngilizce Günlük" sergisi ve Yavuz Sultan Selim Han Ortaokulu tarafından hazırlanan "Sevgi" temalı şiir dinletisi 19 Mayıs Ilkokulu'nun konferans salonunda yapıldı. Ayrıca, Avanos Mehmet Akif Ersoy Ortaokulu öğrenci ve öğretmenlerinin hazırladığı "Sevgi" temalı şiir dinletisi ise okulun konferans salonunda sanatseverler ile buluştu. Yoğun katılımla gerçekleştirilen etkinliklere Avanos Kaymakamı Osman Bilici, Avanos Belediye Başkanı Mustafa Kerem Santaş, İl Milli Eğitim Müdürü Yusuf Yazıcı, Eğitim Müfettişleri Başkanı Hayrettin Tuksel, ilçe milli eğitim müdürleri, şube müdürleri, yöneticiler, öğretmenler, öğrenciler ve veliler katıldı.

HABER: SEMA BALLIKAYA

Kapadokya'nın tarihi güzelliklerini keşfettiler

Kozaklılı öğrenciler, Kozaklı Kaymakamlığınca organize edilen kültür gezisine katılarak Kapadokya bölgesinin tarihi ve kültürel mekanlarını gezdi.

Kozaklı KYK yurdunda misafir darısmanlık derslerine katılan öğrenciler, Kaymakamlığın organizasyonunda Gençlik Koordinatörü Mehpare Nur Karaağaç eşliğinde anlamlı bir kültür gezisine çıktı.

GENÇLER TARİHLE, KÜLTÜRLE VE TABİATLA BULUŞTU

Gezi kapsamında öğrenciler, sırasıyla Özkonak Yeraltı Şehri, Avanos Kurşunlu Camii, Göreme Açık Hava Müzesi, Üç Güzeller, Ürgüp, Taşlan Paşa Medresesi ve Damsa Barajını gezdi. Burasında incelemelerde bulunan öğrenciler, bölgenin tarihi ve kültürü hakkında bilgi edindi.

Öğrenciler daha sonra Nevşehir Hacı Bektaş Veli Üniversitesi'nde bulunan mütüklüğün Genç Ofisini de ziyaret ederek, birim sorumlusu Duran Küçükten gençlik faaliyetleri hakkında bilgi aldı.

HABER: SEZER ALTUNOK

KALABA BELEDİYESİ GÜNEŞ ENERJİ SANTRALİ PROJESİ HALKIN KATILIMI TOPLANTISINA DAVET

Kalaba Belediyesi ve İller Bankası A.Ş. tarafından Dünya Bankası Finansmanı ile yürütülecek olan 'Kamu ve Belediye Yenilenebilir Enerji Projesi (KAPYEP)' kapsamında Nevşehir İli Avanos İlçesi Kalaba Beldesi içerisinde yapılması planlanan Kalaba Belediyesi Güneş Enerji Santrali Projesi (GES) için yürütülen Çevresel ve Sosyal çalışmaları için halkı bilgilendirmek, görüş ve önerilerini almak, inşaat ve işletme döneminde paydaşlar ile işbirliği tesis etmek üzere "Halkın Katılımı Toplantısı" düzenlenecektir. Toplantı detayları aşağıda verilmiştir.

Halkımıza saygı ile duyurulur.

Toplantı Yeri ve Saati

Bağlı İl/ İlçesi	Yer	Tarih ve Saat
Nevşehir/ Avanos/ Kalaba Beldesi	Taziye Evi	10.06.2025 / 15:00

Proje Sahibi	Kalaba Belediyesi
Telefon	+90 (384) 561 20 27
E-Posta	info@kalaba.bel.tr
ÇSYP Hazırlayan Kuruluş	ÇA Mühendislik
Telefon	+90 (553) 144 08 75

Resmi ilanlar www.ilan.gov.tr'de Basın: 2230032

Annex-4: Kalaba Municipality Website, Announcements (23.05.2025)

Annex-5: Kalaba Municipality Public Consultation Meeting Brochure

The Kalaba SPP Project ("Sub-project"), is one of the subprojects under the Türkiye Public and Municipal Renewable Energy Project (PUMREP)**("Project")** to support sustainable development in cities in Türkiye. Specifically, the PUMREP aims to invest in sustainable urban development and develop project approaches related to the development of renewable energy sources, disaster and climate change mitigation and urban resilience to risk.

The sub-project, financed by the World Bank (WB), will be implemented by Kalaba Municipality through İller|Bankası A.Ş.

The sub-project aims to contribute to local development by providing clean energy to the water treatment plant in Kalaba District by utilizing solar energy and meeting energy needs.

The Kalaba Municipality SPP Project aimed to meet the electrical energy needs of the district and to reduce the consumption costs of the district by obtaining the energy used from renewable energy sources.
In this context, the sub-project will be built with a 30-year use period of the power plant to be established. The SPP project is expected to generate 976.64 MWp / 720 MWe of electricity. The sub-project will be built on an area of approximately 13,960 m² on a lot 1 of block 277 in Kalaba Town Avanos District of Nevşehir Province (See: Figure 1).

2

The expected results of the sub-project are as follows:

-The sub-project will improve access to clean and affordable water in Kalaba Town, Avanos District of Nevşehir Province by powering the water treatment plant — a major source of municipal energy consumption — with solar energy.

-The sub-project will reduce the dependence on fossil fuels for energy and ensure the economic development of the district,

-The sub-project will contribute to Türkiye' s efforts to comply with national and international quality standards in the renewable energy sector,

- By utilizing clean energy sources, a step will be taken in the fight against climate change and will contribute to the environmental and economic well-being of local communities.

Local people will be prioritized in the recruitment process of the sub-project.

The sub-project will be in line with national legislation as well as good international practices, including WB Safeguard Policies, guidelines, standards and best practice documents.

3

The sub-project will create job opportunities for local residents during the construction and operation phase. It is expected that the construction works of the SPP project will be completed in a fairly short period of time, road closures will be avoided as much as possible, and businesses around the sub-project are not expected to close due to construction activities.

Figure 1: Kalaba Municipality SPP Project Area

An Environmental and Social Management Plan (ESMP) has been developed to manage the expected impacts.

The ESMP is prepared to monitor and assess potential environmental and social impacts and risks over the life of the sub-project and to propose mitigation measures for significant adverse environmental impacts.

4

Monitoring and audit activities to be implemented within the scope of the ESMP will also be defined. Within the scope of ESMP studies, impacts that may occur such as soil and air environments, noise, odor, water resources, wastes, traffic, ecosystem, existing natural disaster risks related to the area where the sub-project will be established, reflection and glare effects that may be experienced due to SPP will be determined and relevant avoidance mitigation measures will be specified.

Monitoring requirements will also be defined and presented in the monitoring tables within the ESMP. Accordingly, during the construction phase of the sub-project, topsoil loss and compression, soil and water pollution due to leaching of pollutants and chemicals into the soil and groundwater, dust emissions, noise during construction of the sub-project and from temporary traffic load, waste generation and occupational health and safety, and during the operation phase, storage and use of chemicals, wastes, noise, reflection and glare impact of the power plant, livelihoods, grievances, community conflicts, stakeholder engagement, occupational health and safety and labor parameters will be monitored in accordance with the requirements set out in the ESMP.

The main institution responsible for the implementation of this Environmental and Social Management Plan (ESMP) is the Municipality of Kalaba, which is also responsible for the construction and operation phases of the sub-project. In addition, various parties at different stages of the sub-project (Contractors, Consulting firm, sub-project Implementation Unit, ILBANK, etc.) They will take responsibility for various issues within the scope of ESMP. All the mentioned works will be coordinated by the Municipality of Kalaba.

The sub-project documents will also be published on the website of Kalaba Municipality and if requested, these documents will be shared by Kalaba Municipality.

5

Sub-project documents will also be published on Kalaba Municipality's website and will be shared by Kalaba Municipality upon request.

Kalaba Municipality has established a **Grievance Mechanism** to receive, resolve and follow up on the concerns and grievances of sub-project affected communities. All grievances will be effectively received, recorded and responded to within a predetermined timeline and according to their content. Kalaba Municipality will be the responsible institution for the establishment and implementation of the Grievance Mechanism. In this context, the communication channels given below can also be used to share expectations, opinions, suggestions and complaints about the sub-project.

Public Engagement Meetings:

Kalaba Municipality:

Telephone: +90 (384) 561 20 27

E-mail: https://www.kalaba.bel.tr/

All internal and external stakeholders will also have the right to make use of other grievance mechanisms, such as the Presidency's Communication Center (CIMER), which is accessible to all sub-project stakeholders and is used nationwide, as an alternative and well-known channel to communicate sub-project-related complaints and feedback directly to government authorities.

- **www.cimer.gov.tr**
- **Call Center :150**
- **Telephone Number: 0(312) 590 20 00**

6

This project is co-funded by the European Union, the Republic of Türkiye and the World Bank.
Bu proje, Avrupa Birliği, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklaşa finanse edilmektedir.

TURKIYE PUBLIC AND MUNICIPAL RENEWABLE ENERGY PROJECT (PUMREP)

Kalaba Municipality
Solar Power Plant Project

Public Consultation Meeting Brochure

10/06/2025
15:00
Kalaba Municipality

THE WORLD BANK

T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

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Annex-6: Kalaba Municipality Notice Board