REPORT

Niğde G4-Bor-1 Solar Power Plant Project

Environmental and Social Impact Assessment - Non-Technical Summary

Submitted to:

Smart Güneş Enerjisi Teknolojileri Ar-Ge Üretim San ve Tic A.Ş.

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ABBREVIATIONS

Abbreviation	Definition
AC	Alternating Current
AoI	Area of Influence
BOS	Balance of System
CCRA	Climate Change Risk Assessment
CIA	Cumulative Impact Assessment
CSR	Corporate Social Responsibility
DC	Direct Current
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EPRP	Emergency Preparedness and Response Plan
EPs	Equator Principles
ESA	Supplementary Environmental and Social Assessment
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ETL	Energy Transmission Line
EU	European Union
E&S	Environmental and Social
EV	Electric Vehicle
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
HRIA	Human Rights Impact Assessment
ha	hectare
IFC	International Finance Corporation
IFI	International Financial Institutions
km	Kilometer
m	Meter

Abbreviation	Definition
m^3	Cubic meter
MBF	Mercury Lamps
MoEUCC	Ministry of Environment, Urbanization and Climate Change
MWp	Megawatt Power
NTS	Non- technical Summary
PDoEUCC	Provincial Directorate of Environment, Urbanization and Climate Change
PM	Particulate Matter
PSs	Performance Standards
PV	Photovoltaic
SEP	Stakeholder Engagement Plan
Smart	Smart Güneş Enerjisi Teknolojileri Ar-Ge Üretim San ve Tic A.Ş. (Project Owner)
SPP	Solar Power Plant
SON	High-pressure Sodium Lamps
SOX	Low-pressure Sodium Lamps
TCFD	Task Force on Climate-related Financial Disclosures
TEİAŞ	Turkish Electricity Transmission Corporation
VEC	Valued Environmental and Social Component
WSP Türkiye	WSP Danışmanlık ve Mühendislik Ltd. Şti.
YEKA	Renewable Energy Source Area

1.0 INTRODUCTION

Smart Solar Technologies (hereinafter referred to as the Smart), established in 2014 in Istanbul, is dedicated to creating a more sustainable future by helping reduce carbon emissions through innovation. The company designs and produces solar panels and offers a wide range of clean energy solutions. These include helping customers finance solar projects, managing full solar power system installations, providing engineering support, and maintaining both solar systems and electric vehicle (EV) charging stations.

With three production bases in Türkiye—in Gebze, Dilovası, and Aliağa—the company expects to reach a high level of solar panel production by early 2024. Today, Smart Solar Technologies supports customers in 20 countries and employs over 1,000 people. It has also been recognized for its strong commitment to workers' rights and ethical business practices.

Smart is seeking international funding for the Nigde G4-Bor-1 Solar Power Plan Project, a project which will be producing electricity from solar energy with a total installed capacity of 140 MWp / 100 Mwe in Seslikaya and Badak Villages of Bor District, Niğde Province, namely Niğde G4-Bor-1 Solar Power Plant Project (hereinafter referred as “the Project’”).

The Project has the potential to cause significant adverse environmental and social risks and/or impacts that are diverse, irreversible, or unprecedented, and therefore has been classified as Category A.

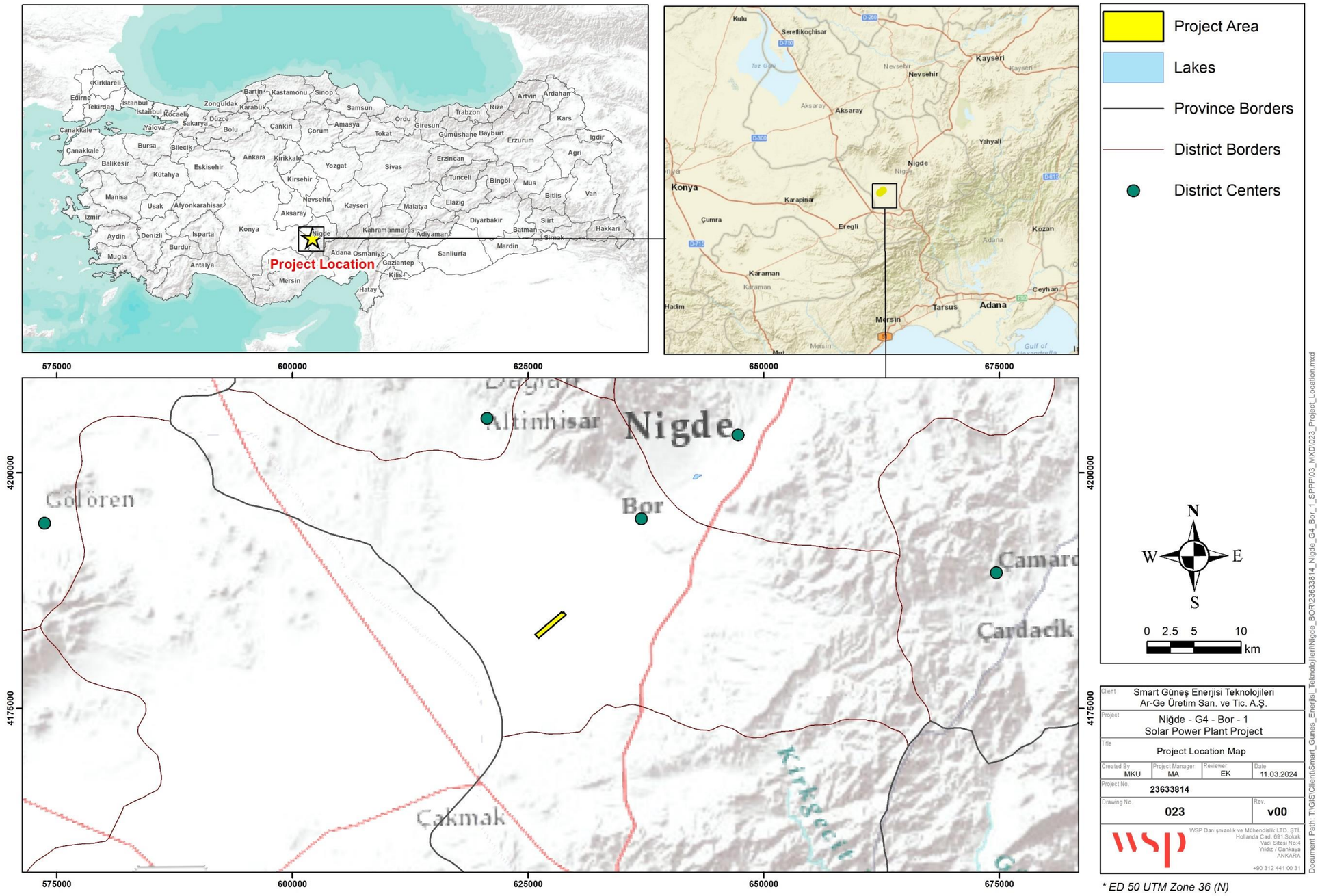
The ESIA was prepared to comply with national and international standards related with the Project.

This Non-Technical Summary (NTS) briefly presents the outcomes of the Environmental and Social Impact Assessment (hereinafter referred to as “the ESIA”) (August, 2024), as well as the subsequent E&S Supplementary Assessment (May, 2025), prepared for the Niğde G4-Bor-1 Solar Power Plant Project.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The Project Area is situated in the Türkiye, within the administrative boundaries of Niğde Province, Bor District, in the Seslikaya Village. The Project location map is given in Figure 1.



* *ED 50 UTM Zone 36 (N)*

Figure 1: Project Location

The Niğde G4-Bor-1 Solar Power Plant Project will be developed on a 201.3-hectare area of former pastureland, designated as an "Industrial Zone" within the Niğde-Bor Energy Specialized Industrial Zone.

Existing roads will be used for accessing the Project Site during both construction and operation, with no need for additional link roads or major road improvements, as no heavy-load transport beyond standard limits is planned. Permanent on-site roads will be built for long-term operational use.

Approximately 29.5 km long 154 kV ETL was established by TEİAŞ to transmit the produced electrical energy to the Yaysun SPP Substation.

The closest settlements to the Project Site, Seslikaya Village (2.64 km away), Emen Village (1.92 km away), and Badak Village (5.08 km away) and their proximity to the Project are presented in Figure 2.

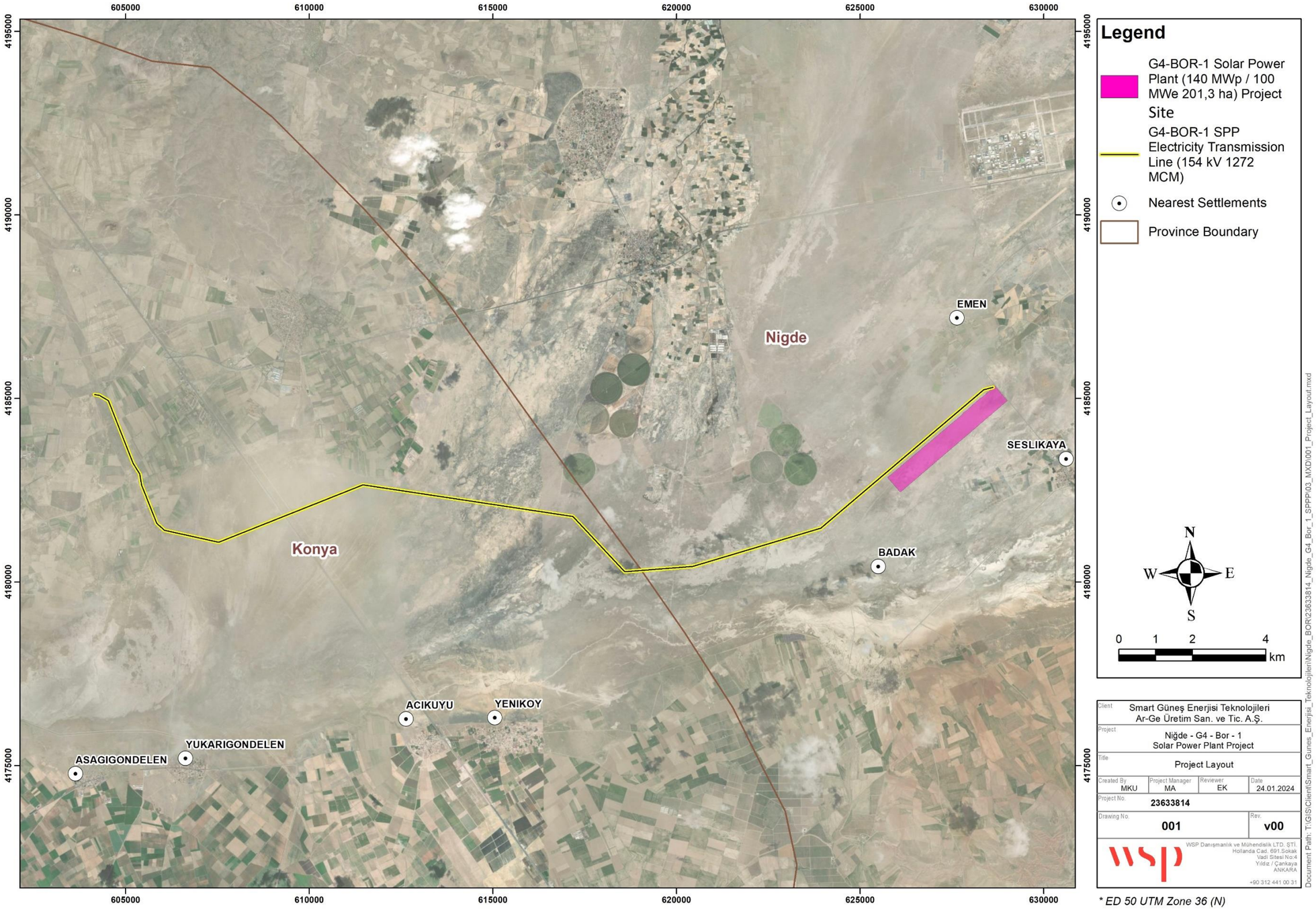


Figure 2: Nearest Settlements to the Project Area

2.2 Project Components

The main components of solar power plants, along with solar panels, include inverters, panel support systems, and the Balance of System (BOS). Solar Power Plants consist of four main structures:

- Photovoltaic (PV) Panel: Integrates semiconductor PV cells on the panel to ensure the generation of direct current electricity from the sunlight.
- Inverter: Converts the direct current electricity generated by PV panels into grid electricity for daily use.
- Panel Support System: Refers to the support structure systems and mounting apparatus where photovoltaic PV panels are installed.
- Balance of System (BOS): Encompasses elements beyond the fundamental materials mentioned above. In the context of Solar Energy Plants, the part outside the Module, Inverter, and construction is defined as BOS. It includes infrastructure activities and materials necessary for the sustainability and protection of the system, such as infrastructure, AC-DC cables, connectors, paralleling panels, switchgear equipment, low-voltage panels, transformer substations, medium/high-voltage panels, construction works, wire fences, lighting, camera systems, and others.

2.3 Associated Facilities

According to the OECD definition and IFC Performance Standards, Associated Facilities are defined as:

- OECD - “Associated facilities are those facilities that are not a component of the project but that would not be constructed or expanded if the project did not exist and on whose existence the viability of the project depends; such facilities may be funded, owned, managed, constructed and operated by the buyer and/or project sponsor or separately from the project.”
- IFC – PS1 par. 8 – “Associated facilities, which are facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable”.

The only associated facility identified is the Energy Transmission Line (ETL). This 154 kV line, approximately 29.5 km in length, was constructed by TEİAŞ to transfer the generated electricity to the Yaysun SPP Substation. An EIA Report has been prepared for the ETL Project in accordance with the requirements of the Turkish EIA Regulation, and the “EIA Positive” decision has been obtained on August 22nd, 2023 (Decision No. 7217). During the EIA process, the connection agreement between Smart and TEİAŞ was signed on January 24th, 2023. According to the EIA report, along the 154 kV ETL, 14 some poles and 2 final poles will be established.

The construction phase of the ETL was completed in early November 2023.

2.4 Project Schedule

Within the scope of the Project, construction phase is estimated around 11 months, while operation phase is estimated as 30 years.

Construction of SPP has already been started in October 2023 and it planned to be completed in August 2025 by completion of the test and commissioning activities and the commissioning phase is planned to be ended in September 2025.

2.5 Workforce Requirements

It is planned to employ 100 people during the construction phase of the Project and 20 people during the operation phase. It is planned to employ local workforce where possible during the construction and operation phases.

Working hours will be planned in compliance with the Labor Law. Construction working hours are planned to be 16 hours/day as 2 shifts and operation working hours are planned to be in 3 shifts of 8 hours each.

2.6 Alternative Analysis

Alternatives considered for the Project includes the following:

- Site Alternatives
- Technology Alternatives
- No-Project Alternative

2.6.1 Site Alternatives

The Project Area was determined by the Ministry of Energy and Natural Resources during Renewable Energy Resource Area (“YEKA”) development process, which is a program initiated to enhance Türkiye’s renewable energy potential and encourage investments. The YEKA process typically involves a specific procedure for the development and operation of large-scale renewable energy projects.

According to the "Competition Announcement for the Allocation of Solar-Based Renewable Energy Resource Areas and Connection Capacities" published in the Official Gazette dated 14/07/2021 with number 31541, YEKA GES-4 (Bor-1, Bor-2, and Bor-3) competitions were held on 08/04/2022. As per the Ministry of Energy and Natural Resources letter dated 20/05/2022 with reference number 121795, it was reported that Smart Ges Energy Production Joint Stock Company won the competition for Bor-1 region by offering the lowest bid. YEKA Right of Use Agreements were signed with these companies on 16/05/2022.

2.6.2 Technology Alternatives

During the YEKA tender stage, the Ministry of Energy and Natural Resources identified photovoltaic solar energy as the Project technology. There are 4 different types of photovoltaic panels:

- Monocrystalline solar panel
- Polycrystalline solar panel
- Thin-film solar panel
- Flexible solar panel

Monocrystalline solar panels are selected for the Project. Monocrystalline solar panels offer several advantages over other types of solar panels, including higher efficiency, better performance in low light, longevity, space efficiency and sleek appearance.

2.6.3 No Project Alternative

The "No Project" alternative considers the scenario where the project does not move forward. In this case:

- Environmental impacts would be avoided, as no construction or operation would occur.
- Socio-economic benefits such as job creation and infrastructure improvements would not be realized.
- Economic gains for local and national stakeholders would be lost.
- Sustainability contributions, including renewable energy generation, would not take place.

3.0 IMPACT ASSESSMENT SUMMARY

To evaluate the environmental and social impacts of the Project, an ESIA Report was prepared.

Figure 3 illustrates the areas of influence for Project footprint, including physical, social, and biological components considered for the environmental and social impact assessment studies.

For including ETL to the local study area and evaluating protected areas around the Project, Figure 4 is given below

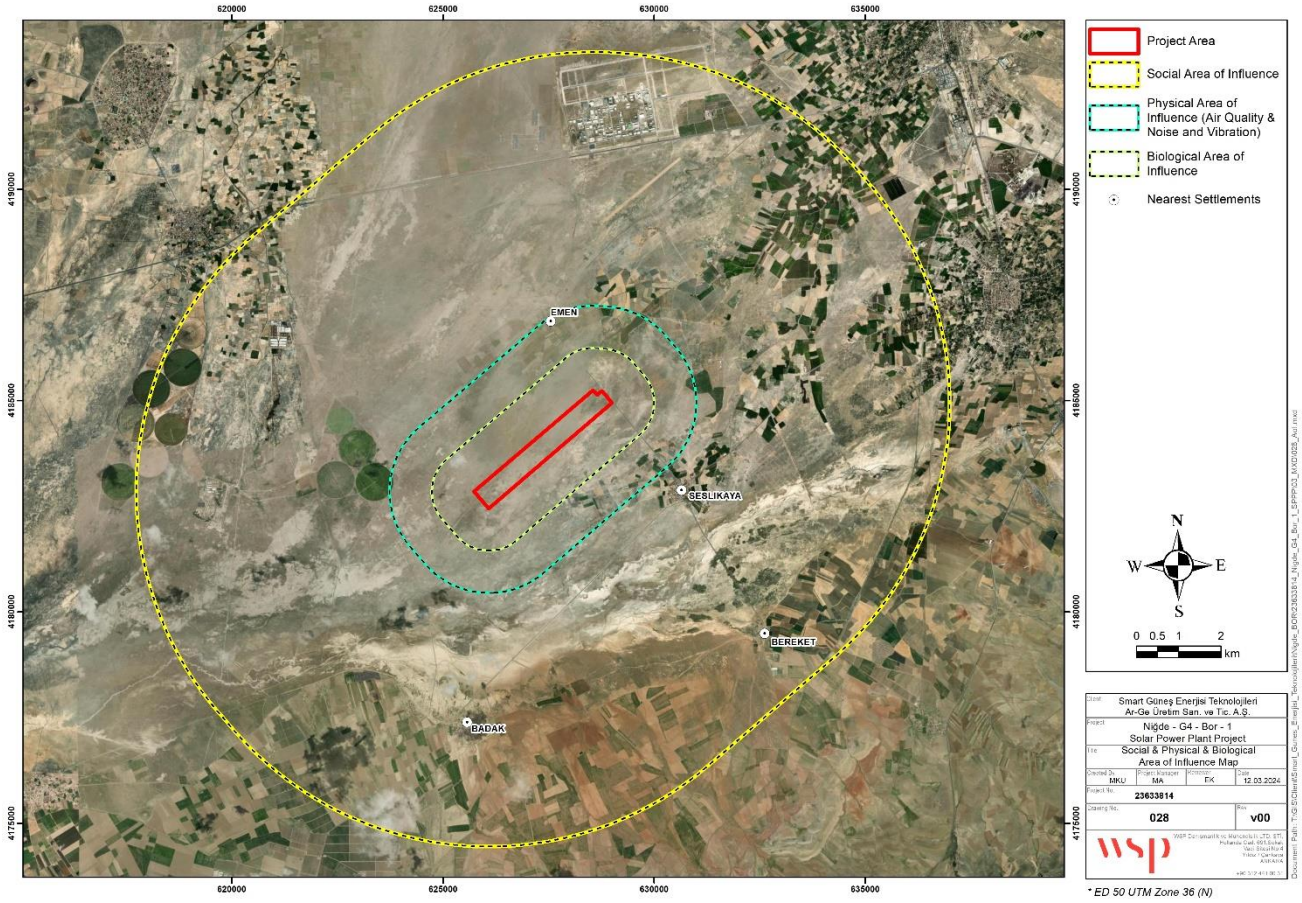


Figure 3: Project AoI

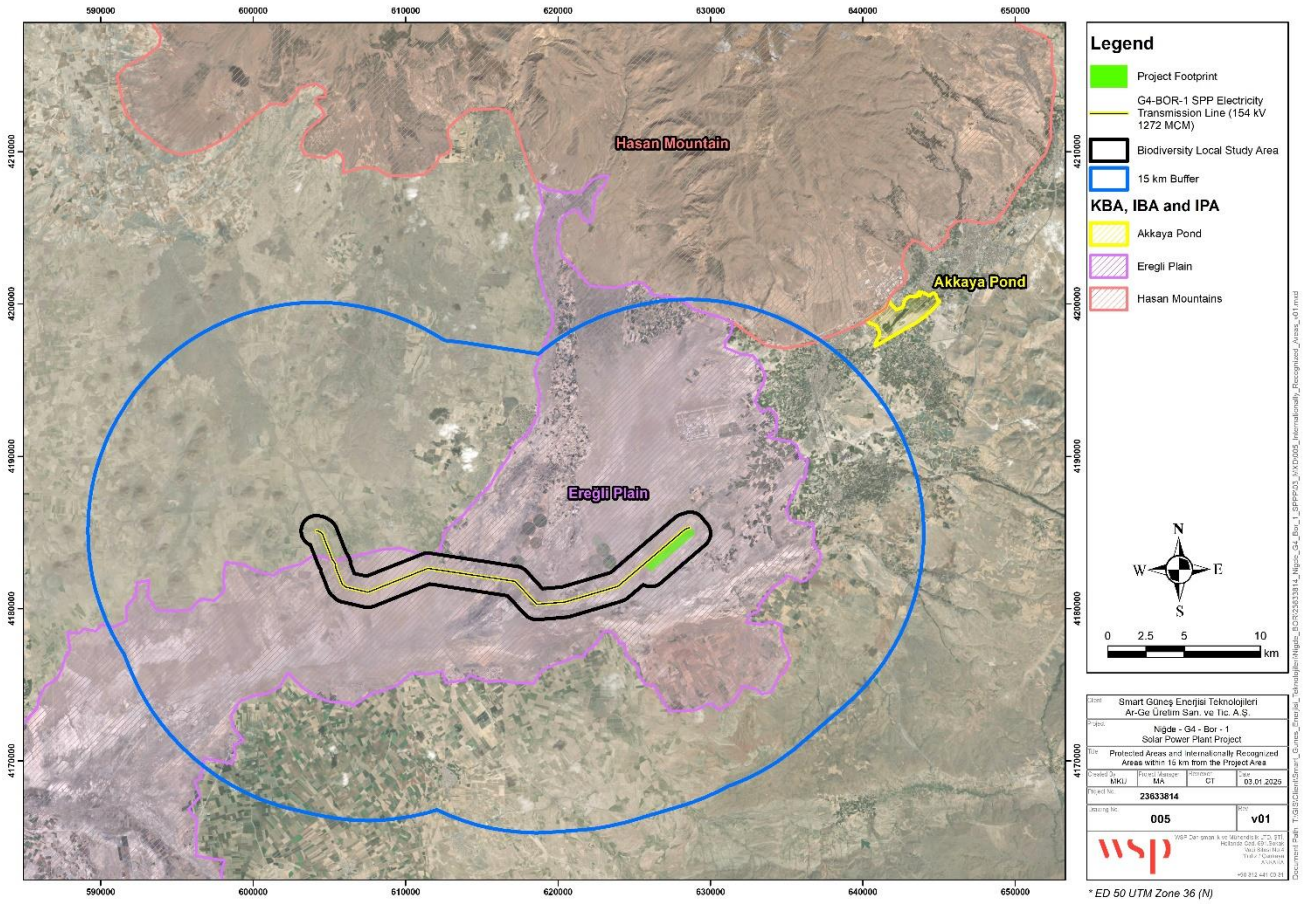


Figure 4: Local Study Area

The ESIA was prepared based on field studies and desktop research and literature review.

The outcomes of the Niğde G4-Bor-1 Solar Power Plant Project ESIA are summarized in the following sections. Information on mitigation measures, including the implementation of management plans, is also provided in this section.

3.1 Air Quality

For the evaluation of the baseline conditions, baseline air quality measurements conducted at three locations in the dates between 13 December 2023 and 11 February 2024 and data from Air Quality Monitoring Stations in Niğde Province were considered. The results indicate that the average PM_{10}, $PM_{2.5}$ and settled dust concentrations in the vicinity of the Project Area are complied with both Turkish and IFC Air Quality Standards.

The emissions of dust, particulate matter, and gaseous pollutants during the construction phase of the Project are associated with various construction works, including land clearing, ground excavation, cut-and-fill operations, and the transportation of construction materials.

During the operation phase, only emission source will be the exhaust emissions from the vehicles used by operation team. . The impacts on air quality have been assessed in the ESIA, and mitigation measures and monitoring requirements have been identified.

The following measures will be implemented during the construction phase:

- Water spraying on construction sites and transport routes, especially during dry and windy conditions.

- Covering and spraying dust-generating materials during transport.
- Minimizing material handling and ensuring dust control during loading/unloading.
- Avoiding construction traffic through settlements when possible; otherwise, enforcing speed limits and informing local communities.
- Limiting vehicle idling and ensuring engines/machinery operate only when necessary.
- Regular maintenance of vehicles and machinery to ensure compliance with emission standards.
- Minimizing the number of active equipment/vehicles and transportation distances.
- Using electric-powered equipment when possible.
- Providing personal protective equipment, such as dust masks to workers in high-dust areas.
- Establishing a grievance mechanism to address community concerns
- Further information on mitigation measures is provided in the Air Quality Management Plan developed for the construction phase

The following measures will be implemented during operation phase:

- Limiting vehicle idling and ensuring engines/machinery operate only when necessary.
- Regular maintenance of vehicles and machinery to ensure compliance with emission standards.
- Minimizing the number of active equipment/vehicles and transportation distances.
- Using electric-powered equipment when possible.
- Establishing a grievance mechanism to address community concerns
- Further information on mitigation measures is provided in the Air Quality Management Plan developed for the operation phase

3.2 Noise and Vibration

Background noise measurement was conducted at 3 points for 48 hours continuously between 15 and 16 December 2023 in compliance with the Turkish legislation and IFC General EHS Guideline for Noise. The measurement results do not exceed Turkish Legislation and IFC Guideline Limits.

Noise emission during the construction phase of the Project is associated with various construction works, including vegetation clearing, ground excavation, and the transportation of construction materials. During the operation phase, the emission source will be plant operation.

During the construction phase, an increase in ambient noise levels is anticipated due to the use of heavy machinery and equipment for infrastructure and superstructure works. This impact has been assessed using a cumulative and conservative approach to represent the worst-case scenario. In this scenario, the noise model assumes that all equipment operates simultaneously, at full capacity, and in close proximity to sensitive receptors. According to the modelling results, the cumulative noise levels remain below the limits set by both IFC noise standards and Turkish national legislation.

During the operation phase, the Project's main components, like solar panels and inverters, operate silently without combustion or moving parts. Unlike traditional power plants, solar power plants generate electricity

through sunlight conversion, resulting in no significant increase in background noise levels at nearby sensitive areas.

During the construction, operation and decommissioning phase, provisions of the “Regulation on Protection of Workers from Noise-Related Risks” and “Regulation on Control of Environmental Noise” will be applied in order to protect both health of employees and environment regarding to noise related impacts

Based on the modelling studies, the following measures will be implemented during construction phase:

- Providing personal protective equipment (e.g., earplugs or earmuffs) to workers when necessary.
- Using low-noise machinery and well-maintained equipment.
- Limiting the operation hours of noisy equipment, especially near communities.
- Repositioning noise sources away from sensitive areas.
- Applying speed limits and rerouting traffic to avoid populated areas.
- Installing mufflers and acoustic enclosures on noise-generating equipment.
- Avoiding idling of machinery and ensuring engine covers remain closed during operation.
- Replacing or repairing excessively noisy equipment.
- Training workers regarding to best practices, including switching off equipment in noise-reduction practices.
- Establishing a grievance mechanism to address complaints.
- Conducting regular maintenance of machinery to prevent elevated noise levels.
- Further information on mitigation measures is provided in the Noise and Vibration Management Plan developed for the construction phase

The following measures will be implemented during operation phase:

- Equipment will undergo regular maintenance to minimize noise emissions.
- If a noise-related complaint is received, immediate noise measurements will be conducted at the reported location.
- If noise levels exceed legal limits, monthly monitoring will be carried out at the affected receptors for at least one year.
- If exceedances persist, noise reduction measures such as soundproofing or installing noise barriers will be implemented.
- Further information on mitigation measures is provided in the Noise and Vibration Management Plan developed for the operation phase

3.3 Soil and SubSoil

In order to determine the existing soil contamination and quality of the Project Site, 3 soil samples were taken in December 2023 as per Turkish Soil Pollution Control and Sites Polluted by Point Source Contamination Regulation. As per analysis results, baseline soil quality of region shows absence of any known historical sources of contamination at the site.

During the construction phase, several project actions may impact soil and subsoil, including vegetation clearing, earthworks, material transportation, and temporary stockpiling. These activities can lead to the removal of soil, minor leakage of contaminants, discharge of wastewater and occupation of lands.

- Hazardous material and temporary waste storage areas are built with secondary containment, proper drainage, and fire/spill prevention measures.
- Waste storage complies with national regulations and GIIP; hazardous and non-hazardous wastes are stored separately and labeled.
- Waste will be regularly removed and declared to authorities; permits and insurance for hazardous waste are mandatory.
- Machinery will be maintained regularly; refueling/maintenance will occur on impervious surfaces with spill control.
- Spill kits, containment materials, and worker training will be provided; spill response plans are in place.
- Accredited labs will assess contamination in case of spills/leaks, and corrective actions will be planned.
- Septic tanks will be leakproof; no untreated wastewater will be discharged to land.
- Pollution prevention and waste management plans will be implemented to prevent soil contamination.

During operation phase, operation activities can lead to may impact soil and subsoil, minor leakage of contaminants, discharge of wastewater and occupation of lands.

During operation phase, same mitigation measures will be followed and management plans will be followed.

3.4 Geology, Geomorphology and Seismicity

The Bor District in southern Central Anatolia is surrounded by mountainous terrain and primarily features gently sloping plains composed of volcanic tuffs, basalt flows, and alluvial deposits. The Project Area itself has a mild slope (0–10%) and lacks high topography. Geologically, the region comprises five main rock groups, ranging from the oldest Niğde Metamorphic Complex to the youngest Quaternary sediments, each formed under varying volcanic, tectonic, and sedimentary conditions. The area has experienced significant tectonic activity, including multiple orogenic phases that formed complex fault systems. The Tuz Lake Fault Zone, an active strike-slip fault about 11 km from the site, and the Ecemiş Fault Zone, about 35 km away, are key seismic features in the region. The ground type at the site is classified as ZC (very dense soil or weathered rock), and the design earthquake ground motion level (DD-2) corresponds to a 10% probability of exceedance in 50 years (475-year return period). The calculated Peak Ground Acceleration (PGA) for this event is 0.127 g.

The primary impact is associated with alterations to the existing area's morphology resulting from earthworks, excavations, site preparation (including excavation, filling with appropriate material, and flattening), and the construction of foundations for structures. No blasting activities will take place for the Project.

The following mitigation measures will be followed:

- Compliance with the Türkiye Building Earthquake Regulation will be ensured before and during construction.
- Structural stability will be assessed under both normal and seismic loads based on geotechnical investigations.
- All project structures will be designed in accordance with Turkish and international standards, considering factors like slope, footing, and other design specifics.

- Geological, geotechnical, hydrological studies and flood risk assessments will be completed prior to construction.

Following the impact screening, it is anticipated that there will be no effects on the geological and geomorphological aspects during the operational phase

3.5 Hydrology and Surface Water

Hydrology is the scientific study of water movement, distribution, and management, encompassing surface water, groundwater, and related disciplines. The Project Area is located within the Konya Closed Basin, one of Türkiye's 25 major basins, covering about 7% of the country's land area. Surrounded by mountains and shaped by ancient riverbeds, the basin lacks natural drainage to the sea, giving it a closed character. The region primarily consists of alluvium and paleo-lake sediments at an elevation of 900–1050 meters. Although several dry riverbeds are present in and around the Project Area, there are no naturally flowing streams or active surface water bodies. The only notable water source nearby is the Akkaya Dam, situated approximately 20 km northeast of the site, which serves irrigation purposes but has limited downstream flow.

If not properly managed, temporary storage of waste or hazardous materials during construction may lead to surface or groundwater contamination, primarily through runoff near freshwater bodies. Potential sources include oil and fuel leaks, chemical spills, and inadequate containment of hazardous materials or wastewater. Such contamination can harm surface water quality and aquatic ecosystems and may quickly spread to groundwater. However, due to the distance of project facilities from water bodies, such incidents are expected to be rare and low in intensity. During construction, domestic wastewater will be generated in the mobilization area, stored in septic tanks, and transported to a treatment plant. No wastewater is expected from dust suppression activities, as the applied water is anticipated to evaporate.

The following mitigation measures will be followed during construction phase:

- Hazardous chemical and fuel leaks will be prevented through strict on-site safety protocols.
- Diesel/fuel storage areas will include paved surfaces, secondary containment, drainage systems, and collection ponds.
- Temporary waste storage will comply with national waste regulations.
- Safe fuelling guidelines will be established; fuelling in excavated areas is prohibited unless on impermeable surfaces.
- Hazardous materials will not be stored in excavated areas;
- A rain event management procedure will be implemented, including covering exposed surfaces and materials.
- Regular inspection and maintenance of all water management structures, especially after rain events.
- Spill response training and provision of spill kits for all workers, including subcontractors.
- Further information on mitigation measures is provided in the Pollution Prevention Plan and Water Management Plan developed for the construction phase

The impacts anticipated during the operation phase are expected to mirror those observed in the construction phase. Consequently, the activities in the operation phase will resemble construction-related activities

The following mitigation measures will be followed during construction phase:

- Continued implementation of safety measures to prevent chemical and fuel leaks.

- Waste storage areas will comply with waste management regulations.
- High-quality, leak-proof septic tanks will collect domestic wastewater, which will be removed via vacuum trucks and discharged into the local wastewater system.
- Further information on mitigation measures is provided in the Pollution Prevention Plan and Water Management Plan developed for the operation phase

3.6 Hydrogeology and Groundwater

Türkiye is divided into 25 water basins, with the Project located in the Konya Closed Basin. Although it holds only 2% of the country's surface water, it provides 17% of its groundwater. The basin features shallow and deep aquifers, with groundwater flowing from the Taurus Mountains to Salt Lake. In the Project Area, the main hydrogeological unit is the Gökbez Formation (limestone), with shallow water levels and a thickness of 50–150 meters.

Three groundwater wells near the Project Area were selected to assess baseline conditions, focusing on nearby settlements that may be impacted by the Project

According to the analysis results, no pollution source was detected in the area.

During construction, there is a potential risk of groundwater contamination from accidental releases of hazardous materials, machinery spills, and improper waste management, especially in shallow soil areas. However, no highly hazardous materials are expected to be used, and significant spills reaching groundwater are unlikely due to planned mitigation measures. Wastewater from personnel activities will be stored in septic tanks and regularly transported to treatment facilities, with no wastewater expected from dust suppression as water used will evaporate.

The following mitigation measures will be followed during construction phase

- Safe fuelling procedures will be established, and fuelling within excavated areas will be prohibited; drip trays will be used if equipment cannot be relocated.
- The storage of hazardous materials in excavated areas will be prohibited, and all handling will be conducted in accordance with EHS and IFC (2007) guidelines. Secondary containment systems (e.g., berms, dikes) will be implemented to prevent leaks.
- An Emergency Response Plan (ERP) was developed to address potential hazardous material spills during construction.
- The release of untreated wastewater or residues into groundwater or surface water will be prevented.
- Wastewater discharges from site activities such as excavation and equipment washing will be regulated and controlled.
- Contaminated water from accidental leaks will be contained and prevented from mixing with water bodies or polluting the soil.
- Vehicle and equipment maintenance will be conducted in designated areas with impermeable surfaces and appropriate containment.
- Spill kits will be provided and maintained on-site, and instructions for their use will be made available.
- All workers, including subcontractors, will be trained in spill response and proper use of containment and clean-up materials.

- Adequate tanks, paved surfaces, spill containment materials, and secondary containment systems will be supplied and maintained to prevent soil and groundwater contamination.
- Further information on mitigation measures is provided in the Pollution Prevention Plan developed for the construction phase

Impacts on this component during operation phase will be the same as during the construction phase. The above measures are also applicable during the operation phase and are further detailed in the Pollution Prevention Plan.

3.7 Traffic

Traffic activities related to the Project may increase traffic load and emissions, potentially affecting nearby communities. Access to the Project Area is primarily via the D330 Niğde–Malatya Highway through Emen Neighborhood, also used by residents of Emen, Seslikaya, and Badak, as well as nearby SPP projects. The road is already asphalt-paved and double-laned, so no upgrades are planned. Existing safety measures like speed bumps and convex mirrors have been installed to reduce traffic-related risks in Emen.

During the site preparation and construction phases, existing village roads—especially Emen Village Road—will be used for transporting machinery, materials, and personnel, leading to increased and modified traffic. Although vehicle data for these roads is unavailable, potential impacts include higher environmental noise levels, traffic disruptions, and road damage due to heavy vehicle use. Local communities may express concerns over speeding and safety, as the shared use of village roads by construction vehicles increases the risk of accidents involving pedestrians and residents. Additionally, the rise in road traffic may lead to unintended wildlife casualties along these routes.

The following mitigation measures will be followed during construction phase :

- Adequate lighting will be installed at the project site for visibility.
- Vehicles will be restricted to designated site roads; off-road driving only in emergencies.
- Pedestrian and vehicle routes will be separated where possible.
- Speed limits will be enforced.
- Seatbelts will be mandatory in vehicles and machinery.
- Entry of vehicles/equipment/materials into work areas will require security approval.
- Only licensed and medically fit operators will be allowed to drive vehicles.
- Vehicle repairs and maintenance will be carried out by authorized services.
- Transport activities will be scheduled outside of rush hours to reduce local congestion.
- Roads will be upgraded as needed for heavy vehicles, and repairs will be made if damaged.
- Reversing procedures will be implemented with sensors, reversing aids, and trained flagmen.
- Designated parking areas will be clearly marked; reverse parking will be used for emergencies.
- Procedures addressing driver fatigue and distraction will be implemented.
- Local communities will be informed about traffic controls, closures, and the grievance mechanism.

- Collaboration with local authorities will focus on improving signage and road safety near sensitive areas (e.g., where children are present).
- Traffic signs, signals, and barriers (e.g., on Emen Village Road) have been installed and will be regularly maintained.
- Further information on mitigation measures is provided in the Traffic Management Plan developed for the construction phase

During the operation phase, increased or modified traffic from personnel transport (around 20 staff) may impact local roads and highways. Key concerns include potential hazards from high vehicle speeds, minor local traffic congestion, and occupational safety risks related to vehicle-worker accidents. The above measures are also applicable during the operation phase and are further detailed in the Traffic Management Plan.

3.8 Waste Management

During the construction phase, the disposal of waste derived from construction activities is notably high compared to other Project phases. Improper disposal of construction waste can lead to environmental pollution, contaminating soil, water sources, and air quality, thus risking community health and the ecosystem. Moreover, construction waste creates physical hazards, increasing the likelihood of accidents and injuries for Project employees and local communities. To mitigate these impacts, proper waste management practices are crucial during the construction phase.

During operation phase, there may be the possibility of waste disposal, though at a significantly reduced level compared to the construction phase. This possibility arises from the nature of operational activities, which typically involve fewer intensive processes and resource utilization. Hence, while waste disposal remains a consideration, the extent of waste generated during operation is expected to be considerably lower due to the absence of large-scale construction activities that typically generate significant waste.

Topsoil removal will be applied under the area of the permanent building foundations. Soil removal will occur during various activities, including earthworks to prepare the surface for construction, trenching for cable laying, and excavations for building foundations. It is anticipated that no excavation waste will be generated, as the material excavated will be utilized for filling purposes.

The following measures, detailed in the Pollution Prevention Plan and Waste Management Plan, are recommended for waste management:

- Official waste declarations for all generated waste will be submitted to the online system of the Ministry of Environment, Urbanization, and Climate Change annually.
- Storage of waste outside designated areas will be prohibited and wastes from interim storage areas will be transferred to temporary storage areas.
- Temporary waste storage areas will be built in accordance with the stipulations outlined in the "Regulation on Regular Storage of Wastes," published in the Official Gazette No: 27533, dated 26/03/2010 (Amended: OG-24/06/2022-31876), and the "Regulation on Waste Management," published in the Official Gazette, dated 02/04/2015, No: 29314 (Amended: OG-23/03/2017-30016).
- Appropriate waste disposal facilities, such as licensed landfills or recycling centres, will be utilized for the safe and environmentally responsible disposal of waste materials.
- Project personnel will receive training on proper waste management practices to minimize the generation of waste and maximize recycling and reuse opportunities.

- Measures will be implemented to prevent littering and illegal dumping of waste materials, including the installation of signage and barriers to deter unauthorized disposal.
- Regular monitoring and inspection of waste disposal practices will be conducted to ensure compliance with applicable laws and regulations.
- Regular audits and reviews of waste management practices will be conducted to identify areas for improvement and implement corrective actions, as necessary.

3.9 Biodiversity

The baseline information collected and processed as part of the ESA Report included the assessment and evaluation of biodiversity within the Project footprint (the area covered by photovoltaic (PV) panels, permanent facilities, and temporary facilities). Biodiversity impacts were assessed taking into account several biological components, such as flora, fauna, natural and modified habitats, and legally and internationally protected areas. All these components are expected to be differently impacted by the Project activities. During the operation phase, temporary facilities were excluded from this assessment, as they will be rehabilitated after construction.

During construction phase, construction activities will result in the disruption of vegetation, causing direct habitat loss, particularly in areas designated for the development of permanent and temporary facilities. Emissions of noise, vibrations, dust, and particulate matter from machinery and vehicle movement are additional impacts that may disturb habitat and degrade air quality. Increased and modified road traffic during construction can further contribute to habitat fragmentation and increase the risk of wildlife collisions. Additionally, the removal of natural vegetation cover and disturbance of soil could encourage the spread of alien (non-native) and/or invasive species, which are inadvertently introduced by vehicles such as cars, trucks, and other heavy machinery used in construction.

During the operation phase, permanent infrastructure such as inverter stations, substations, administrative buildings, and internal roads will reduce natural habitat availability, leading to both direct and indirect impacts on local flora and fauna. While solar panels themselves generate minimal noise, associated equipment like tracking motors, inverters, high-voltage transformers, and energy storage systems may produce operational noise. Additionally, lighting integrated into thermal cameras may attract nocturnal wildlife, increasing the risk of collisions and encounters with workers. Ongoing maintenance activities may facilitate the introduction and spread of invasive alien plant species, particularly those that arrived during construction. The altered environmental conditions, including new shaded areas created by the panels, may further support the establishment and expansion of these invasive species.

Some of the mitigation measures that should be implemented throughout the construction phase of the Project in accordance with the impact mitigation hierarchy are as follows:

- Minimizing disturbance to natural vegetation by clearly marking boundaries of temporary and permanent facilities to prevent unintended expansion of the construction footprint.
- Conducting pre-construction biological surveys to identify and relocate fauna, particularly low-mobility species (e.g., reptiles and small mammals), from areas designated for development.
- Relocating reptiles to suitable habitats at least 50 meters away from construction areas; inspect for hibernation burrows during winter works and either move reptiles to undisturbed areas or place them in care until spring.
- Restricting vehicle movement to the Project Site and existing access roads; strictly prohibit off-road driving to avoid unnecessary vegetation damage.

- Minimizing night works between the hours of 8 pm and 6 am in order to minimize the negative effects on nocturnal wildlife species.
- Minimizing dust from material handling using covers or equipment like water suppression, bag houses, or cyclone systems.
- During rehabilitation and restoration, non-native and invasive plant species will be avoided. If invasive species are detected, an appropriate eradication plan will be developed and implemented.
- Temporary cleared areas resulting from construction will be expeditiously restored, with the objective of establishing a stable vegetative cover to mitigate erosion, dust accumulation, and the proliferation of invasive alien species.

Some of the mitigation measures that should be implemented throughout the operation phase of the Project in accordance with the impact mitigation hierarchy are as follows:

- Permanent infrastructure will be fenced, but fences will be modified to reduce barrier effects by including gaps (10 cm high, 1 m wide) every 100 meters along the base.
- Non-reflective coating will be applied to solar panels to minimize glare.
- Vehicle movement will be restricted to existing roads, with off-road driving prohibited to protect natural vegetation.
- For noise emission, no further steps of minimization are considered essential in addition to those already provided in Section 3.2.
- The number of light sources will be kept to a minimum.
- Low-pressure sodium lamps (SOX) or warm-colored LEDs (around 3000°K) will be used for exterior and security lighting, with LEDs preferred for their directional focus.
- Motion-sensor lights will be installed, and all lights will be directed downward to reduce light pollution.
- Mercury (MBF) and high-pressure sodium (SON) lamps, which attract insects and affect wildlife such as bats, will not be used.
- Non-native flora species, especially those classified as invasive alien species, will be avoided during rehabilitation and restoration.
- If invasive species are detected, a suitable eradication programme will be developed and implemented.
- The areas devoid of vegetation beneath the PV panels will be as soon as possible recovered, with the aim of reestablishing the original natural ecosystem and potentially augmenting the richness and diversity of plant species.

3.9.1 Critical Habitat Assessment

A screening was performed to determine if there are any Critical Habitats (CHs) inside the LSA, based on the information that is currently available. This screening was completed in accordance with IFC Performance Standard 6 (PS6).

According to Criterion 1, species classified as Endangered (EN) or Critically Endangered (CR) by the global IUCN criteria were taken into account. In the absence of a global assessment by the International Union for Conservation of Nature (IUCN), such as "Not Evaluated" (NE) or "Data Deficient" (DD), the status of the species was determined by considering the threat categories outlined in the local assessments, such as the Red Data

Book for Turkish Plants. These assessments were re-evaluated by the local expert, Prof. Hayri Duman, using the most up-to-date information on the species' distribution and the IUCN 2001 criteria. **No species triggering, or potentially triggering CH were identified based on this criterion.**

According to Criterion 2, the presence of endemic or Restricted Range species (Extend of Occurrence (EOO) less than 50,000 km^2 for terrestrial vertebrates and plants) was considered.

According to Criterion 2, only one mammalian species was identified as potentially triggering CH.

- Anatolian Vole (*Microtus anatolicus*, DD, Restricted Range)

To evaluate the cruciality of the LSA for this species, the following threshold was applied (Guidance Note 6, GN75, IFC 2019):

a) areas that regularly hold ≥ 10% of the global population size AND ≥ 10 reproductive units of a species.

Given that the Ecologically Appropriate Area of Analysis (EAAA) falls below 10% of the calculated EOO, the species does not meet the criteria to initiate Critical Habitat (CH) designation according to Criterion 2. Consequently, **no species potentially triggering CH based on this criterion were identified.**

Criteria 3 threshold assessments were conducted on all migratory and congregatory bird species that triggered the Ereli Plain IBA: “areas known to sustain, on a cyclical or otherwise regular basis, ≥ 1 percent of the global population of a migratory or congregator species at any point of the species’ lifecycle”.

Following the screening process, three bird species were determined to have the potential to trigger CH based on Criterion 3 in the EAAA. The species mentioned are the Pigmy Cormorant (*Microcarbo pygmaeus*), the White-headed Duck (*Oxyura leucocephala*), and the Ruddy Shelduck (*Tadorna ferruginea*).

It is crucial to emphasise that all of these species are aquatic species, and their occurrence as breeding, wintering, and/or passing species is closely linked to the existence of open water habitats. These habitats are absent in the LSA or its surrounding areas. However, they are only found in the south-western part of the Ereğli Plain IBA, approximately 60 km away from the Project LSA. These habitats are specifically located around the Argol Lake. Additionally, when the Project Area is assessed in terms of bird migration routes, it has been determined that neither primary nor secondary migration routes pass over it. Therefore, it has been concluded that bird flights originating from aquatic areas 60 km away occur in a south-westerly direction rather than over the Project Area.

Therefore, it can be concluded that **no Critical Habitat is expected to be present in the LSA according to this criterion**.

Criterion 4 focused on ecosystems facing the imminent risk of substantial reduction in size or decline in quality, characterized by limited spatial coverage, and/or hosting significant concentrations of species restricted to a specific biome. The implementation of Criterion 4, as outlined in GN79 and IFC 2019, involves utilizing the "Red List of Ecosystems (RLE)," especially in cases where official IUCN assessments have been carried out. It is important to note, however, that there has been no evaluation conducted in Türkiye, as evidenced by the absence of assessments in the IUCN RLE Database[1]. Hence, the current unavailability of assessments in Türkiye renders the use of the "Red List of Ecosystems (RLE)" impractical. In lieu of this, the "European Red List of Habitats" was employed to pinpoint threatened ecosystems.

[1] http://assessments.iucnrle.org/

Within the LSA, only one natural habitat type was recognized, namely the EUNIS habitat "E6.2 – Continental inland salt steppe." According to the European Red List of Habitats, this habitat has been categorized as Vulnerable (VU)[15].

No habitats classified as Endangered (EN) or Critically Endangered (CR) were identified. Therefore, **no Critical Habitat is expected to be present in the LSA according to this criterion.**

Criterion 5 encompasses the examination of areas with landscape features potentially linked to evolutionary processes or notably distinct species populations, raising concerns for their special conservation. However, the LSA does not exhibit landscape features that are known to influence evolutionary processes, leading to distinctive regional configurations of species and ecological characteristics. Notably, there are no species or subpopulations within the area distinguished by a specific level of isolation, spatial heterogeneity, or an abundance of environmental gradients or edaphic interfaces. Additionally, the LSA is not acknowledged for its significance in climate change adaptation or as a biological corridor. Consequently, these considerations indicate that the study area does not support any pivotal evolutionary processes.

Therefore, **no Critical Habitat is expected to be present in the LSA according to this criterion.**

3.10 Socio-Economic Impacts

Changes in the socio-economic environment and communities can arise from a range of positive and negative environmental and social impacts caused by the Project's impact factors. As such, it is essential to identify and implement effective mitigation measures to reduce adverse effects and enhance the beneficial outcomes of the Project.

Population and demography

During the construction phase, 100 workers will be employed, potentially causing increased traffic, pressure on local infrastructure, and shifts in community social dynamics. However, hiring local people for the construction phase will significantly reduce these potential impacts, as the influx of workers from outside the area will be minimized. Hiring individuals from the local community can ease the burden on local infrastructure and services, reducing traffic related impacts and minimizing changes in social dynamics within the community.

During the operation phase, only 20 workers will be needed, with limited interaction with local communities as they will remain within the Project Site. The decommissioning phase mainly involves workers departure and is not expected to significantly impact the local population.

To mitigate the negative impacts of population influx on local communities especially during the construction phase, the following measures will be implemented:

- Cultural sensitivity training will be provided for both incoming workers and local residents to foster mutual understanding, respect, and cooperation, thereby minimizing the potential for social tensions and conflicts.
- An Employee Code of Conduct will be developed and enforced to ensure proper behaviour and respect for local customs.
- Priority will be given to the recruitment of local residents for employment opportunities generated by the Project.
- When necessary, protocols for managing offsite accommodations will be implemented to safeguard workers' well-being and safety.
- Measures will be implemented to mitigate environmental impacts associated with increased population, such as waste management programs, and pollution control measures, to preserve the natural ecosystem and quality of life for residents.

- Transparent grievance mechanisms will be established to allow residents to voice their concerns and complaints regarding the Project impacts, ensuring timely resolution and accountability.

By implementing these mitigation measures in a comprehensive and coordinated manner, the negative impacts of population influx will be effectively addressed.

Infrastructure, Social Services and Ecosystem Usage

During the construction phase, the Project is expected to place significant pressure on local infrastructure, social services, and ecosystem usage. Activities such as excavation, transportation of materials, and infrastructure installation may disrupt public utilities, roads, and buildings. The influx of workers can strain local services, including healthcare, education, and transportation, potentially reducing their availability and quality. Increased traffic may lead to road congestion, longer commute times, and safety concerns. Vulnerable groups may face greater difficulty accessing essential services due to heightened demand. Additionally, changes in land use, such as the occupation of pasturelands, could impact local livelihoods and ecosystem services. Emergency response services may also be affected, both by increased demand and reduced access caused by construction disruptions. Furthermore, new health and safety risks, including exposure to hazardous materials and higher accident rates, could place additional burdens on emergency and health services.

Given that the road of Emen Village will serve as a route for construction and employee vehicles going to and from the Project site, the community anticipates negative impacts on the road of Emen village. Mitigation measures will be implemented accordingly.

During the operation phase of the Project, although construction-related traffic will decrease, some operational activities may still contribute to occasional traffic congestion and transportation challenges. Additionally, the continued operation of the Project may have ongoing impacts on local ecosystems and land use.

By implementing the following measures throughout all Project phases, it is possible to reduce the potential negative impacts resulting from the Project.

- Develop and implement an Emergency Preparedness and Response Plan for effective incident management.
- Prepare and enforce a Traffic Management Plan to reduce congestion and protect transportation infrastructure.
- Repair the Emen village road in coordination with the KES Adi Ortaklığı.
- Collaborate with other projects to manage traffic and install speed-reduction measures (e.g., speed bumps) in villages.
- Engage local authorities before construction to plan for energy, transportation, and water needs.
- Provide health services within worker accommodations to reduce pressure on local healthcare facilities.
- Establish an on-site first aid station and medical unit for immediate health support to workers.
- Ensure prompt repair of damaged local infrastructure (e.g., telecom, electricity, roads, water sources).
- Implement a Project-specific Grievance Mechanism to address and resolve community concerns.
- Involve local authorities and communities in transportation planning for tailored solutions.
- Supply bottled drinking water and use water tankers for potable water in construction areas.
- Conduct continuous monitoring of water use and quality during construction to meet regulations.

- Perform regular maintenance and inspection of water infrastructure to prevent issues affecting water supply.

Land Use and Land-based Livelihoods

While the Project's use of pastureland does reduce the overall grazing area, this impact must be understood within the broader context of longstanding challenges in the region such as recurring droughts and the gradual decline in pasture quality. These factors have already significantly influenced the availability and usability of grazing land and shaped a big role in shifting the existing livestock breeding practices.

To ensure that the Project impacts on pastureland use, land use and livelihoods are minimized and avoided, some mitigation measures that Smart will implement throughout the entire project life cycle are as follows:

- Smart has been in contact with vulnerable households in the villages and will continue to maintain communication while providing ongoing support, especially to the household identified in Badak village.
- Feed support will be provided to 10 households from Seslikaya who utilize pasturelands for sheep breeding and to 7 households who perform cattle breeding in barns, separately and on a regular basis.
- Degraded pastures outside the Project footprint can be rehabilitated through reseeding, controlled grazing practices, and water management strategies in collaboration with local authorities and agricultural experts.
- Assistance for efficient water use, such as the installation of water troughs and support for irrigation systems, can be provided to mitigate the effects of drought on farmers and livestock breeders.
- Households interested in transitioning away from livestock breeding can be supported by offering tailored counselling and training for alternative careers in different industries.
- The following additional monitoring measures will be implemented to evaluate the impacts of the Project on land use and livelihoods and to assess the effectiveness of the implemented mitigation measures:
- Periodic surveys will be conducted to assess the perceptions of affected communities regarding changes in their livelihoods and land use specifically due to the Project.
- The condition and rehabilitation progress of grazing lands outside the Project area will be monitored, including reseeding and pasture improvement efforts.
- Changes in livestock numbers and productivity among affected households will be tracked, along with shifts in grazing practices.
- The outcomes of community-led livelihood restoration projects will be documented, including participation levels and income generation.
- Data on participation and outcomes of alternative livelihood training programs will be collected and their alignment with community needs will be evaluated.
- The implementation and success of water resources management initiatives, such as water troughs or irrigation system improvements, will be tracked to address drought impacts.
- Environmental conditions in the Project Area will be monitored to identify any indirect effects on pasture quality or availability.

For the areas along the ETL route, a consultation process has been carried out with the landowner of one private parcel. During the construction phase, compensation for any crops affected by the installation of the poles was provided to the landowner, ensuring fair reimbursement for the loss incurred. Following this, the remaining portions of the land continue to be used by the owner without any restrictions or disruption caused by the Project.

This approach allows the landowner to maintain their agricultural activities on the land that was not directly impacted by the installation of the poles.

For the treasury lands along the ETL route, the Project has also taken steps to minimize its impact on land use. The land surrounding the poles on these parcels remains available for use by local communities. Specifically, of the total 40 poles along the ETL route, 10 poles are located on treasury lands. Despite these poles being installed in the area, the use of the surrounding land is not restricted.

The following monitoring measures will be implemented to assess the impacts of the Project on land use in the ETL areas, including private and treasury lands:

- Land use in the private parcel and treasury lands will be monitored to ensure that the areas surrounding the poles can be used and that the users are not facing any restrictions on their activities.
- Access to land surrounding the poles will be verified to ensure that the remaining areas are accessible and usable for their intended purposes.
- Periodic consultations will be conducted by the Project CLOs with the landowners of private lands and relevant authorities including mukhtars to address any concerns regarding land use.
- Grievance mechanisms will be followed to document any complaints or concerns raised regarding the use of land, crop losses, or other issues related to the Project's impact on land use.
- Restoration of land where poles are installed will be tracked to ensure that any construction-related damage is repaired, and the land is restored to a condition suitable for use.
- Ongoing engagement with local authorities and stakeholders will be maintained to ensure that treasury lands are managed in accordance with the Project's commitments, and that there are no adverse impacts on community use or access.

Economy and Employment

During the construction phase, priority will be given to employing 100 personnel from the nearest settlements to maximize local socioeconomic benefits. Hence, the Project will strengthen local employment, prioritizing hiring individuals from the settlements within the AoI.

In addition to creating employment, the Project will boost the local economy by purchasing a wide range of goods and services, including fuel, transportation, food, energy, office supplies, and security. These activities will support regional economic growth. At the village level, the Project can further contribute by hiring local resources, such as tractors, and sourcing supplies from local markets.

During operation phase, considering the possibility of providing uninterrupted energy with energy transmission, the Project is expected to have substantial contribution to national economy of Türkiye.

During construction phase, to enhance the positive impacts on employment, some of the actions will be undertaken as follows:

- Assess local workforce skills to identify actions for enhancing employment opportunities.
- Prioritize hiring from settlements directly impacted by the Project; if needed, recruit regionally or nationally.
- Give priority to individuals previously engaged in grazing, unemployed, or living in poverty.
- Establish a formal, transparent recruitment process ensuring equal opportunities.
- Inform village Mukhtars and residents about job openings through announcements and banners.

- Implement scholarship programs and vocational training to support education and skill development.
- Identify and prioritize local suppliers for goods and services before procurement.
- Ensure equal procurement opportunities for local small businesses via a fair Supplier Management Plan.

Mitigation measures to address the anticipated negative impact on economy and employment during the operation and the decommissioning phase, and the subsequent retrenchment of workers from the construction phase, will include:

- Provide skills development and career advancement opportunities for retrenched workers to help them transition into new employment.
- Support initiatives to diversify the local economy, such as promoting small businesses, entrepreneurship, and tourism.
- Explore infrastructure investment or development projects to boost economic growth and create post-decommissioning job opportunities.
- Establish assistance programs offering financial and essential support to retrenched workers during their transition.
- Engage with local communities, labor unions, and stakeholders to develop additional support measures for affected workers.
- Continuously monitor and evaluate socio-economic impacts during operation and decommissioning to adapt mitigation strategies.
- Implement the Worker Grievance Mechanism developed during the construction phase to address concerns.

Labour and Working Conditions

During construction phase, Project may pose several labor-related risks, including exploitation such as forced labor, child labor, and unfair wages or working hours. Workers could also face discrimination, harassment, or unfair treatment based on gender, race, ethnicity, or nationality. Additionally, hazardous working conditions, inadequate safety protocols, and insufficient protective equipment increase the risk of accidents, injuries, or fatalities. The lack of proper training or skill development may lead to a poorly qualified workforce, further elevating safety risks. Moreover, workers may be exposed to health hazards such as dust, chemicals, noise pollution, and poor air quality.

During the operation phase, similar impact factors from the construction phase are expected but with reduced intensity due to a smaller workforce. A collective dismissal of construction workers will occur as the Project transitions to operation, although limited-duration contracts and prior notice will help manage expectations. Employment opportunities will decline significantly, with only 20 workers planned for the operation phase, potentially leading to negative impacts on those affected by the downsizing.

No new impacts are expected during the decommissioning phase of the Project, apart from those already identified during the construction phase.

Mitigation measures have been identified for potential impacts that may arise during all phases of the Project, some of which are as follows:

- Provide clear information on wages, working hours, overtime, and benefits (e.g., sick, maternity/paternity, holiday leave).

- Ensure verbal explanations of contracts so workers understand their rights before signing.
- Guarantee fair, timely payment of wages and benefits, including overtime.
- Align wages, benefits, and conditions with industry standards in Niğde and the relevant sector.
- Provide adequate rest periods and breaks to promote worker well-being.
- Allow workers to join trade unions and participate in collective bargaining.
- Implement a grievance mechanism, including options for anonymous submissions and GBVH-related concerns.
- Ensure transparent, non-discriminatory recruitment processes.
- Prohibit child and forced labor, in line with national and international standards.
- Enforce occupational health and safety standards and promptly address hazards.
- Provide first aid, medical services, and safety provisions for hazards.
- Ensure worker accommodations are clean, safe, and include sanitary, laundry, and cooking facilities.
- Ensure all water used meets Turkish standards for human consumption.
- Guarantee fair, non-discriminatory treatment of third-party workers.

Additional mitigation measures are defined in the Human Resources Policy, Human Resources Management Plan, Labour Management Plan, Occupational Health and Safety Plan, Offsite Accommodation Management Plan, Community Health and Safety Plan, Security Management Plan.

Community Health and Safety

During the construction phase of the Project, several potential risks to community health and safety have been identified. A major concern is increased traffic, particularly in Emen Village, due to the frequent movement of trucks transporting machinery, equipment, and personnel. Additionally, construction activities will generate dust and noise, potentially affecting air quality and causing respiratory discomfort, though noise levels are not expected to significantly exceed legal limits. The influx of approximately 100 workers may raise the risk of communicable diseases, especially in villages lacking health facilities, and poor waste management could further exacerbate these risks. Improper disposal of construction waste may also lead to environmental pollution and physical hazards for both workers and local communities. Lastly, the presence of security personnel on-site must be carefully managed to avoid any abusive behavior or community tensions that could harm social cohesion. Effective traffic control, health safeguards, waste management, and responsible security practices are essential to mitigate these impacts.

During the operation phase, Emen Village residents remain concerned about increased traffic and related safety risks due to ongoing use of local roads by Project personnel and vehicles. Although waste generation may still occur, it is expected to be minimal compared to the construction phase due to less intensive activities. Security risks are also anticipated to decrease significantly during operations, as the environment becomes more stable and controlled, with existing measures like fencing and surveillance continuing to mitigate potential threats.

During decommissioning phase, abandoned infrastructure or equipment left behind after decommissioning may present physical hazards, such as sharp edges, unstable structures, or hazardous materials, increasing the risk of accidents and injuries to community members.

The following measures, detailed in the Traffic Management Plan, Security Management Plan and Community Health and Safety Management Plan, are recommended for community health and safety:

- Traffic during peak hours will be managed by scheduling transport during quieter periods.
- Heavy vehicle road use will be permitted and maintained, with timely repairs and adequate site lighting.
- Speed limits will be enforced to ensure community and employee safety.
- Cooperation with other projects will help implement regional traffic strategies and install physical speed control measures (e.g., speed bumps).
- Vulnerable areas (e.g., schools) will be considered in traffic planning; driving training will be provided to all personnel.
- Vehicles will follow designated routes; off-road driving only in emergencies. Safe reversing procedures will be implemented.
- Designated parking areas and emergency reverse parking will be marked; pedestrian and heavy vehicle routes will be separated.
- Traffic signs, signals, and barriers will be installed to prevent accidents.
- All drivers must be licensed and medically cleared; vehicle maintenance will be conducted by certified bodies.
- Adequate hygiene facilities, such as handwashing stations and sanitation equipment, will be provided throughout the Project site.
- Regular cleaning protocols will be applied across the Project site to maintain hygiene standards.
- Shared facilities and common areas will be regularly disinfected to minimize the spread of pathogens.
- Workers will be encouraged to use social distancing measures and personal protective equipment (PPE) to reduce the risk of transmission.
- Project personnel will receive training on proper waste management practices to minimize the generation of waste and maximize recycling and reuse opportunities.
- Regular audits and reviews of waste management practices will be conducted to identify areas for improvement and implement corrective actions, as necessary.
- Dust control measures such as using dust suppression systems on construction machinery and covering stockpiles of materials will be implemented.
- Transportation routes will be regularly watered using water sprinklers to suppress dust.
- Collaboration with local environmental authorities will be established to develop and implement best practices for dust control and air quality management.
- Noise-reducing equipment and machinery will be utilized where possible.
- Sound barriers or enclosures will be installed around noisy operations.
- Noisy activities will be scheduled during off-peak hours to minimize disturbance to nearest settlements.
- Employ local community members as security personnel when possible to foster positive community relations.

- Establish transparent communication and consultation channels for stakeholders to express concerns about security.
- Prevent unauthorized entry using appropriate security tools and signage.
- Clearly mark hazardous areas within the Project site.
- Develop and implement a Decommissioning Plan to ensure safe removal, disposal, or repurposing of infrastructure with minimal community impact.

Cultural Heritage

The construction of the Project, particularly soil removal, can potentially affect cultural heritage. Soil removal will occur during construction activities such as earthworks (excavation and filling) to prepare the construction surface, trenching for cable installation, and excavation for building foundations (e.g., administration building). Due to the absence of visible cultural heritage assets on the surface, only chance finding may occur during excavation and trenching.

Considering the nature of the Project no impacts are expected on the cultural heritage component during the operation phase.

No impacts are expected on the cultural heritage component during decommissioning phase rather than the impact factors defined for the construction phase.

According to the information acquired from site visits during ESIA studies, interviews with mukhtars, household surveys and face-to-face meetings with Smart, intangible forms of cultural heritage does not present in the Project area.

Additionally, as per EIA Report of ETL Project, archaeological surveys were conducted by the Konya Regional Board experts for the section of the ETL that lies within the Konya Regional Board's jurisdiction, including confirmation that no potential adverse impacts are expected / occurred.

Therefore, according to the cultural heritage assessments carried out by the Project, the Project is not expected have an impact on any critical cultural heritage.

The following mitigation measures shall be implemented to mitigate the effects of the impact factors.

- A Chance Find Procedure will be prepared in compliance with the project organization, and it will be implemented that is necessary for the management of the "chance finds". All construction workers should receive a training on project requirements, protection of cultural and archaeological heritage, laws and legislations related with the archaeological and cultural heritage and chance find procedure.
- When any chance find occurs during the construction activities, the further steps should be taken in accordance with the Chance Find Procedure and the relevant bodies, and the Directorate of the Museum will be notified immediately. Relevant instructions about the sensitivity of the site will be shared with all construction team a few days before the construction activities, in case of any find or information associated with archaeological potential of the site is already discovered. Chance finding should not be moved, removed or further disturbed. The proper equipment will be identified and used with the consideration of the directorate of the museum and the construction teams.
- All construction personnel working during land preparation phase of the construction phase should receive training on project requirements, protection of cultural and archaeological heritage, laws and regulations regarding archaeological and cultural heritage and Chance Find Procedure.

Indigenous People

IFC PS-7 on Indigenous Peoples is not applicable in Türkiye, as there are no recognized Indigenous peoples under international or national frameworks within the country. Indigenous peoples, as defined by the IFC and other international bodies such as the United Nations, are groups with distinct cultural practices, languages, and traditions that are historically tied to specific territories and have a collective attachment to their ancestral lands and resources. Consequently, there is no land, cultural heritage, or settlements under the collective customary use of Indigenous peoples that would be affected by the Project and PS-7 protections do not apply in this context.

Visual Aesthetics

During the construction phase, various activities will lead to temporary environmental impacts. The use of construction machinery will generate dust emissions, while both temporary and permanent structures will be built on-site. Light emissions are also expected in and around the Project Area. Additionally, the presence of construction vehicles, equipment, and dust will result in visual impacts, affecting the views and general air clarity in the immediate vicinity of the site.

During operation phase of the Project, with the use of anti-reflection (AR) coatings, no glint-glare impact is foreseen. Decommissioning of these structural and infrastructural components could have a positive impact if the natural state of the land is recovered.

Some of the mitigation measures for the Project are as presented below:

- The areas used as construction area will be returned to their original use.
- Dust suppression will be implemented during construction phase.
- The number of lights will be minimized to decrease light spillage from the site in line with health and safety standards. Also, all lights should be shielded and pointed to the ground to avoid direct light effects on the resettlements around the Project Area.

3.11 Human Rights

The Human Rights Impact Assessment (HRIA) study for the Project was prepared by WSP Türkiye and conducted to support requirements and Good Industry Practices (GIP) in line with the specifications of Equator Principles IV (dated July 2020) and IFC Performance Standards. As part of the ESIA studies, a Human Rights Impact Assessment for the Project was carried out to identify measures for mitigating potential impacts on local communities and both direct and indirect workers. This assessment was undertaken in accordance with international standards, which mandate the inclusion of evaluations of potential adverse human rights impacts within the ESIA or other assessments.

The Human Rights impacts of the Project may be various, and they vary according to the context, type, and scale of the Project. The content shall be tailored to the local conditions and the nature and characteristics of the Project and shall address potential risks and impacts in at least the following areas:

- **Civil and Political Rights**
  - Freedom of thought and opinion
  - Right to information
- **Labor Rights**
  - Working conditions and working hours

  - Wages
  - Non-discrimination
  - Right to form and join trade unions and the right to strike
  - Right not to be subjected to slavery, servitude or forced labour
  - Right to abstain from work
  - Right of protection for the children
  - Right to social security, including social insurance
  - Labour standards in supply chains
  - Migrant workers
  - Women employment
  - Grievance Mechanism
- **Social rights**
  - Right to an adequate standard of living and housing
  - Right to health, food, water, and sanitation
  - Right to take part in cultural life
- **Vulnerability**
  - The rights of minorities
- **Community health and safety**
  - Environmental issues
  - Security issues

The human rights impacts of the Project are generally minimal regarding the risks to workers and stakeholders, and they can be further reduced with the application of additional mitigation measures

By implementing the following mitigation and monitoring measures, Smart aims to continuously improve its approach to human rights management and maintain transparency and accountability in its operations:

- In accordance with IFC PS-2, risks related to social and labour issues, including human rights violations, forced labour, child labour, unsafe working conditions, and discrimination, will be eliminated.
- Smart will source necessary products from companies/countries that comply with international labour standards and eliminate human rights violations at the highest level.
- Smart will conduct thorough due diligence on suppliers to ensure compliance with international labour standards and human rights principles.
- Suppliers/service providers will be evaluated on their Health, Safety, Environment (HSE), Quality, System, Legal, and Compliance performance.

- Regular audits and/or assessments will be conducted to identify and address any potential human rights violations within the supply chain.
- Training programs will be initiated to related parties to raise awareness of human rights issues and promote adherence to ethical labour practices.
- A Project-specific grievance mechanism will be implemented for both Project workers and local communities to address concerns.
- Tools for stakeholders to raise grievances and requests will be provided in accessible locations.
- Stakeholders will be encouraged to report any concerns or suspicions of human rights abuses, and appropriate actions will be taken to address them in a timely manner.
- Any grievances related to human rights violations will be promptly investigated and addressed through the Project-specific grievance mechanism.
- A target/term target for grievance closing percentage will be determined and monitored.

3.12 Cumulative Impacts

Within the scope of the ESIA, cumulative impacts refer to the combined effects resulting from the simultaneous presence of impact factors generated by both the Project and other development initiatives. These cumulative impacts have been evaluated by considering the spatial and temporal overlap between the Project and other projects or facilities located within the AoI of the Niğde G4-Bor-1 Solar Power Plant Project.

The facilities expected to contribute to any cumulative effects on the physical and biological environment within the Project's AoI are limited to those listed below (see Figure 5).

- G4-BOR-2 Solar Power Plant Project (Operation phase)
- G4-BOR-3 Solar Power Plant Project (Operation phase)
- G4-BOR-1 SPP Electricity Transmission Line (Operation phase)
- G4-BOR-2 SPP Electricity Transmission Line (Operation phase)
- G4-BOR-3 SPP Electricity Transmission Line (Operation phase)

Bor YEKA SPP (Local EIA process still on-going – timeframe for development is unknown)

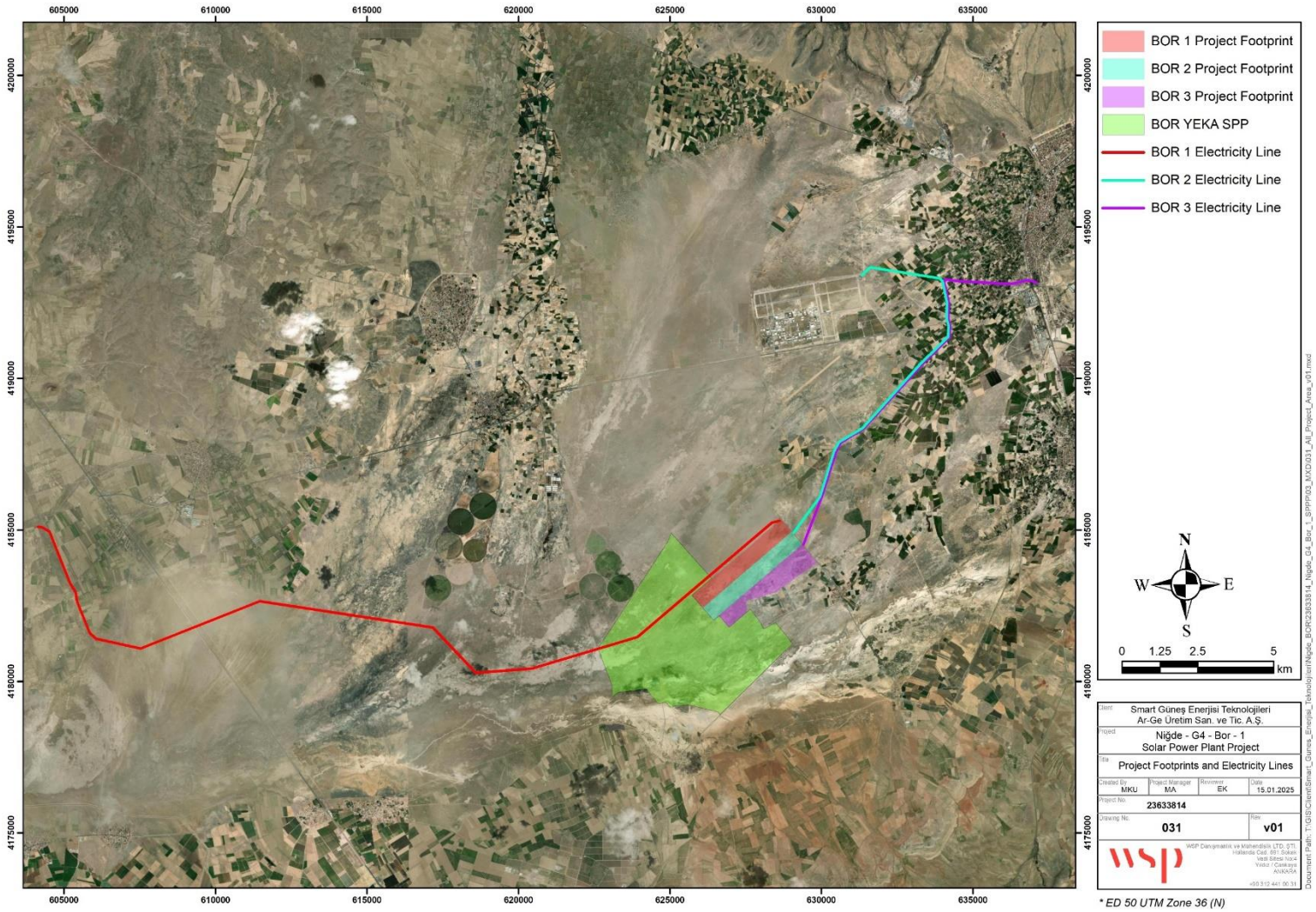


Figure 5: Other activities in the Cumulative Impact Assessment Area

. Possible cumulative impacts are listed below**.**

- **Noise**: Noise is expected from excavation, vehicle movement, and equipment operation during construction phase. Cumulative noise impacts are not expected since G4-BOR-2 and G4-BOR-3 are already under operation and G4-BOR-1 Project will be in operation when the Bor YEKA SPP Project starts construction. Due to the nature of the projects, no significant noise generation is expected therefore cumulative impact is not expected during operation phase. Monitoring and grievance mechanism and management are in place.
- **Air Quality**: Dust emissions are expected from land clearing and material transportation during construction phase. Cumulative air impacts are not expected since G4-BOR-2 and G4-BOR-3 are already under operation and G4-BOR-1 Project will be in operation when the Bor YEKA SPP Project starts construction. Due to the nature of the projects, no significant air emission is expected during operation phase therefore cumulative impact is not expected during operation phase. Monitoring and grievance mechanism and management are in place.
- **Terrestrial Biodiversity**: Potential impacts on biological components from the Project will mainly be associated with the following impact factors: emission of noise, emission of light, Increase of traffic, introduction of alien species (potential). With the mitigation measures defined in the EISA Report and Biodiversity Management Plan, the expected cumulative impact of these projects at the regional scale is expected to be Low. Monitoring is in place.
- **Traffic**: Increased traffic volume and accident risks from heavy vehicle movement and maintenance vehicles in village road are the potential impacts during construction and operation. Traffic signs/labels, speed bumps and two convex mirrors in proper places were placed in the Emen Village Road to prevent potential accidents/incidents. Considering the traffic load increase amount and all mitigation measures specified in the ESIA and the management plan, the expected cumulative traffic impact will be at **low** significance
- **Visual Aesthetics**: The PV panels have impacts on visual aesthetics in terms of glint and glare impacts. The Project, with the use of anti-reflection (AR) coatings, no glint-glare impact is foreseen during operation phase of the Project. therefore cumulative impact is not expected.
- **Land Acquisition**: Pressure on pasturelands from multiple projects. The land allocation for energy projects will negatively affect pasturelands and their users, with the Bor YEKA SPP Project causing the greatest impact due to its large footprint, compared to G4-BOR-1. While all projects contribute to cumulative pressure on pasturelands, mitigation measures for G4-BOR-1 are expected to effectively reduce its localized impact. Overall, with mitigation, the cumulative impact is expected to be reduced to medium level. Monitoring and grievance mechanism and management are in place, and a detailed mitigation strategy is outlined in
- **Community Health and Safety**: Increased movement of workers and machinery posing health risks. Cumulative impacts on the noise, air and traffic are deemed low with the mitigation and monitoring measures.
- **Labor Influx**: Increased demand for labor therefore positive cumulative impact is expected.

Some of the mitigation measures for the cumulative impacts are as presented below:

- Implement noise reduction measures during construction and operation phases as defined in the Noise Management Plan.

- Protect habitats and species and prevent the introduction of invasive species as defined in Biodiversity Management Plan and Invasive Alien Management Plan.
- Manage traffic impacts through signage, speed bumps, and convex mirrors
- Use anti-reflection coatings and manage light emissions during construction.
- Mitigate impacts on pasturelands as defined in the ESIA and ESA Report and through community engagement.
- Engage with local communities to ensure their concerns are addressed.
- Maximize local employment opportunities and ensure fair distribution of economic benefits.

3.13 Greenhouse Gas Emissions

After ESIA and development of ESMP, a supplemantery ESA Report was prepared to re-assess environmental and social impacts of the Project by addressing the comments, recommendations and suggestions of the financial institutions and their international environmental and social consultant.

In the ESA Report, actual GHG emissions originated from the construction activities are calculated with the consumption data provided by Smart.

The combined annual emissions from the construction phase of the Project are about **1,648.96 t CO_2e per annum**. This annual value is below the 25,000 t CO_2e threshold defined in IFC PS3 and Equator Principles IV. Therefore, no additional monitoring will be required.

During the operation phase, no greenhouse gas emissions is expected except the combustion of diesel fuel due to use of generators in case of emergency. It was assumed that annual emissions from combustion of diesel fuel due to use of generators will be at the same amount with annual construction emissions originated from the generators as a worst-case scenario.

With the consideration of this assumption, annual emissions from the operation phase of the Project are about **28.80 t CO_2e per annum**. This annual value is well below the 25,000 t CO2e threshold defined in IFC PS3 and Equator Principles IV. Therefore, no additional monitoring will be required.

A new impact is not expected other than those listed in the construction and operation phases in the decommissioning and closure phase of the Project.

3.14 Climate Change Risk Assessment

As a part of the ESIA, a Climate Change Risk Assessment has been prepared in line with the Equator Principles 4. This Climate Change Risk Assessment has been updated within the scope of the ESIA Report. The Climate Change Risk Assessment approach is designed to be consistent with the approach of the Taskforce for Climate-related Financial Disclosure (TCFD) and considers physical climate change risks to the Project.

The Project may be exposed to various climate change-related risks that could impact both infrastructure and personnel. According to the qualitative physical risk assessment, the effects of climate on the Project have been determined.

Flooding, severe storms, and extreme precipitation events have the potential to damage project equipment and infrastructure. Prolonged periods of drought and water stress may affect operational efficiency, and the availability of resources needed for construction and maintenance. Extreme temperatures (both heat and cold) pose risks to the proper functioning of equipment and the health and safety of on-site personnel. In particular,

heat stress could affect workers and sensitive infrastructure components during high-temperature periods, while cold stress may be a concern during colder seasons. Additionally, wildfires, exacerbated by hotter and drier conditions, represent a potential threat to project assets and surrounding ecosystems. These risks highlight the importance of integrating climate resilience measures into project planning and operations.

In the physical qualitative risk assessment, the risk levels identified for the impacts of climate change are classified from low to high. Based on the vulnerability assessment, several preventive or mitigation measures were identified for each climate hazard. Some of these measures are as follows, as identified in the Climate Change Risk Assessment (CCRA):

All Risks

- The Project Emergency Preparedness & Response Plan will include procedures for managing climate-related hazards (e.g., extreme weather, drought, wildfires) and will be regularly updated.
- Necessary equipment and training will be ensured throughout the Project's lifecycle.
- Reliable communication systems, including alternatives for emergencies, will be maintained across the Project site.
- Cooperation with local authorities will be pursued to ensure regular maintenance of access roads, enhancing adaptive capacity, especially against flooding.

Risk of Extreme Heat and Extreme Cold for Equipment and Infrastructure

- Cooling and heating systems will be regularly maintained to ensure effectiveness during extreme temperature fluctuations.
- Materials with low heat absorption and high durability under extreme heat will be considered for buildings and infrastructure.

Risk of Extreme Heat and Extreme Cold for Project Personnel

- Rescheduling working hours during extremely hot and cold periods to ensure the safety and efficiency of staff working in outdoor areas.
- Providing proper clothing and PPEs in accordance with the weather conditions.

Risk of Severe Storms and Extreme Precipitations

- A regional flood risk assessment and stormwater drainage study will be conducted, with design adjustments made as needed to protect surrounding land, water sources, and ecosystems.
- Protective measures will be implemented to safeguard critical infrastructure from heavy rainfall, strong winds, and lightning.
- Lightning rods will be installed on-site.
- Drainage systems and manholes will be kept clear to prevent flooding during intense rainfall.
- Waterproof materials and coatings will be used on all equipment.
- Materials vulnerable to strong winds will be evaluated and reinforced to withstand severe storms.
- All panels and equipment will be securely fastened to prevent storm-related damage.

Risk of Wildfires

- Fire awareness programs will be organized, potentially in collaboration with the Niğde Fire Department.
- An early warning system for fire detection will be implemented, with connections to local or regional systems to ensure timely monitoring and information sharing.
- The maintenance program for all fire prevention and emergency systems will be regularly reviewed for adequacy.

Risk of Water Stress for Equipment and Infrastructure

- Implement dry cleaning methods for solar panels to reduce water usage.
- Train staff in water conservation practices to promote efficient usage.
- Collaborate with local authorities for shared water management strategies.

Risk of Water Stress for Project Personnel

- Ensure adequate on-site water storage, use water-saving measures, and coordinate with local suppliers to secure a reliable supply to the project personnel.

Heat Stress for Equipment and Infrastructure

- Install shading structures to protect equipment and reduce heat exposure.
- Use materials that can withstand high temperatures.
- Implement cooling systems to manage heat stress on equipment

Water Stress for Project Personnel

- Adjust work hours to cooler times,
- Provide shaded rest areas and drinking water, and
- Train workers to recognize heat-related symptoms.

4.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM

To guarantee the effective implementation of these mitigation measures, sufficient resources and project management planning will be allocated, guided by the ESMP prepared for the Project. The ESMP forms a core component of the ESIA, serving as a framework document for both the Project and its contractors. It provides guidance for the effective implementation and continual enhancement of environmental and social commitments for the Niğde G4-Bor-1 Solar Power Plant Project by Smart.

As an integral component of the ESIA, the ESMS stands as a foundational document, underscoring the Project's dedicated commitment to environmental and social sustainability throughout its lifecycle. It is meticulously developed in alignment with Smart's corporate policies, integrating the commitments outlined in the ESIA. Additionally, the ESMP aligns with the pertinent Turkish regulatory framework and adheres to a suite of international Environmental and Social (E&S) Standards, including the IFC PSs, Guidance Documents, IFC General Environmental, EHS Guidelines, EP, and the OECD’s Common Approaches. The Project ESMP consists of several sub-management plans as demonstrated further in Table 1, in which the ESIA mitigation measures are reflected and compliance with applicable Project legislation, standards and limits are ensured.

The main goal of the ESMS is to implement the environmental, social, and occupational health and safety commitments and mitigation measures outlined in the ESIA. It ensures that all phases of the Project—construction, operation, and decommissioning—are carried out with minimal negative impact on the physical, biological, and social environments in the affected area.

Specifically, the ESMS will:

- **Establish Standards:** Set environmental and social management standards that either meet or exceed Good International Industrial Practices (GIIP) and align with community expectations.
- **Employ Mitigation Hierarchy:** Proactively anticipate, avoid, or, when avoidance is unfeasible, minimize and restore E&S impacts.
- **Integrate E&S Considerations:** Formulate and execute policies, plans, and procedures to embed E&S considerations within the overarching project management framework throughout its lifecycle.
- **Facilitate Management Plans:** Implement the management plans as delineated by the ESIA to prevent, minimize, and control E&S impacts.
- **Educate Personnel on Responsibilities:** Ensure Project personnel are educated on their E&S responsibilities and monitor their adherence to these responsibilities.
- **Implement Monitoring Program:** Evaluate residual environmental impacts and monitor ESMS performance through an implemented monitoring program.
- **Conduct Audits and Corrective Actions:** Periodically conduct system audits and identify corrective actions, if needed, to achieve planned objectives.

As a part of this ESMS, Smart has established a comprehensive framework of policies and ethical principles to guide its operations, ensuring commitment to sustainable and ethical conduct across all aspects of its business operations.

- Environment And Climate Change Policy
- Human Rights Policy
- Occupational Health and Safety Policy
- Corporate Social Responsibility Policy
- Anti-Bribery and Anti-Corruption Policy
- Supply Chain Policy
- Sustainability Policy
- Donation and Aid Policy
- Information Policy
- Profit Distribution Policy
- Compensation Policy
- Ethical Principles

- Supplier Code of Conduct

The Project's Environmental and Social Management System (ESMS) outlines the key components developed by Smart, aligned with its integrated management system. It includes corporate policies, project-specific HR procedures, the ESIA process, a Management of Change procedure, Environmental and Social Management Plans (ESMPs), organizational capacity, stakeholder engagement (via the SEP), emergency preparedness, and monitoring and review mechanisms.

The roles and responsibilities for construction phase is given below (see Figure 6)

- Project Manager: Ensures resources and project success, manages suppliers and all resources.
- Site Chief: Provides resources, ensures compliance, monitors performance, manages stakeholders and subcontractors, develops detailed plan.
- Senior Electrical Engineer: Manages and updates the Plan, supports contractors, organizes training, engages communities, handles grievances, audits, coordinates electrical teams.
- Mechanical Installation & Quality Engineer: Similar to Electrical Engineer but focuses on mechanical/quality, audits, material and construction quality assurance.
- Civil Engineer: Similar to above, supports Plan implementation, organizes training and audits, coordinates teams.
- HSE Coordinator (Corporate): Ensures health and safety practices, coordinates HSE team.
- HSE Expert: Enforces health and safety on-site and among subcontractors.
- HR Manager (Corporate): Manages recruitment/retrenchment, audits labor conditions, handles unresolved labor grievances.
- Timekeeper Support Staff: Records time management data, reports labor grievances to HR.
- Reporting Engineer: Tracks KPIs and non-compliances, handles reporting and permits, conducts audits and site visits, prepares progress reports.
- Senior Community Liaison Officer: Engages with local communities, manage stakeholder relations and grievances, tracks KPIs, promotes local employment, supports SEP updates.
- Stakeholder Responsible: Manages and reports grievances, keeps engagement records, supports internal/external reporting.
- Administration Officer: Coordinates site security, meals, cleaning, and shuttle services.

The roles and responsibilities for operation phase is given below (see Figure 7):

- Q&M Manager (Corporate Level): ensures resource provision, manages project resources, and ensures quality and success.
- Q&M Chief: Avoids routing through residential areas or mitigates impacts, ensures ESIA measures, engages authorities, ensures compliance, monitors ESMS, manages subcontractors/suppliers, and coordinates timelines and inspections.

- Electrical Engineer: Ensures contractor compliance with the ESMS, coordinates electrical teams, and facilitates training participation.
- Mechanical Engineer: Ensures contractor compliance with the ESMS, coordinates mechanical teams, and ensures training participation.
- HSE Specialist: Implements OHS practices, enforces ESIA measures prepares annual work/training plans, organizes tracks trainings, and conducts inspections.
- Environmental Engineer: Implements ESIA measures, ensure environmental monitoring, and organizes/trainings for all personnel and subcontractors.
- Administrative Officer: Tracks vehicle/equipment maintenance schedules and liaises with authorities.
- Senior Community Liaison Officer: engages with local communities, shares project information, manages the Grievance Mechanism, ensures public access to the mechanism, and collects/responds to public feedback.

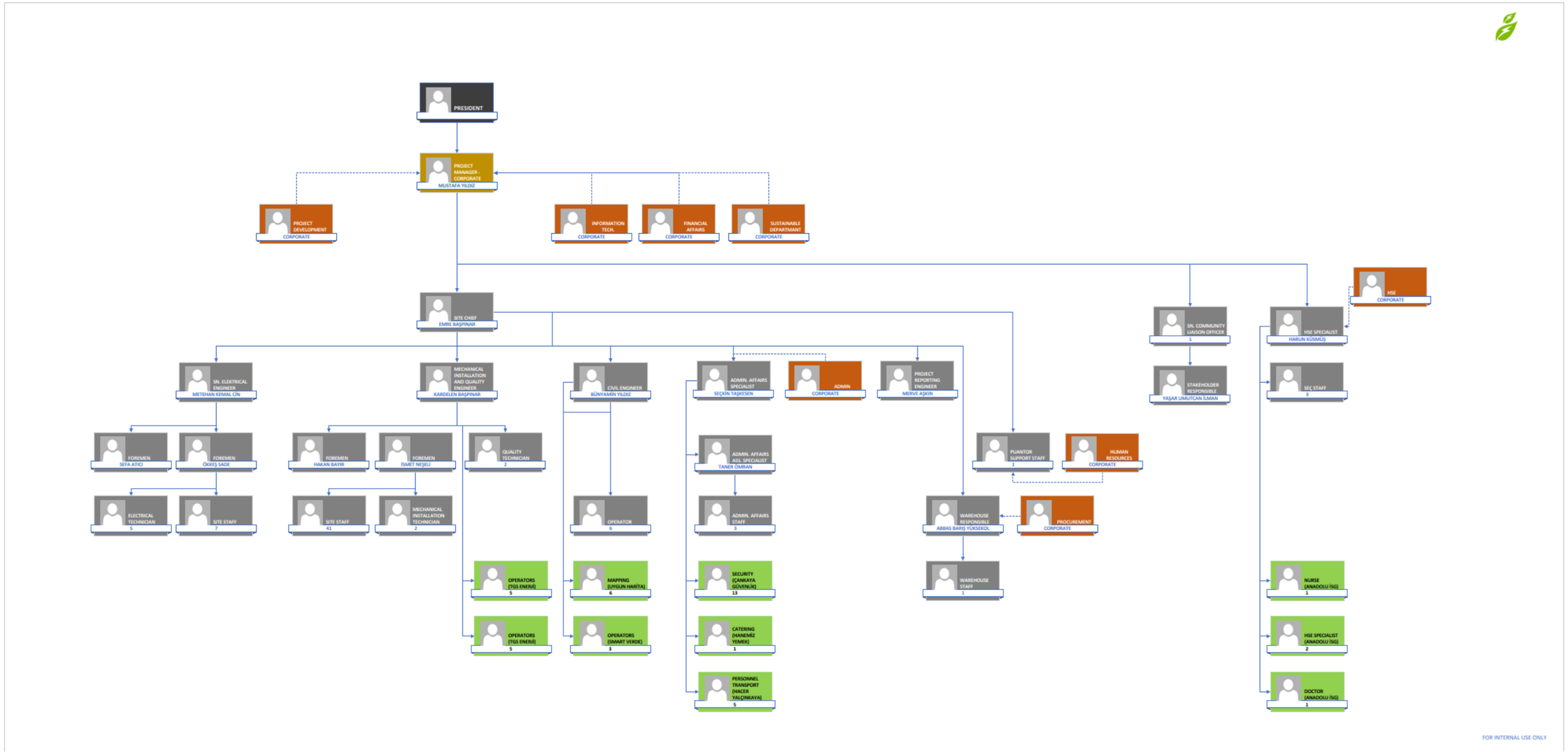


Figure 6: Organization chart for Construction Phase

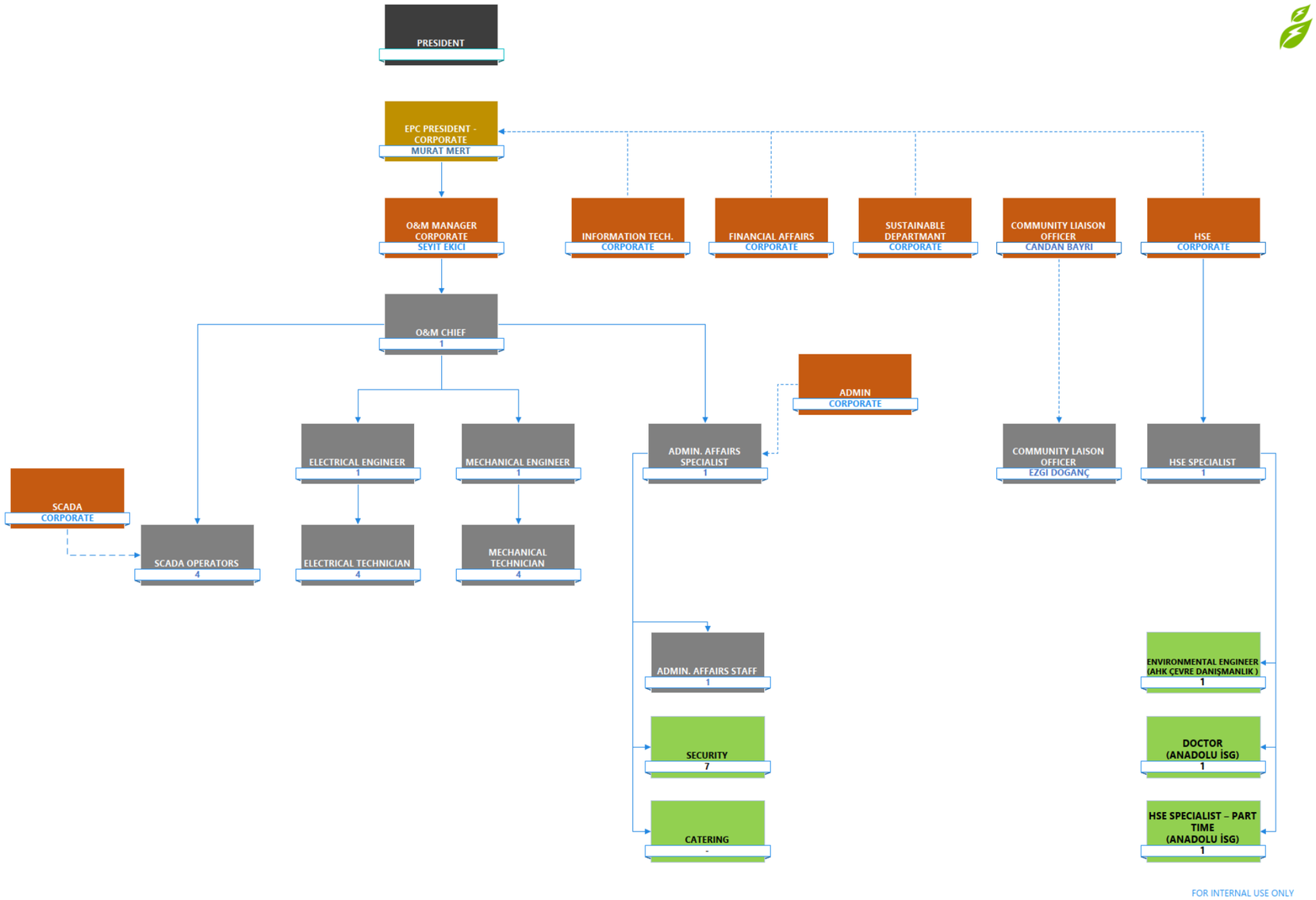


Figure 7: Organizational Chart for Operation Phase

Table 1: ESMPs and Corresponding IFC PSs

Relevant IFC PS	Plans / Procedures
IFC PS1 5-24: Assessment and Management of Environmental and Social Risks and Impacts	■ ESMPs - (this chapter) ■ Stakeholder Engagement Plan ■ Interface Management Plan ■ E&S Monitoring Plan ■ ESMS Manual ■ E&S Policies ■ Management of Change Procedure (including E&S Aspects and Impacts Register) ■ Simultaneous Operations Plan
IFC PS2: Labour and Working Conditions	■ Human Rights Management Plan ■ Offsite Accommodation Management Plan ■ Labour Management Plan ■ Contractor Management Plan ■ Supplier Management Plan ■ Retrenchment and Demobilisation Plan
IFC PS3: Resource Efficiency and Pollution Prevention IFC EHS Guidelines	■ Resource Efficiency Management Plan ■ Pollution Prevention Plan (e.g., air, noise, wastewater, soil, groundwater contamination, hazardous material management, etc.) ■ Waste Management Plan ■ Soil Management and Erosion Control Plan ■ Hazardous Material Management Plan ■ Air Quality Management Plan ■ Noise and Vibration Management Plan ■ Water Management Plan
IFC PS4: Community Health, Safety, and Security IFC EHS Guidelines	■ Traffic Management Plan ■ Community Health and Safety Management Plan ■ Security Management Plan ■ Emergency Preparedness and Response Plan
IFC PS5: Land Acquisition and Involuntary Resettlement	■ Not applicable
IFC PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	■ Biodiversity Management Plan

Relevant IFC PS	Plans / Procedures
IFC PS7: Indigenous Peoples	■ Not applicable
IFC PS8: Cultural Heritage	■ Cultural Heritage Management Plan and Chance Find Procedure

The ESMPs will be implemented throughout the Project organization, including the EPC contractor, subcontractors, and primary suppliers under Smart's control or influence. They will apply across the Project Area of Influence, including associated facilities as defined by IFC PS 1.

Each ESMP includes key components such as objectives, legal references, implementation responsibilities, links to other plans, mitigation measures, monitoring and reporting requirements, KPIs, training needs, and procedures for inspections, audits, and reviews. While all plans follow a consistent structure, their detail and complexity reflect the level of identified risks and impacts in the ESIA.

The ESMPs integrate mitigation measures from the ESIA and will be disclosed to stakeholders in line with the Stakeholder Engagement Plan (SEP). Smart will share the ESMPs with the EPC and subcontractors to ensure consistency in developing their own management plans, incorporating additional mitigation measures as needed based on their specific activities.

Also, Smart has implemented a comprehensive ESMS monitoring and reporting framework to ensure compliance with Turkish laws, IFC Performance Standards, and the commitments outlined in the ESIA. This framework includes regular internal and external audits, contractor oversight, performance monitoring through KPIs, and systematic tracking of non-compliances (classified into Levels 1–3 and Observations). As a part of this monitoring system, Smart is responsible for organizing periodic site inspections, managing stakeholder grievances, and overseeing the corrective actions taken by EPC and subcontractors.

In addition to auditing and compliance tracking, A Commitments Register that ensures all ESIA-based obligations to be followed throughout the project lifecycle, supported by regular performance reviews and transparent reporting to regulators, stakeholders, and lenders was built.

5.0 STAKEHOLDER ENGAGEMENT

The primary objective of stakeholder engagement is to offer stakeholders clear information about the Project's potential environmental and social impacts through transparent disclosure. This transparency helps stakeholders develop accurate perceptions of the proposed development. It also involves seeking feedback and opinions from stakeholders and providing mechanisms to address their concerns or complaints.

Within the scope of the ESIA process, WSP undertook Public Participation Meetings and conducted surveys at household and community levels with local communities residing in the Seslikaya, Emen and Badak villages. During the Public Participation Meetings and surveys, detailed information about the Project’s nature, scope, and potential environmental, economic, and social impacts was shared with community members to ensure they were well-informed.

Engagement activities—such as public announcements, hearings, and consultations—are detailed in the Stakeholder Engagement Plan (SEP), which outlines a structured approach to communication and grievance management. The SEP, developed and implemented by Smart, ensures continuous dialogue, particularly with affected communities, through mechanisms aligned with IFC Performance Standard 1. It includes both internal and external grievance procedures, regular reporting, and documentation of how feedback informs decision-

making. The SEP is treated as a living document and is regularly reviewed and updated to remain relevant throughout all Project phases. Internal communication among Project teams is also addressed within the Environmental and Social Management System (ESMS).

6.0 GRIEVANCE MECHANISM

A grievance refers to any complaint, opinion, or feedback related to the implementation and impact of a project. The Grievance Mechanism is the primary tool for stakeholders to voice concerns, provide feedback, and file complaints about the project. Its goal is to respond to stakeholder needs and build a trusting relationship by developing effective mitigation strategies. The key objectives of the grievance mechanism include:

- Providing culturally appropriate ways for affected individuals to express concerns throughout the project lifecycle.
- Ensuring complaints remain confidential.
- Establishing transparent, respectful relationships with communities.
- Identifying and implementing corrective actions.
- Verifying that affected people are satisfied with the actions taken.
- Avoiding legal disputes, though it does not restrict stakeholders' access to the legal system.

6.1 Governmental Grievance Mechanism- all stakeholders

The public can raise any issues, complaints, and requests through the Presidential Communication Centre (CIMER). This centre is an active 24-hour online national system developed by the Directorate of Communications to keep communication channels between the public and government open. The public may raise issues, complaints, and requests at anytime and anywhere. Issues, complaints and requests can be both received and responded to through this national online system.

6.2 Worker Grievance Mechanism

The project is committed to ensuring a fair and transparent working environment for all individuals. To uphold this commitment, a Project-specific Worker Grievance Mechanism, accompanied by a comprehensive Grievance Mechanism Procedure will be implemented. The procedure defines a grievance as a statement of dissatisfaction with any condition that is alleged to be detrimental to the employee. A grievance may relate to matters of internal communication, abuse of authority, abuse of authority, race, colour, ancestry, national origin, religion, age, sex, sexual orientation, gender identity, sexual harassment, or disability status. All contractor/subcontractor workers shall have access to the Worker Grievance Mechanism

All complainants have the right to remain anonymous and to maintain their confidentiality. Smart will not disclose complainants’ details without their consent. If such consent is given, only the managers and staff involved in the specific complaint will be informed.

6.3 Community Grievance Mechanism

A Project-specific Community Grievance Mechanism will be implemented. The grievance mechanism will be part of the management system. It will respond to any concerns and complaints, especially from affected stakeholders and communities. Special attention will be given to the training of the designated staff involved in the management of the grievance mechanism. The overall objective of the grievance mechanism is to provide

an opportunity for all stakeholders to obtain information about Project activities and facilities, to submit their complaints and concerns in a structured and formal manner, and to receive prompt, fair and effective responses.

Comments or concerns may be made to the Client verbally, in writing (by post or email) or by completing a Grievance Form. The form is available on the Project website, at the Project site and at the Mukhtar's office, along with a description of the mechanism. All grievances will be:

- acknowledged within seven days of receipt; and
- responded to no later than 30 business days after receipt.

In particular, nominated, and trained staff will record information about grievances in grievance register. The information in the grievance register will include details of the grievance, and how and when it was submitted, acknowledged, responded to, and closed.

Individuals may request that their names remain confidential, and this mechanism does not preclude the right of stakeholders to pursue grievances through other legal means.

- Step 1: Receipt of complaint,
- Step 2: Assessment,
- Step 3: Acknowledgement of complaint,
- Step 4: Investigation and resolution of the complaint,
- Step 5: Closure, and
- Step 6: results of corrective action.

The grievance mechanism is widely publicized, with stakeholder meetings held for project-affected communities.

The Project have communication tools such as public relation office, Project website. In addition to this, grievances can be filed through the interviews by face-to-face, on-line or telephone. Grievance forms will also be found in easily accessible places such as common usage areas in the settlements, public relation office and Project management office. The grievance forms will be kept in print where wish-complaint boxes placed at specific points and will be used for the submission of both anonymous and public complaints.

Table 2: Current Contact Details of the Project*

Contact Details	
Project Website	https://www.smartsolar.com.tr/iletisim.aspx
Phone Number	+90 (216) 225 72 00
E-mail	oneri@smartsolar.com.tr, sikayet@smartsolar.com.tr info@smartsolar.com.tr

When both external and internal stakeholders experience problems, concerns, or difficulties in providing their contact information, identification information, complaints submitted by stakeholders will be initially evaluated and recorded as anonymous complaints or anonymous suggestions.

Stakeholders can send all their wishes and complaints, without specifying their names, to the wish-complaint boxes placed at specific points for external stakeholders or via hotline.

Grievances are received anonymously and assessed by applying the steps defined in the workflow. Within the scope of the complaint, it will be evaluated through investigation / examination processes and each stage will be recorded in the complaint mechanism system. Third parties will not be informed about complaints that need to be kept confidential.

When the complaint is concluded, although there will be no formal feedback on the solution to be implemented, if it is an issue that needs to be informed by the public and if deemed necessary, it can be announced to the stakeholders through common boards/ public and general communication tools.

On the other hand, ESIA Feedback Form which can be used to write questions and opinions about the Environmental and Social Impact Assessment study prepared Project is presented in Appendix A. This form can be submitted with communication tools described above.

Signature Page

WSP Danışmanlık ve Mühendislik Ltd. Şti.

Damla Küçükarslan/Eylül Kırbaç
Environmental Engineer/Senior Environmental Engineer

Merve Acırlı
Project Manager

APPENDIX A

ESIA Feedback Form

You can write your questions and opinions about the Environmental and Social Impact Assessment study prepared Project to the following addresses.

ESIA Feedback Form	
Name-Surname	
Address	
Phone Number	
Date	
Concerns, expectations, questions or complaints on the ESIA report	

wsp.com