TURKIYE PUBLIC AND MUNICIPAL RENEWABLE ENERGY PROJECT (PUMREP)

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

SPP : 6,454.8 kWp/5000 kWe

SPP-1: 6,506.6 kWp/4990 kWe

SPP-3: 6,454.8 kWp/5000 kWe

Solar (Photovoltaic) Power Plant Projects

of Elazığ Municipality

JUNE, 2025

Document History

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Abbreviations

AFAD	Disaster and Emergency Management Presidency
AoI	Area of Influence
CITES	Convention on the International Trade in Endangered Species of Wild Flora and Fauna
EIA	Environmental Impact Assessment
EHS	Environmental Health and Safety
ESAP	Environmental and Social Action Plans
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Monitoring Report
ESMS	Environmental and Social Management System
EPDK	Energy Market Regulatory Agency
ESS	Environmental and Social Standard
ETL	Energy Transmission Line
E&S	Environmental and Social
EU	European Union
FI	Financial Intermediary
GHG	Greenhouse Gas
GIS	Geographical Information Systems
GIIP	Good International Industry Practice
GM	Grievance Mechanism
IFIs	International Finance Institutions
IA	Impact Assessment
ILO	International Labor Organization
ILBANK	Iller Bankası A.S.
ISKUR	Employment and Labour Agency
IUCN	International Union for Conservation of Nature and Natural Resources
KPIs	Key Performance Indicators
LOTO	Lockout Tagout
MSDS	Material Safety Data Sheets
MoEUCC	Ministry of Environment, Urbanization and Climate Change
OG	Official GazettePAP
OHS	Occupational Health and Safety
PIU	Project Implementation Unit
PIF	Project Introduction File
PPE	Personal Protective Equipment
PUMREP	The Turkish Public and Municipal Renewable Energy Project

PV	Photovoltaic
RCA	Root Cause Analysis
RE	Renewable Energy
SEAH	Sexual Exploitation, Abuse and Harassment
SEDI	Socio-Economic Development Index
SEP	Stakeholder Engagement Plan
SPP	Solar Power Plant
Sub-Project	SPP: 6454.8 kWp / 5000 kWe., SPP-1: 6506.5 kWp / 4990 kWe, SPP-3: 6454.8 kWp / 5000 kWe Solar (Photovoltaic) Power Plant Project of Elazığ 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

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 sub-projects to be financed under PUMREP include the installation of renewable energy facilities by Elazığ Municipality with a capacity of Solar Power Plant (SPP): 6,454.8 kWp / 5,000 kWe., Solar Power Plant – 1 (SPP-1): 6,506.5 kWp / 4,990 kWe, Solar Power Plant – 3 (SPP-3): 6,454.8 kWp / 5,000 kWe. These solar power plants are located in the Şahinkaya neighborhood of the Central district in Elazığ province.

Elazığ 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.

Elazığ Municipality's SPP: 6,454.8 kWp / 5,000 kWe, SPP-1: 6,506.5 kWp / 4,990 kWe, SPP-3: 6,454.8 kWp / 5,000 kWe Solar Power Plants Projects are located in lots 549 and 550 of block 110, Şahinkaya neighborhood, Central district, Elazığ province. The subdivision process was carried out with the 2024/06 council decision of Elazığ Municipality dated 04.01.2024. According to the new zoning decision, it was divided into lot 549 of block 110 (152.418 m2) and lot 550 of block 110 (75.473 m2). (The old parcel was lot 518 of block 110). The municipal council decision and zoning plan are available in the ESMP annex (See Annex-B). The ownership of the lands where the sub-project will be established belongs to Elazığ Municipality. The land ownership title deed record is available in the ESMP annex (See Annex-C).

The sub-project is in the Moderate Risk category according to the Environmental and Social Screening and Risk Classification Procedure conducted within the scope of the ILBANK Environmental and Social Management System (ESMS) and the World Bank (WB) 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 plan outlines the necessary measures and guidelines to ensure that the environmental and social impacts of the sub-project are effectively managed throughout the construction and operation phases.

Environmental and Social Management Plan (ESMP) for the sub-project outlines the measures to reduce the potential environmental and social impacts throughout the life cycle of the sub-project. This plan is important to ensure that the projects comply with national environmental and social regulations and iWB Environmental and Social Standards. The ESMP for the sub-project outlines the measures to reduce the potential environmental and social impacts throughout the life cycle of the sub-project.

The sub-project (SPP and SPP-1) was secured "EIA not Necessary" decisions in line with Environmental Impact Assessment (EIA) Regulation which was published in the Official Gazette dated 25.11.2014 and numbered 29186 and entered into force. For the SPP-3, "EIA not Necessary" decision was secured on 28 January 2025 in line with EIA Regulation (Official Gazette dated 29.07.2022 and numbered 31907) (See Annex B).

On May 27, 2025, at 14:00, a Stakeholder Consultation Meeting was held in the Elazığ Municipality meeting hall. A total of 12 people, including Şahinkaya neighborhood residents, citizens and Elazığ Municipality personnel, attended the meeting. The meeting started with the opening speech of the Elazığ Municipality Climate Change and Zero Waste Manager. He provided information about the sub-project process. Then, a presentation was made by the PVGLOBAL Energy project manager who provided information about the Environmental and Social Management Plan (ESMP) of the sub-projects. Within the scope of the ESMP, the subject of the sub-project, stakeholders, environmental and social risks of the project and impact mitigation measures were conveyed. In the meeting; Questions were asked on the following topics:

- The negative impact of the GES project on environmental pollution and rivers,
- The negative impact of PV panels on human health,
- Fire danger at the GES plant and what precautions were taken,
- How many years is the economic life of the GES plant, and the environmental impact of panels that have completed their life,
- The negative impact of the GES plant on biodiversity.

In the Stakeholder Consultation Meeting, which lasted approximately 1 hour, PVGLOBAL Energy and Elazığ Municipality officials provided information about the project and a question-answer session was held.

1. INTRODUCTION

1.1. Background

The Public and Municipal Renewable Energy Project (PUMREP) 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.

Elazığ Municipality (here in after referred to as "the Sub-borrower") has applied to ILBANK for sub-financing of Elazığ Municipality SPP: 6,454.8 kWp / 5,000 kWe., SPP-1: 6,506.5 kWp / 4,990 kWe, SPP-3: 6,454.8 kWp / 5,000 kWe. (here in after referred to as "the Sub-project") under Component 2. The sub-project is located in Elazığ province, Central district, Şahinkaya neigborhood.

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 PVGLOBAL Energy Engineering for the sub-project 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 (See Annex A).

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

[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:

- ILBANK Environmental and Social Management System (ESMS) (2024)
- 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)

The relevance of World Bank ESSs to the sub-project is given in the table below (See Table 1).

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	Not Relevant (Any expropriation within the scope of the subproject will not be processed as there will be no ESS-5)
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
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 subproject is provided in the ESMP annex (See Annex J).

1.4. Review and Update

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

The Sub-borrower will notify ILBANK of any 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 sub-project – including sub-contractors) throughout the sub-financing agreement life cycle.

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

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

The 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. Section 4 presents risks and impacts and mitigation measures.

During the construction and operation phases, PIU assigned by Elazığ 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 "Elazığ Municipality Solar Power Plant (SPP: 6,454.8 kWp / 5,000 kWe., SPP-1: 6,506.5 kWp / 4,990 kWe, SPP-3: 6,454.8 kWp / 5,000 kWe) by Elazığ Municipality on lots 549 and 550 of block 110 within the borders of Şahinkaya neighborhood, Central district, Elazığ province.

Lots 549 and 550 of block 110 where the sub-project subject activity will be carried out is a qualified land. The sub-project secured EIA not required decisions according to the Turkish EIA Regulation published in the Official Gazette dated 25.11.2014 and numbered 29186 and in the Official Gazette dated 29.07.2022 and numbered 31907 (See Annex-B).

Sub projects aims to reduce the budget allocated for electricity by Elazığ Municipality by meeting 66.42% of the electricity usage of Elazığ Municipality. In this way, the municipality will be able to use the budget allocated for energy needs more efficiently. At the same time, it will sub- protect the environment and human health with a sustainable energy source.

Basic technical information regarding the sub-project is summarized in the table (See 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

SPP	Information	Remarks/ Notes
SPP	Technology	**Photovoltaic**
	Installed Power	6,454.8 kWp
	Connection Power	5,000 kWe
	Annual Electricity Generation	10,250,222 kWh
	Solar Panel Type	550 Wp (Monokristal panel)
	Number of Solar Panels	11.736
	Inverters Panel Type	100 kW
	Number of Inverters	50
	Annual Carbon Emission Reduction	3,274 Ton
	Lifetime Carbon Emission Reduction	81,850 Ton
	Number of Households Supported with Produced Energy	4,000
	Economic Life of the Power Plant (Operation Duration)	25 years

SPP	Information	Remarks/ Notes
SPP-1	Technology	**Photovoltaic**
	Installed Power	6,506.5 kWp
	Connection Power	4,990 kWe
	Annual Electricity Generation	10,332,222 kWh
	Solar Panel Type	455 Wp (Monokristal panel)
	Number of Solar Panels	14,300
	Inverters Panel Type	125 kW
	Number of Inverters	46
	Annual Carbon Emission Reduction	3,301 Ton
	Lifetime Carbon Emission Reduction	82,525 Ton
	Number of Households Supported with Produced Energy	4,000
	Economic Life of the Power Plant (Operation Duration)	25 years

SPP	Information	Remarks/ Notes
SPP-3	Technology	**Photovoltaic**
	Installed Power	6,454.8 kWp
	Connection Power	5,000 kWe
	Annual Electricity Generation	10,250,222 kWh
	Solar Panel Type	550 Wp (Monokristal panel)
	Number of Solar Panels	11.736
	Inverters Panel Type	100 kW
	Number of Inverters	50
	Annual Carbon Emission Reduction	3,274 Ton
	Lifetime Carbon Emission Reduction	81,850 Ton
	Number of Households Supported with Produced Energy	4,000
	Economic Life of the Power Plant (Operation Duration)	25 years

2.1.1.Subproject Location

Information on the sub-project location is presented in table (See The lands determined for the solar power plant projects planned to be carried out by the Elazığ Municipality (lots 549 and 550 of 110 block) belong to the Elazığ Municipality (See Annex C). It is registered as a land in the title deed. There is no agricultural or animal husbandry activity within the undisturbed green area.

The lands determined for the solar power plant projects planned to be carried out by the Elazığ Municipality (lots 549 and 550 of 110 block) belong to the Elazığ Municipality (See Annex C). It is registered as a land in the title deed. There is no agricultural or animal husbandry activity within the undisturbed green area.

Table 3. Subproject Location

Information	Remarks/ Notes
Province	Elazığ
District	Central
Neighborhood/ Village	Şahinkaya neighborhood
Land Area (ha)	SPP: 15.24 ha (lot 549 of block 110) SPP-1: 15.24 ha (lot 549 of block 110) SPP-3: 7.55 ha (lot 550 of block 110)
Land Use Type according to Title Deed	Dry farming
Current Land Use	There are no agricultural activities or activities such as animal husbandry, livestock breeding, animal grazing on the land. It has not been previously used as a commercial enterprise by the municipality, institution or 3rd parties. Within the scope of the sub-project site visit, in the consultations held with Şahinkaya neighborhood mukhtar and Şahinkaya neighborhood citizens on 01.08.2024, it was determined that the pasture area is not currently used by the local people for grazing, livestock activities or as a passage route for animals. The lot 486 of block 110, which is the pasture land belongs to Treasury. Lot 486 of block 110 is landwhere the ETL line will pass..
Other Nearby Facilities and Activities	There is another SPP plant with a capacity of 8.5 MW operated by Akfen Company on 1 km northwest of the sub-project area. The ETL belonging to the sub-project will be connected to the existing Transformer Center (Solentegre TM) built by Akfen Company of the existing SPP..

A map of the Subproject location is presented in figure (See Figure 1).

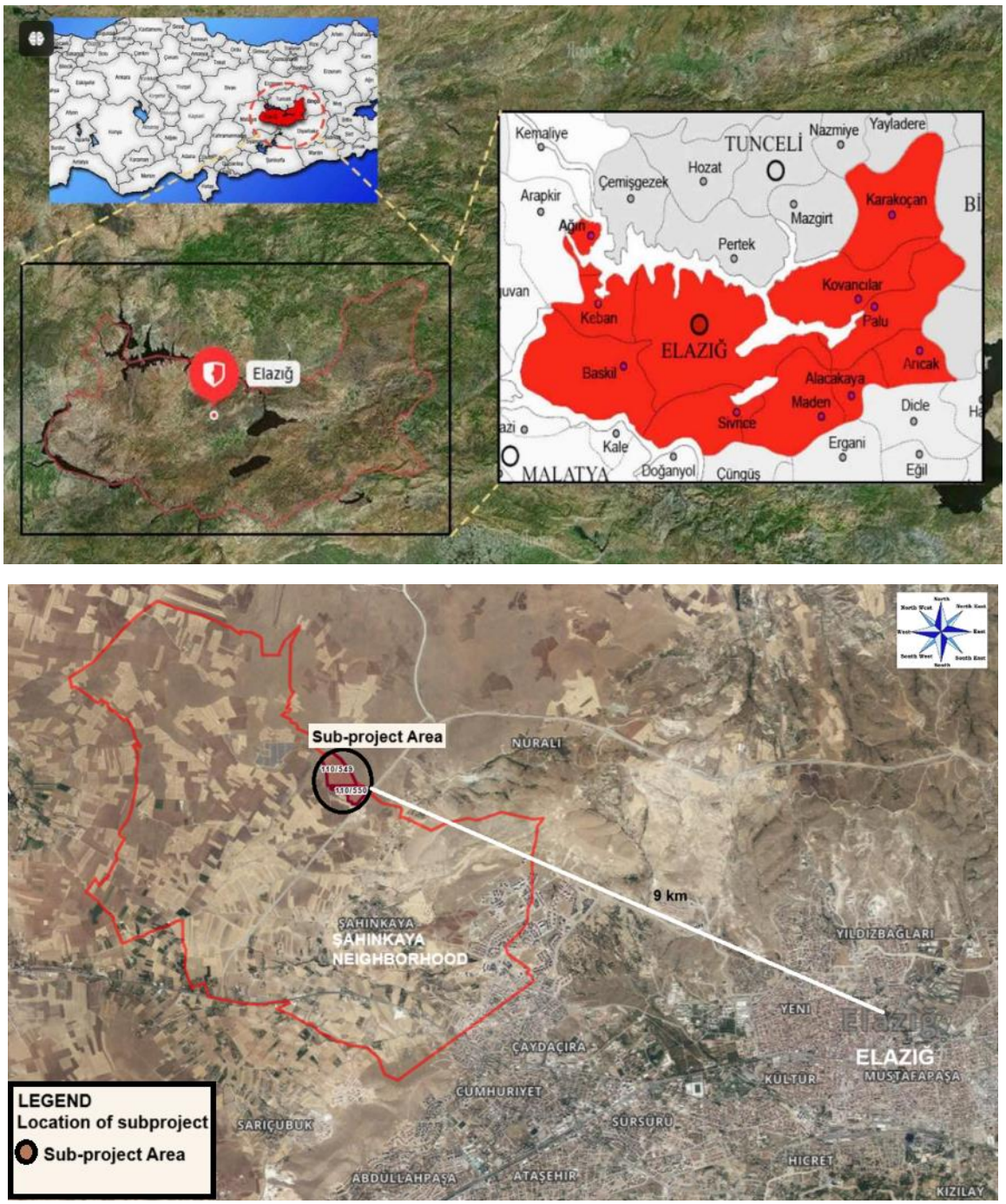


Figure 1. Map of Subproject Location

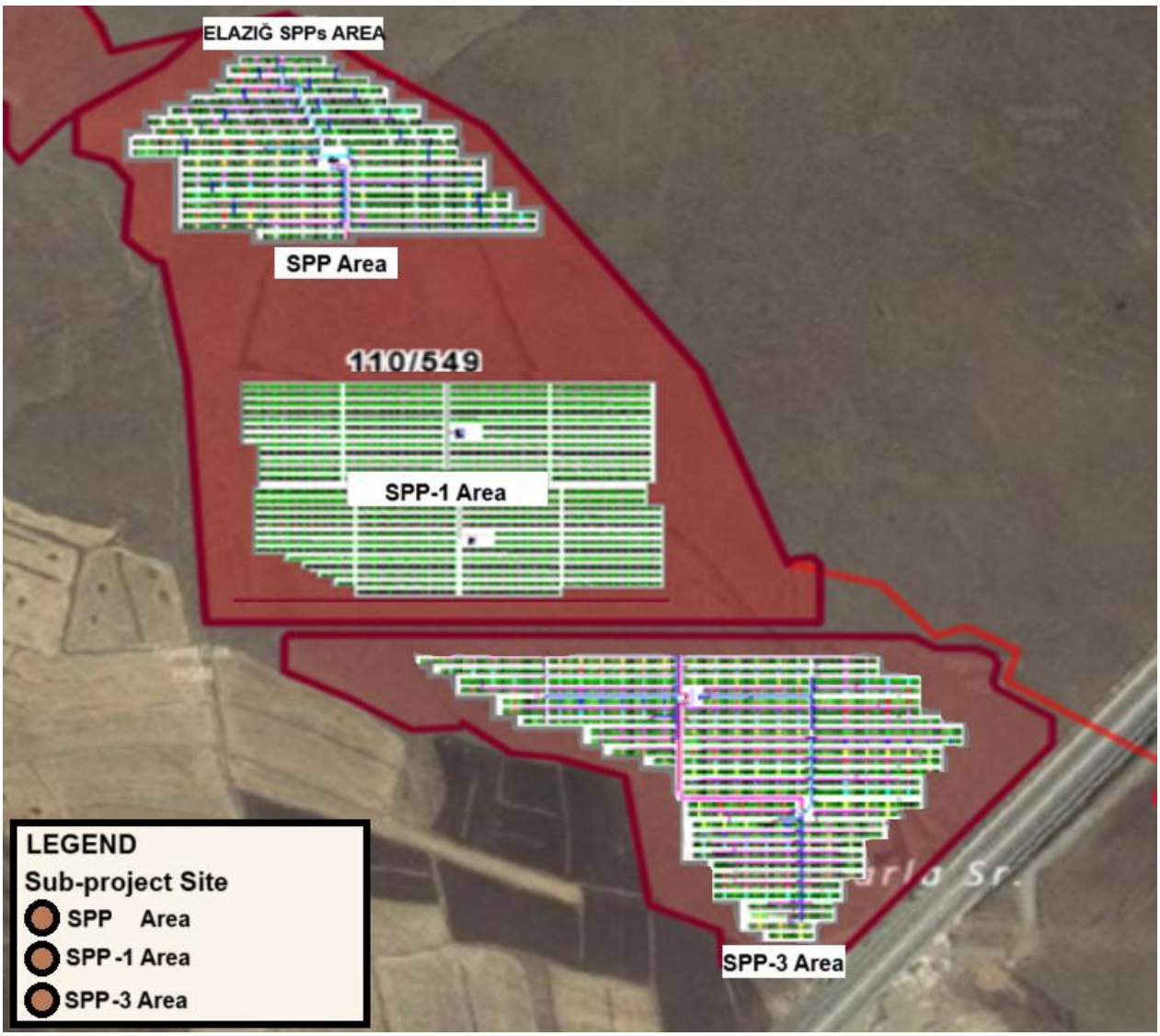


Figure 2. Sub-project Site

Table 4. Coordinates of the Sub Project Area

Unit	Coordinates (WGS84 in decimals)	
	Y	X
110/549	38.7142	39.1377
	38.7147	39.1368
	38.7150	39.1362
	38.7149	39.1355
	38.7147	39.1352
	38.7144	39.1347
	38.7143	39.1345
	38.7141	39.1345
	38.7141	39.1345
	38.7140	39.1347
	38.7138	39.1349
	38.7135	39.1349
	38.7133	39.1351
	38.7133	39.1352
	38.7125	39.1354
	38.7120	39.1354
	38.7107	39.1355
	38.7107	39.1404
	38.7111	39.1404
	38.7112	39.1403
	38.7112	39.1402
	38.7111	39.1401
	38.7125	39.1394
	38.7142	39.1377
110/550	38.7100	39.1422
	38.7102	39.1418
	38.7103	39.1418
	38.7104	39.1418
	38.7105	39.1418
	38.7105	39.1417
	38.7105	39.1416
	38.7105	39.1413
	38.7105	39.1412
	38.7106	39.1412
	38.7106	39.1411
	38.7106	39.1362
	38.7106	39.1361
	38.7103	39.1361
	38.7103	39.1363
	38.7101	39.1367
	38.7099	39.1371
	38.7099	39.1373
	38.7099	39.1375
	38.7100	39.1376
	38.7098	39.1378
	38.7098	39.1379
	38.7097	39.1383
	38.7096	39.1387
	38.7096	39.1388

2.1.2.Site Access Route

The SPP lands' borders Elazığ North Peripheral highway and access to Sub-project area will be provided through this highway. In order to access to the subproject site, the lots 549 and 550 of block 110, which are the parcels belonging to the municipality, will be used. The access roads in the parcels were opened by Elazığ Municipality. The access road is shown in the figure (See Figure 2). Access to the sub-project sites is provided via the stabilized road branching off from the Elazığ Northern Ring Road.

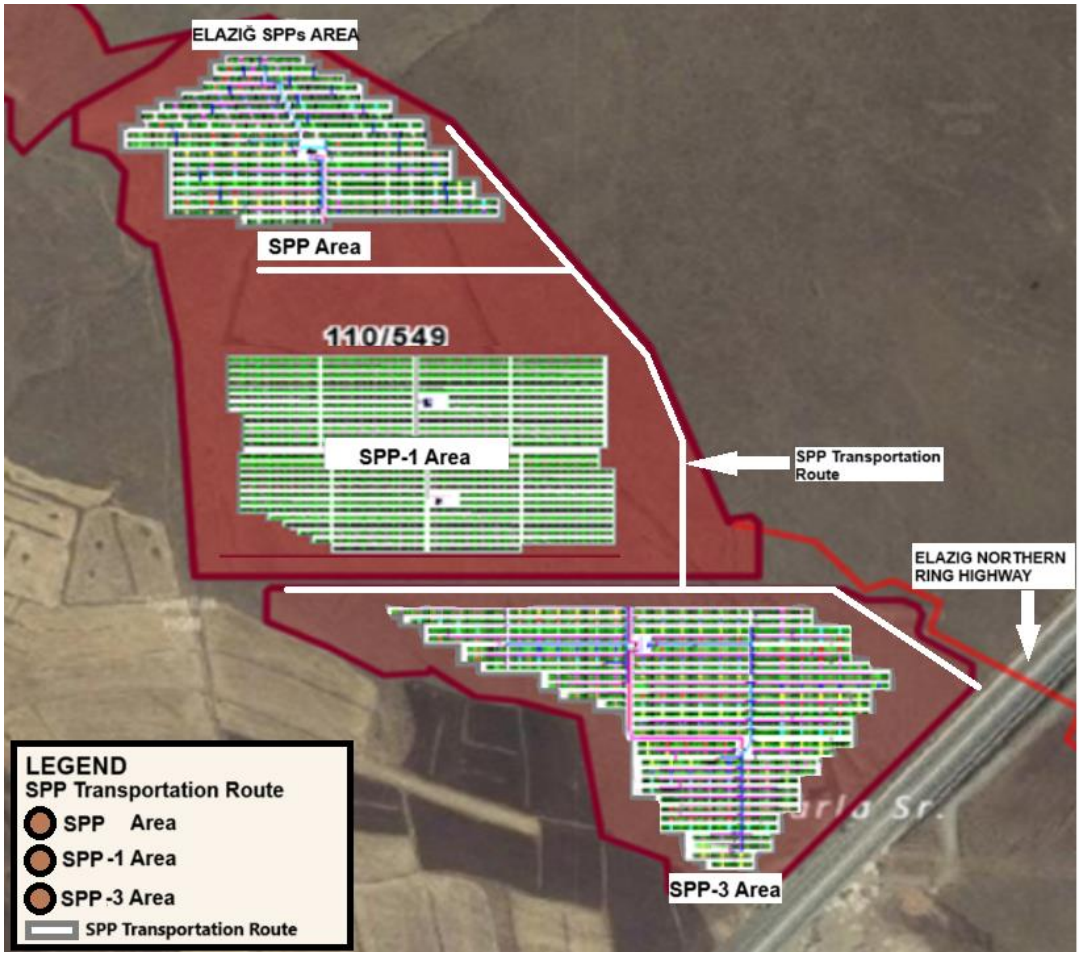


Figure 3. Subproject Sites Access Route

2.1.3.Energy Transmission Line (ETL)

Technical information on the ETL is presented intable (SeeTable 5). A map showing the ETL route and the national grid connection location is provided in figure (See Figure 4).

According to the Energy Permit of the Electricity Distribution Company, the energy transmission line will be carried out by moving 800 meters from the inner boundary the lot 486 of block 110, which is Treasury land in the form of pasture. The title deed record of the parcel, which is the treasury land, is available in the ESMP annex (See Annex B). Regarding the allocation of the energy transmission line route to be passed through the parcel in question to Elazığ Municipality, an official application was made by the municipality the Provincial Directorate of Agriculture with the letter dated 22.07.2024 and numbered 341 and the procedures were initiated (See Annex B). The land acquisition is not required regarding the energy transmission line route. The expropriation exemption letter received from the municipality regarding the subject is available in the ESMP annex (See Annex B). Necessary transfers will be made by opening access roads within the parcel number 549 of the 110th island belonging to the municipality.

Table 5. Technical Information on the ETL

Information	Remarks/ Notes
Status of ETL	Underground
Transformer station (for national grid connection)	Solentegre DM
Length of the route (km)	0.8
Voltage level (kV)	36 kV
Number of ETL towers (pylons)	NA
Total footprint area per each ETL tower (m^2)	-
Number of parcels subject to expropriation	There is no need for land acquisition.
Number of parcels subject to easement rights ("*irtifak hakkı*")	Not required

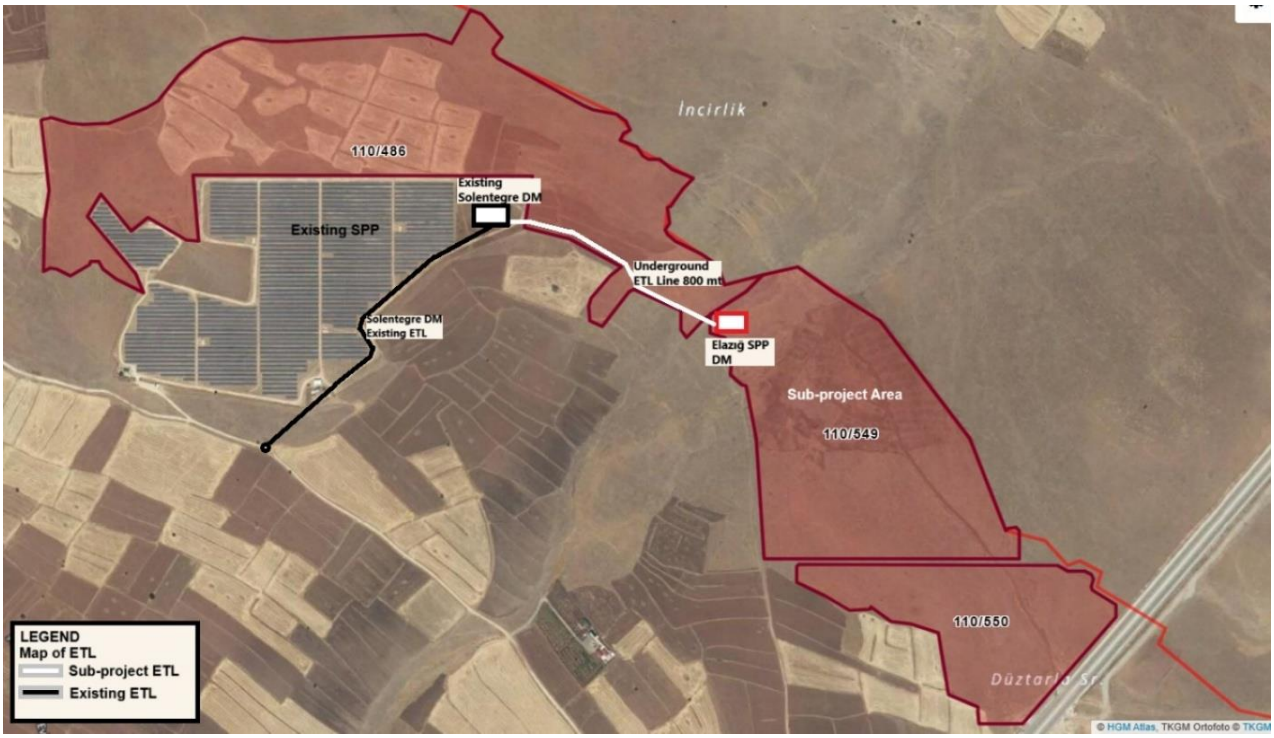


Figure 4. Map of ETL Route

2.1.4.Associated Facilities

In line with the decision taken by ILBANK, Elazığ SPP, SPP1 and SPP3 projects were merged. There will be a single ETL common to these three merged projects, therefore there are no sub-project specific associated facilities.

2.1.5.Subproject Impact Area

According to WB ESS1, "where the project specifically identifies physical elements, issues and facilities that are likely to have an impact, the environmental and social risks and impacts will be identified in the context of the subproject's Area of Influence (AoI)". When determining the environmental and social impacts arising from the subproject, the Area of Influence of the subproject has been taken into account. When calculating the environmental and social risks and impacts, for precautionary purposes, 100 meters of the subproject site and 100 meters around the areas where the ETL passes have been determined as the area of influence. The satellite image of the nearest settlement and its distances to the subproject site are given in the figure below (See Figure 5).

The nearest settlement to the sub-project area is Şahinkaya neighborhood, 1.4 km away. In addition, there is another SPP plant operated by private third parties in the vicinity of the sub-project. The SPP plant, located 1 km northwest of the subproject areas and owned by Akfen Company, has a capacity of 8.5 MW and was commissioned in 2016. The ETL of the subproject will be connected to the existing Substation (Solentegre TM) constructed by Akfen Company.

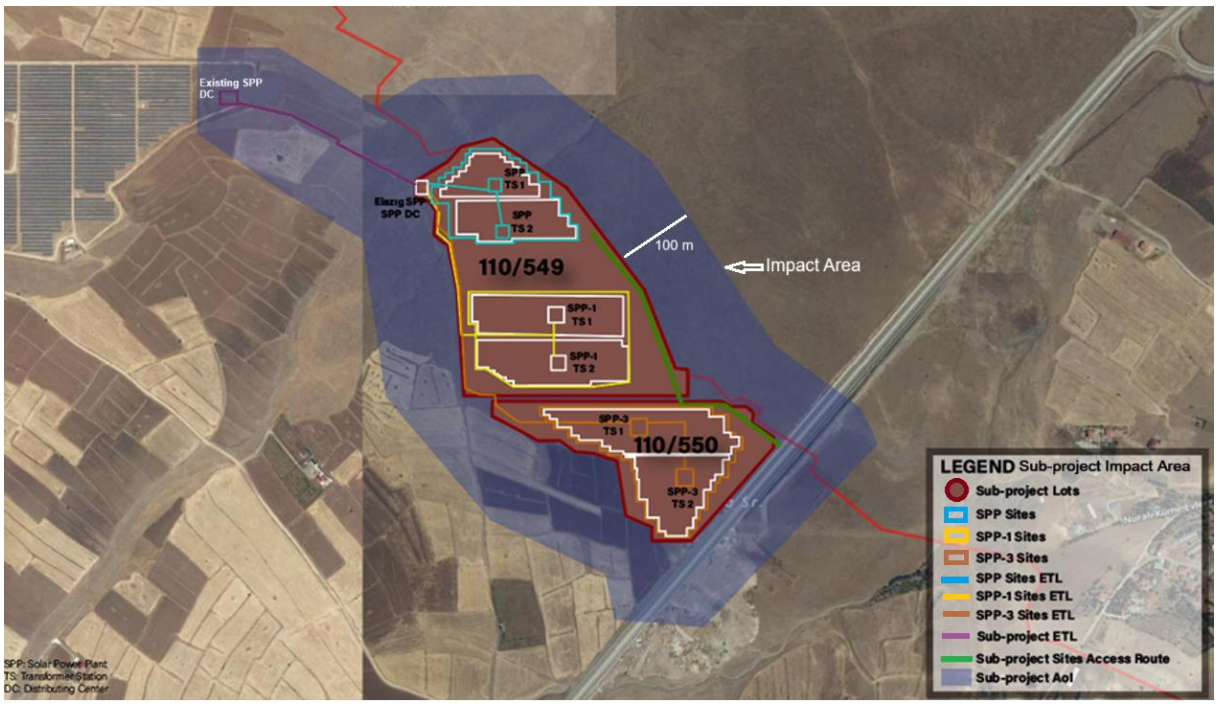


Figure 5. Sub-project area the nearest settlement

2.1.6. Environmental and Social Baseline

This section provides information on the environmental and social baseline of thesub-project. The explanations and information provided in this section on the current status of the sub-project area and its immediate surroundings are based on reports from relevant public and private organizations (Ministry of Agriculture and Forestry, Disaster Emergency Management Presidency, General Directorate of Meteorology, Ministry of Environment and Urbanization, Chamber of Industry and Commerce, Turkish Crops Data Service, Turkish Statistical Institute, Provincial Sectoral Action Plans, etc.) on field studies, Geographical Information Systems studies and satellite images for environmental physical, biological and socio-economic determinations.

The Solar Power Plants to be established by Elazığ Municipality are located on lot 549 of block 110 in Şahinkaya Village, Central district, Elazığ province. There is no agricultural or animal husbandry activity area or commercial enterprise on the land.

The summary of the field studies carried out within the scope of the ESMP study on 04.11.2024 is given in the table below (See Table 6).

Table 6. Summary of Baseline Field Studies

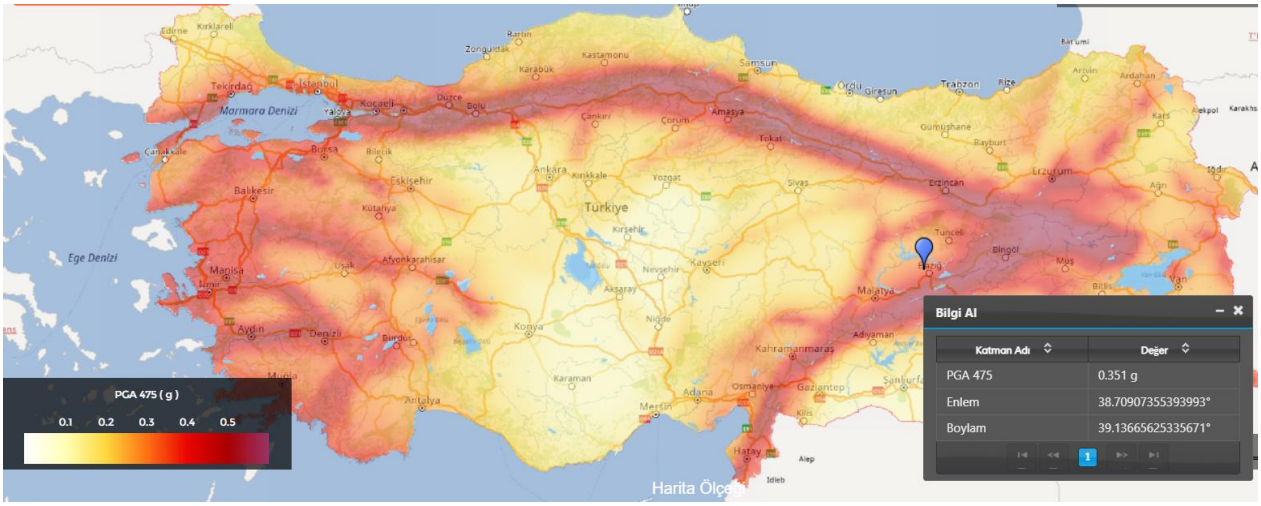
Subject	Date of the Field Study	Experts who Participated in the Field Study
Land acquisition	04.11.2024	On 04.11.2024, PVGLOBAL Energy, Environmental Expert and Social Expert made a site visit. Consultations were held with the Şahinkaya neighborhood mukhtar, Şahinkaya neighborhood residents, Provincial Directorate of Agriculture and Forestry official, DSI Regional Directorate official, Provincial Directorate of Environment, Urbanization and Climate Change official.
Utilization status of the sub-project area,		
Social and cultural structure of Şahinkaya neighborhood,		
Socio-economic status of the people of Şahinkaya neighborhood		
Status of health, education and infrastructure services in Şahinkaya neighborhood		
Information on vulnerable/disadvantaged groups in Şahinkaya neighborhood		
Environmental and social impacts of the subproject during construction and operation		
Research on the current status of Biodiversity, Cultural Heritage, Air Quality, Noise, Water Quality, Waste Management, etc.		

More information about the details and findings of the studies mentioned in the table above will be presented in the following sections.

2.1.6.1 Physical Environment

2.1.6.1.1 Geology

The topographic structure of Elazığ consists of pits and elevations due to volcanic effects. The sub-project area is a barren land with a flat soil surface with a slope of 10-15 degrees. It has soft ground suitable for construction assembly. The sub-project area is located within the Eastern Anatolian Fault System and is a tectonically active region. According to the Earthquake Hazard Map of Turkey, the maximum ground acceleration PGA-475 values of the sub-project area is 0.351 g (tdth.afad.gov.tr). The soil structure of the sub-project area is alluvial due to tectonic activities. The sub-project area is located in the 3rd risk zone according to the Turkey Landslide Hazard Map (See Figure 7).



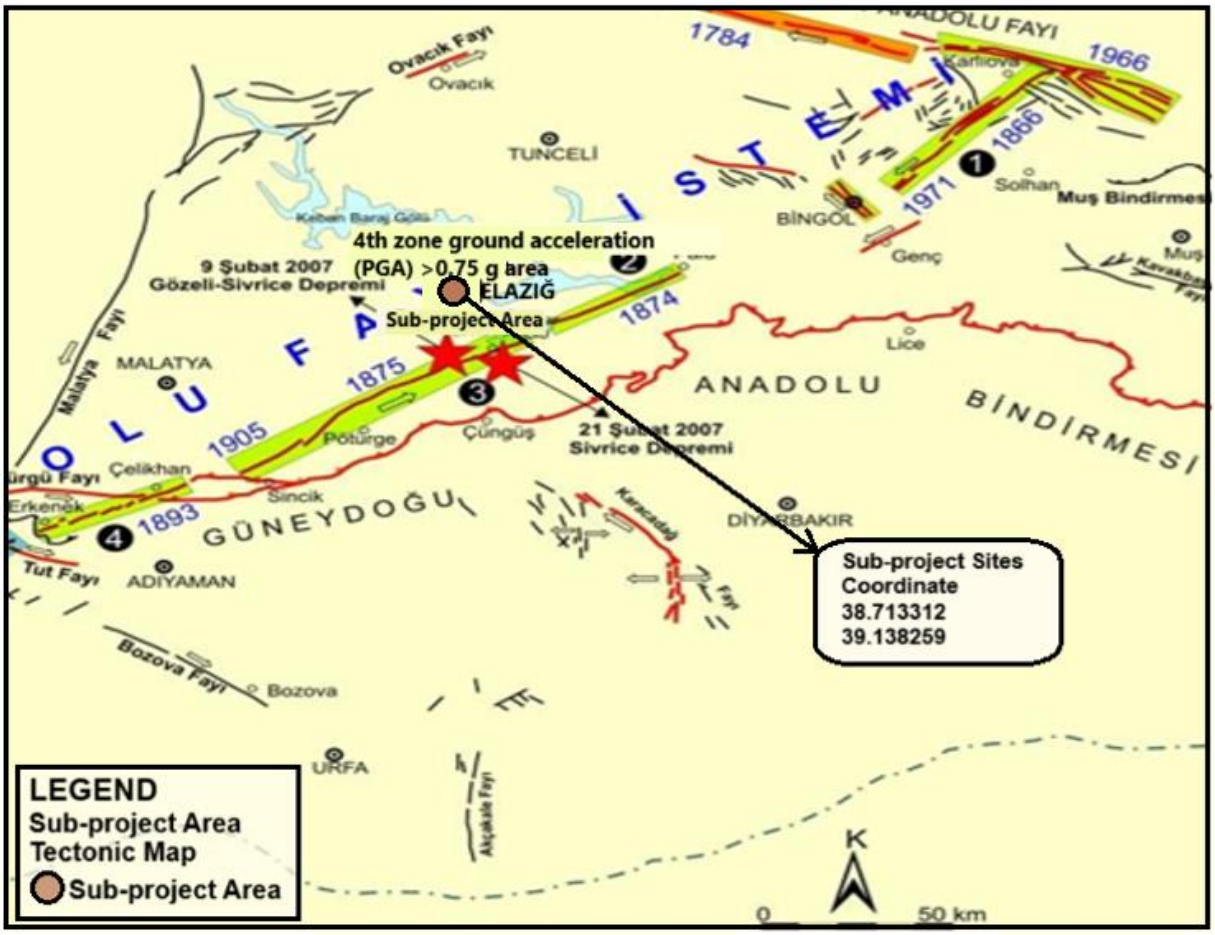


Figure 6. Türkiye Earthquake Hazard Map and Sub-project Tectonic Map

Figure 7. Türkiye Landslide Hazard Map

2.1.6.1.2 Soil and Land Composition

Elazığ is surrounded by the western extensions of the Taurus Mountains. Considering the land use capacity of Elazığ province, the total land area is 915,135 hectares, of which 264,180 hectares is agricultural land, 450,965 hectares is meadow-pasture, 130,403 hectares is forest-fallow and 69,587 hectares is other land. The irrigable agricultural land is 213,659 hectares and it is in a very good situation in terms of irrigable land and agricultural irrigation activities.

The soil structure in and around the Sahinkaya neighborhood sub-project area has an alluvial structure, a row stone and a thin layer soil structure. 60% of the neighborhood consists of agricultural land. Barley and wheat are mainly cultivated.

2.1.6.1.3 Meteorology and Climatic Characteristics

Elazığ SPP Project sites has an annual sunshine duration of 2,664 hours and irradiation values of 1,588 kWh/m^2.. With the effect of technical, geographical and climatic parameters, it ranks important in terms of electrical energy production efficiency.

Based on 20-year temperature averages, the average annual temperature is 9.4°C. The highest values in terms of energy production are measured in July. The highest temperature measured in the region was 42.4°C (in July). The month with the lowest annual sunshine hours and efficiency is January.

The climate is mild, less humid and has high sunshine hours, which makes it ideal for energy efficiency. The winter season is quite mild in the plain near the SPP site. Snowfall is not very effective. Most of the precipitation, which usually falls as rain, falls in the spring season. The average rainfall is around 500 - 600 millimeters. The hottest month of the year is July.

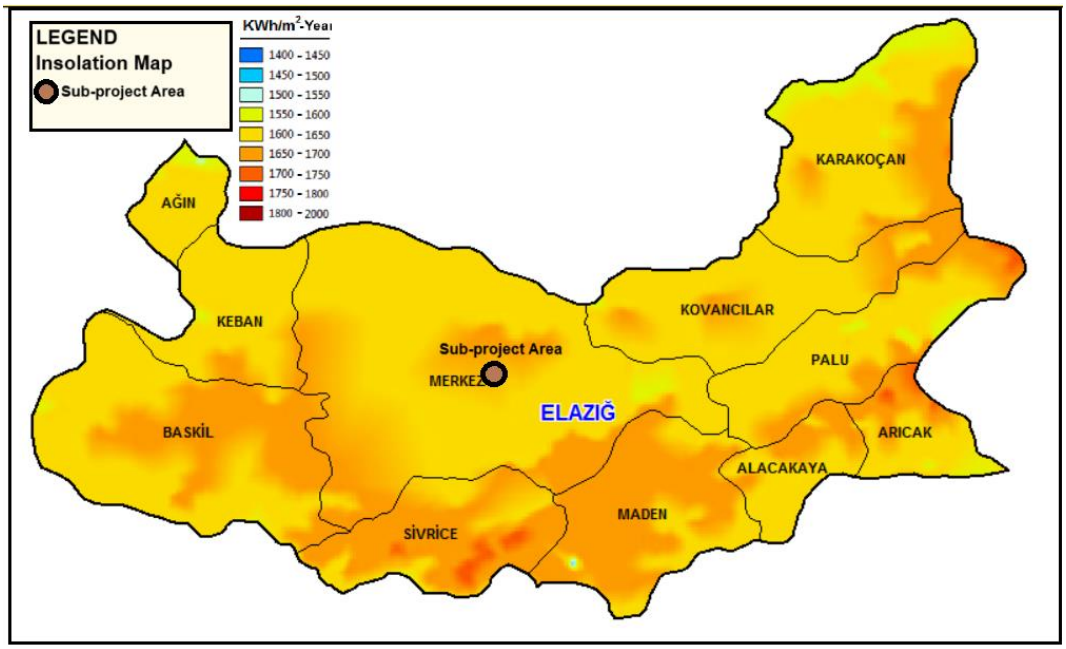


Figure 8. Elazig Province Insolation Map

Extreme Maximum, Minimum and Average Temperatures Measured in Long Period (°C)												
ELAZIG	January	February	March	April	May	June	July	August	September	October	November	December
Maximum Temp.	13.0	18.6	26.4	32.2	36.6	38.6	42.4	42.2	39.7	32.4	24.3	19.6
Minimum Temp.	-22.6	-21.4	-17.0	-7.0	0.0	4.0	6.7	10.2	1.0	-2.2	-15.2	-22.6
Average Temp.(1981-2010)	0.1	1.5	6.7	12.1	17.1	23.0	27.4	27.3	21.9	15.3	7.3	2.2
Average Max. Temp. (1981-2010)	4.0	6.3	12.4	18.4	24.2	30.7	35.2	35.2	30.1	22.6	13.1	5.9
Average Min. Temp. (1981-2010)	-3.2	-2.6	1.6	6.2	10.3	14.7	19.0	18.9	13.9	8.8	2.6	-0.9

Measured in Long Period						
Max. Precipitation	06.05.2022	**74.4** kg/m2	**Max. Wind**	06.02.1992	**114.1** km/hour	**Max. Snow Height**	19.12.1951	**68** cm
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The number of rainy days in Şahinkaya neighborhood is 97 days. 1/3 of the winter and spring months are rainy. While snowfall is more common in winter, rainfall is more common in spring. The summer months are generally dry and rainfall is observed in an average of 1.9 days.

2.1.6.1.4 Air Quality

In Elazığ province, in order to ensure air quality limit values, the components of air quality management are emission inventory, air quality modeling and air quality measurements. In recent years, developing information technologies have started to be used in the field of air management and the "Air Emission Management Portal", which uses web-based geographical information technologies, has been commissioned on the Ministry servers. In this portal, geographical locations and information of all pollutant sources are recorded and their contribution to air pollution is revealed.

There is one Air Quality Measuring Device station in the province and Elazığ Station was opened on 17 November 2014 on Highways 8. It was established in the garden of the Regional Directorate. 38°40'26" - 39°12'30" it has coordinates. It is 7.3 km away from the sub-project area (See Figure 9). In addition to the measurements of SO2 and PM10 parameters, which are the most common pollutants and are mainly used for fuel use, meteorological parameters are also measured fully automatically for a healthier assessment of air quality data.

Figure 9. Local Air Pollution Measurement Instrument in Elazığ Province

During the site visit, the environmental expert of the consultancy firm met with Şahinkaya Muhtar and Elazığ Meteorology Directorate officials. According to the air quality measurement data of the Air Quality Measurement Station for the year 2024, it is seen that the current WHO limit values for 2021 are exceeded (See Figure 10). The most important reason for this is the air pollution caused by fuels such as wood and coal used for heating in Şahinkaya Neighborhood, especially in winter months.

2024 Monthly Average Values of Air Quality Parameters

ELAZIĞ AIR QUALITY MEASUREMENT STATION	SO_2	AGS*	PM10	AGS*
JANUARY	9,41	-	45,24	-
FEBRUARY	7,63	-	36,47	-
MART	6,51	-	31,21	-
APRIL	6,3	-	41,66	-
MAY	**5,32**	**-**	**35,85**	**-**
JUNE	6,63	-	31,58	-
JULY	5,81	-	36,86	-
AUGUST	6,24	-	42,52	-
SEPTEMBER	5,84	-	40,22	-
OCTOBER	8,99	-	52,44	-
NOVEMBER	6,94	-	53,37	-
DECEMBER	9,39	-	53,47	-

Figure 10.2024 Air Quality Parameters Measurement Values

WHO's new guidelines recommend air quality levels for 6 pollutants, where evidence has advanced the most on health effects from exposure. When action is taken on these so-called classical pollutants — particulate matter (PM), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and carbon monoxide (CO), it also has an impact on other damaging pollutants. The Air Quality Index Level of our country, the European Union and the World Health Organization are given in the table below (SeeTable 7).

Table 7. Limit Values of Our Country, European Union and World Health Organization

Polluting	Period	Türkiye Air Quality Guidelines	EU Directive 2008/50/EC	WHO Air Quality Guide Values
PM10	24 hour	50 µg/m^3	50 µg/m^3	45 µg/m^3
	I year	40 µg/m^3	40 µg/m^3	15 µg/m^3
PM2.5	24 hour	-	-	15 µg/m^3
	1 year	-	25 µg/m^3	5 µg/m^3
NO2	1 hours	210 µg/m^3	200 µg/m^3	200 µg/m^3
	1 year	42 µg/m^3	40 µg/m^3	10 µg/m^3
SO2	1 hours	350 µg/m^3	350 µg/m^3	-
	24 hours	125 µg/m^3	125 µg/m^3	40 µg/m^3
	1 year	20 µg/m^3	20 µg/m^3	-
CO	8 hours	10 mg/m^3	I0 mg/m^3	10 mg/m^3
O3	8 hours	120 µg/m^3	120 µg/m^3	100 µg/m^3

WHO 2021 AQG Levels (WHO, 2021)

2.1.6.1.5 Noise

Environmental noise in Turkey is regulated by the Environmental Noise Control Regulation (ENCR), which entered into force with the Official Gazette numbered 32029 on 30.11.2022. The regulation specifies noise limits that can be applied to various areas (e.g. industrial facilities, transportation sources, music broadcasting organizations, etc.) for three time periods. Similarly, the WBG General Environment, Health and Safety Guidelines specify noise limits for two types of receivers and two time periods. The guideline requires that noise levels do not exceed the given levels or cause a maximum of 3 dB increase in background levels at the nearest receiver location off-site. The limit values of national and international standards are summarized in tables (See Table 8 andTable 9).

Table 8. National Environmental Noise Limit Values (Leq dBA)

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(1)	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) : 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 9. World Bank (WB) Noise Level Guidelines Limit Values (Leq-dBA for one hour)

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

Within the scope of the basic works of the sub-project, 24-hour noise measurements were made at a single point in the Şahinkaya muhtar's office building in the Şahinkaya neighborhood between 04.11.2024 - 05.11.2024.The measurement point was determined by considering the wind effect, environmental noise, the location of construction activities and the immediate surroundings in terms of sensitive receptors. In the measurements made within the scope of the project, the preferred measurement location for the device was selected at a distance of 1 m from any reflective surface and at least 1.5 m from important sound transmission elements.

Table 10. Noise Measurement Results

Standards	Duration	Noise Limit Values (Leq dBA)	Measurement Results A- Belt Weight Leq	L10	Lgo
National Environmental Noise Limit Values (Leq dBA)	Daytime (07:00- 19:00)	65	63.2	67.2	62.6
	Evening (19:00- 23:00)	60	60.8	62.9	59.4
	Nighttime (23:00- 07:00)	55	53.6	55.2	51.2
WBG Noise Level Guidelines Limit Values (One-hour Leq-dBA)	Daytime (07:00- 22:00)	55	63.2	67.2	62.6
	Nighttime (22:00- 07:00)	45	53.6	55.2	51.2

The measurement results are given in table (SeeTable 10). According to the measurement results, values exceeding the limit value for "Commercial and Residential Areas Where Workplaces Are Mainly Located" specified in the Regulation on Control of Environmental Noise were obtained. Measurement results exceeding the day and night limit values specified in the World Bank standards were obtained. Due to the necessity of being in a safe spot and the need for electricity, measurements were made in front of the mukhtar's office building in the Şahinkaya neighborhood (See Figure 11)

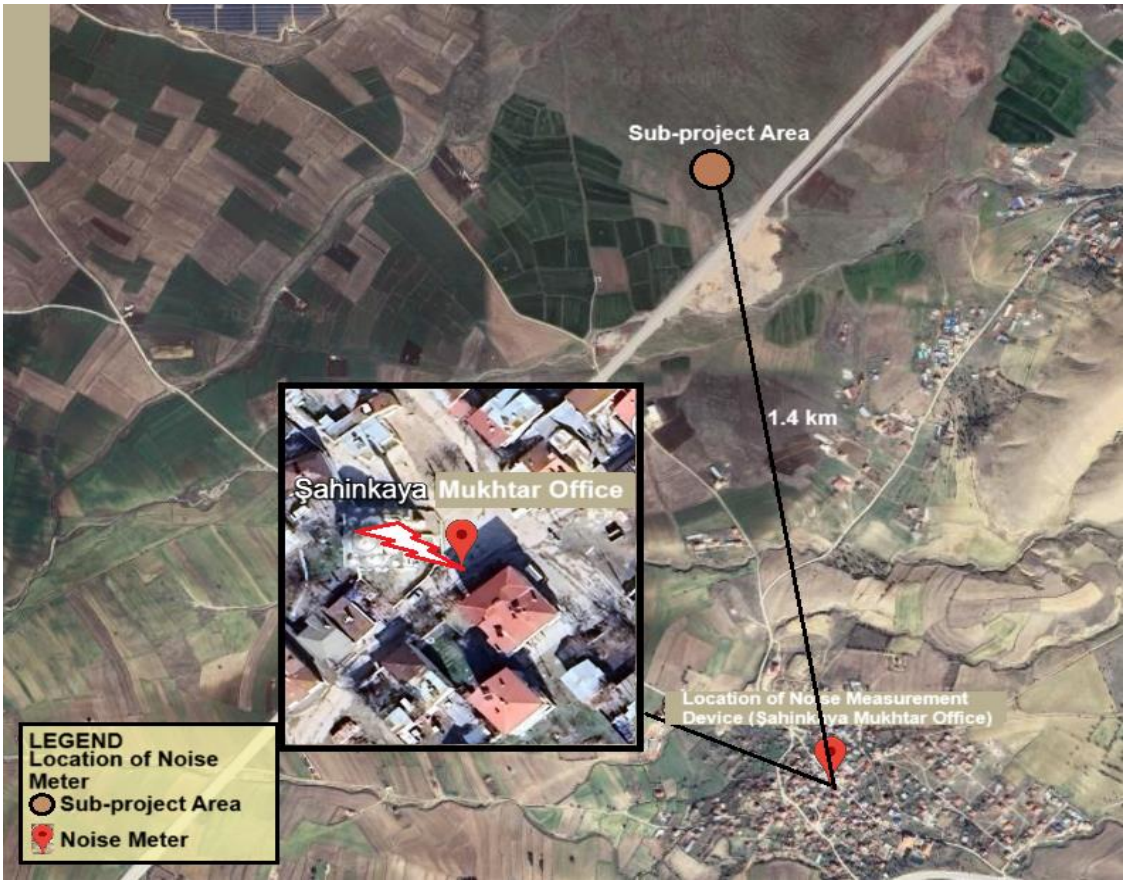


Figure 11.Location of Noise Meter

2.1.6.1.6 Water Resources

Elazığ is within the Euphrates Basin in terms of river basin. Keban reservoir is located 45 km northwest of Elazığ province and 65 km northeast of Malatya province and was built around Keban district, 10 km southwest of the confluence of Karasu and Murat rivers. The largest river of the lake, the Euphrates, is the most important river in Eastern Anatolia. The second largest river is the Murat River. With its 42,000 km^2 basin, it is the most important tributary of the Euphrates. The tributaries of the Euphrates, the Murat River and Karasu, merge in the north of Keban district. Its total length is 2,800 km.

The SPP land has an arid land structure under the influence of the continental climate. The closest water source to the sub-project area is the CIP Dam Pond, 7 km away. There is a dry stream bed 1 km away (See Figure 13). During the meeting with the authorities of the Provincial Directorate of Agriculture and land surveys conducted by geophysical engineers in the region, the soil structure near the surface consists of crystallized limestone and sandstone. For this reason, no groundwater was found in the investigation conducted at and around the SPP site. There are many small lakes called circus opened by glaciers in the high parts of Elazığ. However, these water sources are far from the sub-project area.

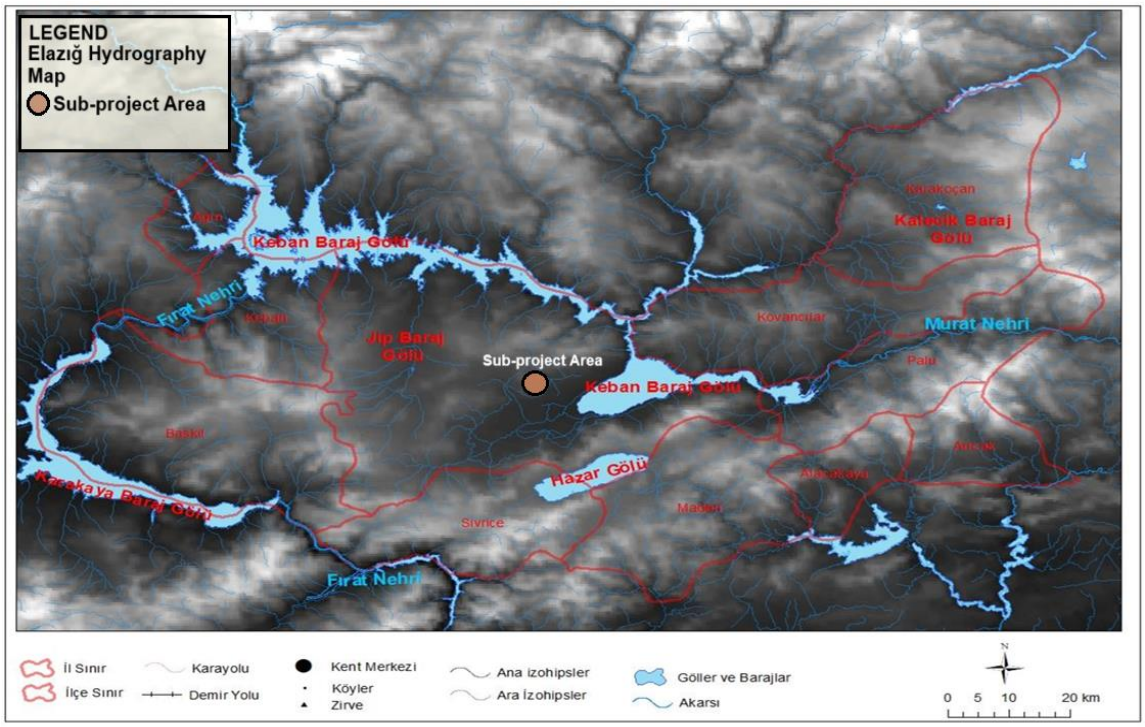


Figure 12. Elazig Province Hydrography Map

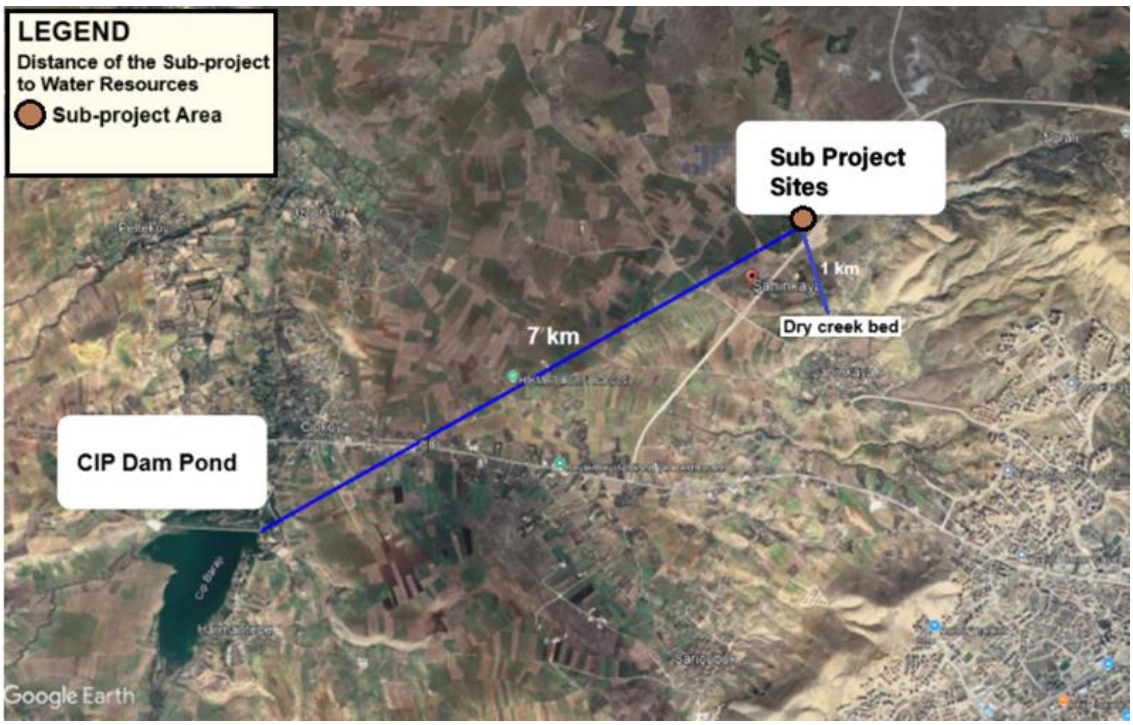


Figure 13. The closest water source to the sub-project site

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

According to AFAD data, there are no natural disaster records due to landslides in the sub-project area.

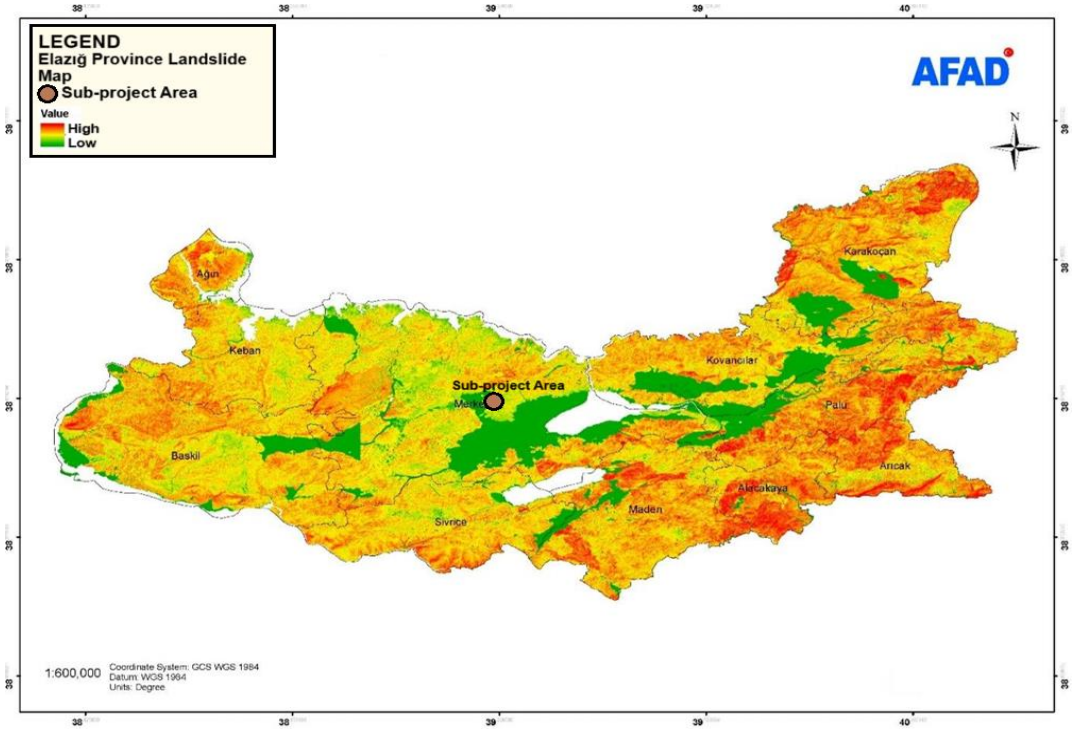


Figure 14. Sub-project Area Landslide Map

2.1.6.2 Biodiversity

This section was developed to examine the status of the ecosystem and biodiversity in the sub-project area and its immediate surroundings, to present the flora and fauna inventory, to identify endemic, rare or endangered taxa, and to determine the threat categories of the taxa determined in accordance with the World Bank Environmental and Social Standards-6 (ESS-6);Conservation of Biodiversity and Sustainable Management of Living Natural Resources (WB ESS-6). Within the scope of Biodiversity Inventory and Monitoring, field work and literature review were conducted in the sub-project impact area and Şahinkaya neighborhood.

Within the scope of the field study on Terrestrial and Inland Water Ecosystems and Biodiversity specific to the sub-project, consultations were held with the households of Şahinkaya neighborhood, the Nature Conservation and National Parks Regional Directorate, the Diyarbakır Natural Assets Conservation Regional Commission and the District Agriculture and Forestry Directorate officials. It was aimed to prepare the necessary plans for the effective protection of biodiversity and sustainability, dynamic monitoring in temporal and spatial axes, protection of flora and fauna structure and protection of natural resources in the sub-project area and Merkez district.

The consultancy firm's environmental expert made a field visit on 04.11.2024. Consultations were made with Şahinkaya neighborhood residents, Provincial Directorate of Agriculture and Nature Conservation and National Parks Regional Directorate officials. Literature review was conducted. Data on biodiversity were collected within the scope of consultations. The obtained data is presented in the ESMP annex (Annex K and Annex L).

2.1.6.2.1 Flora

The environmental expert of the consultancy company conducted research on the vegetation and flora species in the sub-project area and its surroundings. He consulted with the Provincial Directorate of Agriculture and Forestry officials and the people of Şahinkaya neighborhood about the flora diversity of the region. He conducted a literature review.

The dominant vegetation in the sub-project area and its surroundings is steppe. There are no endemic species in the activity area and its surroundings. There are shrubs and similar plants in the sub-project impact area.

The plant taxa identified in the sub-project area and its surroundings were evaluated within the scope of the Protection and Sustainable Management of Biodiversity of Living Natural Resources (ESS6) standards and there are no plant species that need to be protected.

Detailed information about the flora is given in the ESMP annex (See Annex K).

2.1.6.2.2 Fauna

The environmental expert of the consultancy company conducted a field study on the fauna species in the sub-project area and its surroundings. Consultations were held with the Provincial Directorate of Environment, Urbanization and Climate Change officials and the Directorate of Nature Conservation and National Parks officials on the fauna diversity of the region. Literature review and publications on this subject were examined.

Field work to determine the fauna species and their current status in the sub-project area was carried out in the form of observations of local people and literature review.Few bird species, rarely partridges, mice, rabbits, snakes and foxes were detected in high altitude areas away from settlements such as the sub-project area. In the literature review, it was determined that partridges, mice, rabbits, pigs, foxes, hedgehogs and ferrets were found in rural areas while pigs, wolves and mountain goats were found in higher altitudes than the sub-project area.

There are no amphibian species, inland water fish or pair-living creatures in the sub-project area and its surroundings. Of the reptile species found in the region, only *Blanus alexandri* is endemic and the endemism rate is 3.6%.

Detailed information about the flora is given in the ESMP annex (See Annex L).

2.1.6.3 Socio-economic Environment

This study aims to examine the social and economic structure of Elazığ province and Şahinkaya neighborhood within the framework of socioeconomic and financial indicators.

Consultations were held with the Şahinkaya neighborhood mukhtar, Şahinkaya neighborhood residents and Elazığ Municipality social expert on 04.11.2024 where the sub-project will be implemented, and the socio-economic structure of the people was examined. The Socio-Economic Development Index (SEDI) is an index used to measure the socio-economic development level of a country or region. This index is calculated by taking into account variables such as demographic data, employment status, education, health services, competitiveness, innovation capacities, financial status and accessibility. When Şahinkaya neighborhood is examined in terms of socio-economic development level, it is at a very low level in the development ranking. The reasons for this are the employment problem, lack of competitiveness due to low-income level and high unemployment rate, and low level of education.

2.1.6.3.1 Demography and Population

According to the interview with the Şahinkaya neighborhood mukhtar and Turkish Statistical Institute (TURKSTAT) data for 2024, a total of 4,076 people live in the Şahinkaya neighborhood. Of this population, 1,959 are male and 2,117 are female. There are 770 students. All people are of Turkish origin. There are no refugees or migrants.Population distribution by age is given in the table (SeeTable 11).

Table 11. Population distribution of Şahinkaya neighborhood by age

Age	Population
0-10	211
10-20	768
20-30	1415
30-40	710
40-50	513
50-60	329
60-70	116
70+	14
TOTAL	4,076

Mukhtar interview 2024, TURKSTAT 2024

Table 12. Education level of Şahinkaya neighborhood

Education Degree	Population
People with with Illiterate-uneducated	10
Primary education	2850
Middle school	1900
High school	500
Bachelor degree	220

Mukhtar interview 2024, TURKSTAT 2024

2.1.6.3.2 Land Ownership Status and Land Use

The ownership of the sub-project site belongs to the municipality of Elazığ Municipality. During the interviews conducted during the site visit, the people of Şahinkaya neighborhood stated that there had been no agricultural activities, animal husbandry or commercial activities in the sub-project area before. They said that the negative impact in terms of economic livelihoods is not expected.

2.1.6.3.3 Employment and Means of Livelihood

According to Employment and Labour Agency (İŞKUR) data, the unemployment rate in Şahinkaya neighborhood is below the Turkish average. As of the end of 2023, the number of registered unemployed in Şahinkaya neighborhood was 50, while the female unemployment rate was 48.5% and the unemployed youth Deciency between the ages of 18-24 was 29.5%. A significant part of the people registered to IŞKUR in Şahinkaya neighborhood are people who have professions that do not require qualifications.

The people of Şahinkaya neighborhood earn their living from agriculture, a small amount of animal husbandry and trade..30% of the people of Şahinkaya neighborhood are engaged in agriculture. Wheat and barley production is approximately 150 tons per year. Animal husbandry has decreased recently due to the decrease in income and migration to Elazığ city center. Despite this, 4000 head of cattle are still raised. A small part of the neighborhood is also engaged in trade.

2.1.6.3.4 Education and Health Services

There are two schools in Şahinkaya neighborhood, a primary school and a secondary school. The schools are located within the neighborhood and are far from the subproject area. There is no health institution operating in Şahinkaya neighborhood. The construction of the family medicine service building, which is under construction and will be opened at the end of 2025, is ongoing. Şahinkaya neighborhood residents receive health services from health institutions located in Elazığ city center. Residents go to these institutions by ambulance or their own means.

2.1.6.3.5 Infrastructure Services

According to the information received from the Şahinkaya neighborhood mukhtar, there is electricity and mains water infrastructure in the neighborhood. There is no natural gas infrastructure. Since there is no sewerage infrastructure, closed septic tanks are used. The roads in the neighborhood are asphalt and there is no transportation problem.

2.1.6.3.6 Transportation and Traffic

Elazığ is located on the highways connecting to other parts of Türkiye. It is possible to reach Elazığ province and Şahinkaya neighborhood by road. The subproject area will be reached from Elazığ northern ring highway. The sub-project is on the border of the northern ring highway. There will be a direct transition to the subproject area from this road. Access roads have been opened within the subproject area by Elazığ Municipality (See Figure 15).

Figure 15. SPP Intra-Field Access Road

2.1.6.3.7 Cultural Heritage (Tangible and Intangible)

There are important cultural heritages in Elazığ province. The most important of these are Harput Castle, Roman Rock Tombs, Virgin Mary Church, Harput Ulu Mosque, Sare Hatun Mosque. There are also historical structures such as inns, baths, madrasahs, fountains, churches as Cultural Heritage.

Figure 16. Harput Castle

The closest cultural heritage to the subproject area is Harput Castle, 10.5 km away.

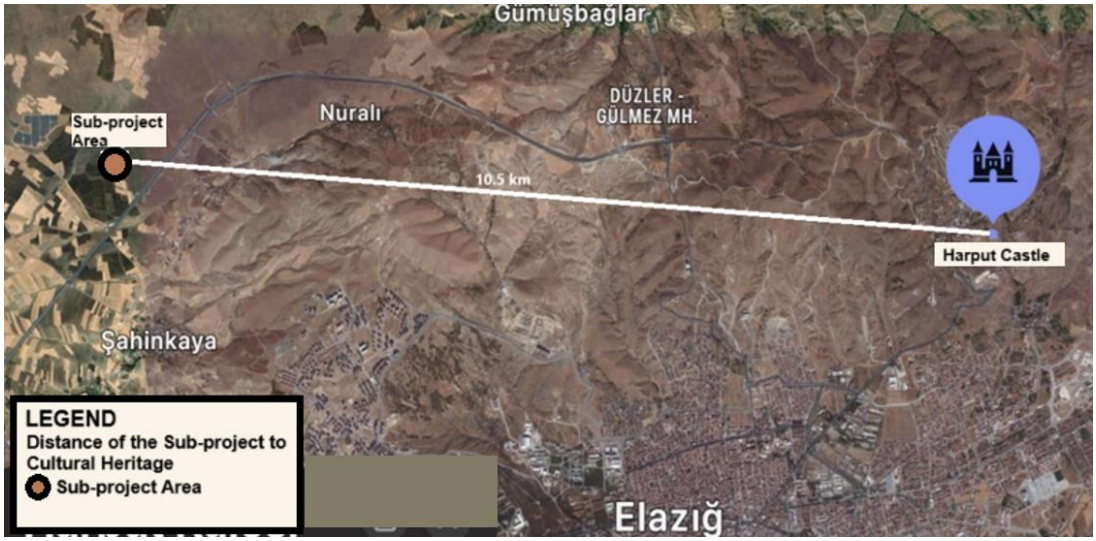


Figure 17. Distance of the SPP Project Area to the Nearest Cultural Heritage (Harput Castle)

2.1.6.3.8 Vulnerable and Disadvantage Groups/Individuals

Vulnerable groups refer to persons who, by virtue of gender identity, sexual orientation, religion, ethnicity, indigenous status, age, disability, economic disadvantage or social status. They can be affected by Sub-Project impacts differently than others and may be limited in their ability to claim or take advantage of sub-project benefits. Therefore, Elazığ Municipality and the Contractor, will apply provisions for assisting disadvantaged or vulnerable individuals that may be more adversely affected by subprojects impacts.

During the construction and operation phases, there will be "vulnerable/disadvantaged" individuals/groups who are more likely to be adversely affected by subproject impacts and/or whose ability to realize the benefits of a subproject is more limited than others. Such individuals/groups are more likely to be excluded from the mainstream participation process and may require special measures and assistance.

Specifically identified disadvantaged/vulnerable groups and the impacts that these groups are likely to face under the Sub-Project are given below;

- **Households with low or no income:**
  - Individuals experiencing financial difficulties may have difficulty maintaining their livelihood routines due to the negative social and environmental impacts of the project. They may experience anxiety regarding their livelihoods. Household representatives with low or no income may have difficulty communicating their complaints, concerns or opinions due to financial difficulties, as they cannot afford transportation or access to complaint mechanisms. They may have difficulty accessing activities. There are 75 people in Şahinkaya neighborhood with low or no income.

- **Households with family members with physical and/or mental disabilities:**
  - Construction activities may disrupt accessibility routes or facilities, limiting mobility and causing inconvenience. There are 3 households with physical and mental disabilities in Şahinkaya neighborhood.

- **People with with Illiterate-uneducated**
  - Construction-related activities may affect the access of illiterate and uneducated people to routines. It may cause communication problems and anxiety. They may have difficulty in conveying their complaints, concerns or opinions due to their illiteracy. There are 10 illiterate and uneducated people in Şahinkaya neighborhood.

- **Elderly people over 70 living alone and in need of care:**
  - Construction activities may disrupt daily routines and access to essential services for the elderly, potentially causing inconvenience or stress. The number of elderly people over the age of 70 who live alone and need care in Şahinkaya Neighborhood is 1 resident.

During the field visit, it was determined that there is no one who does not speak Turkish in Şahinkaya Neighborhood. It was also found that there were no patients with chronic diseases requiring continuous medical care and no individuals in need of care.

The characteristics of disadvantaged and vulnerable individuals in table (See Table 13) include those who experience restrictions in their access to development opportunities, often for economic, social or physical reasons. These groups/individuals often experience poor well-being, limited access to health services and lack of education and employment opportunities. The lack of social support systems and being at risk of discrimination also increase the vulnerability of these groups.

In the interviews with Şahinkaya neighborhood mukhtar, Şahinkaya neighborhood residents, there are no refugees or migrants among those affected by the sub-project or living in Şahinkaya neighborhood. In addition, there are no child or female-headed households. There are 15 people living on social assistance from the state and associations and 50 unemployed individuals.

Table 13.Vulnerable and disadvantaged groups/individuals in Şahinkaya neighborhood

Vulnerable and Disadvantage Groups/ individuals	Number of People
Households with family members with physical and/or mental disabilities	3
People with with Illiterate-uneducated	10
Elderly people over 70 living alone and in need of care	1
Households with low or no income	75
Total Vulnerable and Disadvantage Individuals/Groups	89

3. SUBPROJECT ACTIVITIES

3.1 Construction Phase

3.1.1 Construction Activities

Construction activities will be completed in 6 months. 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 solar power plants construction and installation. Approximately 5 cm of topsoil and stones on the land will be cleared and the land will be prepared flat. The stripped topsoil will be used for land leveling and filling material.

➢ 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 are required to be marked appropriately and deviations in the column assembly will be prevented.

➢ Access roads within the land will be opened.

➢ Temporary shelter facility, temporary storage area and security hut will be constructed.

➢ A leak-proof septic pit will be opened in accordance with the standards.

- Construction/ installation activities:

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

➢ Steel construction will be assembled for the installation of the panels.

➢ Cable ducts will be opened and cables will be pulled.

➢ Inverter will be installed and cables will be connected.

➢ SPP transformer will be installed and the electrical distribution panel will be liaised.

➢ It has ETL underground cable characteristics and cable channel excavation will be done.

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

➢ Steel construction will be assembled for the installation of the panels.

➢ Cable ducts will be opened and cables will be pulled.

➢ Inverter will be installed and cables will be connected.

➢ SPP transformer will be installed and the electrical distribution panel will be liaised.

- Construction machinery and equipment:

➢ 2 truck, 2 excavator, 2 crane, 2 pile driver and 2 tanker will be used during the construction process.

- Use of other resources and materials:

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 classified as hazardous waste. 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.

Throughout the life cycle of the sub-project, key measures for the implementation of resource efficiency that can help minimise negative environmental impacts, reduce costs and maintain the environmental, social and economic sustainability of solar power generation 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.

- 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 Recycling Plan will be developed 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.
- Water Saving: Reduction of water consumption, including cleaning activities of PV panels, and minimization of impacts on local water resources will be ensured throughout the life cycle of the proposed PV power plant.
- Energy Efficiency: Use of energy-efficient equipment and adoption of low-energy construction techniques will be ensured. Optimizing energy use during transportation, installation and operation of the proposed PV power plant will reduce overall energy consumption and associated greenhouse gas emissions.
- Community Participation and Social Sustainability: Engaging with local communities and stakeholders throughout the project life cycle will help identify opportunities to enhance social sustainability, address community concerns and maximize local benefits, and contribute to the overall efficiency and acceptance of the proposed PV power plant.

- 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
- As there will be no accommodation in the sub-project area, only temporary construction facilities will 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 (SeeTable 14).

Table 14. Construction Facilities

Type	On-site or Off-site	Temporary or Permanent	List of Facilities
Temporary waste storage areas	On-site	Permanent	• Panel waste • Hazardous waste • Domestic waste
Construction camp site	Off-site	Temporary	• The accommodation needs of employees will be met in the houses to be rented in Elazığ city center.
Security hut	On-site	Permanent	• For personnel responsible for the security of the sub-project site
Container for personnel	On site	Temporary	• Area where personnel's belongings are stored and where they can meet their eating, drinking and toilet needs.

3.2 Operation Phase

3.2.1 Operation Activities

During the operation phase, panel cleaning will be carried out 2 times a year. No chemicals will be used for panel cleaning. Panels will be cleaned with deionised pure water. Although it varies according to the pollution status of the panels in the washing process, 12 tonnes of water will be used for 1 MW solar panels on average.

3.2.2 Operation Facilities

The operating facilities are described in the table below (See Table 15).

Table 15. Operation Facilities

Component	Characteristics		
Solar panels	SPP :550 Wp (monoperc) 11736 piece panels SPP-1:455 Wp (monoperc) 14300 piece panels SPP-3: 550 Wp (monoperc) 11736 piece panels		
Mounting structures			
Inverters, transformers, etc.	SPP: 50 piece inverters (100 kW) 2 piece 2500 kVa transformers	SPP-1: 46 piece inverters (125 kW) 2 piece 3000 kVa transformers	SPP-3: 50 piece inverters (100 kW) 2 piece 2500 kVa transformers
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	Active Lightning Rod Method		
Fire preparedness and firefighting facilities	Fire extinguisher 6 kg (30 pieces)		
Security facilities	Security Staff, CCTV System ,Motion sensor, Wire Fence		

3.3 Labor Requirements

Number of workers (at peak) that will work on site during the construction and operation phases of the sub-project are provided in table (SeeTable 16).

The contractor company is responsible for meeting the accommodation needs of the personnel to be employed within the scope of the sub-project. Accommodation and shelter activities will be carried out in houses to be rented in Elazığ city center. Houses will be rented in accordance with the number of personnel. During the construction process, a temporary shelter area will be provided where the personnel will store their clothes, meet their food, beverage, rest, shower and toilet needs. In addition, 1 temporary storage container and 1 security booth will be constructed (See Figure 18).

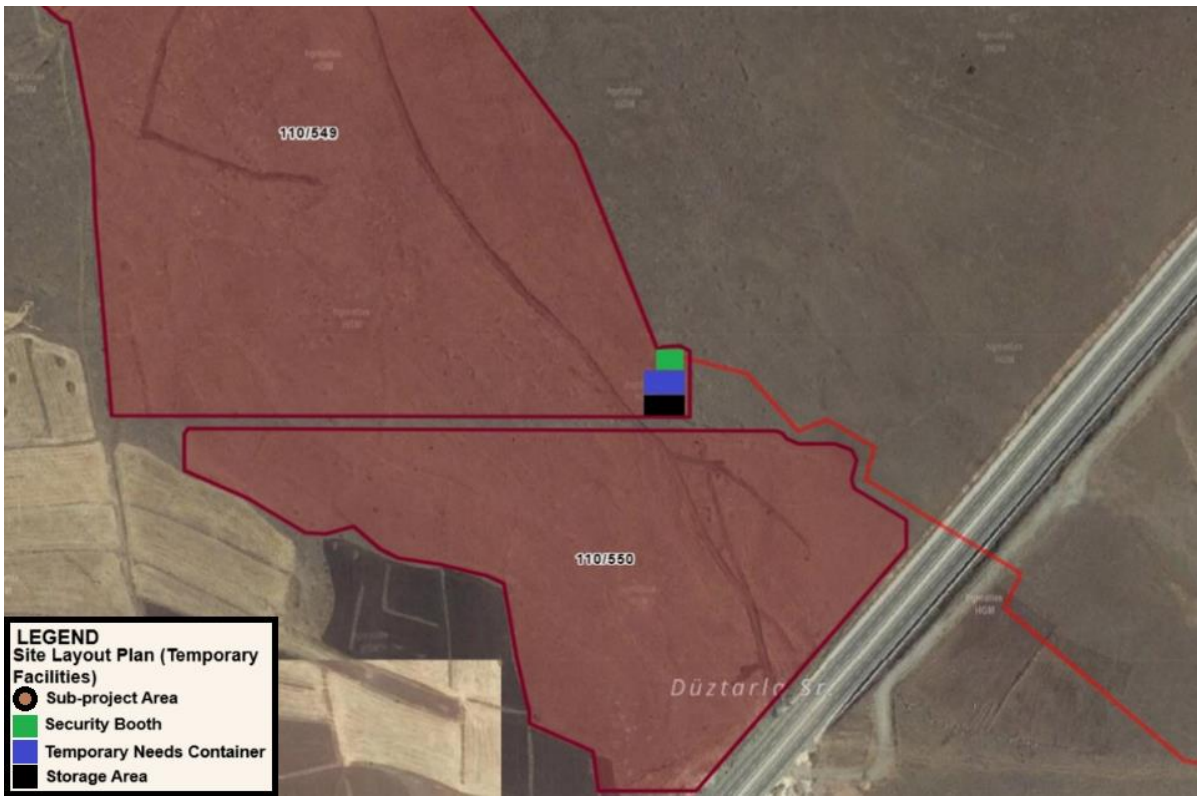


Figure 18. Buildings to be constructed within the scope of the sub-project

Table 16. Labor Requirements of the Subproject

Phase	**Number of Workers** (including contractors and subcontractors)	**Planned Accommodation Arrangement**
Construction Workers (at peak)	20	Off-site accommodation
Operation Workers(Technical Personnel)	2	Off-site accommodation
Operation Workers (Security guard)	2	Off-site accommodation
Operation Workers (The cleaner)	1	Off-site accommodation

3.4 Land Acquisition Status

Elazığ Municipality SPP power plants are located on lots 549 and 550 of block 110 lot in Şahinkaya neighborhood, Central district Elazığ province. The ownership and title deed registration of the land belongs to Elazığ Municipality (Annex-C).

The total area before the land division was 240,993 m^2 and the subdivision process was carried out with the 2024/06 council decision of Elazığ Municipality dated 04.01.2024. According to the new zoning decision, lot 549 of block 110 was converted into 152,418 m^2 parcel and lot 550 of block 110 was converted into 75,473 m^2 parcel. The municipal council decision and zoning plan are available in the Annex-B. Solar Power Plants are planned in lots 549 and 550 of block 110. A time extension letter was written to the Provincial Directorate of Agriculture on 26.08.2024 regarding the use of the solar power plant land for non-agricultural purposes, and a time extension approval letter was received in the response letter dated 11.09.2024 and numbered 15769643. The approval document is available in the annex of the ESMP (See Annex B).

The parcel title deed record of the Treasury land is available in the ESMP annex (See Annex B). An official application was made by the municipality to the Provincial Directorate of Agriculture with the letter dated 22.07.2024 and numbered 341 regarding the allocation of the energy transmission line route to Elazığ Municipality and the procedures have been initiated (See Annex B). There is no need for expropriation regarding the energy transmission line route and access roads. The expropriation exemption letter received from the municipality is attached to the ESMP (See Annex B).The connection roads within lots 549 and 550 of block 110, the ownership of which belongs to Elazığ Municipality, have been opened by the municipalit .The lot 550 of block 110 and the Elazığ North Peripheral highway passing through the border of this parcel.

Table 17.Land Acquisition Status for the Sub-project and Associated Facilities

Sub-project Component &AF	**Lot/ Parcel No.**	**Current Land Ownership (e.g. Applicant Sub-borrower, Private Person, Legal Entity), Treasury, Non-registered, Other)**	**Type of Parcel (according to Title Deed)** (e.g. Agricultural, Pasture, Raw Soil, etc.)	**Land Acquisition Method** (e.g. Purchase, Lease, Allocation, Easement Rights, etc.)	**Title Deed Area of the Parcel (m^2)**	**Area to be Used by the Sub-project (m^2)**	**Status of Land Acquisition**
SPP Area	**lots 549 and 550 of block 110**	Elazığ Municipality	Dry Field	Elazig Municipality Property	lot 549 of block 110 (152,418 m^2) lot 550 of block 110 (75,473 m^2)	SPP- 75 m^2 SPP-1 75 m^2 SPP-3 75 m^2	Elazig Municipality Property
ETL	**lot 486 of block 110**	Finance Treasury	Pasture	Allocation	252.193,4 m^2	518 m^2	Allocation was made to Elazığ Municipality.
Access route	**lots 549 and 550 of block 110**	Elazığ Municipality	Dry Field	Elazig Municipality Property	lot 549 of block 110 (152,418 m^2) lot 550 of block 110 (75,473 m^2)	Elazığ municipality opened the roads.	Elazig Municipality Property

3.5 Permitting Status

The total area before the land division was 240,993 m^2 and the subdivision process was carried out with the 2024/06 council decision of Elazığ Municipality dated 04.01.2024. According to the new zoning decision, lot 549 of block 110 was converted into 152,418 m^2 parcel and lot 550 of block 110 was converted into 75,473 m^2 parcel. The municipal council decision and zoning plan are attached to the ESMP (See Annex B).

Status of permits, licenses, approvals required to be in place before start construction is presented in table (See **Hata! Başvuru kaynağı bulunamadı.**

Table 18. 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 sub-project (SPP and SPP-1) was secured ”EIA not required Necessary” decisions in line with Environmental Impact Assessment (EIA) Regulation which was published in the Official Gazette dated 25.11.2014 and numbered 29186 and entered into force. For the SPP-3, ”EIA not Necessary” decision was secured on 28 January 2025 in line with EIA Regulation (Official Gazette dated 29.07.2022 and numbered 31907) (See Annex B).
Please list any other permits required to start construction of the Subproject.	In place	The expropriation exemption letter received from Elazığ Municipality is shared in Annex B.
		The letter of Elazığ Municipality regarding the change of allocation purpose of the pasture is shared in Annex B.
		The land class determination letter and technical report received from the Provincial Directorate of Agriculture and Forestry are presented in Annex B.
		The SPP conformity letter received from TEDAŞ General Directorate is shared in Annex-B.
		The permission received from the Ministry of Culture and Tourism is shared in Annex-B.

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:

- 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.

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.

Other E&S management plans and procedures that will support implementation of the ESMP and SEP are listed in Section 1.5.

The installation process is planned to be 6 months. Excavation and driving machines will be used intermittently only for a maximum of 6-8 week of this process.

As the sub-project owner, it is Elazığ 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 Elazığ Municipality SPP, SPP-1, SPP-3 planned within the scope of the subproject.

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 4.4.

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 Sub-project. 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:

- Construction phase,
- Operation phase,

General, cross-cutting potential environmental impacts, which could be expected for all Subproject, are presented below.

4.2 Construction Phase

4.2.1 Environmental Impacts and Risks

4.2.1.1 Wastes

Waste generation is expected to be as follows:

- Construction waste is expected to be generated during power plant installation works. Chemical wastes will be collected and transported by licensed trucks to licensed waste disposal facilities in accordance with the Waste Management Regulation.
- Domestic solid waste (non-hazardous) is expected to be generated during construction and operation phases. Municipal solid wastes will be collected by Elazığ Municipality and disposed of in the sanitary landfill operated by the municipality.
- Solar panels may contain hazardous materials such as cadmium, zinc, lead, CFCs, etc. Unless broken waste panels will be managed with appropriate waste management systems or in the event of an accident/explosion/fire during the construction phase, these substances can be released. And may cause negative environmental impacts. Hazardous wastes that will be generated during all phases of the Project will be collected separately in closed and sealed containers according to their characteristics and types in line with the Waste Management Regulation and will be transported to licensed waste transportation companies and licensed disposal facilities.
- Recyclable waste is mainly from packaging materials. There will be bins for recyclable waste in the sub-project area. These wastes will be collected by Elazığ Municipality and disposed of by licensed companies.
- Protective equipment such as masks, gloves, etc. used due to pandemic control conditions will be considered as medical waste. Protective equipment of all personnel will be considered as medical waste. These will be stored and disposed of separately from other wastes in accordance with the Medical Waste Control Regulation.

All employees will be trained on waste management to raise awareness on waste minimization. Mitigation measures against the potential impacts of the above-mentioned wastes are included in Section 4 of this plan.

Domestic Solid Waste

Assuming that the amount of domestic solid waste generated by personnel during the construction and operation phase of the project is 1.03 kg/day per person (average waste amount per person (kg/person-day), TURKSTAT, 2023);

A total of 20 personnel will work during the sub-project construction phase. Accordingly, the amount of waste to be generated daily is;

20 person * 1.03 kg/person = 20.6 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 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 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;

20.6 kg * 0.135 = 2.78 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. In case of occurrence, temporary storage will be established at a point determined in the activity area and hazardous wastes will be stored here. Wastes will be stored in closed and sealed containers. 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” 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 and Urbanization. The provisions of the Waste Management Regulation will be complied with.

The panels that have become waste during the construction phases will be collected in the designated area in the sub-project area. The collection area will be single for both parcels. The area to be constructed will be sealed to prevent the hazardous waste contained within from mixing with the soil. The waste panels collected in a safe area will be delivered to licensed recycling facilities with the code 16 02 04. The glass and precious metals contained in the panels will be recycled as raw materials for the circular economy, and the remaining part will be disposed of as hazardous waste.

Waste Oils

Within the scope of the Project, it is planned that the maintenance and repair of the machines will be carried out at the authorized services located in the region. However, in cases where it is not possible to take the work machines to the service area in case of any malfunction, maintenance and repair of the machines will be carried out in a rain-free environment, on sealed ground. Waste oils spilled accidentally on the impermeable floor will be removed from the concrete floor with absorbent materials before reaching the receiving environment and will be disposed of according to the provisions of the ‘Regulation on Control of Waste Oils’. Waste oils will be collected in sealed containers and given to licensed waste oil collectors.

Contamination of soil and surface waters with mineral oils will be prevented. In addition, daily, weekly and monthly maintenance of the machines to be used in the plant will be carried out regularly and oil leaks will be prevented. Waste oils will be collected in leak-proof waste oil containers and given to recycling facilities licensed by the Ministry of Environment, Urbanisation and Climate Change.

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

According to the 'Regulation on the Control of Medical Wastes' published in the Official Gazette dated 25.01.2017 and numbered 29959, the medical wastes that will be generated at all stages of the activity will be handled by using red plastic bags that are resistant to tearing, puncture, explosion and transport, made of original medium density polyethylene raw material with leak-proof properties, with a lifting capacity of at least 10 kilograms, large enough to be seen on it and bearing the 'International Biohazard' emblem and the phrase 'CAUTION MEDICAL WASTE' on both sides. The bags will be filled at most ¾ full, the mouths will be tightly tied and absolute sealing will be ensured. These bags will not be recycled or reused in any way. The contents of medical waste bags shall not be compressed under any circumstances, medical waste shall not be removed from the bag, emptied or transferred to another container. Medical, hazardous and domestic wastes and packaging wastes will be collected separately at the source without mixing with each other.

Separately collected medical waste will be delivered to licensed Medical Waste Sterilisation facilities authorised by the Ministry of Environment, Urbanisation and Climate Change with Medical Waste Transport Vehicles allocated for this purpose only.

4.2.1.2 *Water* Supply and Wastewater Management

It is planned that 20 personnel will be employed during the construction phase of the Elazığ Municipality Solar Power Plant Project, and assuming that the drinking and utility water consumption per person is 327 L/day (TurkStat, 2022),

20 people * 327 L/day*person = 6,540 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, 2022 data, the amount of wastewater per person is calculated as 197 L/day. During the construction phase, 20 people will work at the facility. Daily wastewater amount:

197 L/day-person*20 person= 3,940 L/day

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 Elazığ 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 47,488 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

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.

4.2.1.3 Dust and Exhaust Gases 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.

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

Calculation of dust emissions from topsoil stripping

The emission factors given in the “Regulation on Industrial Air Pollution Control” published in the Official Gazette dated 03.07.2009 and numbered 27277 were used in the calculation of the dust emissions to be produced and the results were evaluated within the framework of the "Regulation on Industrial Air Pollution Control".

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.

Table 19. Control of Industrial Air Pollution

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 (1 kg/hour)

Uncontrolled; E1 = 1 tons/hour x (0.025+0.01+0.01) kg/ton = 0.045 kg/hour

Controlled; E1 = 1 tons/hour x (0.0125+0.005+0.005) kg/ton= 0.0225 kg/hour

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 0.1 km round trip. Assuming that each truck to be used during transportation can carry 25 tons of material, and therefore approximately 1 trip will be made in 1 working hour (25 tons/ 1 tons/hour), the mass flow rate of dust emission to occur during transportation is;

Uncontrolled; E2 = (0.7 kg/km) x (0.1 km/1 trip) x (1 trip/1 hour) = 0.07 kg/hour

Controlled; E2 = (0.35 kg/km) x (0.1 km/1 trip) x (1 trip/1 hour) = 0.035 kg/hour

Dust Emission Mass Flow Rate to be Formed During the Storage of Vegetal Soil (Area Where Soil Will Be Stored: 0.02 ha)

Uncontrolled; E3 = (5.8 kg/ha-day)x(0,02 ha / 1 days(24 hours)) = 0.048 kg/hour

Controlled; E3 = (2.9/ha-day)x(0,02 ha / 1 days(24 hours))= 0.0024 kg/hour

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

Uncontrolled; ETOTAL-1 = 0. 045 kg/h + 0.07 kg/h + 0.048 kg/h **≈ 0.163 kg/h**

Controlled; ETOTAL-1 = 0. 0225 kg/h + 0.035 kg/h + 0.0024 kg/h **≈ 0.06 kg/h**

Table 20. Dust Emission Amounts from Construction

	Controlled removal of excavated soil (kg/hour)	**Removal of uncontrolled excavated soil (kg/hour)**
Sub-Project Area	0.06	0.163

Considering that all the work to be done within the scope of lifting, loading, unloading, transportation (total round-trip distance) and storage of topsoil at the construction site will be carried out in the same time period (worst case scenario), the dust emission to be generated was calculated as 0.163 kg/hour for the uncontrolled case and 0.06 kg/hour for the controlled case.

The construction equipment and transport vehicles in question will be used at different times of the day. Therefore, the pollutant values calculated in table above are expected to be much lower in practice (SeeTable 20).

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 30.11.2013 and numbered 28837 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 (See Table 21).

Fuel to be spent: 0.18* HP * Working Time* Number of machines

Table 21. Usage periods of the work machines to be used in the facility

Machine type	Number	Power (hp/h)	Working Time (h)
Crane	2	250	1
Excavator	2	300	1
Truck	2	112	1
Pile Driving Machine	2	112	1

Diesel oil will be used as fuel for the work machines to be used in the facility. The properties of the diesel oil are given in table (See Table 22).

Table 22. 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	Hydrogen (%)	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

Fuel to be spent:

(250*1*0,18*2)+(300*1*0,18*2)+(112*1*0,18*2)+(112*1*0,18*2)=278.6 L/h

Assuming that all construction machines work at the same time during the construction phase of the project, the amount of fuel required for construction machines is 278.6 lt/hour in total. Unit values of exhaust emissions from vehicles are given below.

Table 23. Pollution Emission Factors from Diesel Vehicles (gr/lt)

Pollutant	Diesel (gr/L)
CO	9.7
HCs	29
NOx	36
SOx	6.5
Dust	18

Table 24. Pollutant Values to be Originated from Construction Machinery

CO	9.70 gr/L * 278.6 L/h *1kg /1000gr = 2.7 kg/h
HCs	29.0 gr/L * 278.6 L/h *1kg /1000gr = 8.08 kg/h
NOx	36.0 gr/L * 278.6 L/h *1kg /1000gr= 10.03 kg/h
SOx	6.5 gr/L * 278.6 L/h *1kg /1000gr = 1.8 kg/h
Dust	18.0 gr/L * 278.6 L/h *1kg /1000gr= 5.01 kg/h

Table 25. Regulation on the Control of Industrial Air Pollution Limit Values

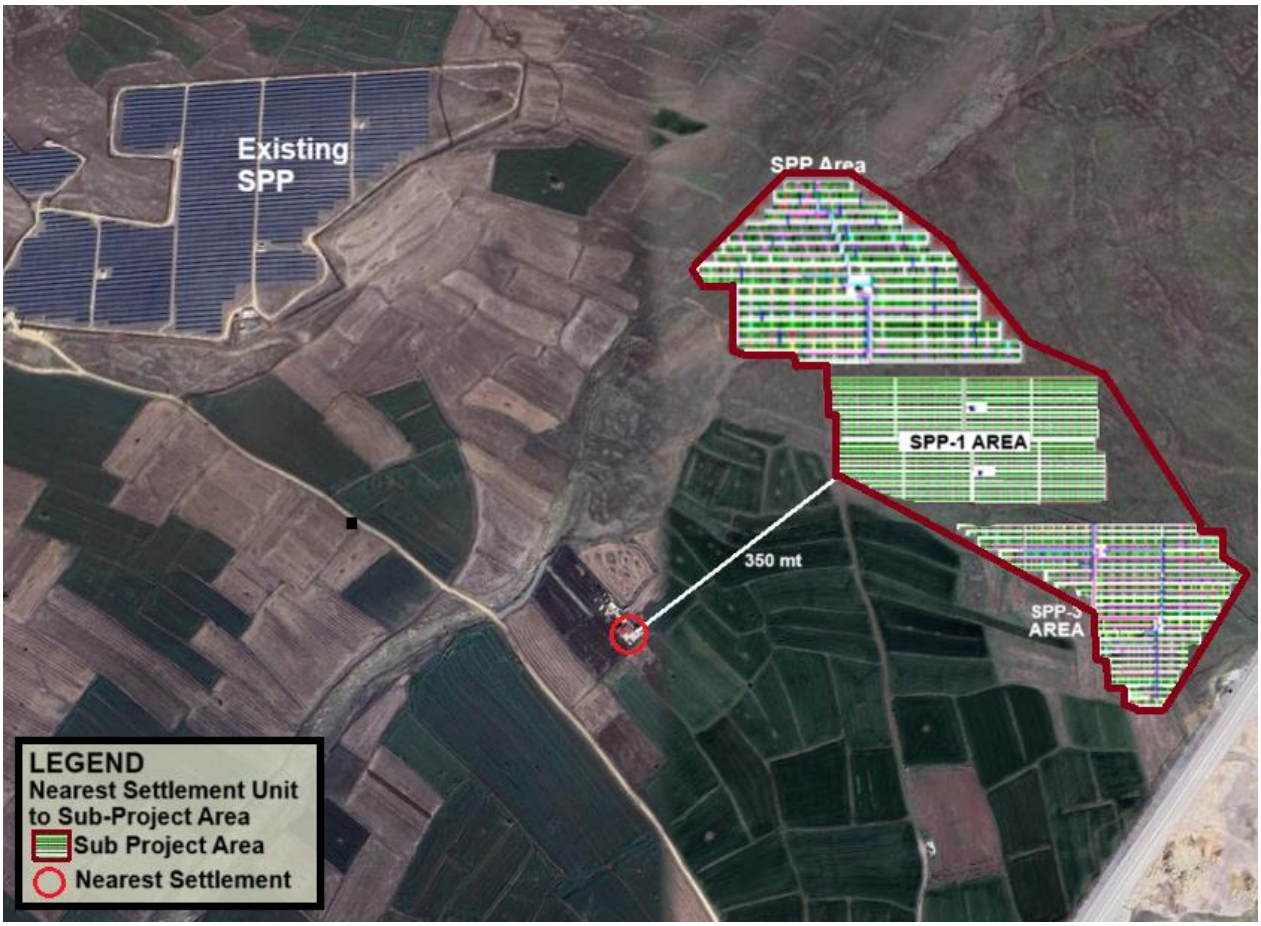
Emissions	Mass flow rates (kg/h) for normal operating conditions and weekly working hours	
	From the chimney	From places other than the chimney
Dust	10	1
Hydrogen chloride and gaseous inorganic chloride compounds	20	2
CO	500	50
SO_2	60	6
NOx (as NO_2)	40	4

The calculations above were made assuming that the construction equipment will operate simultaneously.

However, the construction machines and transportation vehicles in question will be used at different times during the day. For this reason, it is expected that the pollutant values calculated in the above table will actually be much lower. Since the mass flow rates for normal working conditions and weekly working hours are below the limits specified in Annex-2 of the Industrial Air Pollution Control Regulation published in the Official Gazette dated 03.07.2009 and numbered 27277, it will not adversely affect the existing air quality. The provisions of Exhaust Gas Emission Control Regulation, which entered into force through publication in the Official Gazette dated 11.03.2017 and numbered 30004, will be complied with.

4.2.1.4 Noise and Vibration

During the construction phase, noise and vibration will occur due to construction machinery and equipment. The resulting noise levels are compared with the values in the Distribution of Equivalent Noise Levels by Distance table (See Table 27). The nearest settlement to the sub-project area is the residence at a distance of 350 m (See Figurel 19). According to Table 27, the perceived noise level at this distance is below the daytime limit value of 55 dBA in the WBG Noise Level Guidelines Limit Values (One Hour Leq-dBA). Accordingly, it is not expected that the nearest settlement will be adversely affected by the noise that will occur during the construction phase.



Figurel 19.Location of the Nearest Settlement Unit to the Sub-project Area.

It is inevitable that there will be short-term noises that will affect the environment during the transportation and assembly periods during the installation of the project. Appropriate time periods will be selected to minimize the disturbance to the environment. No work will be carried out at night during the construction phase. The noise levels of the equipment to be used during the preparation of the land within the scope of the sub-project will be in accordance with the provisions of the "Regulation on Environmental Noise Emission from Equipment Used in Open Areas" prepared by the Ministry of Industry and Trade and published in the Official Gazette dated 30.12.2006 and numbered 26392 and entered into force, and the WBG Noise Level Guide Limit Values.

Table 26.Environmental Noise Limits for Construction Sites

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(1)	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)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 27.Distribution of Equivalent Noise Level by Distances

Distance	40	50	100	200	300	350	400	500	750	1000
Equivalent noise level	64.4	62.3	56.0	49.3	45.3	43.8	42.4	40.1	35.8	32.8

The noise levels of the equipment to be used during the preparation of the land within the scope of the project will comply with the provisions of the "Regulation on Noise Emission in the Environment Generated by Outdoor Equipment" prepared by the Ministry of Industry and Trade and published in the Official Gazette dated 30.12.2006 and numbered 26392.

During the activity, the relevant provisions and limit values of the "Regulation on Environmental Noise Assessment and Management", which entered into force after being published in the Official Gazette dated 04.06.2010 and numbered 27601, will be complied with.

4.2.1.5 Soil Erosion, Loss and Contamination

The biggest impact on the soil may be the loss of top soil of the excavation areas of the sub-project where the excavation will be carried out. The excavated soil may be exposed to erosion agents, mainly water and wind. Due to the commissioning of heavy machinery during the construction phase, soil pollution may be observed due to accidental oil leaks in the regions. The effects on the soil will be minimal and will be localized only in the areas where construction will be carried out. In addition, mitigation measures will be implemented.

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 sub-project, and
- Erosion potential due to earthworks.

4.2.1.6 Impacts on Natural Habitats

Access roads to the Sub-Project have been opened by the municipality of Elazig. Therefore, there will be no loss of trees and other vegetation for the purpose of opening roads. Although there may be a small amount of vegetation loss in the excavations to be carried out for the power transmission line cable during construction in the SPP area and in the steel construction foundations. The construction works will cover the clearing of bushes, stripping of a small amount of topsoil.

During the construction phase of the sub-project, dust and exhaust gas emissions may occur due to the transportation of materials to the site and the movement of vehicles and equipment in the construction area. In addition to dust emissions, exhaust emissions of heavy construction machinery may also occur. The primary emissions from the exhaust gases of vehicles are NO2, CO, HC, SO2 and pm. Also, bioaerosols and odors can cause deterioration of air quality during waste collection and transportation.

Noise Pollution

Noise pollution may occur during the construction phase. Necessary measures will be taken and mitigation measures will be implemented.

Impacts associated with water, energy and raw materials use

There is no water source or stream in the sub-project area and its immediate vicinity. It is not expected that water pollution will occur during the construction and operation phase. Employees will need water, and water supply will be required for dust removal purposes. These polluted waters will be transferred to a sealed septic tank. Mitigation measures will be applied against water pollution that may occur.

Waste

Due to the land leveling works that the municipality has done previously in the sub-project, land leveling will not be done during the construction phase. Therefore, the waste of letters is not expected. However, activities such as the construction and installation of temporary housing units and auxiliary units, transportation and installation of units and equipment will be carried out. Within the scope of these activities, solid wastes, packaging wastes, household wastes or chemical wastes can be expected to occur. There may be hazardous wastes that will occur as a result of breaking, cracking, burning of the panels to be used in the power plant. In addition, hazardous wastes (chemical wastes, medical wastes, electronic wastes, wastes contaminated with hazardous substances, wastes carrying disease risks, industrial wastes) may occur. Waste vehicle oils and fuels may be generated during the operation and maintenance of machines and vehicles.

Biodiversity

No negative impacts on flora are expected where the solar power plant will be established. The flora species mentioned in Chapter 2 are not found in and near the project area. Despite this, no adverse impacts on flora are expected if the measures specified in Section 4 are taken within the scope of the project.

As the sub-project area is far from urban settlements, some of the fauna species identified in Section 2 are expected to be present in or around the sub-project sites. No adverse impacts are expected as long as the measures discussed in Section 4 are implemented within the scope of the sub-project.

- *Blanus alexandri* (the Alexandrian Blind Snake) may be present at subproject area according to baseline studies, the precautions will be applied during construction period for the protection of fauna species especially for *Blanus alexandri*:Relocate the animals or create protective corridors to allow them to move safely.
- Preserve as much natural habitat as possible, particularly for rare species. This may include keeping certain areas undisturbed during construction.
- Limit excavation and land disturbance to the minimum required for the construction of the plant. Disturbance of the soil and vegetation should be kept to a minimum to avoid disrupting local species and ecosystems.
- Implement measures to protect species like *Blanus alexandri*. This might involve placing barriers to prevent them from entering construction zones or relocating the animals before heavy machinery is introduced to the site.

- Establish wildlife monitoring programs to track species presence and potential disturbances during the construction process.
- Limit noise pollution and vibrations, as they can disturb both plant and animal life.
- Properly manage construction waste to prevent pollution of nearby land. Ensure that hazardous materials like chemicals, oils, and fuels are storfed safely to avoid spills that could harm wildlife.
- Use biodegradable or environmentally friendly materials whenever possible during construction.

4.2.1.7 Social Impacts and Risks

Occupational Health and Safety and Labor

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

Personnel to be employed during the construction phase may be affected by OHS risks such as noise, vibration, dust exposure, hazards that will cause eye damage (welding / hot processes) exposure to hazardous chemicals, working with electrical equipment, falling from heights, traffic accidents, accidents caused by machinery and moving equipment… It is presented in the section. OSH risks and impacts will be managed and reduced with an OHS Management Plan and Risk Assessment (including Emergency Plans) to be prepared by the Contractor before starting construction activities for the construction phase.

The spread of infectious diseases, among workers are another potential negative impact on OHS. This impact could also result in increased pressure on health services due to overcrowding. Fire risks and worker injuries due to various electrical faults are also likely (electric spark, short circuit, electric shock due to ground fault, etc.).

Elazığ Municipality and the contractor are required to provide safe and healthy working conditions.

Community Health and Safety

Impacts that may pose risks to public health, safety and security, mainly during the construction phase, are assessed under the following headings for the subproject:

- Noise,
- Dust,
- Traffic accidents (traffic safety),
- Electrical and machinery/equipment safety,
- Infectious diseases,
- Gender-Based Violence, including Sexual Exploitation, Abuse and Harassment (SEAH).

Labor and Working Conditions

There will be employees who will be directly employed by the Sub-Borrower (payroll staff), as well as employees who are likely to be employed through third parties for a significant period of time to perform the core business processes of the Project (contract staff) and staff who will be employed by the Sub-Borrower's primary suppliers (supply chain staff). Workers have rights under national labor and employment law and any applicable collective agreements, including rights to working hours, wages, overtime, compensation and benefits upon commencement of the employment relationship and when any material change occurs.

In the event that accommodation services are provided for workers, although not foreseen, the Sub-Borrower shall establish and implement policies regarding the quality and management of the accommodation and the provision of basic services.

The potential negative impacts of subproject activities on workers in terms of working conditions and labor management are as follows:

• Unequal opportunity and unfair treatment adversely affect non-discriminatory and equal opportunity conditions such as recruitment and induction, compensation (including salaries and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices.

• There may be a risk of employing migrant workers who are not employed on substantially equal terms and conditions with non-migrant workers performing similar work..

As all employees employed within the scope of the sub-project will be provided from the local workforce, no labor migration or labor influx are foreseen.

Facility Security

During the construction phase of the sub-project, there is a potential risk of damage to construction equipment, theft and sabotag.

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 increased frequency and severity of accidents.

Due to the transportation of PV panels and other equipment, traffic congestion is not expected on the Elazığ Northern Ring Road, which is the access road to the subproject area. The municipality has opened a dirt road within the lot 549 and lot 550 of block 110, which are SPP areas, from the Elazığ Northern Ring Highway. The dirt road is not used by other people for any purpose. It will only be used for SPP transfers. In addition, no one lives in and around the SPP areas that may be adversely affected by dust and emission pollution. Despite this, the roads will be wetted with municipal irrigation vehicles against dust formation. A picture of the opened road is below.

Thanks to traffic impact reduction measures, negative impacts will be mitigated or completely eliminated.

Land Acquisition

During the construction of the solar power plants, there is no group providing its livelihood from animal husbandry, agriculture or any other work in or around the subproject area. Therefore, it is not expected that no one may be negatively affected by the subproject. During the site visit on 04.11.2024, in consultations with the Şahinkaya neighborhood headman and Şahinkaya neighborhood residents, it was determined that the SPP areas were not used for commercial activities, agricultural activities and animal husbandry activities (grazing, shelter, passageway for animals, etc.). These activities were not carried out before. It was also determined that commercial activities, agricultural activities and animal husbandry activities were not carried out at the momen. Therefore, livelihoods will not be negatively affected by the project.

Vulnerable and Disadvantaged Groups/Individuals

Certain vulnerable/disadvantaged groups/individuals may be affected during the construction phase, such as persons with disabilities, children or elderly, low-income, vulnerable or unemployed groups/individuals.

The subproject-specific ESMP, together with the SEP, will take into account any impacts related to the daily lifestyles of vulnerable/disadvantaged groups/individuals that may occur due to construction activities.

Cultural Heritage

During the site visit, in consultations with Elazığ Municipality officials and Provincial Directorate of Culture officials, it was stated that there was no cultural heritage in the sub-project area and its surroundings. However, cultural assets may be encountered during excavations during the construction phase. In this case, a Chance Find Procedure will be applied (See Annex H).

4.3 Operation Phase

4.3.1 Environmental Impacts and Risks

Impacts related to noise, dust and exhaust emissions are not expected during operation phase of the sub-project. Impacts related to water consumption, waste and wastewater generation are detailed below sections.

4.3.1.1 Wastes

Domestic Solid Waste

Assuming that the amount of domestic solid waste generated by personnel during the construction and operation phase of the project is 1.03 kg/day per person (average waste amount per person (kg/person-day), (TurkStat, 2023);

A total of 5 personnel will work during the sub-project operation phase. Accordingly, the amount of waste to be generated daily is;

5 person * 1.03 kg/day = 5,15 kg/day

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;

5,15 kg * 0.135 = 0.69 kg/day(Packaging Waste)

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 end of life of the equipment to be used in the facility. Panels will experience a loss of efficiency during the 25-year material life. According to the catalogue data, there will be an efficiency loss of approximately 20% at the end of 25 years. Therefore, replacement will be in question. 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 recycled of under the code 16 02 04.

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

During the operation phase, medical waste is not expected to be generated in the project area since the nearest health institution will be visited in case of any accident. If it occurs, the relevant provisions of the 'Regulation on Control of Medical Wastes', which entered into force after being published in the Official Gazette dated 25.01.2017 and numbered 29959, will be complied with.

4.3.1.2 Noise and Vibration

Catalogue noise levels of electrical devices (transformers, inverters etc.) to be used during the operation phase are below the 55 dB limit value. The noise levels of the equipment to be used during the preparation of the land within the scope of the sub-project will be in accordance with the provisions of the "Regulation on Environmental Noise Emission from Equipment Used in Open Areas" prepared by the Ministry of Industry and Trade and published in the Official Gazette dated 30.12.2006 and numbered 26392 and entered into force, and the WBG Noise Level Guide Limit Values.

4.3.1.3 Biodiversity

No adverse impacts on vegetation, flora and fauna are expected during the operation phase.

4.3.1.4 Water Supply and Wastewater Management

It is anticipated that a total of 5 people will work. Since the daily amount of drinking and utility water to be used per person is 327 L/person-day, the total amount of water to be used will be (TurkStat, 2022);

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

Personnel water usage amount = (327 L/person-day) x (5 people)

≈ 1,635 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, 2022 data, the amount of wastewater per person is calculated as 197 L/day. During the operation phase, 5 people will work at the facility. Daily wastewater amount:

197L/day-person*5 person= 985 L/day

A septic tank will be constructed during the operation period within the scope of the sub-project.

To minimize efficiency losses in the solar power plant, it is essential to clean the solar panels periodically. Although the frequency of cleaning the panels varies depending on the dust and dirt status of the plant, cleaning the panels twice a year will be sufficient on average. The solar panels will be cleaned with deionized water.

Panel washing and cleaning will be carried out twice a year in the facility during the operation phase of the sub-project. The municipality will carry out this process through service procurement. Deionized water will be used for cleaning, approximately 12 lt deionized water will be used for 1 MW. Since the cleaning water will evaporate on the panel surface, no wastewater will be generated. As a result, the operation phase effects of the sub-project are not expected to have a negative impact on water resources.

No groundwater was encountered in the sub-project area and its surroundings during the field visit. No negative impacts on groundwater resources are expected during the operation phase.

Impacts associated with water, energy and raw materials use

During the operation phase, waste dirty water will be generated during the panel washing process. Using chemicals to clean the solar panel can scratch the panel and reduce the absorption power of sunlight, which will significantly weaken the efficiency of solar panels. Therefore, no chemicals will be used during cleaning.

4.3.1.5 Social Impacts and Risks

Occupational Health and Safety and Labor

Personnel working during the operation phase may be affected by OHS risks such as hazards that cause eye damage (welding/hot processes), exposure to hazardous chemicals (panel components), exposure to electric current, falling from heights, traffic accidents, and accidents caused by machinery and moving equipment.

Community Health and Safety

Risks and related potential impacts during the operation phase of the subproject are as follows:

- Electrical and machinery/equipment safety,

- Exposure to subProject-related emergencies (fire, etc.) and/or hazardous materials.

Labor and Working Conditions

There will be employees (payroll staff) who will be directly employed by the Sub-Borrower. The staff shall have rights under national labour and employment law and applicable collective agreements, including working hours, wages, overtime, compensation and fringe benefits at the commencement of the employment relationship and when any material change occurs.

The sub-project will be operated by two (2) personnel consisting of electrical technicians of Elazığ Municipality. In addition, 2 security guards and 1 cleaning staff will be employed. Elazığ Municipality will hire cleaning services twice a year for cleaning and maintenance of SPP panels.

The staff to be recruited will be primarily from the Şahinkaya neighbourhood and then from the Central district.

The sub-borrower will establish and implement policies on the quality and management of working conditions and the provision of basic services.

Facility Security

During the operation phase of the sub-project, risks of theft, damage to panels and other equipment, and sabotage are possible.

Traffic

No negative impact or risk is expected in terms of transportation or traffic during the operation phase.

Land Acquisition

There will be no negative impact on the livelihoods of any person/group during the operation phase.

Vulnerable Groups/Individuals

During the operation phase, ‘vulnerable or disadvantaged’ persons/groups living in Şahinkaya neighbourhood will not be adversely affected due to subproject impacts.

Cultural Heritage

There will be no excavation works during the operation phase. Therefore, cultural assets are unlikely to be encountered. However, in the event that cultural assets are encountered, Change Finds Procedure is in place (See Annex H). Existing procedures and rules will be complied with immediately.

Technical and Social Infrastructure

No change is expected in the social and technical infrastructure during the operation phase of the sub-project.

4.4 Pre-Construction ESMP Matrix

Table 28. Pre-Construction Phase Environmental and Social Management Plan Matrix

Ref	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsibility for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
Labor and Working Conditions					
1.	Working Conditions	Construction Workers	• A Labor Management Plan will be prepared for workers before construction. • Recruitment procedures will be carried out in accordance with national laws and ESS2. • • Before construction, workers will be given clear and understandable information about national labor law, collective agreements, working hours, wages, overtime, compensation and rights. • A comprehensive risk assessment document will be prepared before construction addressing sub-project specific risks and identifying mitigation measures. • Necessary OHS training covering risks will be provided to all workers, including contractors, before construction. • All Sub-project management plans, including the Occupational Health and Safety Management Plan and the Emergency Preparedness and Response Plan, will be prepared.	Contractor Supervision Consultant Elazığ Municipality	• Emergency Preparedness and Response Plan • Occupational Health and Safety Management Plan • Community Health and Safety management Plan • Traffic Management Plan

Ref	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsibility for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
			• All workers will be trained on discrimination and codes of conduct before construction. The training provided to workers will be explanatory on the concepts of GBV and SEA/SH. Training will be provided to prevent discrimination in the workplace. • Pre-construction will ensure that workers learn about the grievance mechanism and the steps to follow when exercising their legal rights. • Information will be provided on minimum legal labor standards (prevention of child/forced labor, non-discrimination, working hours, minimum wages) in accordance with International Labor Organization (ILO) regulations and the employment of child laborers under the age of 18 will be prevented.		
2.	Impacts on Local Economy, Livelihoods and Employment	Communities	• Under the Subproject, local employment in unskilled, semi-skilled and skilled jobs will be prioritized as much as possible. SEP will be implemented to ensure engagement with communities and operationalize the grievance mechanism.	Contractor Supervision Consultant Elazığ Municipality	• Grievance Mechanism Procedure • Stakeholder Engagement Plan (SEP)

Ref	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsibility for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
3.	Inadequate Information Sharing	Communities	• Prior to the commencement of construction activitiesstakeholders are provided with activities, potential impacts and mitigation measures. ESMP and SEP will be prepared and published on the website of Elazığ Municipality.	Contractor Supervision Consultant Elazığ Municipality	• Grievance Mechanism Procedure • Stakeholder Engagement Plan (SEP)
4.	Missing Documentation	Communities	Subproject management plans will be prepared prior to the construction phase: • Air Quality Management Plan • Noise Management Plan • Chance Finds Procedure • Biodiversity Management Plan • Traffic Management Plan • Spill and Leak Response Procedures • Labor Management Plan • Emergency Preparedness and Response Plan • Fire Extinguishing Plan • OHS Management Plan • Grievance Mechanism Procedure • Spill and Leak Response Procedures • Stakeholder Engagement Plan • Hazardous Material Management Plan • Waste Management Plan • Water Management Plan • Annual Training Plan	Contractor Supervision Consultant	

4.5 Construction ESMP Matrix

Table 29. Construction Phase Environmental and Social Management Plan Matrix

Ref.	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
ESS2- Labor and Working Conditions					
1.	Improper Working Conditions, Child labour, forced labour and unregistered employment	Construction Workers	• Recruitment procedures will be conducted in accordance with national laws and ESS2. • A comprehensive risk assessment document will be prepared addressing subproject specific risks and identifying mitigation measures. • All employees, including subcontractors, will be provided with the necessary OHS trainings covering the risks. • All Subproject management plans including Occupational Health and Safety Management Plan and Emergency Preparedness and Response Plan will be prepared. • A Labor Management Plan will be prepared and implemented for and management of construction workers. • Employees will be provided with clear and understandable documented information on their rights under national labor law, collective bargaining agreements, working hours, wages, overtime, compensation and benefits. will be notified at the beginning of the relationship and when any material change occurs. • Labor Management Plan will be implemented throughout the construction phase of the Project. • Workers will be allowed to have access to the Grievance mechanism and will be required to be aware about this Mechanism. • Starting from pre-construction and throughout the construction period, all workers will be given training on discrimination and codes of conduct. The trainings given to the employees will be explanatory about the concepts of GBV and SEA/SH. At the same time	Contractor	• Labor Management Plan • OHS Management Plan • Grievance Mechanism Procedure

			through the		
Ref.	**Description of impacts**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
			trainings, it will be ensured that workers learn the Grievance mechanism of the Project (explained in detail in the Project's SEP document) and the steps to be followed in exercising their legal rights. Access to the Grievance mechanism will be easy and effective. The grievance mechanism officer designated for the Project will be announced to all employees during the trainings to be given before starting work. There will be brochures and posters containing the grievance mechanism and the contact information of the authorized person in places such as the cafeteria, canteen and service areas used by the employees. • Minimum legal labour standards will be met (preventing child/forced labour, anti-discrimination, working hours, minimum wages) as per International Labour Organization (ILO) regulations. • The work permits of the employees will be controlled within the scope of the Project, prohibiting, forced labour, and child labour under the age of 18. • Employees will be trained to prevent discrimination in the workplace. • Necessary measures will be taken by contractor to make sure that workers coming from outside the city will be given a training program on dialogue and communication with local communities, and that there are no social or cultural issues between host communities and external workers. It is the Consultant's responsibility to ensure that the contractor complies with the determined criteria.		

			• Workers will be provided hygienic and adequate facilities. • Workers will be allowed to have access to primary healthcare on site, enabling the provision of prescriptions. • Discrimination based on language, race, gender, political thought, philosophical belief, and religion will be avoided in business relations.		

Ref.	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
2.	General OHS Risks	Construction Workers	• A comprehensive risk assessment document will be prepared addressing Subproject specific risks and identifying mitigation measures. • All employees, including subcontractors, will be provided with the necessary OHS trainings covering the risks. • Safety plan will be followed and appropriate Personal Protective Equipment (PPE) will be used when working at height • OHS Trainings will cover include findings of the risk assessment study. • In OHS accidents resulting in loss of life, loss of limb or eye or temporary incapacity for more than 72 hours, the Contractor immediately (within 24 hours) inform ILBANK PIU and follow up by filling ESIRT forms in line with ILBANK's instructions. This process will also include root cause analysis and corrective action plan.	Contractor	• OHS Management Plan • A Labor Management Plan • Emergency Preparedness and Response Plan
3.	Facility Security	Employees	• The facility will employ 2 security personnel. • It will provide continuous pedestrian security patrols around the facility. • The entrances and exits to the facility will be kept under control by security personnel. • It will provide training to security personnel to be prepared for all risks that may occur in the facility. • It will ensure that the personnel correctly analyzes the concepts of suspicious vehicles, people and packages.	Contractor	• OHS Management Plan • Emergency Preparedness and Response Plan

			• The facility will be surrounded by wire mesh. • The facility's surroundings and roads will be illuminated with lighting poles.		
Ref.	**Description of impacts**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
4.	Lifting Operations OHS Risks	Construction Workers	• The lifting area will be fenced off to prevent access to the lifting area during lifting operations. • Warning signs will be placed for lifting activities. • Occupational Health and Safety Management Plan • will be implemented for lifting operations. • The lifting operations will be carried out by a well-trained, qualified and certified lifting team, accompanied by appropriate means of communication and a flagman. • Employees will be provided with all necessary PPE and safety equipment.	Contractor	• OHS Management Plan • Emergency Preparedness and Response Plan
5.	Work Accidents and	Construction Workers	• During the installation of electrical equipment, the relevant safety procedure shall be followed to prevent the risk of injury to workers from electric shock. - Lock Out Tag Out Procedure" will be prepared and implemented. -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.		• OHS Management Plan • Emergency Preparedness and Response Plan

	Electric Shock		-Ensure that power cords and extension cords are protected against damage from traffic by shielding or suspending above traffic areas	Contractor	• Labor Management Plan • Lock Out Tag Out Procedure
Ref.	**Description of impacts**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
			-Ensure that high-voltage equipment ('electrical hazard') and service rooms where access is controlled or prohibited are properly labeled. -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. • A safety strip will be drawn around the electrical areas and a safe working area will be provided. • Contractor electricians will be ensured Only certified electricians who is able to document his/her competency this particular field of vocational training will be allowed to work and provided with appropriate insulated PPE and work tools, as well as knowledge of the risk of electric shock and protection techniques. • Work will be avoided in wet weather conditions. Warning signs will be placed in areas with electrical hazards and all safety precautions will be implemented to prevent workers from being exposed to these areas.		

6.	Fire Safety Precautions and Emergency Response Plan	Construction Workers	• Employees will be trained on their responsibilities to report hazards. • Ignition sources will be kept under control. • It will be ensured that a fire extinguishing system is available. • Employees will receive comprehensive training on fire-fighting measures. • Fire drills will be conducted regularly.	Contractor	• OHS Management Plan • Labor Management Plan • Emergency Preparedness and Response Plan • Fire Extinguishing Plan
Ref.	**Description of impacts**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
7.	Rotating and Moving Equipment	Construction Workers	• 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	Contractor	• OHS Management Plan • Emergency Preparedness and Response Plan • Labor Management Plan
			• Ensure that industrial vehicle operators are trained and certified in the safe use of specialized vehicles such as forklifts, including safe loading/unloading, load limits • Make sure drivers undergo medical supervision Ensure that mobile equipment with restricted rear		

8.	Industrial Vehicle Driving and Site Traffic	Construction Workers	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 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.	Contractor	• OHS Management Plan • Emergency Preparedness and Response Plan • Labor Management Plan • Traffic Management Plan
Ref.	**Description of impacts**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
9.	Welding and Hot Works	Construction Workers	• Ensure that appropriate eye protection, respiratory protection against welding fumes welder's goggles and/or a full-face eye shield , is provided for all personnel involved in or assisting with welding operations. • 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".	Contractor	• OHS Management Plan • Emergency Preparedness and Response Plan • Fire Extinguishing Plan
10.	Manual Handling	Construction Workers	• Site workers will be provided with information and training on manual handling, including healthy lifting techniques. • Implementation of safe transportation techniques will be ensured. • Space limitations will be eliminated, good organization will be ensured and improved layouts will be provided. • Manual handling operations will be kept to one level, ground conditions will be improved and environmental conditions will be enhanced. The ground will be kept clear of obstacles.	Contractor	• OHS Management Plan • Emergency Preparedness and Response Plan

			• Use of appropriate PPE and safety equipment will be ensured. • The potential use of handling aids that can be used in combination with appropriate safety measures will be discussed.		
11.	Gender-Based Violence (GBV); Sexual Exploitation and Abuse/Sexual Harassment of Workers (SEA/ST); Gender Inequality	Construction Workers	• The management staff of the Construction Contractor and both Consultants will be briefed on SEA/SH. • Awareness meetings will be organized with employees. • All employees will be trained on SEA/SH. • All employees will sign and be informed of the Code of Conduct. • An Employee Grievance Mechanism will be implemented to collect grievances related to SEA/SH.	Contractor	• Labor Management Plan • Grievance Mechanism Procedure
Ref.	**Description of impacts**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
ESS3- Resource Efficiency and Pollution Prevention and Management					
12.	General Environmental Risks	Şahinkaya Neighbourhood People Flora and Fauna	• Waste Management and Hazardous Substances Management Plan will be prepared for the construction phase. • A storm water drainage system will be included in the planning and design of the Subproject site. • E&S Training Plan will be prepared.	Contractor	• Waste Management Plan • Hazardous Material Management Plan • Annual Training Plan

13.	Waste Management(General)	Şahinkaya Neighbourhood People Flora and Fauna	• A temporary waste storage area will be established on site to store waste generated by construction site personnel. Waste will be sorted and stored according to type (e.g. household, packaging, hazardous). • Domestic waste will be collected in designated bins and transported to the municipal landfill in accordance with the Waste Management Regulation. • Recyclable wastes, including packaging wastes, will be collected and temporarily stored in designated areas protected from precipitation. These wastes will be processed by licensed recycling companies in line with the Packaging Waste Control Regulation. • Hazardous waste will be stored in robust, leak-proof and secure containers. These containers will be clearly labeled with the type of waste, classification, volume, Material Safety Data Sheets (MSDS) and required PPE. • Unidentified wastes will be evaluated as hazardous waste. A dedicated storage area for hazardous waste will be provided with a concrete floor and sealed measures. Licensed waste management companies will be contracted for the collection, disposal or recycling of these wastes.	Contractor	Waste Management Plan

Ref.	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure

			• Waste batteries, accumulators, tires, medical waste and personal hygiene items will be collected, stored and managed separately in accordance with relevant legislation. Waste oils, batteries and other hazardous materials will be collected according to strict guidelines to prevent environmental pollution or improper disposal. • At waste generation points, containers with lids of appropriate capacity for the frequency of collection will be installed to store non-hazardous solid waste. Lids will be used to prevent rainwater ingress and overflow. • All containers will be clearly labeled according to their contents to promote effective waste management practices. • All waste will be collected, sorted, labeled and stored on site in accordance with the Waste Management Regulation. Detailed records will be kept on waste generation, disposal methods and recycling activities. • Hazardous and non-hazardous waste generation will be minimized by training employees on waste sorting, recycling procedures, spill prevention measures and compliance with legislation. • Hazardous waste containers will be regularly checked for damage or spillage, securely closed and stored in a manner that prevents chemical reactions between wastes. • Maintenance work, such as oil changes and battery replacements, will mainly be carried out off-site by qualified service providers. In cases of mandatory on-site maintenance, designated areas equipped with appropriate drainage and impermeable pavement will be used. • Oil, fuel or lubricant spills will be contained with absorbents, contaminated soil will be stripped and stored as hazardous waste. • Waste tires from vehicle maintenance will be stored in segregated areas in accordance with the Waste Tires Control Regulation.		

Ref.	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
14.	Electronic Waste	Şahinkaya Neighbourhood People Flora and Fauna	• Recycling for the proper disposal or recycling of end-of-life equipment contracts with facilities or producers. • A recycling program for damaged panels will be implemented to recover valuable materials and reduce the amount of waste going to landfill. • Agreements will be made with e-waste recycling facilities to ensure responsible disposal of inverters, batteries and similar electronic waste.	Contractor	• Waste Management Plan
15.	Wastewater Management	Şahinkaya Neighbourhood People Flora and Fauna	• Septic tanks will be constructed and used to collect waste water from construction site personnel. • The wastewater in the septic tank will be regularly vacuumed and drained to prevent overflow, reduce the risk of contamination and ensure proper operation of the system, and the septic tank will be regularly maintained.	Contractor	• Waste Management Plan
16.	Soil and Groundwater Risks	Şahinkaya Neighbourhood People Flora and Fauna	• In case of leakage or spillage of oil, chemicals, lubricants and fuel, the spillage shall be contained and cleaned up immediately. • Kits will be kept on site to control and clean up spills, and spilled materials be disposed of properly through licensed companies. • Construction vehicles and equipment will be regularly maintained in designated off-site areas. • Refueling will take place in designated areas using strict protocols. • Waste oils will be collected and stored for recycling or disposed of through licensed dealers. • Adequate hygienic facilities, such as toilets and showers, will be provided for construction workers. In the event of any accident, leakage or spillage, necessary repairs and/or maintenance will be carried out immediately.	Contractor	• Spill and Leak Response Procedures • Emergency Preparedness and Response Plan

Ref.	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
17.	During Soil Excavation or Stripping Works Dust Emissions and Risks of Gas Emissions from Vehicles and Machinery	Şahinkaya Neighbourhood People Construction Workers Flora and Fauna	• In case of dust formation, dust suppression will be applied by water spraying. Water to be used for dust suppression will be provided by water tankers. • Surrounding industrial facilities and residents within AoI will be informed about the timing and content of construction activities under the SEP. • Loading and unloading of trucks will be done carefully to avoid scattering and spreading of materials. • Transportation trucks entering and leaving the construction site will be covered with tarpaulin on public roads. • A speed limit will be applied for trucks. • Truck tires will be cleaned to prevent mud from being carried onto the roads. • Modern equipment and vehicles in compliance with relevant emission standards will be used during construction works. • Exhaust systems and emission levels of equipment and vehicles will be checked regularly. • Low emission construction equipment and vehicles will be used as part of good site practices, and cleaner fuels and technologies will be preferred to reduce air pollution during construction. • A grievance mechanism will be implemented. • In the event of a complaint, work will be suspended until the necessary measures are taken.	Contractor	• OHS Management Plan • Grievance Mechanism Procedure • Air Quality Management Plan

Ref.	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
18.	Environmental Noise Risks of Transportation Vehicles, Machinery and Outdoor Equipment to be Used at the Construction Site	Şahinkaya Neighbourhood People Construction Workers Flora and Fauna	• Construction machinery will not be operated at night. • Surrounding industrial facilities will be informed about the timing and content of construction activities under the SEP. • The machinery and equipment used during land preparation and construction works will not be operated at the same point, but distributed homogeneously over the area. • Equipment with low noise level will be preferred for the construction machinery to be used within the scope of the Subproject. • Regular and periodic maintenance of work machines and equipment and daily maintenance of each shift will be carried out. • All vehicles used in transportation activities shall comply with the speed limits specified in the Road Traffic Regulation. • A grievance mechanism will be implemented to receive complaints of discomfort. • In the event of a complaint, work will be suspended until preventive measures are taken.	Contractor	• OHS Management Plan • Noise Management Plan • Grievance Mechanism Procedure
19.	Hazardous Wastes	Şahinkaya Neighbourhood People Construction Workers Flora and Fauna	• The types, quantities and properties of hazardous substances to be stored will be documented and recorded. • An equipped and designated storage area will be established and used for the safe storage of hazardous and toxic substances. • Storage containers will be labeled with appropriate hazard warnings, safety information and emergency contact details; all chemicals will be handled, stored and disposed of in accordance with the MSDS. • Appropriate containers and sealed tanks will be used to prevent spillage, leakage or spread of hazardous substances. Secondary containment measures, e.g. embankments, dikes, dikes or containment ponds, will be implemented to capture and contain potential accidental releases. • Adequate ventilation and evacuation systems shall be provided to prevent the accumulation of hazardous vapors or gases in storage areas.	Contractor	• Hazardous Material Management Plan • Emergency Preparedness and Response Plan

Ref.	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
			• Hazardous materials such as lead-containing components in solar panels and electronic waste from inverters will be identified and safely removed. • Appropriate containment and transportation procedures will be implemented to prevent spillage or release of hazardous substances. Coordinate with licensed facilities for proper disposal or recycling of hazardous materials.		
ESS4- Community Health and Safety					
20.	Increased Traffic Depends on Intensity Risks to Community Health and Safety that may lead to Accidents, especially on Local Roads	Şahinkaya Neighbourhood People	• Coordination will be ensured to plan and develop infrastructure improvements or expansions prior to the Subproject. • All vehicles used in transportation activities shall comply with the speed limits specified in the Road Traffic Regulation. • Vehicle speed will be limited to 30 km/h on unpaved roads. • Safe traffic control measures such as road warning signs, speed humps and flag staff will be used where necessary. • Any damage to the roads will be repaired. • An • Emergency Preparedness and Response Plan will be prepared and necessary protocols will be established for possible infrastructure failures, accidents or natural disasters that may occur during construction. • All drivers will receive road safety training.	Contractor Supervision Consultant Elazığ Municipality	• Traffic Management Plan • Stakeholder Engagement Plan • Grievance Mechanism Procedure • Emergency Preparedness and Response Plan

21.	Gender-Based Violence (GBV), Sexual Exploitation and Risks Related to Abuse/Sexual Harassment (SEA/SH)	Şahinkaya Neighbourhood People	• Suitable and adequate accommodation will be provided for Subproject personnel. • All employees will be trained on ethical rules and public communication in order to prevent violence harassment abuse in the workplace. • Employees will be required to sign and comply with the of conduct. • Regular awareness raising sessions will be conducted in the field on gender-based violence (GBV) prevention and other social issues. • A grievance mechanism will be in place to receive complaints on these issues.	Contractor Supervision Consultant Elazığ Municipality	• Stakeholder Engagement Plan • Grievance Mechanism Procedure
Ref.	**Description of impacts**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
22.	Impacts on local economy, livelihood sources and employment	Şahinkaya Neighbourhood People	• Local employment will be prioritized as much as possible • for unskilled, semi-skilled and skilled works within the • scope of the Sub-project. • SEP will be implemented for regularly engaging with • communities and running the grievance mechanism	Contractor Supervision Consultant Elazığ Municipality	• Stakeholder Engagement Plan • Grievance Mechanism Procedure
23.	Impacts on vulnerable and disadvantaged individuals and groups	Şahinkaya Neighbourhood People	• Although the subproject does not pose significant risks to vulnerable groups, additional stakeholder engagement measures will remain in place. Support will be provided in accordance with the project specific SEP, such as transportation to stakeholder engagement activities. • Specific outreach measures will be implemented for vulnerable groups in impacted communities. These measures will include community engagement sessions, collaboration with local organizations, and targeted communication strategies to ensure that these groups are aware of and can access employment opportunities. For instance, sign language interpretation will be offered for hearing-impaired individuals, brochures will be prepared in	Contractor Supervision Consultant Elazığ Municipality	• Stakeholder Engagement Plan • Grievance Mechanism Procedure

			accessible formats (e.g., large print) for visually impaired individuals, and physical access to meeting venues will be ensured for wheelchair users. Furthermore, online access to engagement sessions will be made available for individuals unable to attend in person		

Ref.	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
ESS6- Biodiversity Conservation and Sustainable Management of Living Natural Resources					
24.	Negative Impacts on	Flora and fauna	• Prior to construction, field surveys will be conducted to determine the presence and distribution of these species in the Subproject area. In particular, nesting and sheltering areas will be identified for these species, Disturbance or destruction of these habitats will be avoided during construction activities. • Construction works will be carried out gradually, allowing sufficient time for fauna species that may be present in the area to escape or move to a suitable habitat area. • Construction works will be planned during periods of low wildlife activity, such as the nesting season of birds or the hibernation period of mammals. • Vegetation removal will be minimized through a comprehensive survey to avoid unnecessary	Contractor	• Biodiversity Management Plan

	Biodiversity		vegetation clearing. • Following the completion of construction activities, natural vegetation will be restored and species will be reintroduced to the surrounding areas. • Exclusion fences will be installed to prevent animals from entering construction areas and wildlife-friendly fence designs will be used to provide safe passage for small animals such as hedgehogs. • To protect known nesting or sheltering sites, barriers will be placed around these areas during construction. These barriers may be temporary or permanent, depending on the duration of construction. • Project construction areas and access roads will be separated from other areas by appropriate warning signs, signage and fencing. Personnel and vehicle access to this area will be limited to the construction area. • Habitat destruction will be reduced by keeping vehicles on access roads only and minimizing foot traffic in undisturbed areas.		
Ref.	**Description of impacts**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
			• Blanus alexandri (the Alexandrian Blind Snake) may be present at subproject area according to baseline studies, the precautions will be applied for the protection of fauna species especially for Blanus alexandri: • Relocate the animals or create protective corridors to allow them to move safely. • Preserve as much natural habitat as possible, particularly for rare species. This may include keeping certain areas undisturbed during construction. • Limit excavation and land disturbance to the minimum required for the construction of the plant. Disturbance of the soil and vegetation should be kept to a minimum to avoid disrupting local species and ecosystems. • Implement measures to protect species like Blanus alexandri. This might involve placing barriers to		

			prevent them from entering construction zones or relocating the animals before heavy machinery is introduced to the site. • Establish wildlife monitoring programs to track species presence and potential disturbances during the construction process. • Limit noise pollution and vibrations, as they can disturb both plant and animal life. • Properly manage construction waste to prevent pollution of nearby land. Ensure that hazardous materials like chemicals, oils, and fuels are stored safely to avoid spills that could harm wildlife. • Use biodegradable or environmentally friendly materials whenever possible during construction.		

Ref.	Description of impacts	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
ESS8- Cultural Heritage					
25.	Encountering cultural heritage in topsoil stripping operations	Cultural heritage	• 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 Trabzon Cultural Heritage Preservation Regional Board Directorate and the relevant Museum Directorate will be notified and the "Chance Find Procedure"(See Annex-H) will be applied. • A Chance Find Procedure will be implemented to ensure that artifacts found incidentally during Subproject implementation are identified in a timely manner and managed appropriately. • In case of any incidental finds, construction work will be stopped immediately. The municipality, ILBANK and the relevant museum directorate will be notified. • The relevant Conservation Board or Museum Directorate will be informed immediately and the security of the site will be ensured by the Contractor.	Contractor Supervision Consultant Elazığ Municipality	• Chance Find Procedure • Grievance Mechanism Procedure

			Construction works will not continue without official notification.		
ESS10- Stakeholder Engagement and Information Disclosure					
26.	Risks of Failure to Establish Stakeholder Engagement and Grievance Mechanism	Şahinkaya Neighbourhood People	• Complaints may indicate increasing concerns of stakeholders and may escalate if not identified and resolved. Identification and response to complaints will ensure positive relationships are developed between project staff, local communities and other stakeholders. • Various participation programs will be implemented to ensure the participation of women and disadvantaged individuals in consultation and decision-making processes. • Adequate means of communication will be established to ensure that the voices of vulnerable groups are heard, problems are solved and complaints are listened to. • From the early stages of the project lifecycle, the complaints procedure will include individual or group meetings, and printed materials and information boards will continue to be made public.	Contractor Supervision Consultant Elazığ Municipality	• Stakeholder Engagement Plan • Grievance Mechanism Procedure
Ref.	**Description of impacts**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
			• Complaints regarding the project will be handled through a transparent and impartial process, according to the GM announced in the SEP. • The grievance will be assessed by the municipality. Affected community representatives such as local CSOs and/or muhtars will be consulted depending on the type of grievance. If necessary, the grievance will be investigated on site.		

27.	Impacts on Vulnerable and Disadvantaged Individuals and Groups	Şahinkaya Neighbourhood People	• Although the sub-project does not pose significant risks to vulnerable and disadvantaged groups, additional measures for their participation in stakeholder engagement activities will remain in place. Support will be provided in accordance with the sub-project specific SEP, such as transportation to stakeholder engagement activities. • Specific outreach measures will be implemented for vulnerable individuals and groups in affected communities. These measures will include stakeholder engagement sessions, collaboration with local organizations and targeted communication strategies to ensure that these individuals and groups are aware of and can access employment opportunities. For example, sign language interpretation will be available for individuals with hearing impairments. For visually impaired individuals, brochures will be prepared in accessible formats. Special transportation will be provided for wheelchair users for physical access to meeting venues. In addition, online access to participation sessions will be provided for individuals who are physically unable to attend. Free transportation will be provided for individuals with livelihood constraints.	Contractor Supervision Consultant Elazığ Municipality	• Grievance Mechanism Procedure • Stakeholder Engagement Plan

4.6 Operation ESMP Matrix

Table 30. Operational Phase Environmental and Social Management Plan Matrix

Ref.	Description of Impact	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
ESS2- Labor and Working Conditions					

1.	Unsuitable Working Conditions	Employees	• On-the-job trainings will be implemented on a weekly basis to include the OHS Management Plan and Working Conditions. • Labor Management Plan will be implemented for the recruitment and management processes of all employees. • Child labor, forced labor and unregistered labor will be prohibited under the Labor Management Plan. • Employees will be provided with clear and comprehensible documented information on their rights under national labor law, such as collective agreements, working hours, wages, overtime, compensation and benefits; this information will be provided at the beginning of the employment relationship and when any significant changes occur. • Grievance Mechanism for employees will be implemented. Employees will be informed about this mechanism during recruitment and will have easy access to this mechanism.	Elazığ Municipality	• Labor Management Plan • Grievance Mechanism Procedure • OHS Management Plan
2.	General OHS Risks	Employees	• A comprehensive risk assessment document will be prepared that addresses project specific risks and identifies mitigation measures. • All employees, including subcontractors, will receive the necessary OHS training covering the risks. • All Subproject management plans will be prepared, including Occupational Health and Safety Management Plan and Emergency Preparedness and Response Plan.	Elazığ Municipality	• OHS Management Plan • OHS Training Plan • Labor Management Plan • Emergency Preparedness and Response Plan
Ref.	**Description of Impact**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
			• Occupational Health and Safety Management Plan will be followed and appropriate PPE will be used when using ladders. • OHS Trainings will include Occupational Health and Safety Management Plan		

3.	Facility Security	Employees	• 2 security personnel will be employed at the facility. • It will provide continuous pedestrian security patrols around the facility. • The prepared emergency procedures will be explained to the personnel through drills. • It will provide training to the security personnel to be prepared for all risks that may occur at the facility. • It will ensure that the personnel correctly analyzes the concepts of suspicious vehicles, people and packages. • Security personnel will be given CCTV and equipment training.	Elazığ Municipality	• OHS Management Plan • Emergency Preparedness and Response Plan
4.	Accidents and Electric Shock	Employees	• The relevant safety procedure shall be implemented to prevent the risk of injury to workers due to electric shock during the installation of electrical equipment. • Safety fences will be constructed around electrical areas and a secure storage area for chemicals will be provided. • Contractor electricians will be well trained, equipped with appropriate insulated PPE and work equipment and will be familiar with protection techniques against electric shocks. • Work will be avoided during rainy times. • Hazard signs will be placed in areas of electrical hazard and all safety precautions will be implemented to prevent exposure.	Elazığ Municipality	• OHS Management Plan • Emergency Preparedness and Response Plan
Ref.	**Description of Impact**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
5.	Fire Safety Precautions and Emergency Response	Employees	• Workers will be trained on their responsibility to report hazards. • Hazardous sources with high fire potential will be kept under control. • Accessibility of the fire extinguishing system will be ensured. • Employees will be well trained in fire fighting measures. • Fire drills will be carried out regularly.	Elazığ Municipality	• OHS Management Plan • Emergency Preparedness and Response Plan • Fire Extinguishing Plan

6.	Manual Handling	Employees	• Site workers will be provided with information and training on manual handling, including healthy lifting techniques. • Implementation of safe transportation techniques will be ensured. • Space constraints will be addressed, an organized working environment will be provided and improved layouts will be created. • Manual handling will be kept to a single level, ground conditions will be improved and environmental conditions will be enhanced. The floor will be kept clear of any obstacles. • Use of appropriate PPE and safety equipment will be ensured.	Elazığ Municipality	• OHS Management Plan • Emergency Preparedness and Response Plan
7.	Gender-based violence (GBV); sexual exploitation and abuse/sexual harassment (SEA/SH) on employees; gender inequality	Employees	• Sensitization of the Managements Staff on GBV and SEA/SH issues will be provided. • Awareness Meetings will be conducted with the affected communities. • Training regarding GBV and SEA/SH will be provided to all workers. • •All workers will sign and be informed about the Code of Conduct. • GM will be operated to capture GBV and SEA/SH related complaints	Elazığ Municipality	• Labor Management Plan • Grievance mechanism Procedure
Ref.	**Description of Impact**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
ESS3- Resource Efficiency and Pollution Prevention and Management					
8.	General Environmental Risks	Şahinkaya Neighbourhood People Flora and fauna	• Waste Management Plan and Hazardous Material Management will be prepared and used. • E&S Training Plan will be prepared and implemented.	Elazığ Municipality	• Waste Management Plan • Hazardous Material Management Plan • Annual Training Plan

9.	Waste Generation (General)	Şahinkaya Neighbourhood People Flora and fauna	• The Temporary Waste Storage Area established during construction period will be used. • Wastes will be separated and stored according to their types (e.g. household, packaging, hazardous). • Domestic waste will be collected in designated bins and transported to the municipal landfill in accordance with the Waste Management Regulation. • Recyclable waste, including packaging waste, will be collected and temporarily stored in designated areas protected from precipitation. These wastes will be managed by licensed recycling companies according to the Packaging Waste Control Regulation. • Hazardous waste will be stored in undamaged, sealed and secure containers. These containers will be clearly labeled with waste type, class, volume, MSDS and required PPE. Unidentified waste be considered hazardous. A dedicated storage area for hazardous waste will be provided with a concrete floor and equipped with leak-proof measures. Licensed waste management companies will be contracted for the collection, disposal or recycling of these wastes • Waste batteries, accumulators, tires, medical waste and personal hygiene items will be collected, stored and managed separately in accordance with relevant legislation. • For the storage of non-hazardous solid wastes, containers with sufficient capacity, suitable for the frequency of collection, with lids that prevent rainwater ingress and overflow will be placed at the waste generation points.	Elazığ Municipality	• Waste Management Plan
Ref.	**Description of Impact**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**
			• All containers will be clearly labeled according to their contents to promote effective waste management. • All waste will be collected, sorted, labeled and stored on site in accordance with Turkish Environmental Legislation. Detailed records of waste generation, disposal methods and recycling activities will be kept.		

			• Employees will be trained in waste management to ensure that hazardous and non-hazardous waste is minimized. • Hazardous waste containers will be regularly inspected for damage or leakage, securely closed and stored in a manner that prevents chemical reactions. • Maintenance such as oil changes and battery replacement will be carried out off-site, mainly by authorized service providers. In cases of mandatory on-site maintenance, soil contamination will be prevented by using appropriate drainage and impermeable capped areas. • Oil, fuel or lubricant spills will be contained with absorbent materials and contaminated soil will be stripped and stored as hazardous waste. • Waste tires from vehicle maintenance will be stored in segregated areas in accordance with the Waste Tires Control Regulation. • All unidentifiable wastes will be considered hazardous; labels will include details such as waste class, volume, MGBF and required PPE. Hazardous waste containers will be checked regularly and any damage or leakage will be identified. These containers will be securely closed and storage methods will be implemented to prevent chemical reactions between wastes.	Elazig Municipality	
Ref.	**Description of Impact**	**Sensitive Receiver(s)**	**Management/Mitigation Measure**	**Responsible for Implementation of Mitigation Measures**	**Relevant Management Plan or Procedure**

10.	Other Waste	Şahinkaya Neighbourhood People Flora and fauna	• Contracts will be made with recycling facilities or manufacturers for the proper disposal or recycling of obsolete equipment. • A recycling program for damaged panels will be implemented to recover valuable materials and reduce waste to landfill. • Agreements will be made with e-waste recycling facilities to ensure responsible disposal of electronic waste such as inverters, batteries, etc. • Hazardous waste such as lead-containing components in solar panels and electronic waste from inverters the storage conditions of the materials shall be managed by allocating a clearly marked storage area. • Lead-containing components and electronic waste shall be stored in robust and sealed containers labeled with appropriate hazard symbols and transportation instructions. • Secondary containment systems, such as dikes, embankments or containment ponds, will be used to prevent leaks and spills that could contaminate the environment. • In accordance with the relevant legislation, a special storage area with concrete floor and equipped with leak-proof measures will be allocated. • All waste containers will be clearly identified and labeled with accurate descriptions of the type of waste, providing the necessary information for safe handling and transfer. • Maintenance of the vehicles and machinery to be used, such as oil change and battery replacement, will be carried out by authorized service providers outside the Sub-Project area. • In cases of mandatory on-site maintenance, designated areas with appropriate drainage systems will be used and soil pollution will be prevented with impermeable covers. • Waste batteries and accumulators will be collected, stored and managed separately in accordance with the relevant legislation.	Elazığ Municipality	• Waste Management Plan

Ref.	Description of Impact	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
11.	Water Use	Şahinkaya Neighbourhood People Flora and fauna	• Water will be used efficiently to avoid wasting water during the cleaning of the panels. • Cleaning of the solar panels will be carried out in the form of wiper cleaning with rubber blade water sprayers that use very small amounts of water and a water saving practice.	Elazığ Municipality	
12.	Waste Water Generation	Şahinkaya Neighbourhood People Flora and fauna	• Septic tanks constructed for construction period will be used to collect waste water. • The wastewater in the septic tank will be regularly vacuumed out to prevent overflow, reduce the risk of contamination and ensure proper operation of the system. The septic tank will also be regularly maintained.	Elazığ Municipality	• Wastewater Management Plan
13.	Soil and Groundwater Risks	Şahinkaya Neighbourhood People Flora and fauna	• In the event of any incident, any leakage or spillage of oil, chemicals, lubricants and fuel shall be immediately contained and cleaned up. • Spill control and cleanup kits will be available on site, spills will be properly controlled and disposed of in an appropriate area. • Vehicles and equipment will be regularly serviced at designated locations outside the construction site. • Refueling will take place in designated areas following strict protocols. • Waste oil will be collected and stored through licensed suppliers for recycling or disposal. • In case of any accident, leakage or spillage, the necessary repair and/or maintenance will be carried out immediately.	Elazığ Municipality	• Spill and Leak Response Procedures • Emergency Preparedness and Response Plan

Ref.	Description of Impact	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
14.	Hazardous Wastes	Şahinkaya Neighbourhood People Operation Workforce Flora and fauna	• The types, quantities and characteristics of the materials to be stored will be documented and recorded. • An equipped and designated storage area will be established for the safe storage of hazardous and toxic materials. • Storage containers will be labeled with appropriate hazard warnings, safety information and emergency contact information to ensure proper handling and identification. All chemicals will be transported, stored and disposed of according to the MSDS. • Suitable containers or sealed tanks will be used to contain hazardous substances and prevent spills, leaks or releases. To capture accidental releases and Secondary containment measures, such as embankments, dikes or protection ponds, will be implemented to control the risk of flooding. • Suitable ventilation and evacuation systems shall be provided to prevent accumulation of hazardous vapors or gases in storage areas. • Appropriate containment and transportation procedures will be implemented to prevent spillage or release of hazardous substances. • Proper disposal or recycling of hazardous materials will be carried out through licensed facilities.	Elazığ Municipality	• Waste Management Plan • Emergency Preparedness and Response Plan
ESS4- Community Health and Safety					
15.	How Glare from Solar Panels Impacts Drivers, Pedestrians and Pose a Safety Risk to Residents	Şahinkaya Neighbourhood People	• Appropriate panel orientation will be ensured for road safety near the solar power plants and anti-reflective coatings will be used where necessary.	Elazığ Municipality	• Grievance Mechanism Procedure

Ref.	Description of Impact	Sensitive Receiver(s)	Management/Mitigation Measure	Responsible for Implementation of Mitigation Measures	Relevant Management Plan or Procedure
16.	Gender-Based Violence (GBV), Sexual Exploitation and Risks Related to Abuse/Sexual Harassment (SEA/SH)	Şahinkaya Neighbourhood People	• Ethical rules and codes of conduct will be provided to all employees to prevent gender-based violence, harassment, abuse, etc. in the workplace. • Employees will be required to sign and comply with the code of conduct. • Sessions will be organized to raise awareness on the prevention of GBV and other social issues. • A Grievance Mechanism will be implemented to receive complaints that may be received in this context.	Elazığ Municipality	• Grievance Mechanism Procedure
ESS6- Biodiversity Conservation and Sustainable Management of Living Natural Resources					
17.	Negative Impacts on Biodiversity	Flora and Fauna	• No negative impacts related to Biodiversity Conservation and Sustainability of Living Natural Resources are expected during the operation phase.	Elazığ Municipality	
ESS10- Stakeholder Engagement and Information Disclosure					
18.	Insufficient Stakeholder Engagement Activities and Public Consultation	Communities	• Communities will be engaged/communicated with and appropriate timing for engagement activities will be planned. There will also be regular consultations with authorities and communities regarding project management. • The grievance will be assessed by the municipality. Affected community representatives such as local CSOs and/or muhtars will be consulted depending on the type of grievance.	Elazığ Municipality	• Stakeholder Engagement Plan • Grievance Mechanism Procedure
19.	Impacts on Vulnerable and Disadvantaged Individuals and Groups	Şahinkaya Neighbourhood People	• The recruitment policy will include non-discriminatory recruitment practicesspecific training programs to address the needs of vulnerable groups, and the implementation and provision of support services such as transportation or childcare to facilitate participation in the workforce. • The Corporate Social Responsibility (CSR) program will be designed and implemented to make a positive contribution in areas such as road and infrastructure improvements based on the needs of	Elazığ Municipality	• Grievance Mechanism Procedure • Stakeholder Engagement Plan

			communities.		

4.7 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 the construction and operation phases of the Sub-Project are given in the table (See Table 31).

Table 31. 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

Monitoring Focus	KPI
Water quality analyses	Meeting set national and international water quality standards for surface and groundwater impacted and/or near the Subproject
Flood incidents	No infrastructure damage and damage to loads/humans
Wastewater and Water loss records in network	Sustainable low wastewater and water loss records
Waste	
Waste Generation	Minimization of total waste generated Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)
Waste Disposal	Increase in the ratio of recovered/reused/recycled waste to total waste generated
Soil Quality	
Spill incident	Minimization and continued improvement in the number of the reported soil quality related incidents
Non-Compliance with 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

Monitoring Focus	KPI
HSE training carried out to training matrix > 90% of all training to matrix	>90
% of attendance at scheduled trainings	>90
Engagement in HSE program by individual managers and supervisors	>90
Engagement in HSE program by contractor's	>90
Labor and Working Conditions	
Number of worker grievances closed out within the target timeframe	100% compliance with labor laws and regulations 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, SEAH) 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 32. Construction Environmental and Social Monitoring

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)
	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	-	Elazığ Municipality Contractor	It will be covered within the scope of the sub-project budget.
	Facility Security	Security	Project site	Visual monitoring, Grievance Mechanism	Daily	• Zero theft • Zero sabotage	-	Elazığ Municipality 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)
	Ambient air quality	Dust	Lots 549 and 550 of 110 block, sub-project area transportation route, energy transmission line route	Visual monitoring, Grievance Mechanism	In case of complaint and during the work period Daily	• In case of a complaint, PM_{10}, $M_{2.5}$ and settled dust will be measured. • Daily visual dust monitoring . • Minimization and continued improvement in the number of the reported air quality related incidents. • Zero grievances per year	Industrial Air Pollution Control Regulation WB ESS3	Elazığ Municipality SupervisionConsultant Contractor	It will be covered within the scope of the sub-project budget.
		Exhaust Gas Effects	Lots 549 and 550 of 110 block, sub-project area transportation route, energy transmission line route	Visual monitoring, Grievance Mechanism	Daily Annually	• Visual observation • CO, CO_2, HC will be measured annually • Minimization and continued improvement in the number of reported violations on speed limit	Industrial Air Pollution Control Regulation WB ESS3	Elazığ Municipality Supervision Consultant 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)
	Environmental noise level	Unpleasant Noise and Vibration	Lots 549 and 550 of 110 block, sub-project area transportation route, energy transmission line route	Environmental noise level measurements by accredited laboratory	Meaurement in case of any noise related complaints	• 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	Environmental Noise Control Regulation WB ESS3 IFC General EHS Guideline	Elazığ Municipality Supervision Consultant Contractor	It will be covered within the scope of the sub-project budget.
	Surface, ground and marine water quality	Fuel, oil, antifreeze, etc. spills	Lots 549 and 550 of 110 block, sub-project area transportation route, energy transmission line route	Visual monitoring, Soil quality analysis by accrediated laboratory	Daily Analysis in case of spill/leakages	• 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	WB ESS3	Elazığ Municipality Supervision Consultant 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)
	Waste Management	Inverters , batteries etc. disposal of sourced electronic waste	Lots 549 and 550 of 110 block	Visual monitoring,	Daily	• Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)	Waste Management Regulation WB ESS3	Elazığ Municipality Supervision Consultant Contractor	It will be covered within the scope of the sub-project budget.
		Hazardous waste	Lots 549 and 550 of 110 block	Visual monitoring,	Daily	• Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)	Waste Management Regulation WB ESS3	Elazığ Municipality Supervision Consultant 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	Lots 549 and 550 of 110 block	Visual monitoring,	Daily	• Minimization of total waste generated • Increase in the ratio of recovered/reused/recycled waste to total waste generated	Waste Management Regulation WB ESS3	Elazığ Municipality Supervision Consultant Contractor	It will be covered within the scope of the sub-project budget.
		Packaging Waste	Lots 549 and 550 of 110 block	Visual monitoring,	Daily	• Minimization of total waste generated • Increase in the ratio of recovered/reused/recycled waste to total waste generated	WB ESS3	Elazığ Municipality Supervision Consultant 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)
	Changes in ground structure and erosion as a result of excavations and debris accumulation	-	Lots 549 and 550 of 110 block	Visually - Geotechnics , reviews	Before starting and during the work	• Zero grievances per year		Elazığ Municipality Supervision Consultant Contractor	It will be covered within the scope of the sub-project budget.
	Community Health and Safety	Public Health Complaints	Lots 549 and 550 of 110 block, sub-project area transportation 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	-	Elazığ Municipality Supervision Consultant Contractor	It will be covered within the scope of the sub-project budget.
	OHS	Use of protective equipment, occupational safety training and OHS measures	Lots 549 and 550 of 110 block	Visual Monitoring	Daily	• 100% compliance with labor laws and regulations • Zero unresolved health and safety incidents within the targeted timeframe • Availability/accessibility of PPE	Data obtained through field inspections and feedback will be recorded by preparing an accident notification	Elazığ Municipality Supervision Consultant 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)
						• 90% or higher employee satisfaction rate • Zero employees without safety training • Zero safety violations	report and will be forwarded to Elazığ Municipality officials on the same day. İlbank will be immediately notified by Elazığ Municipality. İLBANK will notify the World Bank officials of the accident within 24 hours at the latest, and the accident result report and additional measures to be taken within 15 days.		

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)
	Redress of grievance	Grievance Mechanism	Areas close to the sub-project site (Şahinkaya Neighborhood)	"Grievance Forms" to be left around the construction site will be collected by the responsible person and forwarded to Elazığ Municipality. It will be monitored by Elazığ Municipality through the internet website, telephone and written applications to Elazığ Municipality. "Grievance Close Out Form" will be kept.	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		Elazığ Municipality Supervision Consultant Contractor	It will be covered within the scope of the sub-project budget.

Table 33. Operation Environmental and Social Monitoring

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)
	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	-	Elazığ Municipality,	All costs during the operation phase are covered by Elazığ Municipality.
	Facility Security	Security	Project site	Visual monitoring, Grievance Mechanism	Daily	• Zero theft • Zero sabotage	-	Elazığ Municipality	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)
	Ambient air quality	Exhaust Gas Effects	Lots 549 and 550 of 110 block, sub-project area transportation route,energy transmission line route	Measurement by accredited laboratory Grievance Mechanism	In case of complaint and during the operation period	• CO, CO2, HC measurements • Zero, Air Quality Limit Value Violation • Vehicle exhaust measurement report controls • Zero complaints	Industrial Air Pollution Control Regulation WB ESS3	Elazığ Municipality	All costs during the operation phase are covered by Elazığ Municipality
	Environmental noise level	Unpleasant Noise and Vibration	Lots 549 and 550 of 110 block, sub-project area transportation route, energy transmission line route	Environmental noise measurement by accredited laboratory	In case of complaint and during the operation period	• Zero Non-Compliance Reports (NCR) per year • Zero complaints per year • Zero staff and community noise complaints	Environmental Noise Control Regulation	Elazığ Municipality	All costs during the operation phase are covered by Elazığ 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)
	Water Quality	Fuel, oil, antifreeze, etc. spills	Lots 549 and 550 of 110 block, sub-project area transportation route, energy transmission line route	Visual monitoring, Soil quality analysis by accredited laboratory in case of spill/leakages	Daily Analysis in case of spills/leakages	• Minimize and continuously improve the number of reported water quality incidents • Zero NCR per year • Zero accidents per year • Zero complaints per year	Water Pollution Control Regulation	Elazığ Municipality	All costs during the operation phase are covered by Elazığ Municipality
	Waste Management	Inverters , batteries etc. disposal of sourced electronic waste	Lots 549 and 550 of 110 block	Visual monitoring,	Monthly	• Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)	Waste Management Regulation WB ESS3	Elazığ Municipality	All costs during the operation phase are covered by Elazığ 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)
		Hazardous waste	Lots 549 and 550 of 110 block	Visual monitoring,	Monthly	• Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)	Waste Management Regulation WB ESS3	Elazığ Municipality	All costs during the operation phase are covered by Elazığ Municipality
		Domestic Waste	Lots 549 and 550 of 110 block	Visual monitoring,	Daily	• Minimization of total waste generated • Increase in the ratio of recovered/reused/recycled waste to total waste generated	Waste Management Regulation WB ESS3	Elazığ Municipality	All costs during the operation phase are covered by Elazığ Municipality
		Packaging Waste	Lots 549 and 550 of 110 block	Visual monitoring,	Daily	• Minimization of total waste generated • Increase in the ratio of recovered/reused/recycled waste to total waste generated	WB ESS3	Elazığ Municipality	All costs during the operation phase are covered by Elazığ 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)
	Surface, ground and water quality	Fuel, oil, antifreeze, etc. spills	Lots 549 and 550 of 110 block, sub-project area transportation route, energy transmission line route	Visual monitoring,	Daily In case of spillage/leakage	• 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		Elazığ Municipality	During the operation phase, all costs are borne by the Elazığ Municipality.
	Community Health and Safety	Public Health Complaints	Areas close to the sub-project site (Şahinkaya Neighborhood)	Visual monitoring, Grievance Mechanism	Every day during operation	• Zero incidents per year • Zero, speed limit exceeding or unsafe driving • Zero, accidental injuries and deaths • Zero, complaints • Zero, unauthorized entry into subproject area	-	Elazığ Municipality	During the operation phase, all costs are borne by the Elazığ 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)
	Redress of grievance	Grievance Mechanism	Areas close to the sub-project site Şahinkaya Neighborhood)	"Grievance Forms" to be left around the construction site will be collected by the responsible person and forwarded to Elazığ Municipality. It will be monitored by Elazığ Municipality through the internet website, telephone and written applications to Elazığ Municipality. "Grievance Close Out Form" will be kept.	Every day during operation	• All complaints are closed within the targeted time, • Information to PAPs, stakeholders, and GM	-	Elazığ Municipality	During the operation phase, all costs are borne by the Elazığ 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)
	OHS	Use of protective equipment , occupational safety training and OHS measures	Lots 549 and 550 of 110 block, sub-project area transportation route, energy transmission line route	Visual monitoring,	Daily	• 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 • Zero work accidents	The data obtained through field controls and feedback will be recorded by preparing an accident notification report and will be forwarded to Elazığ Municipality officials on the same day. İlbank will be notified immediately by Elazığ MunicipalityThe WB will be informed by Ilbank about the accident within 24 hours latest, and the accident result report and additional measures to be taken within 15 days.	Elazığ Municipality	During the operation phase, all costs are borne by the Elazığ Municipality

4.8 List of Associated Plans and Procedures

The E&S management plans and procedures to be prepared by Contractor/s are listed in table (See Table 34).

Table 34.Plans and Procedures associated.

Management Plan or Procedure	Relevant Subproject Phase (Construction only, Operation only, both Construction and Defect Liability Period (DLP))
Air Quality Management Plan	Construction only
Noise Management Plan	Construction only
Chance Finds Procedure	Construction only
Biodiversity Management Plan	Construction only
Traffic Management Plan	Construction only
Spill and Leak Response Procedures	Construction only
Labor Management Plan	Construction and Operation
Emergency Preparedness and Response Plan	Construction and Operation
Fire Extinguishing Plan	Construction and Operation
OHS Management Plan	Construction and Operation
Grievance Mechanism Procedure	Construction and Operation
Spill and Leak Response Procedures	Construction and Operation
Stakeholder Engagement Plan	Construction and Operation
Hazardous Material Management Plan	Construction and Operation
Waste Management Plan	Construction and Operation
Water Management Plan	Construction and Operation
Annual Training Plan	Construction and Operation

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

4.9 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 İ). 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 Supervision Consultant changes at any phase of the Subproject requiring

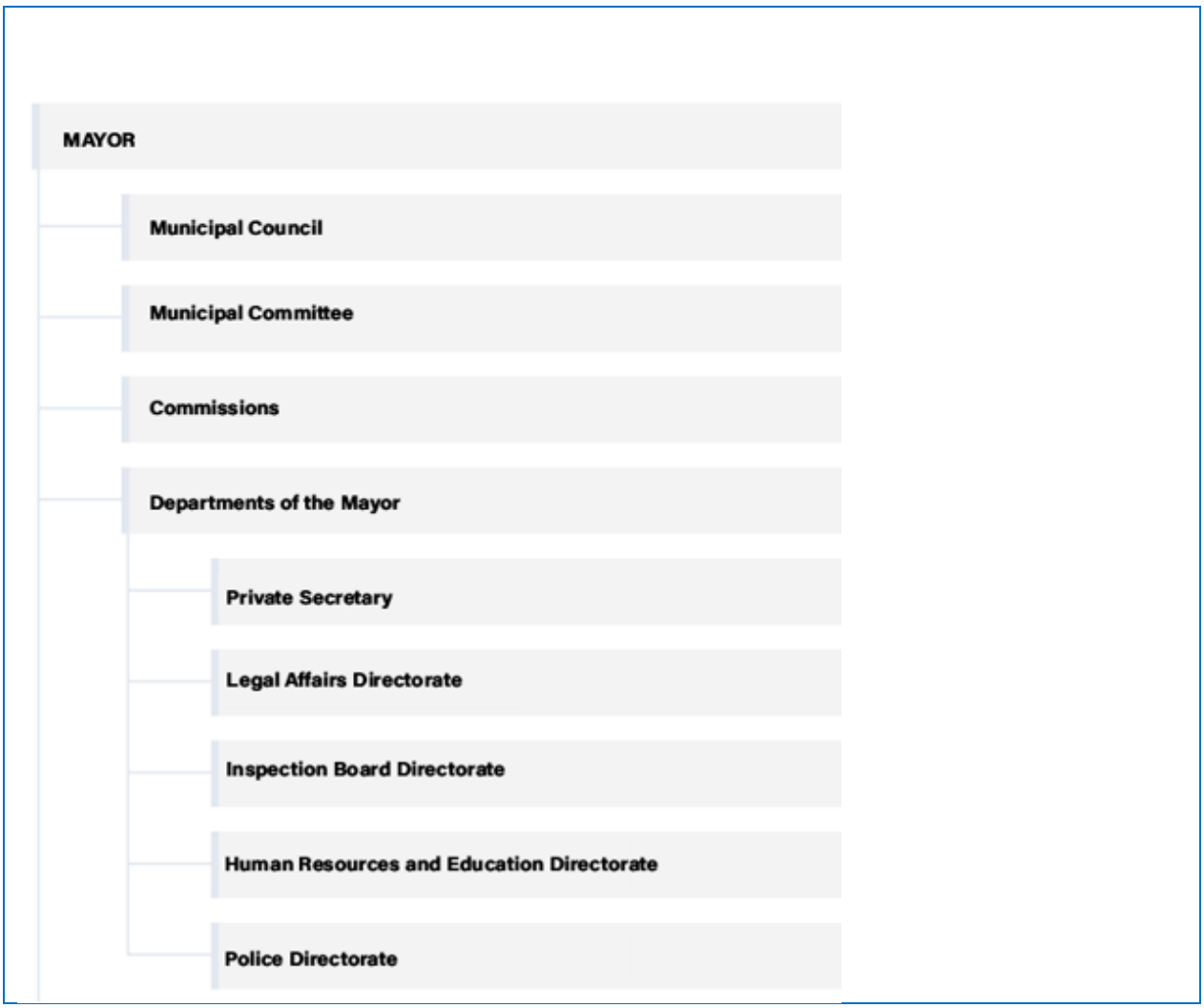
(i) E&S commitments and E&S roles and responsibilities to be clarified with the new contractor or supervision consulting firm,

(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 Elazığ Municipality to be established by the Sub-borrower is presented in figure (See Figure 20). The PIU will have qualified staff and resources to the satisfaction of ILBANK.



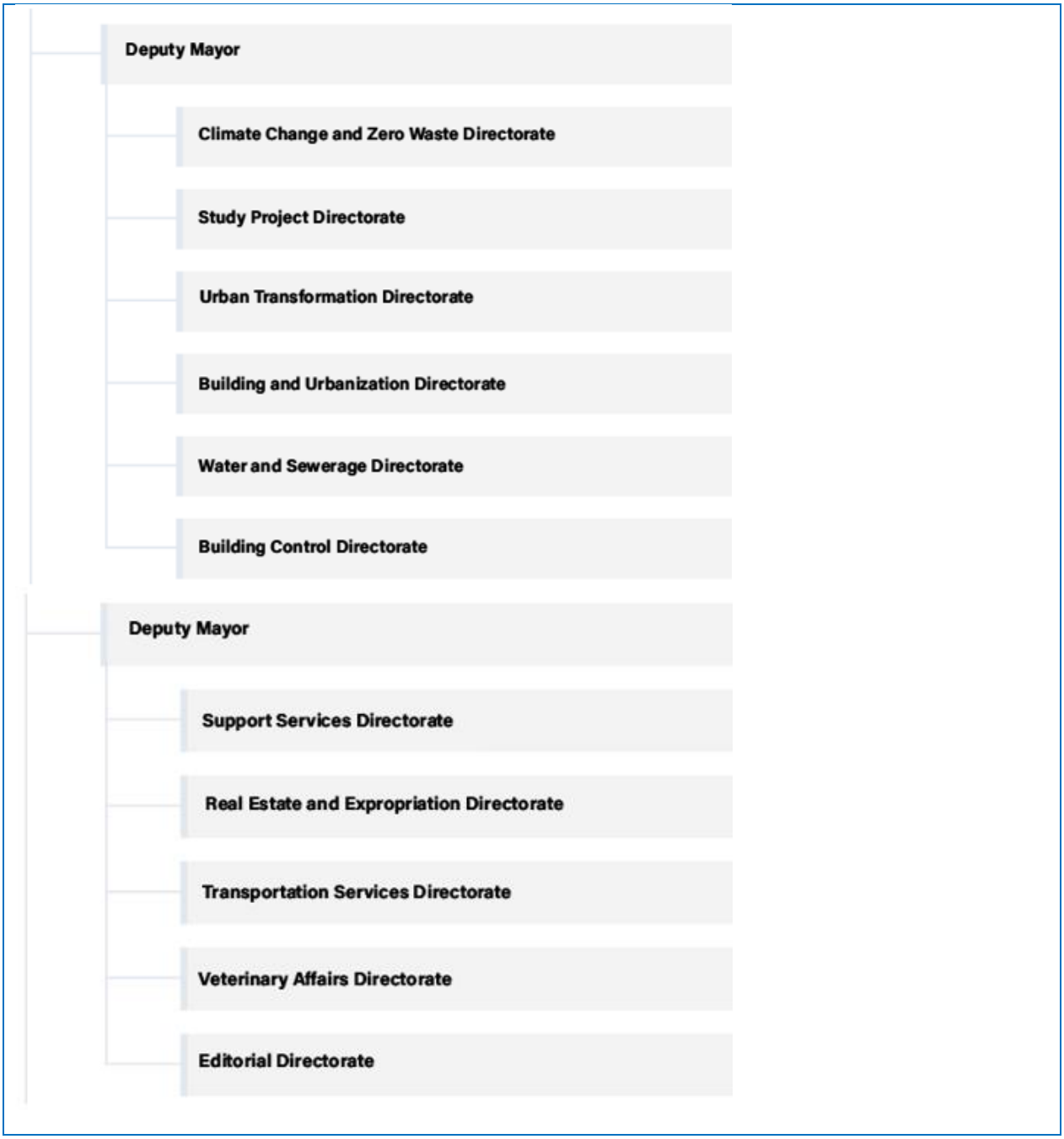

Deputy Mayor
Climate Change and Zero Waste Directorate
Study Project Directorate
Urban Transformation Directorate
Building and Urbanization Directorate
Water and Sewerage Directorate
Building Control Directorate
Deputy Mayor
Support Services Directorate
Real Estate and Expropriation Directorate
Transportation Services Directorate
Veterinary Affairs Directorate
Editorial Directorate

Figure 20. Organization Structure – Elazığ Municipality

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

The persons responsible for communication with Ilbank and ensuring that the sub-project studies comply with the relevant requirements of IlBank's ESMS in line with IFC standards are Elazığ Municipality Personnel and are 5 people in total, including 2 environmental experts, 1 OHS expert, 1 social expert, and 1 human resources expert. Information about authorized persons is shared in annex (See Annex A).

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 responsibilities of the sub-borrower and other key parties regarding their Environmental and Social responsibilities are given in the table (See Table 35).

Table 35. Roles and E&S related Responsibilities of Key Parties associated with ESMP Implementation

Party	Role	Key Responsibilities
Sub-borrower		
Elazığ 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 WB 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 WB – 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).

Party	Role	Key Responsibilities
	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 ESS procedures) • Support the sub-borrower management as required in the review and evaluation of ESAP and other E&S covenants for incorporation into sub-financing agreements to be executed between the ILBANK and the sub-borrower • Ensure compliance of 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 and WB E&S teams over reasonable timeframes • Coordinate the Supervision Consultant, 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.
Supervision Consultant ("*Müsavir*")	Management 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

Party	Role	Key Responsibilities
		• 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 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 Supervision Consultant (“*müşavir*”) – in line with the format provided by ILBANK. • Fill in monthly occupational health and safety (OHS) forms – reviewed by Supervision Consultant. • Implement corrective actions in case of E&S non-compliances under the supervision of sub-borrower’s 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 personnel (trained by ILBANK) will provide E&S training to contractors. Training contents are given in the table below (See Table 36). 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 Elazığ 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 Elazığ Municipality.

Table 36. 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: ○ 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.) ○ External Communications (including stakeholder engagement, grievance management, etc.) ○ Monitoring, Review and Reporting ○ 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: ○ E&S covenants included in sub-loan agreements ○ Subproject ESAP requirements ○ Subproject-level E&S assessment and management documentation (such as ESMP, SEP and other E&S management plans and procedures as applicable); ○ Emergency Preparedness and Response Plan including a training program for emergency responders including drills at regular intervals; ○ 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 Labor Management Plans.

6 IMPLEMENTATION SCHEDULE AND COST ESTIMATES

6.1 Implementation Schedule

The construction and operation phase activity periods are listed in the table below (See Table 37).

Table 37. Duration of Activities

Phase	Remarks/ Notes
Construction Duration	6 months
Defect Liability Period	1 years
Operation Duration inc. DLP	25 years

6.2 Cost Estimates

All costs for implementing the ESMP are included in the Project budget (See Table 38).

- 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 38. 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 Elazığ Municipality (**)
Finance Expert	No Additional Charges (***)
Technical Expert	No Additional Charges (***)

(*) The recruitment of experts is financed within the budget for Supervision 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 Elazığ Municipality for the operation phase.

(***) Since Elazığ 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

Company/ Institution	Profession/ Expertise
Elazığ Directorate of Environment, Urbanization and Climate Change	Environmental Expert
Elazığ Provincial Directorate of Agriculture and Forestry	Forest Engineer
Elazığ Provincial Directorate of Culture and Tourism	Environmental Expert
Elazığ Education and Environment Association	Social Expert
PVGLOBAL Energy	Social Expert Environmental Expert

Annex B – Existing Permitting Documentation

Zoning Decision and Parcel Information

T.C.
ELAZIĞ BELEDİYE BAŞKANLIĞI
ENCÜMEN KARARI

Karar Tarihi	Karar No	Özü
04/01/2024	2024/06	İFRAZ,TESCİL VE TERKİN

Elazığ Belediye Encümeni, Belediye Başkan Yardımcısı Nazif BİLGİNOĞLU' nun Başkanlığında aşağıda isimleri yazılı üyelerin iştirakiyle toplandı.

Şahinkaya Mahallesi, ada: 110'da Elazığ Belediyesi adına kayıtlı 518 numaralı parselin; ifraz tescil ve terkin işlemlerinin yapılabilmesi hususunda gerekli Encümen Kararının alınmasına ilişkin Etüd Proje Müdürlüğünün Başkanlık onaylı 30.11.2023 tarih ve 947 sayılı teklif yazısı ve ekleri görüşüldü.

Şahinkaya Mahallesi, ada: 110'da Elazığ Belediyesi adına kayıtlı 518 numaralı parselin; Belediye Meclisimizin 02/02/2022 tarih ve 2022/30 sayılı kararı ile tasdiki yapılan Elazığ (Merkez) 1/5000 ölçekli Nazım İmar Planı Değişikliği, 1/1000 ölçekli Uygulama İmar Planı Değişikliği, Plan Notları ve Plan Açıklama Raporunda; ; Bir kısmı 0,50 Yençok:6,50 nizamında Güneş Enerjisi Santrali ,bir kısmı 0.80 Yençok:7,50 nizamında Trafo Alanı ,bir kısmı 0.80 Yençok:7,50 nizamında Belediye Hizmet Alanı, bir kısmı ise, Ağaçlandırılacak alanda kalmakta olup, Buna göre bahse konu yerin ekli değişiklik tasarım krokisinde de belirtildiği üzere bahse konu taşınmazlar kamu mülkiyetine ait olduğundan; 3194 sayılı 15.maddesindeki istisna **"10.12.2003 tarihli ve 5018 sayılı Kamu Mali Yönetimi ve Kontrol Kanunu'nda belirtilen merkezi yönetim kapsamındaki kamu idarelerinin yetkisi içindeki kamu yatırımlarında veya kamu mülkiyetine ait alan"** hükmü ile 3194 sayılı İmar Kanununun 15 ve 16. maddelerine göre; A,B,C,D,E,F,G,H ve Y1 olmak üzere dokuz parçaya ifrazına, ifraz sonucu oluşan A,B,C,D,E,F,G ve H numaralı yerin malikleri adına tesciline ,Y1 olarak gösterilen yerin ise imar yolunda kaldığından maliki tarafından bedelsiz olarak Belediyemiz lehine yola terkin edilmek istendiğinden sicilinden imar yolu olarak terkin edilmesine ve alınan iş bu karar hakkında gerekli işlemlerin yapılması için kararın iki örneğinin ekleriyle birlikte Etüd Proje Müdürlüğüne tevdiine oybirliğiyle karar verildi
F.K.

ASLINA UYGUNDUR
Abdurrahim DEMİR
Encümen Şefi

Nazif BİLGİNOĞLU
Encümen Başkanı
Belediye Başkan Yardımcısı

Aydın KARA
Üye

Sami GÜZEL
Üye

Hüseyin İNCE
Üye

Namık ÖCALAN
Üye
Mali Hizmetler Müdürü

Onur TURGUT
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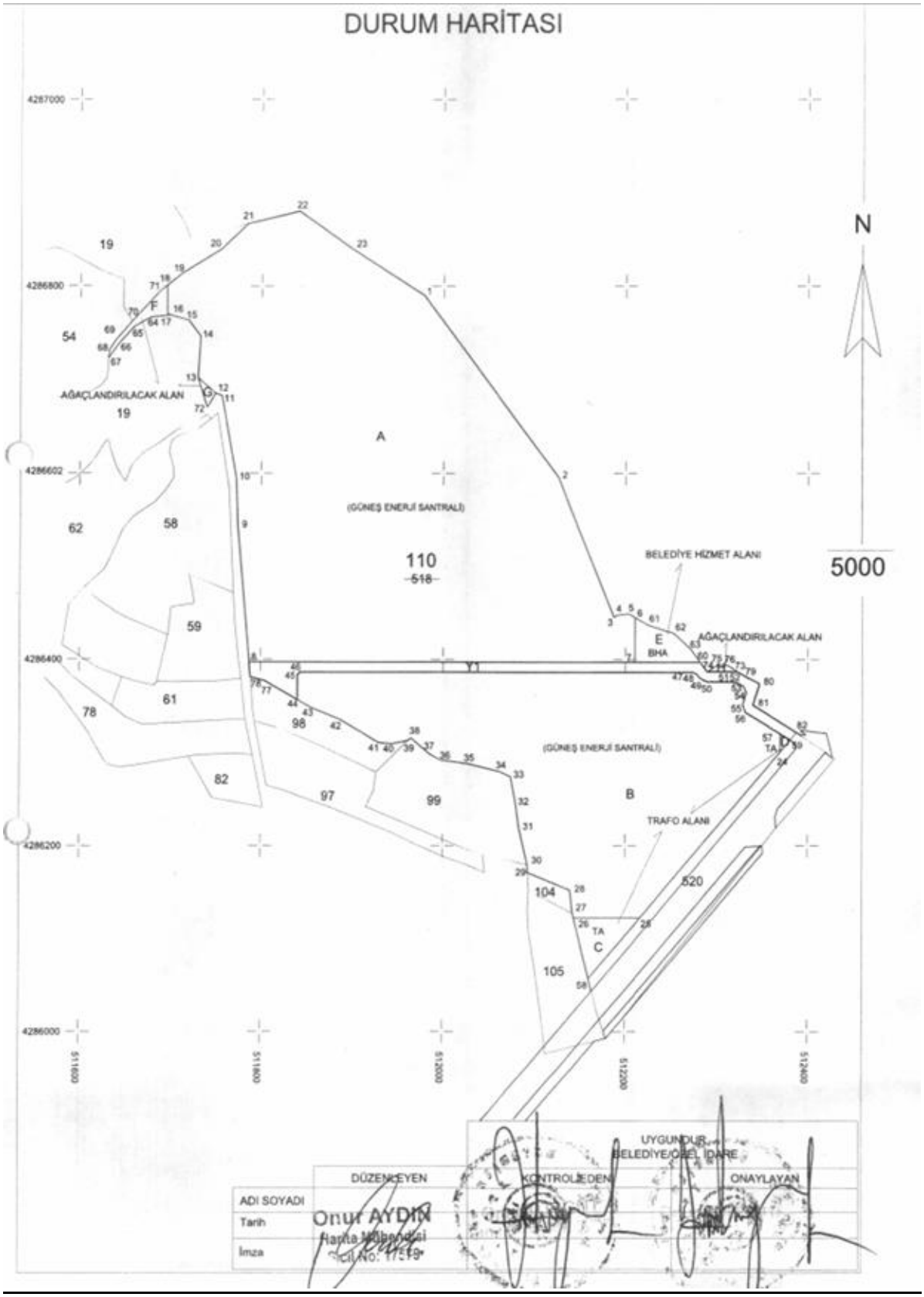
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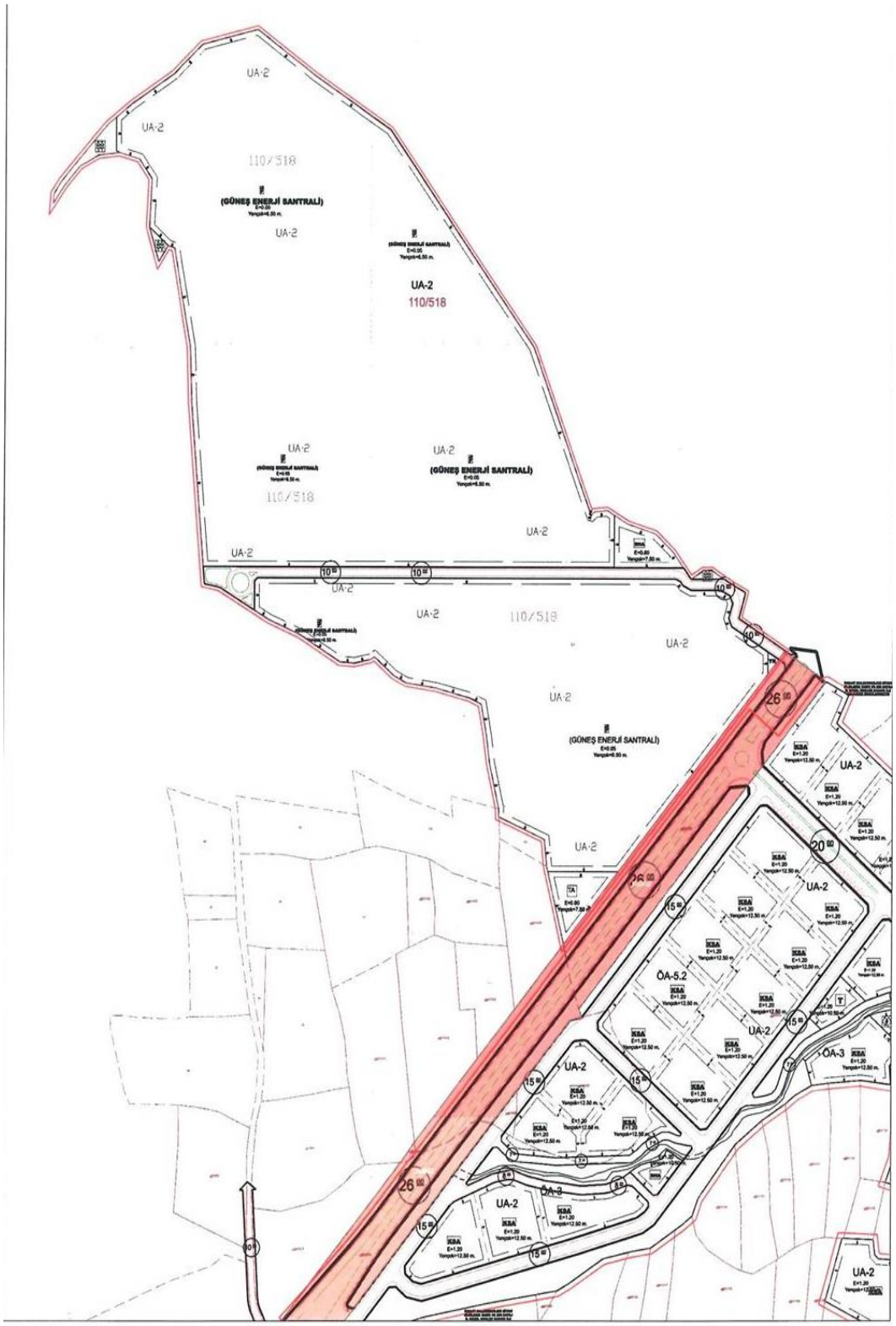
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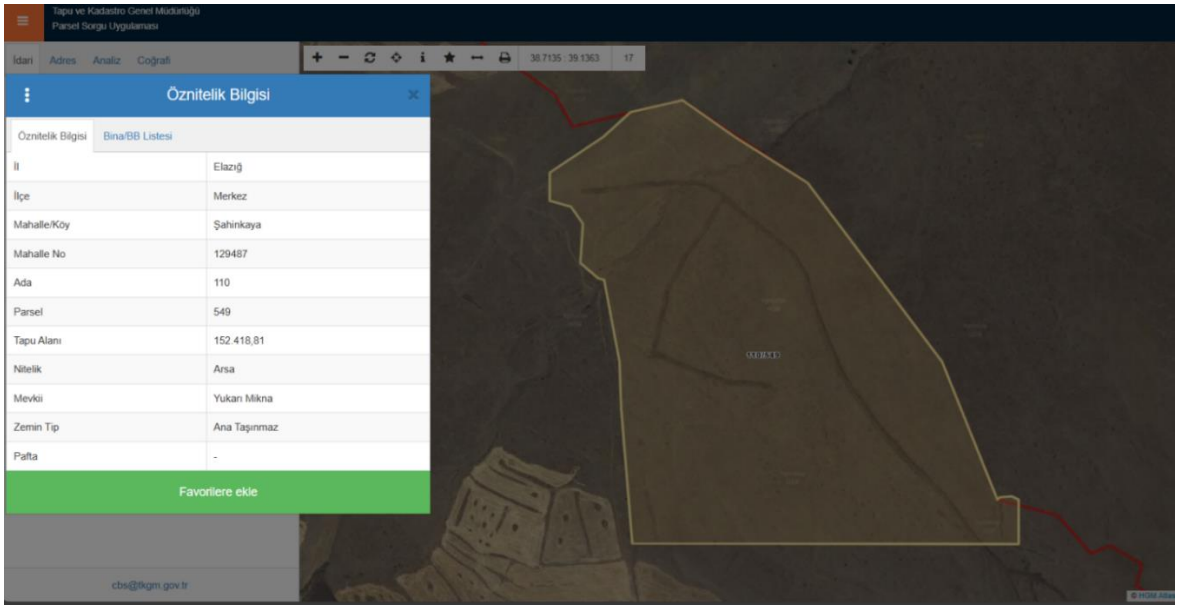
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Mevkii
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Ana Taşınmaz
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cbs@tkgm.gov.tr

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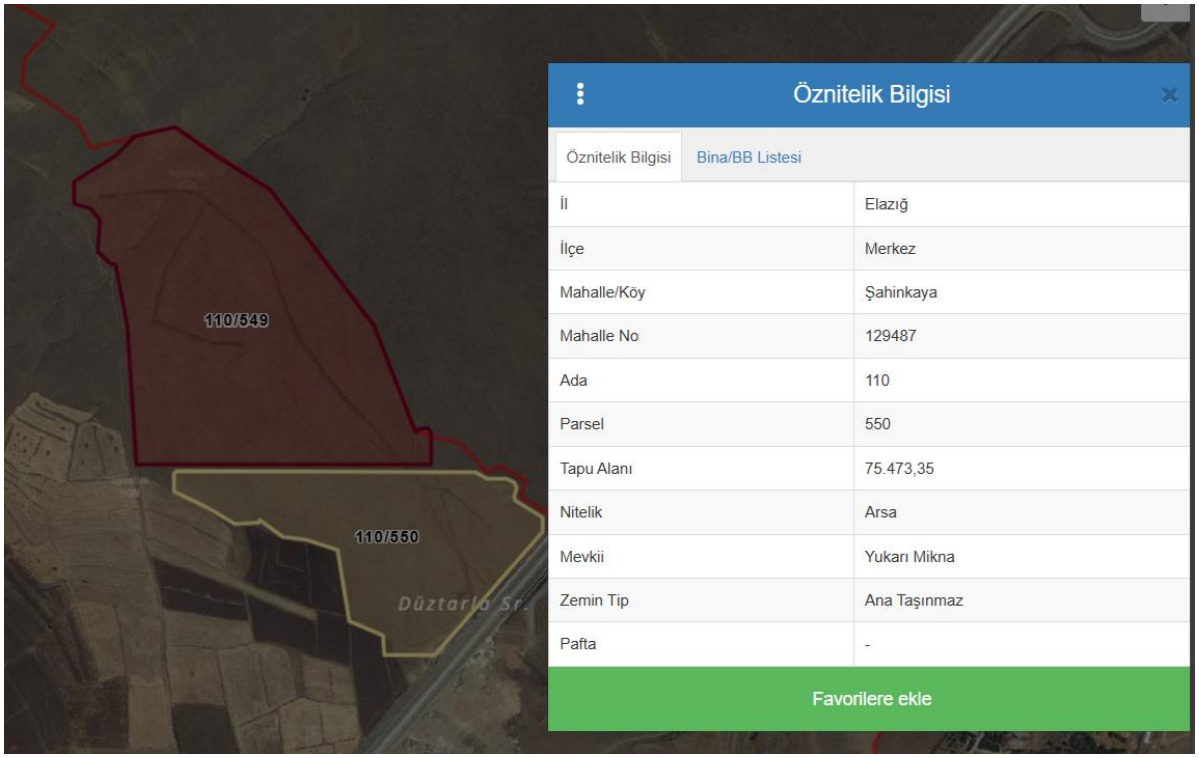
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Şahinkaya
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Mevkii
Yukarı Mikna
Zemin Tip
Ana Taşınmaz
Pafta
-
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ETL Route 110/486 Parcel Title Deed Information

TAPU VE KADASTRO GENEL MÜDÜRLÜĞÜ

PARSEL SORGULAMA BİLGİLERİ

İl	İlçe				Mahalle
Elazığ	Merkez				Şahinkaya
Ada	Parsel	Tapu Alanı (m2)	Nitelik	Mevki	Pafta
110	486	252.193,40	Mera	-	-

BİLGİLENDİRME

- Tüm hakları Tapu Ve Kadastro Genel Müdürlüğüne Aittir.
- Sorgulama sonucu sunulan veriler bilgilendirme amaçlı olup, ticari amaçla kullanılması yasaktır.
- Amacı dışında kullanılması halinde doğacak her türlü hukuki,cezai ve mali sorumluluk uygunsuz kullanan kişilere aittir.
- Görüntülenen kayıtlar ile elinizde bulunan bilgiler arasında uyumsuzluk olması halinde ilgili tapu ve/veya kadastro müdürlüğüne müracaat ediniz.

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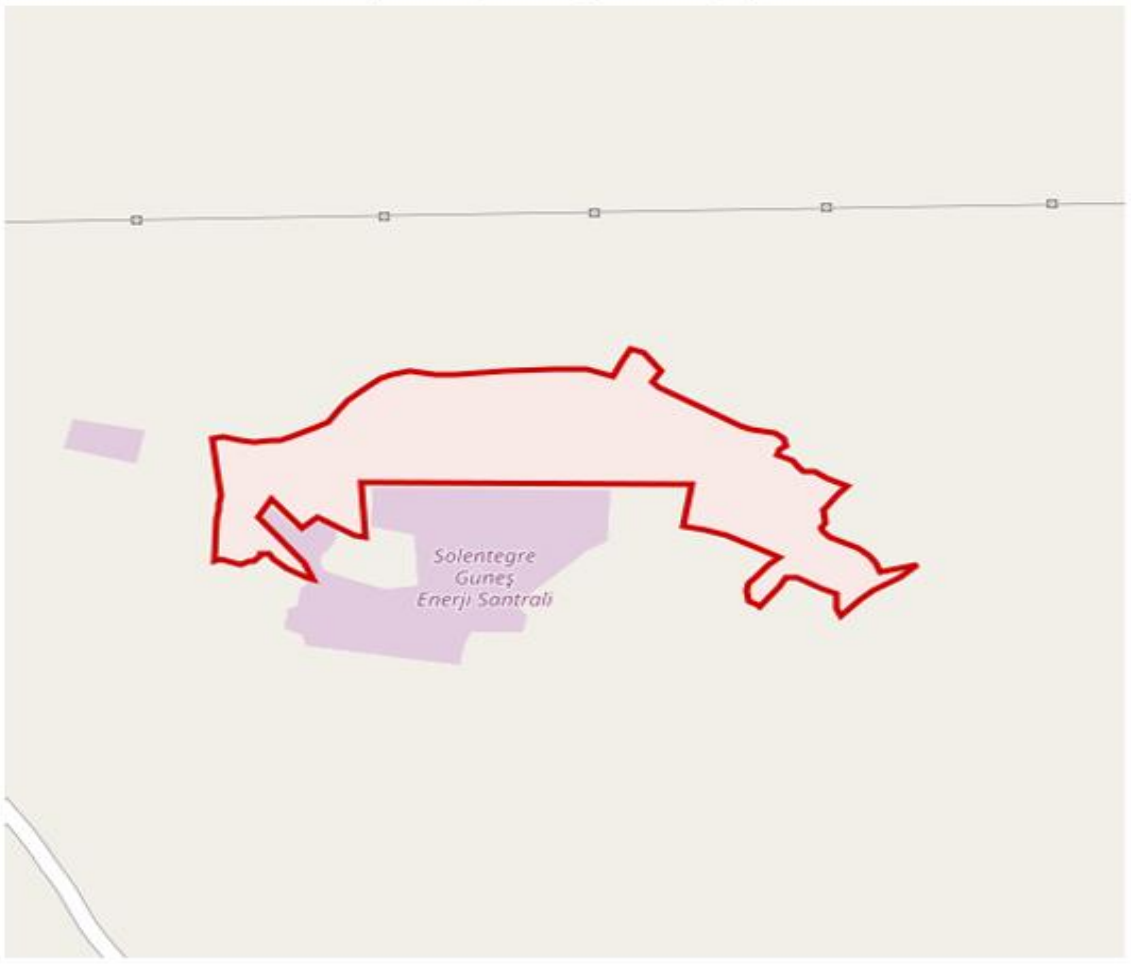


Expropriation Exemption Letter

T.C.
ELAZIĞ BELEDİYE BAŞKANLIĞI
İklim Değişikliği ve Sıfır Atık Müdürlüğü

Sayı : Z-65670405-903.07 -487
Konu : Güneş Enerji Santrali

28/11/2023

İLBANK GENEL MÜDÜRLÜĞÜ'NE

Elazığ İli, Merkez İlçesi, Şahinkaya Mahallesi mevkiinde belediyemize ait olan 110 ada 518 parselde 02.06.2021 tarihli bağlantı anlaşması ile kurulacak olan 6454,8 kWp (5000 kWe) gücündeki güneş enerji santraline yönelik ulaşım yolları ve enerji nakil hattı güzergahında üçüncü şahıslara yönelik kamulaştırma gerektirecek bir durumun bulunmadığını ve güzergahın tamamının belediye mülkiyetli olduğunu taahhüt ederiz.

Gereğini rica ederim.

Sebahattin UÇAR
Başkan a.
Belediye Başkan Yardımcısı

Cumhuriyet Mah. Malatya Cad. No:30 / 23120 Merkez ELAZIĞ
Tel: (0424) 248 47 01 Faks: (0424) 248 30 23
e-Posta:cevrekoruma@elazig.bel.tr İnternet Adresi:www.elazig.bel.tr
Kurumsal Elektronik Posta (KEP)Adresi : elazigbelediyesi@hs02.kep.tr

Bilgi İçin: Kadir Tayfur AKLİMAN
Elektrik Elektronik Mühendisi

ETL Route Allocation Purpose Change Institutional Letter

T.C.
ELAZIĞ BELEDİYE BAŞKANLIĞI
İklim Değişikliği ve Sıfır Atık Müdürlüğü

Sayı: Z-65670405-900-341 22 / 07 /2024
Konu : Tahsis Amacı Değişiklik

ELAZIĞ İL TARIM ve ORMAN MÜDÜRLÜĞÜNE
(Olgunlar Mahallesi İshak Sunguroğlu Sokak No:7 Elazığ/Merkez)

Belediyemiz tarafından Şahinkaya da 110 ada, 549 parsel ve 110 ada, 550 parsel üzerinde kurulacak olan güneş enerji santrali projesi için aksa fırat elektrik tarafından Şahinkaya 110 ada, 487 parsel üzerinde bulunan trafoya bağlantı izni verilmiştir. Söz konusu trafoya bağlantı yapmak için Şahinkaya 110 ada, 486 numaralı parsel üzerinde bulunan mera alanından yaklaşık 800 metre uzunluğunda yer altı kablosu geçirilecektir. Yer altı kablosunun geçeceği mera alanı için tahsis amacı değişiklik yapılması hususunda,

Gereğini bilgilerinize rica ederim.

Sebahattin UÇAR
Belediye Başkan a.
Belediye Başkan Yardımcısı

Cumhuriyet Mah. Malatya Cad. No:34 / 23120 Merkez ELAZIĞ
Tel: (0424) 248 47 01 Faks: (0424) 248 30 23
e-Posta:cevrekoruma@elazig.bel.tr İnternet Adresi:www.elazig.bel.tr
Kurumsal Elektronik Posta (KEP)Adresi : elazigbelediyesi@hs02.kep.tr

Bilgi İçin: Kadir Tayfur AKLİMAN
Elektrik Elektronik Mühendisi

Extension of Time for Non-Agricultural Use and Response Letter

T.C.
ELAZIĞ BELEDİYE BAŞKANLIĞI
İklim Değişikliği ve Sıfır Atık Müdürlüğü

Sayı: Z-65670405-900-401 26.08.2024
Konu : Süre Uzatımı

ELAZIĞ İL TARIM ve ORMAN MÜDÜRLÜĞÜNE
(Olgunlar Mahallesi İshak Sunguroğlu Sokak No:7 Elazığ/Merkez)

İlgi: 30.05.2022 tarihli ve 5763901 sayılı yazınız

Elazığ ili, Merkez ilçesi, Şahinkaya Köyü sınırları dahilinde bulunan 110 ada 518 parsel (yeni ada parsel 110-549 / 110-550) numaralı taşınmaz üzerinde kurulacak olan güneş enerji santralinin tarım dışı amaçla kullanılması talebi ile kurumunuzun talebi istenmiştir.

Bahse konu talebimizle ilgili olarak ilgi yazınız ile; alanın belirtilen faaliyet kapsamında tarım dışı amaçla kullanılmasının uygun görüldüğü ve bu kullanım izninin 2 (iki) yıl süre ile geçerli olduğu ancak yazınız tarihinden itibaren 2 (iki) yıl içerisinde imar planının onaylanmaması veya alanın belirtilen faaliyetin dışında farklı bir amaçla kullanılmak istenmesi durumunda tarafınızdan bilahare izin alınması gerektiği bildirilmiştir.

Bahse konu alanın 110 ada 549 parsel ve 110 ada 550 parsel (eski 110 ada 518 parsel) imar planı 05.09.2023 tarihinde onaylanmış olup tekrar süre uzatımı alınıp alınmaması hakkında kurumunuz görüşüne ihtiyaç duyulmaktadır.

Gereğini bilgilerinize rica ederim.

Sebahattin UÇAR
Belediye Başkanı a.
Belediye Başkan Yardımcısı

EK:
1.30.05.2022 tarihli ve 5763901 sayılı yazınız
2.GES sahasına ait imar durumu

Cumhuriyet Mah. Malatya Cad. No:34 / 23120 Merkez ELAZIĞ
Tel: (0424) 248 47 01 Faks: (0424) 248 30 23
e-Posta:cevrekoruma@elazig.bel.tr İnternet Adresi:www.elazig.bel.tr
Kurumsal Elektronik Posta (KEP)Adresi : elazigbelediyesi@hs02.kep.tr

Bilgi İçin: Kadir Tayfur AKLİMAN
Elektrik Elektronik Mühendisi

T.C.
ELAZIĞ VALİLİĞİ
İl Tarım ve Orman Müdürlüğü

Sayı : E-58308238-230.04.02-15769643 11.09.2024

Konu : Süre Uzatımı

ELAZIĞ BELEDİYE BAŞKANLIĞINA
(İklim Değişikliği ve Sıfır Atık Müdürlüğü)

İlgi : 26.08.2024 tarihli ve 65670405-401 sayılı yazınız.

İlgi tarih ve sayılı yazınıza istianden Elazığ İli Merkez İlçesi Şahinkaya Köyü sınırları dahilinde bulunan 110 ada 518 parsel (yeni ada parsel 110-549 / 110-550) süre uzatımı ile ilgili olarak Kurum görüşümüz istenmiştir.

İlgi sayılı yazınızda 110 ada 549 parsel ve 110 ada 550 parsel sayılı taşınmazlara ait imar planının 05.09.2023 tarihinde onaylandığı belirtildiğinden dolayı ilgili mevzuat gereği Kurumumuzca yapılacak herhangi bir işlem bulunmamaktadır.

Bilgilerinize arz ederim.

Saadettin TAŞKESEN
İl Müdürü V.

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: 229E2C72-2855-45E9-B2FA-5B09122140F8 Doğrulama Adresi: https://www.turkiye.gov.tr/tarim-ebys

Olgunlar Mahallesi İhsak Sungurğlu Sokak No:7 ELAZIĞ
Tel: (0424) 241 16 16 Faks: (0424) 241 10 72
E-Posta: elazig@tarim.gov.tr Kep: tarimveormanbakanligi@hs01.kep.tr
KEP Adresi : tarimveormanbakanligi@hs01.kep.tr

Bilgi için:Numan İRTEGÜN
Mühendis

EIA Exemption Letter

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

Sayı : E-14698725-220.99-3761784 30.05.2022
Konu : ÇED Belgesi Devri Hk.

ELAZIĞ BELEDİYE BAŞKANLIĞINA

İlgi : 27.05.2022 tarih ve Z-42309933-622.03-234 sayılı yazınız.

İlgi yazı ile, İlimiz Merkez İlçesi, Şahinkaya Mahallesi sınırları adresinde 110 ada, 518 parselde bulunan ve 21.08.2022 tarih ve 14698725 220-02 E-2020242 karar numarası ile verilen Çevresel Etki Değerlendirme Belgesi kapsamında ÇED Gerekli Değildir kararı verilen 5 MWe EBUAŞ Güneş Enerji Santrali Tesisinin devir alındığı, söz konusu proje devrine ilişkin bilgi ve belgelerin ekte verildiği, önceki proje sahibi adına verilen ÇED Gerekli Değildir kararının Kurumunuz adına geçerli olduğuna dair yazı verilmesi istenmektedir.

25.11.2014 tarih ve 29186 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Çevresel Etki Değerlendirmesi(ÇED) Yönetmeliğinin 21. Maddesinde *"(1) Proje sahibinin herhangi bir nedenle değişmesi durumunda; projenin yeni sahibi, devirle ilgili bilgi ve belgelerin tasdikli suretini, taahhütnamesini ve imza sirkülerini Valiliğe sunmakla yükümlü olup, projenin önceki sahibinin taahhüt ve yükümlülüklerini, devir tarihinden itibaren, başka bir işleme gerek kalmaksızın üstlenmiş sayılır."* hükmü yer almaktadır.

İl Müdürlüğümüzce yapılan incelemede, Elazığ İli, Merkez İlçesi, Şahinkaya Mahallesi mevkii, 110 ada, B numaralı parsel ve 75.900,00 m²'lik alanda, Elazığ Belediyesi Ulaşım Turz.Teks.Mad.İnş. ve Taah.Ürt.Paz.Tic.San.A.Ş. tarafından gerçekleştirilmesi planlanan "5 MWe Kapasiteli GES" projesine, 21.08.2020 tarih ve 14698725/220-02/E-2020242 karar numarası ile Valiliğimizce(Mülga Çevre ve Şehircilik İl Müdürlüğü) ÇED Gerekli Değildir Kararı verildiği tespit edilmiştir. Söz konusu karar Elazığ Belediye Başkanlığı içinde geçerli olup yeni bir belgenin düzenlenmesine gerek bulunmamaktadır.

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 hususunda;

Bilgilerinizi ve gereğini arz ederim.

Fatih ÖNALAN
Çevre, Şehircilik ve İklim Değişikliği İl Müdürü V.

Bu belge, güvenli elektronik imza ile imzalanmıştır.

T.C.
ELAZIĞ VALİLİĞİ
Çevre ve Şehircilik İl Müdürlüğü

Sayı : 14698725-220.02-E.14799 24.08.2020
Konu : ÇED Gerekli Değildir Kararı

DAĞITIM YERLERİNE

Elazığ İli, Merkez İlçesi, Şahinkaya Mahallesi Mevkii, 110 ada, A nunaralı parsel ve 87143,81 m^2'lik alanda, ÇED Yönetmeliğinin 15. maddesinin (a) bendi uyarınca "Elazığ Belediyesi" tarafından gerçekleştirilmesi planlanan "5 MWe Kapasiteli GES" projesine ait Valiliğimize (Çevre ve Şehircilik İl Müdürlüğü) sunulan Proje Tanıtım Dosyası incelenmiş ve değerlendirilmiştir.

25.11.2014 tarih ve 29186 sayılı Resmi Gazete'de yayımlanan ÇED Yönetmeliğinin 17. maddesi gereğince "5 MWe Kapasiteli GES" projesine 21.08.2020 tarih ve 14698725/220-02/ E.2020240 karar numarasıyla Valiliğimizce "Çevresel Etki Değerlendirmesi Gerekli Değildir" kararı verilmiştir.

Söz konusu projeye ilişkin Proje Tanıtım Dosyası ve eklerinde belirtilen hususlar ile 2872 sayılı Çevre Kanunu ve bu Kanuna istinaden yürürlüğe giren ilgili yönetmeliklere uyulması, mer'i mevzuat uyarınca ilgili kurum/kuruluşlardan gerekli izinlerin alınması ÇED yönetmeliğinin 18. maddesi gereğince, proje sahibinin "ÇED Olumlu" veya "ÇED Gerekli Değildir" kararını aldıktan sonra projede yapılacak bu Yönetmeliğe tabii değişiklikleri Valiliğimize ve Çevre ve Şehircilik Bakanlığına iletmesi gerekmektedir.

Bilgilerinizi ve gereğini arz /rica ederim.

e-imzalıdır
Mustafa PİRİNÇCİ
Çevre ve Şehircilik İl Müdürü V.

Ek : ÇED Gerekli Değildir Belgesi (2 sayfa)

Dağıtım:

Gereği:
Dsi 9. Bölge Müdürlüğüne
Elazığ İl Tarım Ve Orman Müdürlüğüne
Elazığ İl Özel İdaresine
Elazığ İl Sağlık Müdürlüğüne
Elazığ Orman Bölge Müdürlüğüne
Elazığ İl Kültür Ve Turizm Müdürlüğüne
Elazığ İl Afet Ve Acil Durum Müdürlüğüne

Bilgi:
Aktel Çevre Dan. Müş. ve Müh. Ltd. Şti.
1330. (Eski 75.) Sokak No:16/16 Aşağı
Öveçler ÇANKAYA / ANKARA

Tekin AKÇİÇEK
VH.K.İ.

Not: 5070 sayılı Elektronik İmza Kanunu gereği bu belge elektronik imza ile imzalanmıştır.

Evrak Doğrulama Kodu : CVACUJNB Evrak Takip Adresi: https://www.turkiye.gov.tr/cevre-ve-sehircilik-bakanligi
Sürsürü Mah. Atatürk Bulvarı No:91/ 23040
ELAZIĞ
e-posta : elazig@csb.gov.tr

Bilgi için:Derya
DEMİRDAĞ
Mühendis

T.C.
ÇEVRE ve ŞEHİRCİLİK BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

T.C.
ELAZIĞ VALİLİĞİ
ÇEVRE ve ŞEHİRCİLİK İL MÜDÜRLÜĞÜ

Karar Tarihi : 21-08-2020
Karar No : 14698725 220-02 E-2020240

ÇEVRESEL ETKİ DEĞERLENDİRME BELGESİ

25.11.2014 tarih ve 29186 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Çevresel Etki Değerlendirmesi Yönetmeliği'nin Ek-II listesinde yer alan **'5 MWe KAPASİTELİ GÜNEŞ ENERJİ SANTRALİ '** projesi ile ilgili olarak inceleme-değerlendirme yapılmış ve Proje Tanıtım Dosyasında çevresel etkilere karşı alınması öngörülen önlemler yeterli görülmüştür. Ayrıca ÇED Raporu hazırlanmasına gerek bulunmadığı tespit edilmiş olup, söz konusu projeye ÇED Yönetmeliğinin 17. Maddesi gereğince Valiliğimizce **"Çevresel Etki Değerlendirmesi Gerekli Değildir"** kararı verilmiştir.

Mustafa PİRİNÇCİ
Vali a.
Çevre ve Şehircilik İl Müdürü V.

Proje Sahibi : ELAZIĞ BELEDİYESİ
Proje Yeri : Elazığ İli, Merkez İlçesi, (110 NO'LU ADA, A NO'LU PARSEL)ELAZIĞ İLİ, MERKEZ İLÇESİ, ŞAHİNKAYA MAHALLESİ MEVKİİ
Kapasite : 5MWe
Alan:87143,81 metrekare
Koordinatlar arka sayfadadır.

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

Sayı : E-14698725-220.02-11621552 30.01.2025
Konu : Güneş Enerji Santrali

DAĞITIM YERLERİNE

Elâzığ İli, Merkez İlçesi, Şahinkaya Köyü Mevkii, 110 ada, 550 numaralı parselde 75473.35 m^2 (7,54 hektar) alan üzerinde Elazığ Belediye Başkanlığı tarafından gerçekleştirilmesi planlanan "5 MWe (6,454 MWm) Kapasiteli Güneş Enerjisi Santrali" projesine ait Valiliğimize (Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğü) sunulan Proje Tanıtım Dosyası 29.07.2022 tarih ve 31907 sayılı Resmi Gazete'de yayımlanan ÇED Yönetmeliğinin 16. maddesi uyarınca, incelenmiş ve değerlendirilmiştir.

ÇED Yönetmeliğinin 17. Maddesi gereğince Elazığ Belediye Başkanlığı tarafından gerçekleştirilmesi planlanan "5 MWe (6,454 MWm) Kapasiteli Güneş Enerjisi Santrali" projesine Valiliğimizce 28-01-2025 tarih ve 14698725 220-02 E-202545 karar numarası ile "Çevresel Etki Değerlendirmesi Gerekli Değildir" kararı verilmiştir.

Söz konusu projeye ilişkin Proje Tanıtım Dosyası ve eklerinde belirtilen hususlar ile 2872 sayılı Çevre Kanunu ve bu Kanuna istinaden yürürlüğe giren ilgili yönetmeliklere uyulması, mer'i mevzuat uyarınca ilgili kurum/kuruluşlardan gerekli izinlerin alınması ÇED Yönetmeliğinin 18. maddesi gereğince, proje sahibinin ''ÇED Olumlu" veya ''ÇED Gerekli Değildir" kararını aldıktan sonra projede planlanan bu Yönetmeliğe tabi değişiklikleri Çevre, Şehircilik ve İklim Değişikliği Bakanlığına veya İl Müdürlüğümüze iletmesi gerekmektedir.

Bilgilerinizi ve gereğini arz / rica ederim.

Fatih ÖNALAN
Çevre, Şehircilik ve İklim Değişikliği İl Müdürü V.

Ek:
1 - Dağıtım Listesi (11 Muhatap)
2 - ÇED GEREKLİ DEĞİLDİR BELGESİ (2 Sayfa)

Sürsürü Mah.Atatürk Bulvarı No:91/ 23040
ELAZIĞ
e-posta : elazig@csb.gov.tr
KEP Adresi : elazigcevresehircilik@hs01.kep.tr
Bilgi için:Dilek YILMAZ
Çevre Mühendisi

T.C.
ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

T.C.
ELAZIĞ VALİLİĞİ
ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ İL MÜDÜRLÜĞÜ

Karar Tarihi : 28-01-2025
Karar No : 14698725 220-02 E-202545

ÇEVRESEL ETKİ DEĞERLENDİRME BELGESİ

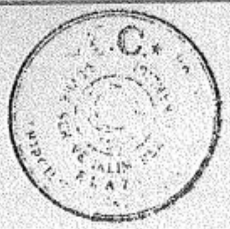
29.07.2022 tarih ve 31907 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Çevresel Etki Değerlendirmesi Yönetmeliği'nin Ek-II listesinde yer alan **'5 MWE/6,454MWM KAPASİTELİ GÜNEŞ ENERJİ SANTRALİ'** projesi ile ilgili olarak inceleme-değerlendirme yapılmış ve Proje Tanıtım Dosyasında çevresel etkilere karşı alınması öngörülen önlemler yeterli görülmüştür. Ayrıca ÇED Raporu hazırlanmasına gerek bulunmadığı tespit edilmiş olup, söz konusu projeye ÇED Yönetmeliğinin 17. Maddesi gereğince Valiliğimizce **"Çevresel Etki Değerlendirmesi Gerekli Değildir"** kararı verilmiştir.

Fatih ONALAN
Çevre, Şehircilik ve İklim Değişikliği İl Müdürü V.

Proje Sahibi : ELAZIĞ BELEDİYESİ BAŞKANLIĞI
Proje Yeri : Elazığ İli, Merkez İlçesi, şahinkaya köyü, 110 ada 550 nolu parsel
Kapasite : Kurulu Güç: 5 MWe (6,454 MWm); Alan: 7,54 Hektar
Koordinatlar arka sayfadadır.

Tablo I. ÇED (GES) Alanı Koordinatları

UTM Koordinatları				Coğrafik Koordinatlar	
Datum	ED-50		Datum	WGS-84	
Projeksiyon	6 derecelik		Türü	Derece,kesir	
Elemanların Sırası	Sağa değer, yukarı değer		Elemanların Sırası	Enlem,boylam	
Sağa Değer	6 basamak,kesir		Sağa Değer	Derece,kesir	
Yukarı değer	7 basamak,kesir		Yukarı değer	Derece,kesir	
DOM	39		ZON	39	
Alan	75473,35 m²			75473,35 m²	
Nokta No	Y(sağa)	X(yukarı)	Nokta No	Enlem	Boylam
1	512380.329	4284767.892	1	39.14221824	38.70982801
2	512227.498	4284589.709	2	39.14045732	38.70822439
3	512155.256	4284589.736	3	39.13962644	38.70822563
4	512154.150	4284594.191	4	39.13961380	38.70826579
5	512151.267	4284619.142	5	39.13958108	38.70849068
6	512104.772	4284638.112	6	39.13904666	38.70866227
7	512104.712	4284646.154	7	39.13904611	38.70873475
8	512095.137	4284686.894	8	39.13893669	38.70910202
9	512091.379	4284712.824	9	39.13889392	38.70933574
10	512086.118	4284741.809	10	39.13883390	38.70958981
11	512074.093	4284746.645	11	39.13869570	38.70964076
12	512039.246	4284755.039	12	39.13829505	38.70971688
13	512008.245	4284759.281	13	39.13793856	38.70975553
14	511995.608	4284765.928	14	39.13779333	38.70981560
15	511975.761	4284782.774	15	39.13756535	38.70996768
16	511972.177	4284780.065	16	39.13752409	38.70994332
17	511954.632	4284776.584	17	39.13732223	38.70991219
18	511939.743	4284777.917	18	39.13715101	38.70992440
19	511897.701	4284802.749	19	39.13666789	38.71014874
20	511866.359	4284815.465	20	39.13630762	38.71026376
21	511851.148	4284824.040	21	39.13613282	38.71034124
22	511851.157	4284850.381	22	39.13613337	38.71057862
23	511854.157	4284853.378	23	39.13616793	38.71060558
24	512285.006	4284853.214	24	39.14112342	38.71059823
25	512289.807	4284850.814	25	39.14117857	38.71057654
26	512292.616	4284847.070	26	39.14121081	38.71054276
27	512300.613	4284843.089	27	39.14130272	38.71050677
28	512328.334	4284843.180	28	39.14162156	38.71050721
29	512333.989	4284841.799	29	39.14168658	38.71049468
30	512340.781	4284838.243	30	39.14176463	38.71046254
31	512343.787	4284831.134	31	39.14179908	38.71039844
32	512339.849	4284817.866	32	39.14175355	38.71027892
33	512342.711	4284810.499	33	39.14178634	38.71021249
34	512380.337	4284787.877	34	39.14221869	38.71000811



Land Class Determination Letter and Report

T.C.
ELAZIĞ VALİLİĞİ
İl Tarım ve Orman Müdürlüğü

GIDAHİSAR

Sayı :58308238-230.04.02-E.2081396 27.07.2020
Konu :Arazi Sınıf Tespiti

ELAZIĞ BELEDİYE BAŞKANLIĞINA
(Çevre Koruma Ve Kontrol Müdürlüğü)

İlgi : 23.07.2020 tarihli ve 42309933-251 sayılı yazınız.

Elazığ ilimiz, Merkez ilçesi Elazığ İli Merkez İlçesi Şahinkaya Köyü sınırları dahilinde bulunan ve koordinatlı krokisi ekte sunulu 231.293,79 m^2 (23,130 ha) alana sahip Şahinkaya Köyü Köy Tüzel kişiliğine ait olan 110 Ada 518 parsel numaralı taşınmazın 87.143,81 m^2 (8,714 ha)'lık kısmı (A Elazığ Belediyesi GES Alanı) üzerinde güneş enerjisi santrali kurulması kapsamında elektrik üretim tesisi yapılması planlanan taşınmazın arazi sınıf tespiti hakkında kurum görüşümüz istenmiştir.

Bu kapsamda konu ile ilgili olarak İl Müdürlüğümüz teknik elemanları tarafından yerinde inceleme yapılarak hazırlanan Teknik Raporu ekte sunulmuştur.

Bilgi ve gereğini arz ederim.

e-imzalıdır
Dr. Turan KARAHAN
İl Müdürü

Ek : Rapor örneği (1 sayfa)

Not: 5070 sayılı Elektronik İmza Kanunu gereği bu belge elektronik imza ile imzalanmıştır.

Evrak Doğrulama Kodu : ARHKUKWG Evrak Takip Adresi: https://www.turkiye.gov.tr/tarim-ve-orman-bakanligi-ebys
Olgunlar Mahallesi İhsak Sunguroğlu Sokak No:7 ELAZIĞ
Tel: (0424) 241 16 16 Faks: (0424) 241 10 72
E-Posta: elazig@tarim.gov.tr Kep: tarim.[illegible].kep.tr
Bilgi için:Zafer KESKİN
Mühendis

TEKNİK RAPOR

Elazığ Belediye Başkanlığının 23.07.2020 tarih ve 42309933-934/251 sayılı yazısına istinaden İl Tarım ve Orman Müdürlüğümüz tarafından Elazığ İli Merkez İlçesi Şahinkaya Köyü sınırları dahilinde bulunan ve koordinatlı krokisi ekte sunulu 231.293,79 m^2 (23,130 ha) alana sahip Şahinkaya Köyü Köy Tüzel kişiliğine ait olan 110 Ada 518 parsel numaralı taşınmazın 87.143,81 m^2 (8,714 ha)'lık kısmı (A Elazığ Belediyesi GES Alanı) üzerinde güneş enerjisi santrali kurulması kapsamında yerinde inceleme yaparak arazi sınıfını belirlemek üzere görevlendirildik.

Bu kapsamda 23.AJ.648 plakalı araç ile taşınmaz mahalline gelindi. Söz konusu taşınmaz üzerinde yaptığımız inceleme ve tespit çalışmaları sonucunda;

Söz konusu 110 Ada 518 parsel numaralı taşınmazın bulunduğu bölge bölgesel olarak karasal iklim etkisinde olup bu taşımazın bulunduğu alan toprak yapısı itibariyle Tınlı-kum bünyede olduğu, toprağın organik madde oranının zayıf düzeyde olduğu, etkili toprak derinliklerinin 0-20 cm arasında sığ ve zirai üretim için kısmen yetersiz olduğu, arazi eğiminin ise % 9-12 arasında ve orta meyile sahip olduğu tespit edilmiştir. Etüt çalışması yapılan taşınmazın tarımsal üretim potansiyeli düşük ve üzerinde yapılacak tarımsal üretimden elde edilecek verim yöre ortalamasının çok altında olacaktır. Taşınmaz yüzeyinin T_3 düzeyinde Çok taşlı olduğu gözlemlenmiştir.

Çevre arazilerle tarımsal bütünlüğü bozacak alanları kapsamadığı ve herhangi bir **tarımsal bütünlüğün bozulmasının söz konusu olmadığı** anlaşılmıştır.

Bu taşınmaz Mutlak Tarım Arazileri, Özel Ürün Tarım Arazileri ve Dikili Tarım Arazileri dışında yerel önemi bulunan veya yerel ihtiyaçlar nedeniyle tarıma açılmış veya yoğun zirai kültürel tedbirlerle tarımsal faaliyetlere açılabilecek arazilerden olup taşınmaz halihazırda arazi sınıfı itibariyle **Kuru Marjinal Tarım Arazisi** niteliğindedir.

Güneş enerjisi santralleri müracaatlarına ilişkin Bakanlığımızın 08.08.2014 tarih ve 68656427.230.99-65401-19803-61675 sayılı talimatının 4.maddesi gereği söz konusu yapılan bu işlem Kanun kapsamında nihai karar olmayıp sadece bir sınıf tespiti işlemidir.

Santral kurulması aşamasına gelinmesi halinde Bakanlığımız mevzuatları kapsamında bilahare Tarım Dışı Amaçlı Arazi Kullanım izninin alınması gerekmektedir.

Netice ve Kanaat:

Elazığ İli Merkez İlçesi Şahinkaya Köyü sınırları dâhilinde bulunan ve koordinatlı krokisi ekte sunulu 231.293,79 m2 (23,130 ha) alana sahip 110 Ada 518 parsel numaralı taşınmazın;

1- **Marjinal tarım arazisi** sınıfında olduğu
2- **Kuru arazi olduğu**
3- Çevre arazilerle **tarımsal bütünlüğü bozacak alanları kapsamadığı ve tarımsal bütünlüğün bozulmayacağı** kanaatine varılmıştır.

İşbu rapor 1 (bir) sayfa halinde 2(iki) nüsha olarak düzenlenip tarafımızca imza altına alınmıştır. 23/07/2020

Zafer KESKİN
Ziraat Müh.

Kadir ATEŞ
Ziraat Mühendisi

SPP Conformity Letter

T.C.
ELAZIĞ BELEDİYE BAŞKANLIĞI
Etüd Proje Müdürlüğü

TS EN ISO 9001:2015 KALİTE YÖNETİM SİSTEMİ SERTİFİKA NO: 02/11398/01

Sayı : 25506309/161 /17/03/2023
Konu: GES Uygunluk

ENERJİ VE TABİİ KAYNAKLAR BAKANLIĞI
TEDAŞ GENEL MÜDÜRLÜĞÜNE

İlgi: 15.03.2023 tarihli dilekçe

İlgi sayılı dilekçeye istinaden 3194 Sayılı İmar Kanununa göre Elazığ İli Merkez İlçe Şahinkaya mevkii 110 ada 518 parsel'de GES (Güneş Enerji Santrali) kurulmasında ve işletilmesinde Belediyemizce herhangi bir sakınca bulunmamaktadır.

Bilgilerinize arz ederim.

Nazif BİLGİNOĞLU
Belediye Başkan a.
Belediye Başkan Yardımcısı

Cumhuriyet Mah. Malatya Cad. No:30/ 23120 Merkez ELAZIĞ
Telefon No: (0424) 248 47 01 Faks No: 0424 248 47 71
e-posta: etüdproje@elazig.bel.tr İnternet Adresi: www.elazig.bel.tr
Kurumsal Elektronik Posta (KEP) Adresi:elazigbelediyesi@hs02.kep.tr

Bilgi İçin: İdari İşler Servisi
Dahili : 1500-1501

Land Classification

T.C.
ELAZIĞ VALİLİĞİ
İl Tarım ve Orman Müdürlüğü

Sayı : E-58308238-230.04.02-5763901 30.05.2022
Konu : Şahinkaya Köyü 110 ada,518 parsel GES İmar Planı.

ELAZIĞ BELEDİYE BAŞKANLIĞINA
(Çevre Koruma ve Kontrol Müdürlüğü)

İlgi : 27.05.2022 tarih ve 233 sayılı yazımız.

İlgi sayılı yazı ile Elazığ İli Merkez İlçesi Şahinkaya Köyü sınırları dahilinde bulunan ve koordinatlı krokisi ekte sunulu 231.293,79 m^2 (23,130 ha) alana sahip Şahinkaya Köyü sınırları içerisinde yer alan 110 Ada 518 parsel numaralı taşınmazın 76.110,36 m^2 (7,611 ha)'lık (B) kısmı üzerinde Güneş Enerjisi Santrali (GES) kurulması kapsamında tarım dışı amaçla kullanılması talebi ile ilgili olarak kurum görüşümüz istenmiştir.

İl Müdürlüğümüz teknik elemanları tarafından yapılan arazi etüt çalışması sonucu düzenlenen etüt raporundan; Alanın "Kuru Marjinal Tarım Arazisi" vasfında olduğu, belirtilen faaliyet kapsamında tarım dışı amaçlı kullanılması durumunda tarımsal bütünlüğünün bozulmayacağı; yapılacak işlerin niteliği, tarım arazilerine uzaklığı ile arazinin toprak ve topografik yapısı itibariyle toprak koruma projesine ihtiyaç olmadığı, tarımsal üretim faaliyetleri açısından olumsuzluk teşkil etmeyeceği anlaşılmıştır.

Buna göre 5403 sayılı Toprak Koruma ve Arazi Kullanımı Kanunu ile 09.12.2017 tarih ve 30265 sayılı Resmi Gazete'de yayımlanan "Tarım Arazilerinin Korunması, Kullanılması ve Planlanmasına Dair Yönetmelik" ve ilgili mevzuatları kapsamında söz konusu alanın belirtilen faaliyet kapsamında tarım dışı amaçla kullanılması uygun görülmüştür.

Yukarıda zikredilen Yönetmeliğin 12'nci maddesinin 8'inci fıkrası gereği, verilen bu tarım dışı amaçlı arazi kullanım izni 2 (iki) yıl süre ile geçerli olup sadece belirtilen faaliyet için verilmiştir.

Bu yazımız tarihinden itibaren 2 (iki) yıl içerisinde imar planının onaylanmaması veya alanın belirtilen faaliyetin dışında farklı bir amaçla kullanılmak istenmesi durumunda İl Müdürlüğümüzden bilahare izin alınması gerekmektedir.

Gereğini arz ederim.

Ali KILIÇ
İl Müdürü V.

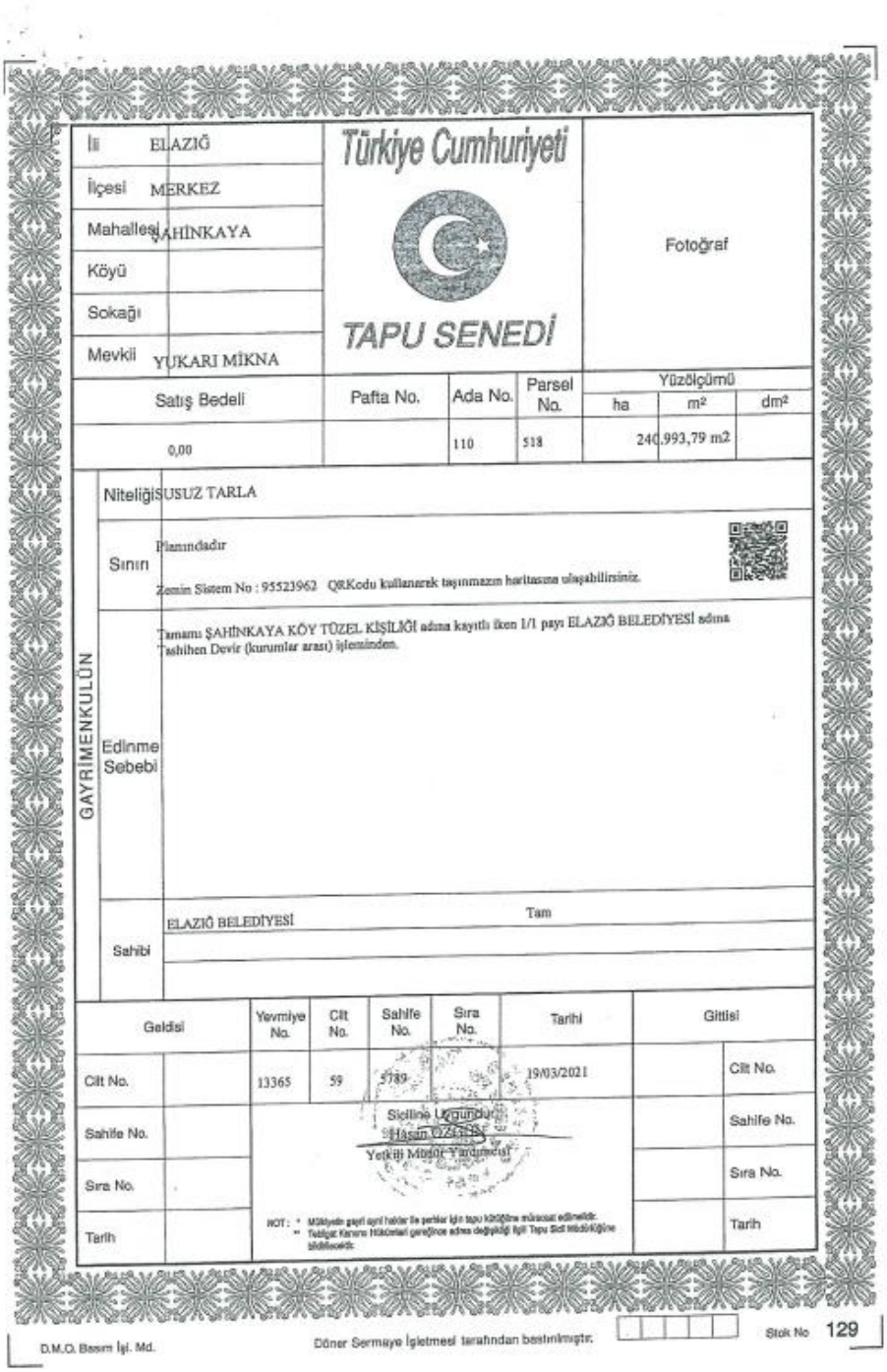
Ek:
1 - Kroki
2 - Uydu görüntüsü

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: 49DFC6C1-2E60-469D-8454-8C6309BF390D Doğrulama Adresi: https://www.turkiye.gov.tr/tarim-ebys

Olgunlar Mahallesi İhsak Sunguroğlu Sokak No:7 ELAZIĞ
Tel: (0424) 241 16 16 Faks: (0424) 241 10 72
E-Posta: elazig@tarim.gov.tr Kep: tarimveormanbakanligi@hs01.kep.tr
KEP Adresi : tarimveormanbakanligi@hs01.kep.tr
Bilgi için:Zafer KESKİN
Mühendis

1 / 2

Annex C – Title Deed



Türkiye Cumhuriyeti

TAPU SENEDİ

İli: ELAZIĞ
İlçesi: MERKEZ
Mahallesi: ŞAHİNKAYA
Köyü:
Sokağı:
Mevkii: YUKARI MİKNA

Fotoğraf

Satış Bedeli	Pafta No.	Ada No.	Parsel No.	Yüzölçümü ha	Yüzölçümü m²	Yüzölçümü dm²
0,00		110	518		240.993,79 m2	

GAYRİMENKULÜN

Niteliği: USUZ TARLA

Sınırı: Planındadır

Zemin Sistem No : 95523962 QR Kodu kullanarak taşınmazın haritasına ulaşabilirsiniz.

Edinme Sebebi: Tamamı ŞAHİNKAYA KÖY TÜZEL KİŞİLİĞİ adına kayıtlı iken 1/1 payı ELAZIĞ BELEDİYESİ adına Tashihen Devir (kurumlar arası) işleminden.

Sahibi: ELAZIĞ BELEDİYESİ — Tam

Geldisi		Yevmiye No.	Cilt No.	Sahife No.	Sıra No.	Tarihi	Gittisi	
Cilt No.		13365	59	5739		19/03/2021		Cilt No.
Sahife No.								Sahife No.
Sıra No.								Sıra No.
Tarih								Tarih

Sicilini Uygundur
Hasan ÖZKAN
Yetkili Müdür Yardımcısı

NOT: * Mülkiyeti geçti ayni hakları ile şerhler için tapu kütüğüne müracaat edilmelidir.
** Tebligat Kanunu hükümleri gereğince adres değişikliği için 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: 01/08/2024** **Location: 110/549** **Details/Notes:**	
Photo No: 02 **Date: 01/08/2024** **Location: 110/549** **Details/Notes:**	
Photo No: 03 **Date: 01/08/2024**	

Location: 110/550	
Details/Notes:	
Photo No: 04	
Date: 01/08/2024	
Location: 110/550	
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)[2]	
☐ 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*]

[2] 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) [3]**:**

☐ 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

[3] 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

Scope

This Chance Finds Procedure (CFP) will be implemented to manage any chance finds that may be encountered during construction activities on the Elazığ Municipality SPP Project. The objectives of the CFP document are:

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

Although there are no known archaeological sites or remains in the sub-project area, it is considered that there is potential to encounter archaeological finds during construction of the project. Activities with a high potential to lead to the discovery or adverse impact of archaeological resources include:

- Topsoil stripping
- Soil excavation

This CFP has been prepared to inform contractors and workers of the actions to be taken in the event of an archaeological chance find discovery

Legislation and Standards

The legislation and standards applicable to the project consist of the following:

- WB Environmental and Social Standards (ESS8)
- Applicable Turkish laws and national standards
- Other commitments and requirements of the Turkish state authorities
- Other industry guidelines to which the project is committed to adhere

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

- All natural assets and immovable cultural assets built until the end of the 19th century,
- Any immovable cultural asset dated after the end of the 19th century and identified by the Ministry of Culture and Tourism as an important asset worthy of preservation,
- All immovable cultural assets located in archaeological sites,
- Buildings/areas that witnessed important historical events during the War of Independence and the establishment of the Republic of Türkiye, and houses used by Mustafa Kemal ATATÜRK, regardless of time and registration status.

The Ministry of Culture and Tourism is the body responsible for taking decisions for the protection of cultural heritage at national level in Türkiye. Within the Ministry, the High Council for the Protection of Cultural Assets is responsible for the protection and restoration of immovable cultural assets. The decisions and regulations issued by the Ministry are implemented by local authorities. At the local level, there are Regional Boards for the Protection of Cultural Assets, defined by the Ministry of Culture and Tourism, which are responsible for the protection, registration and classification of cultural heritage within their jurisdiction.

According to Law No. 2863, all natural and cultural assets that qualify for legal protection are the property of the state. Regional boards therefore have the power and authority to provide legal protection to protected areas and to approve or reject activities that may have potential negative impacts on protected areas, such as construction, demolition and excavation activities.

Mission	Responsibilities
Contractor - Project Manager	• Overall responsibility for the development, review, approval and coordination of numerous activities required to initiate, execute and complete construction. • Ensuring that this procedure is prepared and updated as necessary according to the activities to be carried out under the project. • Ensure that sufficient resources are available to implement the procedures and guidelines outlined in this procedure.
Contractor - Environmental and Social Specialist	• Initiate, develop, implement and coordinate CFP during construction. • Ensure that all site personnel and subcontractors receive adequate training covering the procedures and guidelines set out in this procedure. Establish appropriate control procedures and conduct inspections as required. • Consulting with and reporting to relevant government bodies in the event of potential Chance Finds. • Record all confirmed chance Finds by completing the CFP Reporting Form" and keep copies in a logbook. Ensure that the chance finds logbook is functional and up to date.
Contractor - Field Manager	• Implement the provisions of the CFP on a daily basis on site during construction. • Inform the E&S Specialist about potential chance finds during construction.
Employees	• Understand and comply with archaeological CFP and the guidelines set out in these procedures. • Reporting potential chance finds to the field manager.

Impact Avoidance and Mitigation

In the event of an archaeological discovery, the following activities will be carried out:

- All personnel involved in land clearing and excavation activities will be responsible for managing archaeological protection and will be trained in these aspects by the E&S Specialist.
- If any potential chance finds are encountered, all construction activities in the vicinity of the chance finds will be stopped immediately.
- The Site Manager will be contacted immediately. The discovered site location, characteristics and photographs of potential archaeological material will be recorded by the Site Manager, who will inform the E&S Specialist.
- Elazığ Directorate of Culture will be informed within three days at the latest following the discovery of the accidental find. Contact information of Elazığ Directorate of Culture is given below:

  Address: Sürsürü Mh. Atatürk Bulv. Nurettin Ardıçoğlu Kültür Merkezi Binası Merkez / ELAZIĞ

  Telephone: 0424 2801300

  E-mail: iktm23@ktb.gov.tr

- The site and its immediate vicinity will be protected against damage or loss 24 hours a day until inspection by the competent authority.
- The E&S Specialist will complete an " Chance Finds Report Form" for each confirmed chance finds and inform the Project Manager of the date set by the heritage protection authorities when construction works can resume.

- Further steps to be taken and the appropriate plan for the management of the finds (changes to the layout, conservation, preservation, protection, restoration and recovery) will be decided by the competent authorities and reported in writing.
- Photographs of potential artifacts likely to be encountered at the construction site are presented on the following pages for use during training of relevant personnel.

Verification and Monitoring

The E&S Specialist will record all cases of archaeological chance finds. The E&S Specialist will complete an " Chance Finds Reporting Form" for each chance finds approved by the authorities and keep copies in a logbook. An example of a reporting form that can be used to record chance finds is given below. The chance finds logbook will be summarized annually and the records will be included in annual monitoring reports to verify that correct management procedures are being followed. Action items will be carried out in case of non-compliance with this CFP.

Reporting

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

PART A **BÖLÜM A**				
Subproject Location *Altproje Sahası*	District *(İlçe):* Neighborhood *(Mahalle):*	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 *Tesadüfi buluntunun tam çevresinde iş durduruldu mu?* ☐*Evet* ☐*Hayır*				
Was a buffer zone created to protect chance find? ☐Yes ☐No *Tesadüfi buluntuyu 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 ***TESADÜFİ BULUNTU 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: *Tesadüfi buluntunun tanımı:*	
Description of site and vegetation: (e.g. surface sediment type, ground surface visibility, distance to closest watercourse, etc.) *Sahanın / buluntunun ve saha/buluntunun 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. *İzleme arkeoloğu, müze müdürlüğü arkeoloğu ile irtibata geçti.* 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:*	☐ Yes *☐ Yes*	☐No *☐No*
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 – Tesadüfi buluntu 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 Ç&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, Elazığ 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	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 construction manager that no further action is required, • The Environmental Engineer will inform other managers, • 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 Cultural Assets Protection Regional Board Directorate will officially confirm that the recovery is complete and inform the Environmental Engineer, • 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 finds procedure • Construction activities may restart or relocation may be implemented.

Name	Communication	Address
Elazığ Museum Directorate	+90 424 241 11 30	Sürsürü Neighborhood Atatürk Boulevard Nurettin Ardıçoğlu Cultural Center No:79 / ELAZIĞ

Name	Communication	Address
Diyarbakır Cultural Heritage Protection Regional Board Directorate	+90 412 224 08 31 –412 223 55 88 diyarbakirkurul@ktb.gov.tr	Inonu Street, Ziya Gokalp Street No:23 DAGKAPI / DIYARBAKIR

Annex İ – Change Notification Form

Change Notification Form	
Sub-project Name	
Sub-project Location	
Sub-project 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 Sub-project implementation
	☐ Contractor or Construction Supervision Consultant Change
	☐ Other *(please specify below)*
Detailed Description of the Change(s)	
Documents Submitted with Change Notification Form	
Name of the Staff Notifying the Change	
Position of the Staff Notifying the Change	
Signature	

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 Elazığ Municipality, Elazığ Provincial Directorate of Environment, Urbanization and Climate Change, Elazığ Provincial Directorate of Agriculture and Forestry, Elazığ Province Directorate of Agriculture and Forestry, ECultural Heritage Protection Regional Board Directorate, State Hydraulic Works (DSİ) GAP 9th Regional Directorate.and Şahinkaya 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.

The sub-project (SPP and SPP-1) was secured ”EIA not Necessary” decisions in line with Environmental Impact Assessment (EIA) Regulation which was published in the Official Gazette dated 25.11.2014 and numbered 29186 and entered into force. For the SPP-3, ”EIA not Necessary” decision was secured on 28 January 2025 in line with EIA Regulation (Official Gazette dated 29.07.2022 and numbered 31907) (See 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 39. 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.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
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			
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 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.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
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.
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.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
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
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 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.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
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 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 - Sub project Flora

Since the plant species identified in the vicinity and countryside of Elazığ do not show a wide distribution in and around the project area, the floristic structure and species composition in the SPP area is not similar to the surrounding structure. The land structure and vegetation cover in the Project area will undergo only a limited change. It is evaluated that the project, which is planned to have a tolerable change in the ecosystem, will not cause serious damages in terms of plant ecology.

A report on obtaining data for monitoring biodiversity in Elazığ, establishing monitoring methodology and recommendations for monitoring was prepared. Data were entered into the Noah's Ark Database. Biodiversity data from all provinces were entered into the Noah's Ark Database and stored there. Thus, the biodiversity data of our country can be queried on the basis of tables, graphs and maps through a database.

With the completion of the project, the changes that will occur for the protection and sustainability of our biodiversity will be monitored. In this context, with the "Terrestrial and inland water ecosystems biodiversity inventory and monitoring project for the entire surface area of Elazığ province", the determination of the flora and fauna in the province was started in 2016 and completed as of August 2018.

According to the quadratic system used in the flora of Türkiye, Elazig province falls into the B7 square. Although there is no scientific flora identification study in the region, it is accepted that the region generally hosts species within the borders of Iran-Turanian, European-Siberian, Mediterranean phytogeographic regions. The vegetation is generally degraded forest vegetation, which is a secondary vegetation formed by the destruction of the forest area. There are sparse oak communities and the main species of the steppe ecosystem forming the sub-flora. As a result of the evaluation of 3200 vascular plant samples collected between 2017-2022 in Elazığ, a total of 1122 taxa (962 species, 127 subspecies and 33 varieties) belonging to 87 families and 454 genera were identified.

The forest areas within the borders of the province are composed of dry forests that are adapted to the semi-arid climatic conditions of the region, with poor coverage, sparse and park-like appearance. The trees that make up this forest formation are oaks (95%) spread almost everywhere, junipers (4%) mixed among them to a lesser extent and wild fruit species such as wild cherry, pear (Pyrus communis), almond (Amygdalus communis). Therefore; it is possible to define the forests in the region as oak forests. The oak forests forming the grove forests are very rich in terms of species. Among these; Thuja oak (Quercus infectoria), hairy oak (Quercus pubescens), hairy oak (Quercus cerris) and Lebanese oak (Quercus libani) are the most common ones.

Figure 21.Spermatophyta Pteridophyta and Some Plant Species Identified

All plant species (seed plants (Spermatophyta) and Eğreltiler (Pteridophyta)) identified in Elazığ province were organized according to the List of Plants of Türkiye and their family name, species, subspecies and variety, Turkish name, endemism status, IUCN categories, IUCN status according to the Bern Convention and CITES were determined.

Among the taxa included in the flora list, those that are included in the IUCN endangerment categories, those with dispersed distribution due to their biology were identified individually and with UTM coordinates, and those with dense populations and special plant communities were identified with coordinates in polygons, and then mapped.

Only two studies were conducted on macro fungi in Elazığ region (Gücin, 1990; Akyüz et al., 2015). According to Gücin, 1990, a total of 60 macro fungal species belonging to 38 genera in 18 families were identified. 22 of these are new records for Türkiye. In the study conducted by Akyüz et al. in 2015, five macrofungus species (Picoa lefebvrei (Pat.) Maire, P. juniperi Vittad., Terfezia boudieri Chatin, T. claveryi Chatin, T. olbiensis Tulasne & C.Tulasne) were identified from Elazığ province.

Lichens are morphological and physiological associations of some microscopic fungal species and algae or cyanobacteria. There are around 25,000 lichen species identified in the world. Only 1 study was conducted on lichens in Elazığ region and 179 lichen species were identified in 28 families (Candan and Türk, 2008).

Black mosses are divided into 3 classes as horned liverworts, leafy and tallus liverworts, and leafy liverworts. In a study on mosses in Elazığ region (Alataş et al., 2015), 45 moss species were identified in 9 families. Fritillaria baskilensis was first introduced to science as a new species in 1998.

Figure 22.Fritillaria baskilensis BEHÇET

The Baskil tulip (*Fritillaria baskilensis*) Species Conservation Action Plan Project was completed in 2015 and monitoring activities are continuing as of 2016-2024 within the framework of the Species Conservation Action Plan. As a result of the literature researches conducted within the scope of the project, a total of 283 seedless plant species were identified.

The fact that the study area is located in the Anatolian-Turanian phytogeographic region and steppe vegetation is dominant in the area has an important effect on the high number of elements of the Anatolian-Turanian phytogeographic region (32.9%) in the study area.

Endemic species are species whose distribution areas are specific to a certain country, region or province, i.e. species that spread in areas where they are ideally found and continue their generation, local, region-specific, narrow and rare. In this context, endemic Gysophila (Çöven), Cicer (wild chickpea) and Crambe (wild mustard) plants have been transferred to the natural environment, while studies on many varieties, including Salep bulbs, have been emphasized. The endemism rate in the region is 9.7% and this value is one of the indicators of the fuloristic and ecological importance of the area. The distribution of IUCN Endangerment Categories of 102 endemic taxa identified are as follows; VU (10 taxa), NT (16 taxa), LC (60 taxa) and DD (1 taxon).

Since the taxa identified in the field are "Least Concerning (LC)", they do not pose any risk under WB ESS-6.

Table Main Flora List of Elazığ Province

No	FAMİLYA	TÜR	TURKCE_ADI	BERN	CITES	IUCN	ENDEMIK	REFERANS_KAYNAK
1	Plumbaginaceae	Acantholimon evrenii	Gagoş dikeni	Liste Dışı	Liste Dışı	NE	Endemik	14
2	Plumbaginaceae	Acantholimon hypochaerum	Domuz kardikeni	Liste Dışı	Liste Dışı	NE	Endemik Değil	12
3	Asteraceae	Achillea santolinoides	Kardaşkınası	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,2,4,5,7,11
4	Asteraceae	Achillea vermicularis	Püşan	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,8,12
5	Apiaceae	Actinolema eryngioides	Aklema	Liste Dışı	Liste Dışı	NE	Endemik Değil	1
6	Apiaceae	Actinolema macrolema	Koca aklema	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,2,4,5,11
7	Poaceae	Agrostis gigantea	Koca tavusotu	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,5,9,11
8	Malvaceae	Alcea biennis	Fatmaanagülü	Liste Dışı	Liste Dışı	NE	Endemik Değil	4
9	Rosaceae	Alchemilla pseudocartalinica	Kartal pernçesi	Liste Dışı	Liste Dışı	NE	Endemik Değil	7
10	Fabaceae	Alhagi maurorum	Aguldikeni	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,12
11	Alismataceae	Alisma lanceolatum	Kurbağakaşığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	9,12
12	Amaryllidaceae	Allium ekimianum	Soğan	Liste Dışı	Liste Dışı	NE	Endemik	15
13	Amaryllidaceae	Allium myrianthum	Pak soğan	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,11
14	Poaceae	Alopecurus vaginatus	Benekli tilki kuyruğu	Liste Dışı	Liste Dışı	NE	Endemik Değil	11,12

No	FAMİLYA	TÜR	TURKCE_ADI	BERN	CITES	IUCN	ENDEMIK	REFERANS_KAYNAK
15	Brassicaceae	Alyssum pateri	Yatık kevke	Liste Dışı	Liste Dışı	NE	Endemik Değil	12
16	Amaranthaceae	Amaranthus albus	Kömüş mancarı	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,2,4,5,7,11
17	Amaranthaceae	Amaranthus blitoides	Mor darımancarı	Liste Dışı	Liste Dışı	NE	Endemik Değil	4,11
18	Amaranthaceae	Amaranthus retroflexus	Tilkikuyruğu	Liste Dışı	Liste Dışı	NE	Endemik Değil	2,4,5,7
19	Primulaceae	Anagallis arvensis	Farekulağı	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,2,4,5,7,12
20	Phyllanthaceae	Andrachne telephioides	Duvar nohutu	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,7,8,11
21	Asteraceae	Anthemis kotschyana	Koç papatyası	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,11
22	Apiaceae	Anthriscus nemorosa	Peçek	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,5
23	Poaceae	Apera intermedia	Puslu ipekçimi	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,12
24	Brassicaceae	Arabidopsis thaliana	Fenotu	Liste Dışı	Liste Dışı	NE	Endemik Değil	12
25	Brassicaceae	Arabis aucheri	Cılız tere	Liste Dışı	Liste Dışı	NE	Endemik Değil	11
26	Brassicaceae	Arabis nova	Tıfıl kazteresi	Liste Dışı	Liste Dışı	NE	Endemik Değil	12
27	Asteraceae	Arctium minus	Löşlek	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,2,4,5
28	Caryophyllaceae	Arenaria serpyllifolia	Kuru kumotu	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,8,11
29	Poaceae	Arrhenatherum elatius	Çayır yulafı	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,5
30	Poaceae	Arrhenatherum palaestinum	Kırk çayıryulafı	Liste Dışı	Liste Dışı	LC	Endemik Değil	7
31	Boraginaceae	Asperugo procumbens	Nevazilotu	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,7,11

No	FAMİLYA	TÜR	TURKCE_ADI	BERN	CITES	IUCN	ENDEMIK	REFERANS_KAYNAK
49	Poaceae	Briza humilis	Kadın dili	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,11,12
50	Poaceae	Bromus danthoniae	İbubuk otu	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,7,11
51	Poaceae	Bromus scoparius	İbubuk ekini	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,7,11
52	Caryophyllaceae	Bufonia tenuifolia	Hatunotu	Liste Dışı	Liste Dışı	NE	Endemik Değil	2,5,8
53	Boraginaceae	Buglossoides tenuiflora	İnce taşkesen	Liste Dışı	Liste Dışı	NE	Endemik Değil	7,12
54	Apiaceae	Bupleurum papillosum	Tüylü şeytan ayağı	Liste Dışı	Liste Dışı	NE	Endemik	1,4,5,8
55	Poaceae	Calamagrostis pseudophragmites	Saz çimi	Liste Dışı	Liste Dışı	LC	Endemik Değil	1,4,5,7,11
56	Campanulaceae	Campanula sclerotricha	Dere çıngırağı	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,11,12
57	Brassicaceae	Cardamine impatiens	Sultan kodimotu	Liste Dışı	Liste Dışı	NE	Endemik Değil	12
58	Brassicaceae	Cardamine uliginosa	Acı tere	Liste Dışı	Liste Dışı	LC	Endemik Değil	4
59	Cyperaceae	Carex acutiformis	Çayırsazı	Liste Dışı	Liste Dışı	LC	Endemik Değil	9
60	Asteraceae	Carthamus dentatus	Kına dikeni	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,2,4,7,11
61	Poaceae	Catabrosa aquatica	Çipil	Liste Dışı	Liste Dışı	LC	Endemik Değil	1,4,5,9
62	Apiaceae	Caucalis platycarpos	Kavkal	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,7,8,11,12
63	Asteraceae	Centaurea aggregata	Kümedüğme	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5,7,11,12
64	Asteraceae	Centaurea elazigensis	Gaggoş dikeni	Liste Dışı	Liste Dışı	NE	Endemik	17

No	FAMİLYA	TÜR	TURKCE_ADI	BERN	CITES	IUCN	ENDEMIK	REFERANS_KAYNAK
65	Gentianaceae	Centaurium erythraea	Kırmızı kantaron	Liste Dışı	Liste Dışı	LC	Endemik Değil	1,2,5,7,11,12
66	Gentianaceae	Centaurium pulchellum	Pembe tukul	Liste Dışı	Liste Dışı	LC	Endemik Değil	1,4,5,11
67	Caprifoliaceae	Cephalaria elazigensis	Elazığ pelemiri	Liste Dışı	Liste Dışı	NE	Endemik Değil	16
68	Caprifoliaceae	Cephalaria speciosa	Yıldız pelemiri	Liste Dışı	Liste Dışı	NE	Endemik Değil	11
69	Caryophyllaceae	Cerastium brachypetalum	Gevşek boynuzotu	Liste Dışı	Liste Dışı	NE	Endemik Değil	4
70	Boraginaceae	Cerinthe minor	Cücegözü	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,5,7,11,12
71	Amaranthaceae	Chenopodium foliosum	Cülek	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,11,12
72	Fabaceae	Chesneya elegans	Hoş çesneya	Liste Dışı	Liste Dışı	NE	Endemik Değil	12
73	Asteraceae	Chondrilla juncea	Karakavuk	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,2,4,5,7,11
74	Euphorbiaceae	Chrozophora tinctoria	Siğil otu	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,2,4,5,7,8,11,12
75	Asteraceae	Chrysophthalmum montanum	Tutça	Liste Dışı	Liste Dışı	NE	Endemik Değil	5
76	Santalaceae	Chrysothesium aureum	Anagüvelek	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,4,5
77	Asteraceae	Cirsium amani	Çam kangalı	Liste Dışı	Liste Dışı	NE	Endemik Değil	5
78	Asteraceae	Cirsium creticum	Eşek çalısı	Liste Dışı	Liste Dışı	NE	Endemik Değil	7,11
79	Ranunculaceae	Clematis orientalis	Köpektutağı	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,5,7,11
80	Cleomaceae	Cleome ornithopodioides	Taş saçakgülü	Liste Dışı	Liste Dışı	NE	Endemik Değil	1,2,4,5,7,11,12

Potential Impacts of the Sub-project on Flora and Measures to be Taken

Dust emission can accumulate in the leaf blades, flowers, etc. of flora taxa, affecting both photosynthesis and respiration of the plant and causing slowdowns in the normal development process. Therefore, the work area will be watered regularly with a water truck to prevent dust emission.

Areas disturbed after project activities can be easily rehabilitated with plants from the natural flora of the region. For this reason, it is extremely important for the balance of the ecosystem that the natural plants of the region are preferred in the selection of plants for landscaping purposes.

Annex L - Sub project Fauna

No	FAMİLYA	TÜR	TURKCE_ADI	BERN	CITES	IUCN	ENDEMIK	REFERANS_KAYNAK
1	Gliridae	*Dryomys laniger*	Anadolu kayauyuru	EK-III	Liste Dışı	DD	Endemik Değil	12
2	Erinaceidae	*Erinaceus europaeus*	Batı avrupa kirpisi	EK-III	Liste Dışı	LC	Endemik Değil	25
3	Felidae	*Lynx lynx*	Vaşak	EK-III	EK-II	LC	Endemik Değil	4, 6,7,8,9,10
4	Mustelidae	*Martes martes*	Ağaç sansarı	EK-III	Liste Dışı	LC	Endemik Değil	5
5	Cricetidae	*Microtus irani*	İran tarlafaresi	Liste Dışı	Liste Dışı	NE	Endemik Değil	20
6	Mustelidae	*Mustela nivalis*	Bayağı gelincik	EK-III	Liste Dışı	LC	Endemik Değil	19
7	Vespertilionidae	*Myotis blythii*	Küçük fare kulaklı yarasa	Liste Dışı	Liste Dışı	LC	Endemik Değil	2
8	Vespertilionidae	*Myotis myotis*	Büyük farekulaklı yarasa	Liste Dışı	Liste Dışı	LC	Endemik Değil	3
9	Spalacidae	*Nannospalax ehrenbergi*	Filistin körfaresi	Liste Dışı	Liste Dışı	NE	Endemik Değil	26
10	Spalacidae	*Nannospalax munzuri*	Munzur körfaresi	Liste Dışı	Liste Dışı	NE	Endemik Değil	34
11	Spalacıdae	*Nannospalax tuncelicus*	Tunceli körfaresi	Liste Dışı	Liste Dışı	NE	Endemik Değil	34
12	Bovidae	*Rupicapra rupicapra*	Çengelboynuzlu dağ keçisi	EK-III	Liste Dışı	LC	Endemik Değil	28
13	Sciuridae	*Sciurus vulgaris*	Sincap	EK-III	Liste Dışı	LC	Endemik Değil	21,24
14	Soricidae	*Suncus etruscus*	Cüce sivrifare	Liste Dışı	Liste Dışı	LC	Endemik Değil	20
15	Canidae	*Canis lupus*	Kurt	EK-II	EK-II	LC	Endemik Değil	1,4,6,7,8,9,10,11
16	Bovidae	*Capra aegagrus*	Yabani dağ keçisi	EK-II	Liste Dışı	VU	Endemik Değil	6,7,8,9,10,28
17	Erinaceidae	*Erinaceus concolor*	Kirpi	Liste Dışı	Liste Dışı	LC	Endemik Değil	8,9,25
18	Hystricidae	*Hystrix indica*	Oklukirpi	EK-II	Liste Dışı	LC	Endemik Değil	18,31,32,33
19	Leporidae	*Lepus europaeus*	Yabani tavşan	EK-III	Liste Dışı	LC	Endemik Değil	6,7,8,9,10,23
20	Mustelidae	*Lutra lutra*	Su samuru	EK-II	EK-II	NT	Endemik Değil	6,7,8,9,10,29,30
21	Mustelidae	*Martes foina*	Kaya sansarı	EK-III	Liste Dışı	LC	Endemik Değil	4,5,6,7,8,9,10,13
22	Mustelidae	*Meles meles*	Porsuk	EK-III	Liste Dışı	LC	Endemik Değil	6,7,8,9,10,17
23	Muridae	*Mus musculus*	Ev faresi	Liste Dışı	Liste Dışı	LC	Endemik Değil	9.11
24	Sciuridae	*Sciurus anomalus*	Anadolu sincabı	EK-II	Liste Dışı	LC	Endemik Değil	6,7,8,9,10,22
25	Spalacidae	*Spalax leucodon*	Körfare	Liste Dışı	Liste Dışı	DD	Endemik Değil	14.26
26	Suidae	*Sus scrofa*	Yaban domuzu	EK-III	Liste Dışı	LC	Endemik Değil	6,7,8,9,10,15,16
27	Ursidae	*Ursus arctos*	Boz ayı	EK-II	EK-II	LC	Endemik Değil	6,7,8,9,10
28	Canidae	*Vulpes vulpes*	Tilki	Liste Dışı	Liste Dışı	LC	Endemik Değil	4,6,7,8,9,10,11,13,27
29	Canidae	*Canis aureus*	Çakal	Liste Dışı	Liste Dışı	LC	Endemik Değil	
30	Felidae	*Felis chaus*	Saz kedisi	EK-III	Liste Dışı	LC	Endemik Değil	

Birds

In the literature and field studies conducted for Elazığ province and its immediate surroundings, 247 species were identified, including 246 species and 1 subspecies (Motacilla flava feldegg- Masked wagtail) in 51 families belonging to 17 orders. As a result of the 50-day field study between 30.09.2016-29.04.2018, a total of 200 bird species were identified; 26 of these 200 species identified in the field within the scope of this project are species not found in the literature. Therefore, as a result of the field studies, 26 bird species were identified as new records for Elazığ province. Each bird species identified was evaluated according to Kiziroğlu (2008) according to the Birds of Türkiye Red Data Book (RDB- Red List), International Union for Conservation of Wildlife and Natural Resources (IUCN), CITES, Bern Convention (BERN) and Central Hunting Commission Decision (MAK 2017/2018).

Table Main Bird Species Identified in the Region, Their Protection Status and Status

No	FAMİLYA	TÜR	TURKCE_ADI	GOC_DURUMU	BERN	CITES	IUCN	ENDEMIK	IZLEME_GOSTERGESI	REFERANS_KAYNAK
1	Accipitridae	Accipiter brevipes	Yaz atmacası	Transit Göçmen	EK-II	EK-II	LC	Endemik Değil	İzlemeye Konu Değil	6
2	Anatidae	Mareca strepera	Boz ördek	Yerli	EK-III	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	2
3	Anatidae	Anser albifrons	Sakarca	Kış ziyaretçisi	EK-III	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	2
4	Accipitridae	Aquila heliaca	Şah kartal	Transit Göçmen	EK-II	EK-I	VU	Endemik Değil	İzlemeye Konu Değil	6
5	Anatidae	Aythya nyroca	Pasbaş patka	Kış ziyaretçisi	EK-II	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	9
6	Burhinidae	Burhinus oedicnemus	Kocagöz	Yerli	EK-II	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	2,6
7	Passeridae	Carpospiza brachydactyla	Boz serçe	Transit Göçmen	EK-III	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	6
8	Cuculidae	Clamator glandarius	Tepeli guguk kuşu	Transit Göçmen	EK-II	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	2,6
9	Fringillidae	Coccothraustes coccothraustes	Kocabaş	Yerli	EK-II	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	6
10	Columbidae	Columba oenas	Gökçe güvercin	Kış ziyaretçisi	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	7,9
11	Picidae	Dendrocopos medius	Ortanca ağaçkakan	Yerli	EK-II	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	6
12	Picidae	Dendrocopos minor	Küçük ağaçkakan	Yerli	EK-II	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	6
13	Emberizidae	Emberiza cineracea	Boz çinte	Transit Göçmen	EK-II	Liste Dışı	NT	Endemik Değil	İzlemeye Konu Değil	6
14	Falconidae	Falco columbarius	Bozdoğan	Kış ziyaretçisi	EK-II	EK-II	LC	Endemik Değil	İzlemeye Konu Değil	3,4
15	Falconidae	Falco peregrinus	Gökdoğan	Transit Göçmen	EK-II	EK-I	LC	Endemik Değil	İzlemeye Konu Değil	6
16	Falconidae	Falco vespertinus	Aladoğan	Transit Göçmen	EK-II	EK-II	NT	Endemik Değil	İzlemeye Konu Değil	3
17	Gruidae	Grus grus	Turna	Transit Göçmen	EK-II	EK-II	LC	Endemik Değil	İzlemeye Konu Değil	6
18	Haematopodidae	Haematopus ostralegus	Poyrazkuşu	Transit Göçmen	EK-III	Liste Dışı	NT	Endemik Değil	İzlemeye Konu Değil	6
19	Picidae	Jynx torquilla	Boyunçeviren	Kış ziyaretçisi	EK-II	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	6
20	Laniidae	Lanius nubicus	Maskeli örümcekkuşu	Transit Göçmen	EK-II	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	6

Many data on bird migrations have been collected in Türkiye and migration routes have been presented in the Book of Bird Mobility Maps of Türkiye, one of the most comprehensive and detailed studies.

The sub-project area is located near the main migration route according to the Türkiye Bird Migration Bottleneck Map. There are existing solar power plants around the project area. Therefore, there are no environmental elements (trees, tree hollows, bushes, etc.) in the sub-project area where bird species can meet their feeding, sheltering, accommodation and breeding needs.

Figure 23.Türkiye Bird Migration Bottleneck Map

Inland Water Fish

A total of 36 species belonging to 8 families (Salmonidae, Cyprinidae, Nemacheilidae, Cyprinodontidae, Mastacembelidae, Cobitidae, Sisoridae and Atherinidae) were identified during 40 days of field studies between 01.10.2016-30.06.2018.

Table Species, Protection Status and Status of Aquatic Species Identified in the Region

No	FAMİLYA	TÜR	TURKCE_ADI	BERN	CITES	IUCN	ENDEMIK	IZLEME_GOSTERGESI	REFERANS_KAYNAK
1	Cyprinidae	*Carasobarbus luteus*	Bizir	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	3,5
2	Cyprinidae	*Luciobarbus subquincunciatus*	Leopar Sazanı	Liste Dışı	Liste Dışı	CR	Endemik Değil	İzlemeye Konu Değil	5,1
3	Bagrıdae	*Mystus pelusius*	Kedi Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	5,1
4	Salmonidae	*Salmo munzuricus*	Munzur Alabalığı	Liste Dışı	Liste Dışı	NE	Endemik	İzlemeye Konu Değil	15
5	Siluridae	*Silurus glanis*	Yayın Balığı	EK-III	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	3
6	Cyprinidae	*Acanthobrama marmid*	Akçapak Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	3,5,2,10,14,6
7	Cyprinidae	*Alburnoides bipunctatus*	Noktalı İnci Balığı	EK-III	Liste Dışı	NE	Endemik Değil	İzlemeye Konu Değil	9,3
8	Cyprinidae	*Alburnus heckeli*	Hazar İnci Balığı	Liste Dışı	Liste Dışı	LC	Lokal Endemik	İzlenecek Tür	6,5
9	Cyprinidae	*Alburnus mossulensis*	Tatlısu Gümüş Balığı	Liste Dışı	Liste Dışı	NE	Endemik Değil	İzlemeye Konu Değil	9,5
10	Cyprinodontidae	*Aphanius asquamatus*	Dişli Sazancık	Liste Dışı	Liste Dışı	LC	Lokal Endemik	İzlemeye Konu Değil	6,8,18
11	Cyprinidae	*Arabibarbus grypus*	Şabut	Liste Dışı	Liste Dışı	VU	Endemik Değil	İzlemeye Konu Değil	5,1
12	Cyprınıdae	*Barbus lacerta*	Bıyıklı Balık	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	3,5,10,12,14,6,13
13	Cyprinidae	*Capoeta trutta*	Kara Balık	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	5,14

No	FAMİLYA	TÜR	TURKCE_ADI	BERN	CITES	IUCN	ENDEMIK	IZLEME_GOSTERGESI	REFERANS_KAYNAK
14	Cyprinidae	*Capoeta umbla*	Siraz	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlenecek Tür	5,1,7
15	Cyprinidae	*Carassius auratus*	Havuz Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	3,1
16	Cyprinidae	*Carassius gibelio*	Havuz Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	3,10,5,14
17	Cyprinidae	*Chondrostoma regium*	Kababurun Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	5,14
18	Cobitidae	*Cobitis elazigensis*	Taş Yiyen Balık	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	19,3
19	Cyprinidae	*Cyprinion kais*	Kais Kralbalığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	16,17
20	Cyprinidae	*Cyprinion macrostomum*	Beni Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	3,5,16,14,6,17, 2,10
21	Cyprinidae	*Cyprinus carpio*	Adi pullu sazan	Liste Dışı	Liste Dışı	VU	Endemik Değil	İzlemeye Konu Değil	3
22	Cyprinidae	*Garra rufa*	Yağlı Balık	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	9
23	Cyprinidae	*Garra variabilis*	Yapışkan Balık	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	5,10,6
24	Sisoridae	*Glyptothorax armeniacus*	Dikenli Küçük Yayın Balığı	Liste Dışı	Liste Dışı	NE	Endemik Değil	İzlemeye Konu Değil	3,5,6
25	Sısorıdae	*Glyptothorax kurdistanicus*	Vantuzlu yayin balığı	Liste Dışı	Liste Dışı	DD	Endemik Değil	İzlemeye Konu Değil	2,5
26	Cyprinidae	*Leuciscus vorax*	Sis Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	5,1
27	Cyprinidae	*Luciobarbus esocinus*	Fırat Turnası	Liste Dışı	Liste Dışı	VU	Endemik Değil	İzlemeye Konu Değil	5,6,10
28	Cyprınıdae	*Luciobarbus mystaceus*	Sirink	Liste Dışı	Liste Dışı	NE	Endemik Değil	İzlemeye Konu Değil	5,1
29	Cyprinidae	*Luciobarbus xanthopterus*	Maya Balığı	Liste Dışı	Liste Dışı	VU	Endemik Değil	İzlemeye Konu Değil	5,6,10
30	Mastacembelıdae	*Mastacembelus mastacembelus*	Dikenli Yılan Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	5,6,10
31	Salmonidae	*Oncorhynchus mykiss*	Gökkuşağı Alabalığı	Liste Dışı	Liste Dışı	NE	Endemik Değil	İzlemeye Konu Değil	3,1
32	Nemacheilidae	*Oxynoemacheilus angorae*	Çöpçü Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	3,5
33	Balıtorıdae	*Oxynoemacheilus hazarensis*	Hazar Çöpçü Balığı	Liste Dışı	Liste Dışı	NE	Lokal Endemik	İzlemeye Konu Değil	11
34	Balitoridae	*Oxynoemacheilus insignis*	Çöpçü Balığı	Liste Dışı	Liste Dışı	NT	Endemik Değil	İzlemeye Konu Değil	3,5
35	Nemacheilidae	*Oxynoemacheilus panthera*	Çöpçü Balığı	Liste Dışı	Liste Dışı	EN	Endemik Değil	İzlemeye Konu Değil	3,5
36	Nemacheilidae	*Oxynoemacheilus tigris*	Çöpçü Balığı	Liste Dışı	Liste Dışı	CR	Endemik Değil	İzlemeye Konu Değil	3,5
37	Cobitidae	*Paracobitis malapterura*	Çöpçü Balığı	Liste Dışı	Liste Dışı	NE	Endemik Değil	İzlemeye Konu Değil	3,5
38	Cyprınıdae	*Squalius berak*	Mezopotamya Tatlı Su Kefali	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	5,9
39	Cyprinidae	*Squalius lepidus*	Ak Balık	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	3,5,9
40	Atherinidae	*Atherina boyeri*	Gümüş Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	
41	Cobitidae	*Turcinoemacheilus kosswigi*	Kosswig Çöpçü Balığı	Liste Dışı	Liste Dışı	LC	Endemik Değil	İzlemeye Konu Değil	

Reptiles

A total of 28 reptile species were identified in Elazığ province; 10 of these 28 species are species that are not recorded in the literature and were identified only by field studies carried out within the scope of this project. These ten species (Blanus alexandri, Dolichophis jugularis, Eirenis eiselti, Eirenis lineomaculatus, Eirenis thospitis, Eryx jaculus, Malpolon insignitus, Telescopus fallax, Dolichophis schmidti, Rhynchocalamus melanocephalus) are new records for Elazığ. Among the reptile species found in Elazığ, only Blanus alexandri is endemic and its endemism rate is 3.6%. When the taxa in the area are evaluated according to IUCN endangerment categories, there are 17 LC, 1 VU, 9 NE and 1 DD categories.

Sıra No	FAMİLYA	TÜR	TURKCE_ADI	BERN	CITES	IUCN	ENDEMIK	REFERANS_KAYNAK
1	Scincidae	*Ablepharus chernovi*	Çernov İnce Kertenkelesi	EK-III	Liste Dışı	LC	Endemik Değil	14
2	Lacertidae	*Apathya cappadocica*	Kayseri kertenkelesi	EK-III	Liste Dışı	LC	Endemik Değil	3, 4, 10, 15, 14
3	Colubroidea	*Eirenis punctatolineatus*	Van Yılanı	EK-III	Liste Dışı	LC	Endemik Değil	8
4	Scincidae	*Eumeces schneideri*	Sarı Kertenkele, Keçemen	EK-III	Liste Dışı	NE	Endemik Değil	14
5	Colubroidea	*Hemorrhois ravergieri*	Kocabaş Yılan	EK-III	Liste Dışı	NE	Endemik Değil	15
6	Lacertidae	*Lacerta media*	Doğu Yeşil Kertenkelesi, Ortanca Yeşil Kertenkele	EK-III	Liste Dışı	LC	Endemik Değil	15
7	Viperidae	*Macrovipera lebetina*	Koca Engerek	EK-II	Liste Dışı	NE	Endemik Değil	1, 6, 12
8	Geoemydidae	*Mauremys caspica*	Hazer Çizgili Kaplumbağası	EK-II	Liste Dışı	NE	Endemik Değil	3, 9, 10, 15, 14
9	Colubroidea	*Natrix tessellata*	Su Yılanı	EK-II	Liste Dışı	LC	Endemik Değil	15
10	Lacertidae	*Ophisops elegans*	Yılan Gözlü Kertenkele	EK-II	Liste Dışı	NE	Endemik Değil	2, 10, 11, 15, 14
11	Colubroidea	*Platyceps najadum*	İnce Yılan, Ok Yılanı	EK-II	Liste Dışı	LC	Endemik Değil	15
12	Agamidae	*Stellagama stellio*	Dikenli Keler	EK-II	Liste Dışı	LC	Endemik Değil	1,7
13	Testudinidae	*Testudo graeca*	Tosbağa	EK-II	EK-II	VU	Endemik Değil	1, 3, 10, 13, 15, 14
14	Scincidae	*Trachylepis aurata*	Tıknaz Kertenkele	EK-III	Liste Dışı	LC	Endemik Değil	14
15	Scincidae	*Trachylepis vittata*	Şeritli Kertenkele	EK-III	Liste Dışı	LC	Endemik Değil	15
16	Agamidae	*Trapelus lessonae*	Bozkır Keleri	EK-III	Liste Dışı	LC	Endemik Değil	1
17	Typhlopidae	*Typhlops vermicularis*	Kör Yılan	EK-III	Liste Dışı	NE	Endemik Değil	5
18	Gekkonidae	*Mediodactylus heterocercus*	Mardin Keleri	EK-III	Liste Dışı	LC	Endemik Değil	14
19	Amphisbaenidae	*Blanus alexandri*	Kör Kertenkele	EK-III	Liste Dışı	NE	Endemik	
20	Colubroidea	*Dolichophis jugularis*	Kara Yılan	EK-II	Liste Dışı	LC	Endemik Değil	

Couple Living

While compiling the list of Double Yars found in Elazığ province, a literature review was made and the literature given at the end of the list table was utilized. The literatures are numbered and indicated for each species in the list. The species were identified from the names given in the literature within the borders of Elazığ province or from the points marked on the map in the literature. In the list, the scientific names of the species are given in their current forms in the light of recent studies. The old synonyms of the species were also taken into consideration in the literature review. Conservation status was noted according to IUCN classification (version 2017-3, www.iucnredlist.org). It is also indicated whether it is included in the appendices of the CITES convention (http://www.cites.org/eng/app/appendices.php) and its conservation status according to the BERN convention (http://conventions.coe.int/Treaty/en/Treaties/Html/104.htm).

The status of the species in Türkiye was also noted in the light of the literature and the expert's previous field experiences. In addition, it was checked whether the species in the list were included in the abrogated Ministry of Forestry and Water Affairs Central Hunting Commission Decision for the 2017-2018 Hunting Period (Decision Date: 03.05.2017 Decision No: 16). A total of 6 amphibian species were identified in Elazığ province; 2 of these 6 species are species that are not recorded in the literature and were identified only through field studies carried out within the scope of this project. These two species (Bufotes variabilis, Salamandra infraimmaculata) are new records for Elazığ. Of these 6 species, only Neurergus strauchii is endemic and its endemism rate is 16.7%. When the taxa in the area are evaluated according to IUCN threat categories, there are 3 LC, 1 VU, 1 NT, 1 DD categories.

Table Invertebrate Species Detected in the Region, Their Protection Status and Status

No	FAMİLYA	TÜR	TURKCE_ADI	BERN	CITES	IUCN	ENDEMIK	REFERANS_KAYNAK
1	Hylidae	*Hyla savignyi*	Levanten Ağaç Kurbağası, Yeşil Kurbağa	EK-III	Liste Dışı	LC	Endemik Değil	4
2	Salamandridae	*Neurergus strauchii*	Benekli Semender	EK-II	Liste Dışı	VU	Endemik	3,5
3	Ranidae	*Pelophylax ridibundus*	Ova Kurbağası, Bataklık Kurbağası	EK-III	Liste Dışı	LC	Endemik Değil	1
4	Ranidae	*Rana macrocnemis*	Uludağ Kurbağası	EK-III	Liste Dışı	LC	Endemik Değil	2
5	Bufonidae	*Bufotes variabilis*	Değişken Desenli Gece Kurbağası	EK-III	Liste Dışı	DD	Endemik Değil	
6	Salamandridae	*Salamandra infraimmaculata*	Türk Semenderi	EK-III	Liste Dışı	NT	Endemik Değil	

Possible Impacts on Fauna and Precautions to be Taken:

Fauna species will not be affected due to the works to be carried out within the scope of the Project. Individuals that spontaneously move away from the sub project area will look for suitable, similar habitats in the immediate vicinity. However, observations and surveys in the sub project area have shown that the species do not have dense populations and there is no habitat in the area.

In order to prevent damage to fauna species, visual controls will be carried out in the area during the pre-construction preparation phase, nesting areas will be identified and then the area will be marked to ensure that fauna species move away from the area without any intervention. Juveniles may also be encountered during visual controls during the works. It may not be possible for the juveniles to leave the area on their own. Juveniles and adults that do not leave the area despite all these techniques will be taken out of the study area using appropriate techniques and in a way that they will not be harmed.

In addition to the fauna taxa living above the soil, there are also amphibians, reptiles and mammals living close to the soil surface. For the fauna species that live close to the soil surface, more caution will be exercised, nest entrances and mounds formed by rodents will be detected and these species will be expected to leave the area spontaneously or will be captured with appropriate capture techniques and taken out of the study area. Therefore, it is not expected that the species identified in terms of wild forms that spontaneously move away will find new habitats and that there will be no problems in these areas.

TURKIYE PUBLIC AND MUNICIPAL RENEWABLE ENERGY PROJECT (PUMREP)

ELAZIG MUNICIPALITY

SPP (6,454.8 kWp/5,000 kWe)

SPP-1 (6,504.6 kWp/4,990 kWe)

SPP-3 (6,454.8 kWp/5,000 kWe)

SOLAR POWER PLANT PROJECT

MINUTES OF STAKEHOLDER CONSULTATION MEETING

Delivery Date : May 30, 2025

Meeting Date : May 27, 2025

Meeting Location : Elazig Municipality Meeting Hall

1. STAKEHOLDER CONSULTATION MEETING

“Elazığ Municipality SPP Project, SPP (6,454.8 kWp/5,000 kWe), SPP-1 (6,504.6 kWp/4,990 kWe), SPP-3 (6,545.8 kWp/5,000 kWe) as three solar power plants” (hereinafter referred to as the “sub-project”). Within the scope of PUMREP, Elazığ SPP projects planned to be realized in Elazığ province, Merkez district, Şahinkaya neighborhood, lots 549 and 550 of block 110 aim to support Elazığ Municipality in meeting carbon emission reduction commitments, increasing energy security and expanding the use of renewable energy. The sub-project will be financed with the relevant sub-components below.

Within the scope of the project, an Environmental and Social Management Plan (ESMP) and a Stakeholder Engagement Plan (SEP) were prepared. In addition to these studies, a Stakeholder Engagement Meeting was held on May 27, 2025 at 14:00 following the completion of the ESMP.

1. Summary

In this sub-section, information about the sub-project was presented by the consultant company during the Stakeholder Consultation Meeting. The details are as follows:

Elazığ Municipality announced that the meeting would be held to the Şahinkaya neighborhood within the project impact area, to citizens, relevant civil society organizations and local media officials.

12 people attended the meeting. Şahinkaya neighborhood residents, citizens and Elazığ municipality personnel attended the meeting.

The meeting started with the opening speech of Elazığ Municipality Climate Change and Zero Waste Manager. He gave information about the sub-project process. Then, PVGLOBAL Energy project manager gave a presentation about the project's Environmental and Social Management Plan (ESMP). Within the scope of the ESMP, the project's subject, stakeholders, and environmental and social risks were evaluated.

Then the question-and-answer session started. The questions were answered by the PVGLOBAL Energy project manager.

2. Q&A Session

In this subsection, participants opinions, demands and questions and Stakeholder Consultation Meeting during taken relating to Answers presented. Details the following is as follows:

Question 1: Will the solar power plant project have a negative impact on environmental pollution and rivers? (Citizen)

Answer 1: There is no stream in the region where the solar power plant is located and no negative impact is expected. All precautions will be taken to prevent environmental pollution caused by workers, especially during the construction phase of solar power plants. Actions will be taken according to management plans, procedures and current legislation, and impact reduction measures will be implemented. No negative impact is expected. (Project Manager)

Question 2: Do PV Panels have a negative effect on human health? (Elazığ Municipality Environmental Engineer)

Answer 2: There is no scientific data that PV panels are harmful to human health. Despite this, broken or waste panels will be stored in closed and leak-proof boxes in the temporary storage area on site. Waste panels will then be transferred to licensed recycling facilities. In addition, since the subproject is far from the residential area, no negative impact is expected. (Project Manager)

Question 3: Will there be a fire in the Solar Power Plant? What are the precautions? (Elazığ Municipality Electrical Engineer)

Answer 3: All fire precautions will be taken in accordance with the legislation and standards. Employees will be trained on the Fire Emergency Response Plan. A sufficient number of fire extinguishers will be kept at many points in the plant. (Project Manager)

Question 4: How long is the economic life of a solar power plant? Do panels that have completed their lifespan harm the environment? (Citizen)

Answer 4: The catalog life of the panels is 25 years. The panels that have completed their economic life will be collected in accordance with the Waste Management Plan and Waste Management Regulation and sent to licensed recycling companies. (Project Manager)

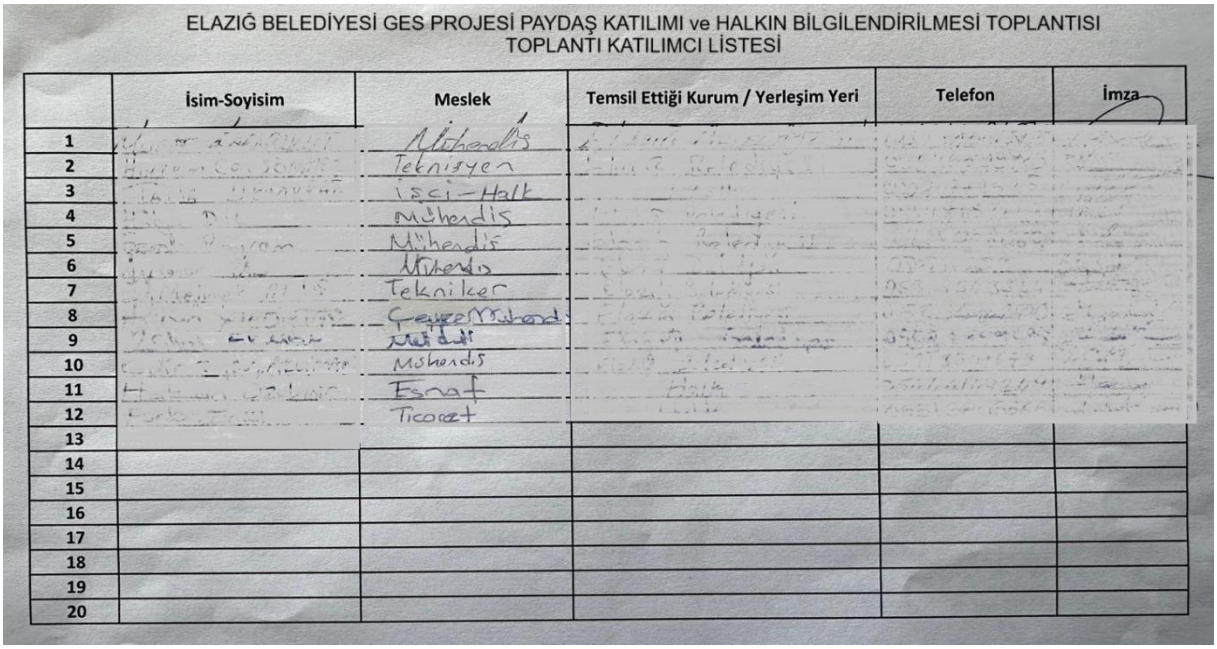
Question 5: Does the Solar Power Plant have a negative impact on biodiversity? (Citizen)

Answer 5: The Solar Power Plant is not expected to have a negative impact on biodiversity. Mitigation measures will be implemented to minimize the impacts on flora and fauna. There are no endemic species in the sub-project area. Within the scope of mitigation measures, plants detected in the field will be moved to a safer area. If an animal nest is detected in the field, it will be moved to a safer area. (Project Manager)

3. Conclusion

In the Stakeholder Participation Meeting that lasted approximately 1 hour, PVGLOBAL Energy and Elazığ Municipality officials provided information about the project and a question-answer session was held. The necessary information was provided to the public and questions were answered about the three solar energy power plants, namely SPP (6,454.8 kWp/5,000 kWe), SPP-1 (6,504.6 kWp/4,990 kWe), SPP-3 (6,545.8 kWp/5,000 kWe), planned to be realized in Elazığ province, Merkez district, Şahinkaya neighborhood, lots 549 and 550 of block 110.

2. Participant List[1]



ELAZIĞ BELEDİYESİ GES PROJESİ PAYDAŞ KATILIMI ve HALKIN BİLGİLENDİRİLMESİ TOPLANTISI
TOPLANTI KATILIMCI LİSTESİ

	İsim-Soyisim	Meslek	Temsil Ettiği Kurum / Yerleşim Yeri	Telefon	İmza
1		Mühendis			
2		Teknisyen			
3		İşçi-Halk			
4		Mühendis			
5		Mühendis			
6		Mühendis			
7		Tekniker			
8		Çevre Mühend			
9		Müdür			
10		Mühendis			
11		Esnaf			
12		Ticaret			
13					
14					
15					
16					
17					
18					
19					
20					

[1] In compliance with the Personal Data Protection Law, the meeting participant list is not published and is stored in the Project Implementation Unit's archives solely for sub-project management purposes. It will be retained for the duration of the sub-project and will not be shared with third parties.

3. APPENDICES

Annex 1: Stakeholder Consultation Meeting Photos

Annex 2 Newspaper Advertisements

08 1a MAYIS 2025 CUMA

Günün İçinden

SABAH

Coğrafyamız Mevlânâ'ya hasret

Tropik kuraklık. Yağmuru bekliyor. Hem ne hafif sarılı. Mevsimi dünyanın nafıratı yağmurlarına hasret. Sevgiye, anlayışa, ortaya, muhabbete hasret. Ormanlar içine gömmek gökyüzünün bir yağmur bekliyor. Hak dostu kayıtlarında hasta yatağında: "Olduğum gün, benim tahtırıma cenazeler üzerinde gördüğünüz zaman, hemde hiçbirinin dendi var sanma. Benim ağlamam. Yanık, yanık, 'Vah vah demeyin. Şeytanın tuzağına düşmem vah vahun sonu o vahtte. Yanık, yanık o zaman dem."

'GECE BİR İHTİYAR GÖRDÜM'

"Dün gece rüyamda aşk mahallesinde bir ihtiyar gördüm. Benim tanıdık gel diye hemen elçiye yanıt etti. "

Velhasılın kısa bir süre önce böyle diyordu Hz. Mevlânâ. Bütün evrenin "aşk" gözüyle bakabilen bu insan ancak Allah'a varlıkta erişen aşk mücadelesi sonucunu edebilir. Büyüklerin dilime hemdemi da özgül değerlerimizin büyük mimarı. "Aşık gelişi. Bir seçimden bahsetmesi. Çünkü her kendinde değiller" Değinçyle. Hayatın sırrı, cihanın ise ilk bulanışında olan kendinde cihanda. Kendinleşme, o cihanın ki

Aslında bütün çevreyi onun yönlendirmesi bir varlık/şek hâlinde olduğunu bulanabiliyoruz. İslam kültürünün doğru bilinmesinin verdiği bir kendiliğin ölüm sonrası güven hâli bütün varlığını çepeçevre kuşatıyor. Gözlüğünün farkındayız. Nasıl konuşacağını tahmin edebiliyoruz. Rabb'ine kıyıdı. Çünkü O'na hiç ihanet etmemişti. İşte şu anda da bütün ahbir dünyanın kendisine verdiklerini ret dediğinde. Daha önemde ne vardı ki! Daha ona kim ne yapabilirdi ki! Bu sükûna ve sükûnu unutmuş yanık, kopuna sonlayan oğlunu seviyordu.

"Git. Başın yaralıysa koy. Beni yalnız bırak. Gecenin dolaşıp durun yanımız yalnızsa bu hastadan vazgeç. Bu geceleri yapağılıyor, sitkiyorsun

'ARADIĞINI KENDİ İÇİNDE ARA'

Yola olan bir fıtık yolcusunun arkasından ayan ekliğe seslenüyordu Mevlânâ. "İnsan çok fıtık bir kalbe sahiptir. İnsanın bir an olsun aca olsu..." Sonra sesi o duşarıdığını anlatmaz olacak ki daha da yükseltiyordu sesini. "Ey yarattığım gülen dost. Aradığın kendi içinde ara."

Mevlânâ, İslam'ın bir gönül tasavvuçu. Sözlerine yüklediği kıymetli, anlamı aşk kökeni olmuştur. "Cennet bedeninde olduğu Kuran'ın bildiğim. Seçtiğim kul

kadar sevda dolguları arasında çıkıp durunuz. Bu gün kösesinde gözyaşları dökerek inlemektedir."

SEVGİ VE AŞK HÂKİM OLSUN

Bu yazımı Kuran'dan ve Hz. Peygamber'den (SAV) sevgi ve aşk dersleyen Hz. Mevlânâ'nın çağrısıyla bitirmek istedim. Bu iki duyguya ne kadar muhtacız bugün. Dünyanın tümüne sevgi ve aşk duygıları hâkim olsun dilerim önümüzdeki zamanlarda. Kinin, nefretin, egoizmin, benciliğin, şehvetperestliğin ve bilumum manevi birlerin kurumun önemden gelebilecek tek ferdi bu. İki duygudur Mevlânâ bu ikisini bulmuştu.

Bizimse Hz. Peygamber'e (SAV) bakarken pelire ve dönüp olan Hz. Muhammed'in (SAV) yolunun tapmağıyım. Kim bu yola duşmüş bir söz nitelendirme hendeni, ondan da o sözden de ulaşıyor olacak."

Hâdiseleri anlamayanlardan dışlıyorlardı. Sevmiyor bazı insanlardan da yıldıyorlardı. Kınamıyorlardı. Kötülüyor, yıkmıyorlardı. Sert bakmamışlardı, anlamamışlardı. "Sen" den kurtulamamışlardı. "Ben" den kurtulamamışlardı diyebiliyoruz.

Dilerim ki önümüzdeki zamanlar bu anlamdaki perdeleri kaldırmak için fırtına bir fırsat verir.

Abdulkadir'in oğlunu gördük. Basmaz Ulusal'da dağ kralları yanılı Resul'u gördük. Bazmaz kurbanın ortına yıldırımsız ilave dersini gördük. Basmaz sadece görmek istediğimizi gördük. Basmaz bunların hiçbirini görmedik. Basmaz ise hiçbir şey görmedik.

Mevlânâ çoğunsunun gönendiğini gördü ve gördüğü anda da bayılmaya başladı: "Hz. Peygamber'in yolundan gitmek için aşk gerekir." (Bütün-i Kebir, c. 4, s. 238). "Onu anlamak için cehaleti, düşmanlığı ve kini bırakmak gerekir." (Mesnevi, c.1, s. 325).

Bir dedi ki: "Niçin müslümanlarda yalnız Tanrı'ya sevgi görmeyip Hz. Muhammed'i (SAV) de seviyorlar?" Cevabını şöyle dedi: "Muhammed (SAV), Tanrı'nın sevgisi (hegâmi) değil mayası sanki." (Fîhi Mâ Fîh, s. 246).

HER MÜMİNİN DEFTERİ VAR

Hz. Mevlânâ burada da durmuyordu. Bir dedi olan deve bulmak zorunda değildi. Onun dedi nabuman dedi'di. Bunun bulunduğu. Onun en büyük dedi ise Sevgili Peygamber'di. Bunun bulunduğu. Yüzünün Hz. Peygamber'in sözünü noktalıyordu. "Ben size bir defter getirdim. Nur'un defteri. Bu defterde bulunan gözlü sırlarım." (Mesnevi, c. 4, s. 44). Hz. Peygamber'in (SAV) annesinin kızı O'nun sarışını üzerine oldukları bir ev sahibi, bir sultanda." (Mesnevi, c. 5, s. 10).

Mevlânâ, Peygamber soluğunun hedefinliği kâmil insanın bulunduğu. Ona göre bir mümünün bir defteri vardır. Bu defter bir gibi beriyor ve temsil olan gönüldür. "Doğru" diyordu. Berâberçe defteri bembeyaz bulanık yıpranak bulanık. Kimsenin okuyamayacağı şeyler yazmak bulanık. Bir defter bilinsin bir de bulanı onlar yazdığını. Başkası okuyamamalıydı.

ŞEMS YOK Kİ MEVLÂNÂ OLSUN

Coğrafyamız yeni Mevlânâ'lara ateşin bırakıyor. Çünkü ateş arbaba sıcaklık, ısıtmaktan yıkılmaz. Ortaç dönemi dünyası, insanlığın aydınlığından, duruş işleri kavgalarından, mezhep mücadelelerinden Rahman'a sığınmış. Şems yok ki Mevlânâ'lar olsun. Aşk yok ki "Fîhi Mâ Fîh" olsun.

Mevlânâ yok ki "Divan" olsun.

Biz sendeleyecek. "Sevsev"e mahkûm. "Zamsem"e hasretiz. "Ah-i hayat" arzulu, bizi dinlere taşıyacak. Hâlâ asırsızlıyor. Şimdi söyler misiniz bu kadar kalıcılık, bu kadar insansız, bu kadar tahammülsüz, bu kadar sefasız, bu kadar kaygısız, bu kadar hesapsız bir havadan Mevlânâ çıkar mı? Mevlânâ'lar çıkar mı? Nafile. Daha çok bekleyeceğiz. Hasretle.

Hz. Peygamberimiz ve Hz. Ali'nin resimleri yapıldı mı?

Peygamberimizin veya herhangi bir sahabenin resmi yapılmamıştır. Etrafında bulunduğu bir resim yok. Hz. Ali'nin gerçek resmi de yok. Hz. Ali'nin elde bulunan resmi, günümüzden geçen çizgilerin bilgi ile yaratılmış hâlidir.

Mezar yeni vakıa olmak diyen vakıacılık mı?

Mezar yeniyle ilgili bir problem varsa mezarı için toprak satın alınmasında bir sıkıntı yoktur. Ancak sandaki yeni vakıf olmak yerine kaybolan eldeki güzel yeri satın almak sanki bir ayrıcalık yapmak hatırı olur. Bir de Hz. Ebubekir'in bir sözüne dayalı. Ebubekir kızına demiş ki: "Kendilerinden mezar kazılacağın, kendini mezara hazırla."

Cennette uçka var mı?

Resim bir bilgi olmamıştır. Hz. Peygamber "Cennette olanın ne uçku yoktur" (Kenzü'l-Hakâ, 2/2969) şeklindeki rivayetten cennetteki cennetle uçka olmadığı söylenmiştir. Çünkü uçka, yargıçlık ve bir fonksiyon dolayısıyla Cennette ise böyle bir ihtiyaç olmayacaktır.

Cinlerden peygamber gelmiş midir?

Alimlerimizin çoğunluğuna göre cinlerden peygamber gelmemiştir. İnsanlardan gelen peygamberlere ayrıcalıklar için de bazılı. Alimlerden sadece Nebî ve Velî'dir. Bu farkları bir müşterisi şöyle demiş: "Hz. Âdem'den önce cinlere sahip olan Yusuf isimli bir peygamber geldi ve cinler bu peygamberi dinlediler. [Bedrüddin Şibli, Mukaddimat Cin, 54] Bu konuyla ilgili Ebussuud'un 139. ayetine bakabilir. Hz. Peygamber'in (SAV) tebliğlerinden bir tanesi de "İnsanı Sıralayın" yani "İki insandan fazla cinler ve insanlardır.

ERDOĞAN'IN LİSE ARKADAŞI SON YOLCULUĞUNA UĞURLANDI

Cumhurbaşkanı Recep Tayyip Erdoğan'ın lise arkadaşı ve eski Danıştay üyesi Hasan Karahocalı, 78 yaşında kalp ve solunum yetmezliği nedeniyle Trabzon'da hayatını kaybetti. Ünlü isim, eşinin cenazesinde görüntülendi. Karahocalı'nın cenazesi, Ankara Hacı Bayram Veli Camii'nde öğle namazının ardından Cebeci Asri Mezarlığı'na defnedildi.

Özgür ÖZDEMİR/SABAH

SABAH 08 CMYK

SANAL DÜNYA ZİNDANI!

Mehmet YILMAZ

Geçmişte toplu taşıma araçlarında yolculuk yapmak ne güzeldi. Öyle ki, gençler büyüklerine yer verme yarışına girerdi… Büyüklere ve yaşlılara yer vermek kanıksanmış bir davranıştı. Yer vermemek ise alışılmadık bir davranıştı. Günümüzde ise tam zıddına evrilmiş bir durum.. Büyükler ayakta yolculuk yaparken, gençler kapıkları yerlerde oturarak yolculuk yapmaktalar. Gençlerin başları öne eğik ellerinde telefon… Ayakta kim var kim yok umurlarında değil. Ellerindeki cep telefonunun bir kelepçe, ekranının ise kelepçe kilidi olduğundan habersizler. Pür dikkat sanal dünya/sosyal medya denizinde sörf yapmaktalar. Özgür olduklarını sanıyorlar. Oysa kendilerini sanal dünya zindanına mahkûm ettiklerinin hiç de farkında değillerdir! Şehir içi toplu taşıma araçlarında çoğu kez gördüğümüz insanlık adına acınası ve de şaşılası manzaralardan bir kesit… Bir önceki durakta otobüse binip boş koltuklardan birine oturan ve ilk iş olarak cep telefonunun ekranından gözlerini ayırmayan 20'li yaşlarında bir genç gelinen sonraki durakta yeni binenler ile birlikte sıkışan yolcular… O kadar ki, Kutup Penguenleri ancak bu kadar sıkışırdı.

"Yolcular lütfen arkaya doğru!" şeklinde bir bant kaydı anonsu… Ne yazık ki arka da dolu, adım atacak yer yok. Arada yaşlı bir amca. Alnında, barkoddaki çizik sayısından daha fazla çizik… (Alın çiziklerini okuyacak barkod okuyucu henüz icat edilmedi… Ama kim bilir her bir çizik, çekilen hangi çilenin mühürlenmiş dosyasıdır…) Ayakta durmakta zorlanan bu yaşlı amca ile oturan genç, göz göze geldiler… Yaşlı amca kafasında zamanı geriye sardı.. Geçmişte büyüklere gösterilen saygı ve sevgiyi hatırladı!

Ve "Nereden nereye" diye içinden mırıldandı…

Genç ise aklı hep cep telefonundaydı. Bir anlık da olsa anlamsız bir bakış attı… Sonra tekrar kaldığı yerden oyununa döndü! Öyle ki kalabalık içerisinde hiç kimse gence "Kalk/sın oradan yerini bu yaşlı amcaya ver/sen?" diyemedi!.. Diyemedi/ler.

Çünkü, gencin ne tepki vereceğini kestiremiyorlardı.. Bu tatsız manzara karşısındaki şaşkınlıkları, yüz ifadelerine yansımıştı. Karanlığı delen Dolunay kadar aşikar. Değerlerin anlamını kaybettiği çağ bu olsa gerek. Neyse ki çok geçmeden yaşlı amcanın ineceği durağa varıldı…

İnen yolcuların yardımıyla yaşlı amca da otobüsten indi. Otobüs yolculuğu o an için son bulmuştu. Ama ömür yolculuğu da kaçınılmaz sona doğru devam ediyordu. Yaşından dolayı sayısız deneyimler yüklüydü.. Otobüste yaşananlar da bir deneyimdi…

Alnındaki çizikler yetmezmiş gibi, yeni bir çiziğin de temeli atılmış oldu…

Yaşlı amca, güçlükle küçük adımlar atarak, evine doğru yürümeye çalışırken; şoför, otobüsü bir sonraki durağa doğru hareket ettirdi. Oturmakta olan genç, göz göze geldiği yaşlı gibi yaşlanacağını düşünmüyor.. Fark etmiyor. Dahası hayal bile edemiyor artık…

Cep telefonundaki ruhsuz ve duygusuz sanal dünyanın hayal kıran okyanusunda sörf yapıyor. Can yeleği olmadan rotasız yolculuğuna devam ediyordu. Maalesef…

Sonuçta SANAL DÜNYA ZİNDANI bir kişiye daha mekân oldu. Değerlere de mezar…

ELAZIĞ'DAN SURİYE'YE KAÇ KİŞİ DÖNDÜ?

HABER: DİLARA GÜLTEKİN

Uluslararası Göç Örgütü (IOM), Elazığ'da dahil olmak üzere ülkesine dönen Suriyeli sayısını açıkladı

Birleşmiş Milletler Uluslararası Göç Örgütü (IOM), Suriye'de Aralık 2024'te gerçekleşen siyasi değişimin ardından 1,9 milyon Suriyelinin ülkesine döndüğünü açıkladı. Bunların 1,3 milyonu iç göçten dönerken, 750 bin kişi mülteci olarak dış ülkelerden geri geldi.

DÖNÜŞLER İÇİN ZORLUKLAR DEVAM EDİYOR

Raporda, dönüş sürecindeki en büyük engellerin ekonomik yetersizlik, temel hizmetlerin eksikliği ve güvenli barınma olanaklarının sınırlılığı olduğu vurgulandı. Özellikle elektrik, temiz su ve sağlık hizmetlerine erişimin olmaması, göç edenlerin yerleşmesini zorlaştırıyor.

ULUSLARARASI YARDIM KRİTİK ÖNEME SAHİP

IOM Genel Direktörü Amy Pope, Suriyelilerin geri dönüş süreçlerinde büyük zorluklarla karşılaştığını belirterek, uluslararası desteğin önemini vurguladı. Pope, "Suriyelilerin toplumlarını ve hayatlarını yeniden inşa edebilmeleri için desteğe ihtiyaçları var. Bu sürecin başarılı olması, ülkenin geleceği açısından kritik" dedi.

ELAZIĞ'DA RAKAM KAÇ?

Günışığı olarak Elazığ rakamları hakkında bilgileri başvurduğumuz yetkililer net rakam vermekten kaçınırken, Elazığ'dan da Suriye'ye göçlerin yaşandığını bildirdi.

DELPHİ FIRAT ÜNİVERSİTESİ'NDE AÇTIĞI YEDEK PARÇA LABORATUVARLARI İLE EĞİTİME DESTEK VERİYOR

Gelecek nesillerin eğitimine yatırım yapmanın bilinciyle çalışmalarını aralıksız şekilde sürdüren Delphi Technologies, Fırat Üniversitesi Teknik Bilimler Meslek Yüksekokulu'nda yeni bir yedek parça laboratuvarı kazandırdı.

Açılış programına Fırat Üniversitesi Teknik Bilimler Meslek Yüksekokulu Müdürü Prof. Dr. Latif ÖZLER, Motorlu Araçlar ve Ulaştırma Teknolojileri Bölüm Başkanı Prof. Dr. Hüseyin BENLİ, Phinia Delphi Türkiye Otomotiv Sistemleri Sanayi ve Ticaret AŞ Türkiye Kafkasya, Ortadoğu ve Afrika Bölge Direktörü Reşat DUMANOĞLU, şirket yetkilileri, öğretim üyeleri ve öğrenciler katıldı.

Açılışta konuşan MYO Müdürü Prof. Dr. Latif ÖZLER Phinia Delphi yetkililerine desteklerinden dolayı teşekkür etti.

Phinia Delphi Türkiye Otomotiv Sistemleri Sanayi ve Ticaret AŞ Türkiye Kafkasya, Ortadoğu ve Afrika Bölge Direktörü Reşat DUMANOĞLU ise, gençlerin eğitimine destek olmak ve geleceğin nitelikli iş gücünü yetiştirmek için kurulan atölyede yapılan takılat, bakım ve yenileme işlemleri ile mesleki eğitime katkı sağlamayı hedeflediklerini ifade etti.

Konuşmaların ardından laboratuvarın kurulmasında emekleri bulunanlara onurluk takdim edildi.

Program kapsamında yedek parça laboratuvarının kurdelesi kesilerek öğrencilerin hizmetine sunuldu.

Annex 3 Brochure Distribution at the Mukhtar's Office for Invitation to Stakeholder Consultation Meeting

Annex 4 Elazığ Municipality Announcement for SCM

ELAZIĞ BELEDİYESİ

İKLİM DEĞİŞİKLİĞİ ve SIFIR ATIK MÜDÜRLÜĞÜ

TUTANAKTIR

Belediyemiz tarafından yapılması planlanan güneş enerji santralinin halkın katılım toplantısı için 16.05.2025 tarihinde saat 15.00'te anons yapılmıştır.

Zühal EKMEN

İklim Değişikliği ve Sıfır Atık Müdürü

Annex 5 Stakeholder Consultation Meeting Brochure for the Sub-Project

PROJENİN AMACI VE FAYDALARI

Alt proje, Elazığ Belediyesinin elektrik enerji ihtiyacını karşılamayı ve yenilenebilir enerji kullanarak yerel kalkınmaya katkı sunmayı amaçlamaktadır.

Alt proje, kamu tesislerinde Yenilenebilir Enerji (YE) pazarının genişlemesine katkıda bulunacak ve ülkenin karbon emisyonu azaltma taahhütlerini karşılamak ile enerji güvenliğini artırmak için sürdürülebilir enerji çözümlerinin kullanılmasında kamu sektöründe öncü bir rol üstlenecektir.

PROJE FİNANSMANI

Kamu ve Belediye Yenilenebilir Enerji Projesi (KABYEP) kapsamında finanse edilen proje, Dünya Bankası (DB) kredisi ve İller Bankası A.Ş aracılığı ile Elazığ Belediyesi tarafından yürütülecektir.

KABYEP, merkezi hükümet binaları ve belediyelere odaklanarak, kamu sektöründe yenilenebilir enerji kullanımının yaygınlaştırılması konusunda Türkiye Cumhuriyeti'ni desteklemeyi amaçlamaktadır.

2

PROJE TANITIMI

Alt Proje Elazığ ili, Merkez ilçesi, Şahinkaya mahallesi sınırları içerisinde kalmaktadır. Projenin konumu aşağıda verilmiştir:

Şekil 1: Elazığ GES Projeleri Alanı

Bu kapsamda kurulacak GES santralleri inşaatlarının 6 ay sürmesi ve 30 yıllık kullanım süresi olması planlanmaktadır. GES Projeleri toplamda 19.505,2 kWp/14.990,0 kWe gücünde olup, 30.974.257 MWh elektrik üretmesi beklenmektedir. Alt projeler, Elazığ ili, Merkez ilçesi, Şahinkaya Mahallesi, 110 ada, 549 ve 550 parsellerde gerçekleştirilmesi planlanmaktadır. Yaklaşık 22,75 ha alana inşa edilecektir (Bkz: Şekil 1).

3

ÇEVRESEL VE SOSYAL ETKİLER

Alt Proje kapsamında çevresel ve sosyal etkiler oluşabilir. Bu etkiler; inşaatın niteliğine, yerleşim yerlerine yakınlığına ve mevcut altyapıya göre değişebilir.

Bu etkileri yönetebilmek üzere Alt Proje özelinde Çevresel ve Sosyal Yönetim Planı (ÇSYP) ve Paydaş Katılım Planı (PKP) hazırlanmıştır. Bu planlar belediyenin internet sitesinde yer almaktadır:

https://www.elazig.bel.tr/yayin/turkiye-kamu-ve-belediye-yenilenebilir-enerji-projesi/686/

4

ÇEVRESEL VE SOSYAL ETKİLERİ AZALTMA ÖNLEMLERİ VE İZLEME

Proje sürecinde oluşabilecek çevresel ve sosyal etkilerin önlenmesi/en aza indirilmesi için aşağıdaki alt yönetim planları hazırlanacaktır:

- Hava Kalitesi Yönetim Planı
- Gürültü Yönetim Planı
- Rastlantısal Buluntu Prosedürü
- Biyoçeşitlilik Yönetim Planı
- Trafik Yönetim Planı
- Dökülme ve Sızıntı Müdahale Prosedürleri
- İşgücü Yönetim Planı
- Acil Durum Hazırlık ve Müdahale Planı
- Yangın Söndürme Planı
- İSG Yönetim Planı
- Dökülme ve Sızıntı Müdahale Prosedürleri
- Tehlikeli Madde Yönetim Planı
- Atık Yönetim Planı

PAYDAŞ KATILIMI VE ŞİKÂYET MEKANİZMASI

Projeye ilişkin bilgi paylaşımı için bir Paydaş Katılımı Planı hazırlanmış, halkın görüş, öneri ve şikâyetlerini iletebileceği bir Şikâyet Mekanizması kurulmuştur. Başvurular hızlı ve özenli şekilde değerlendirilir. Bu mekanizmanın uygulanmasından Elazığ Belediyesi sorumludur. Broşürdeki iletişim kanalları dilek, şikâyet ve önerileri iletmek için kullanılabilir.

5

Şikâyet/dilek/öneriler için iletişim kanalları:

Elazığ Belediyesi Web Sitesi:
https://www.elazig.bel.tr/

Elazığ Belediyesi'nin e-posta adresi:
elazig@elazig.bel.tr

Elazığ Belediyesi Çağrı Merkezi: 153

Elazığ Belediyesi Telefon Numarası: +90 424 248 47 01

Resmi Yazı/Dilekçe için Elazığ Belediyesi'nin Adresi: Cumhuriyet Mah. Malatya Caddesi No: 34 Elazığ

İLLER BANKASI A.Ş. İletişim Kanalları

0(312) 508 79 79

Web sitesi:
https://www.ilbank.gov.tr/form/bilgiedinmeuluslararasi

E-posta: bilgiuidb@ilbank.gov.tr

Açık Adres: İLBANK Genel Müdürlüğü Uluslararası İlişkiler Dairesi Başkanlığı, Emniyet Mahallesi Hipodrom Caddesi No:9/21 Yenimahalle/ANKARA

6

TÜRKİYE KAMU VE BELEDİYE YENİLENEBİLİR ENERJİ PROJESİ (KABYEP)

Elazığ Belediyesi
Güneş Enerjisi Santrali Projesi

Halkın Katılımı Toplantısı Bilgilendirme Broşürü

Tarih: 27 Mayıs 2025
Toplantı Saati: 14:00

Toplantı Yeri: Elazığ Belediye Başkanlığı Toplantı Salonu

THE WORLD BANK

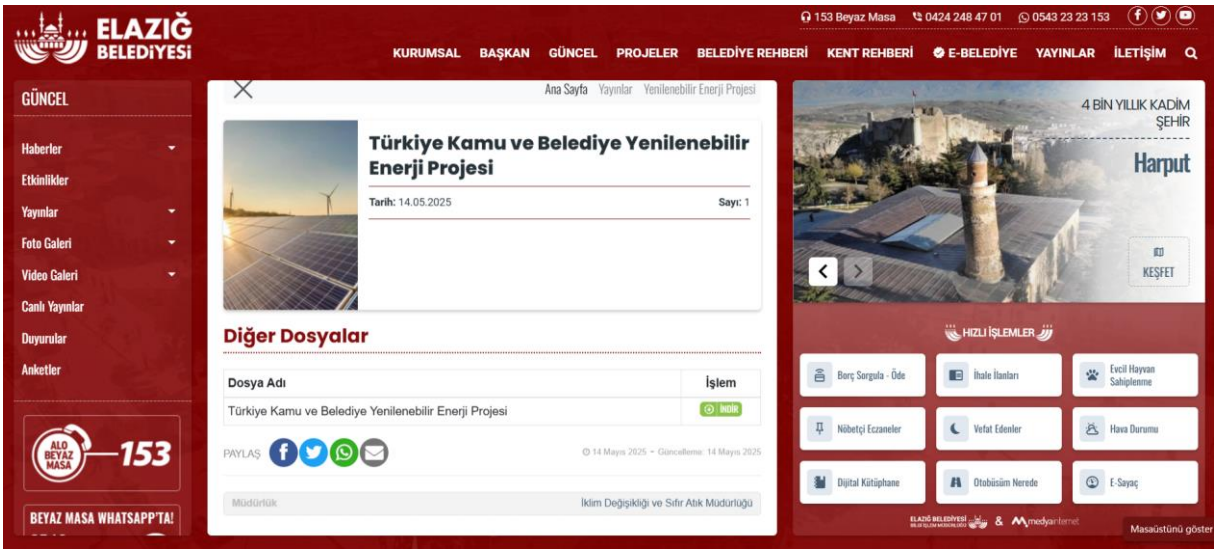
T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

İLBANK

PVGLOBAL Enerji

1

Annex 6 Screenshot of Publishing of ESMP and SEP on Elazığ Municipality Web Page



Annex 7 SMS Message Invitation to Stakeholder Consultation Meeting Screenshot