



Hamur SPP Sub-Project

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
HAMUR MUNICIPALITY

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Executive Summary

ILBANK (The Bank of Provinces in Turkey) and the World Bank (WB) have collaboratively devised the Sustainable Cities Projects, which constitute a series of initiatives (SCP I and II are presently underway). This Environmental and Social Management Framework (ESMF) is specifically crafted for the Additional Financing (AF) of SCP II, intending to establish an augmented support mechanism. This augmentation is in response to the escalating demand from Municipalities seeking investments in sustainable urban development within the ongoing framework of the Sustainable Cities Program. The overarching goal of this program is to assist municipalities in enhancing urban planning, infrastructure development, capital investment planning, and fortifying municipal financial capacities, including creditworthiness.

All investments implemented through this Project will strictly adhere to both the Environmental Regulations of the Republic of Turkey and the Safeguard Policies of the World Bank. To ensure compliance, ILBANK will serve as the financial intermediary, overseeing the adherence to WB policies and procedures. Additionally, ILBANK will ensure that all requisite Turkish environmental approvals, licenses, and permits are obtained.

With financial support from the World Bank for renewable energy projects belong to municipalities, a solar power plant project located in Hamur, a district within Turkey's Ağrı province, has been initiated by Hamur Municipality. This project aims to increase the share of renewable energy sources in the country's energy mix and reduce greenhouse gas emissions and reliance on fossil fuels and to meet the electric energy need of Hamur.

The installed capacity of the plant is 990,0 kWp which is exempted from EIA regulation and it is expected to generate 1.891.564,00 kWh of electricity annually. The project site is located on a Hamur/Kale 107 Block 33 Lot and the land owned by Hamur Municipality. The solar panels used in the project are of high quality and have a lifespan of 30 years. The project was designed and constructed by a team of experienced engineers and technicians. The project developer has prepared and ensured the project in compliance with international quality and safety standards. The plant is equipped with state-of-the-art technology, including inverters, transformers, and monitoring systems. The plant is connected to the national grid which has been constructed as a part of the project.

The project has been financed by the World Bank through a loan agreement with Hamur Municipality. The loan has been provided on favorable terms, with a low-interest rate and a long repayment period. The loan has been used to finance the construction of the solar power plant, including the procurement of equipment and the construction of the power plant. The solar power plant project is expected to have a significant impact on the local economy and the environment. The project will create job opportunities during the construction phase and the operation phase. The project will also contribute to the development of the local infrastructure, including the construction of the substation and the transmission line. The project will also have a positive impact on the environment by reducing greenhouse gas emissions. The solar power plant will generate clean energy, which will replace the energy generated from fossil fuels. The project will also contribute to the country's efforts to address climate change. The solar power plant project in Ağrı, Hamur is a significant step towards the development of renewable energy sources in Turkey. The project in Hamur has the potential to serve as a model for similar projects in Turkey.

The Environmental and Social Management Plan (ESMP) for this solar energy plant project plays a crucial role in the project's execution. The ESMP acts as a comprehensive guide to monitoring, assessing, and mitigating adverse environmental and social impacts throughout the project's lifecycle. This ensures that the project delivers a positive influence on the environment and the community. The ESMP guarantees compliance with local legal regulations and international standards. It ensures that the project operates in accordance with legal requirements.

This project's provision of clean energy aligns with SDG 7, which targets Clean Energy. Additionally, it positively contributes to Good Jobs and Economic Growth (SDG 8). By reducing reliance on fossil fuels

and limiting greenhouse gas emissions, this solar energy plant project supports Turkey's efforts in combatting climate change. It aligns with Turkey's climate action plans and commitments.

In conclusion, the ESMP for this solar energy plant project is a critical document, emphasizing the project's potential for both environmental and societal benefits. It ensures that the necessary steps are taken to monitor and mitigate environmental and social impacts with a focus on the project's unique aspects. Furthermore, it makes a valuable contribution to sustainable development goals and aligns with Turkey's climate action plans.

1. Sub-Project Description

Within the scope of this report, the SPP sub-project details planned by Hamur Municipality was examined to prepare ESMP for sub-project. The subject of this subproject is to establish the unlicensed solar power plant project with an installed capacity of 990,0 kWp /990,0 kWe belonging to Hamur Municipality located in the Hamur district of Ağrı Province. Hamur Municipality will install SPP according to the connection power given in the Table 1.

Temperatures dropping to -40 degrees during the winter months make it very difficult to heat houses in Hamur District. Winter fuel costs for houses currently heated with coal and animal fuel are quite high. The fact that farmers, who are in a bad economic situation during the winter months, have such high fuel costs puts a great strain on the people in the region economically. Since fossil fuels such as coal are used, air pollution is visible in the region. This also increases the number of people suffering from respiratory and chest diseases (Korkusuz & Sevindi, 2016). The plant will meet the energy of more than 1.576 households with 1.891.564,00 kWh of electrical energy production, save the municipality more than 3.95 million EU in energy costs within 30 years and prevent the release of more than 401,64 tons of CO₂ per year into the atmosphere. Increasing renewable energy sources, especially in settlements such as Ağrı and Hamur where air pollution is intense, will contribute to human health and the improvement of the living environment.

The project implementation capacity is less than 1 Mwe and exempted from all environmental requirements by local environmental impact assessment regulation.

The subproject area located in the Kale neighborhood of Hamur, and located in the south of the center of the district which has rural area characteristics. The project area is 200 meters away from residents (Figure 1).

Hamur Municipality SPP project has energy transmission line without need of any expropriation. The transmission system is passing by the water stream next to the project site. There is no private owned land ownership required for expropriation, but the required permit should be received from State Water Works Regional Directorate.

Figure 1: Hamur SPP Sub-Project Area, ETL, and Urban Macroform



This study is prepared within the scope of 30th clause and Article 1 of the "Regulation on Unlicensed Electricity Generation in the Electricity Market" the electricity consumption of the relevant institutions netting with the electricity generation of the power plants to be made over the electricity unit price determined according to the subscription type of the institutions in the Electricity Tariff published by EMRA.

Planned Solar Power Plant has **990,00 kWp DC Capacity, 990,0 kWe AC Capacity**. Equipped with 450 Wp MonoPerc Half-Cut modules with **30° tilt, 25° azimuth angle**.

When the economic life of the plant expires at 30 years, it will be decommissioned, and the cost is written into the cash flow as **decommissioning cost** which is **EU EU 31.680,00/MWp**.

Table 1: Planned SPP Technical Details

Technical Information	
FV Panel Type	Monocrystalline MONOPERC
FV Panel Power Output	450 Wp
FV Panel Count	2200
Annual Degradation	%0,5
Inverter Power Output	100 kW
Inverter Count	10
Total DC Power	990,00 kWp
Total AC Power	990,0 kWe
Estimated Annual Energy Production	1.891.564,00 kWh
Annual Energy Consumption	945.782,00 kWh
Production/Consumption	%200
Decommissioning Cost	EU 31.680,00

Location and Topography

Ağrı Province is located in the Eastern part of Central Anatolia region. It is located between 38° 59' - 40° 02' northern parallels and 42° 15' - 44° 36' eastern meridians. It is bordered by Iran to the east, Kars to the north and Erzurum to the northwest and Iğdır to the northeast, Muş and Bitlis to the southwest, Van to the south. Ağrı lies 1,640 metres above sea level in the valley of the Murat River, a

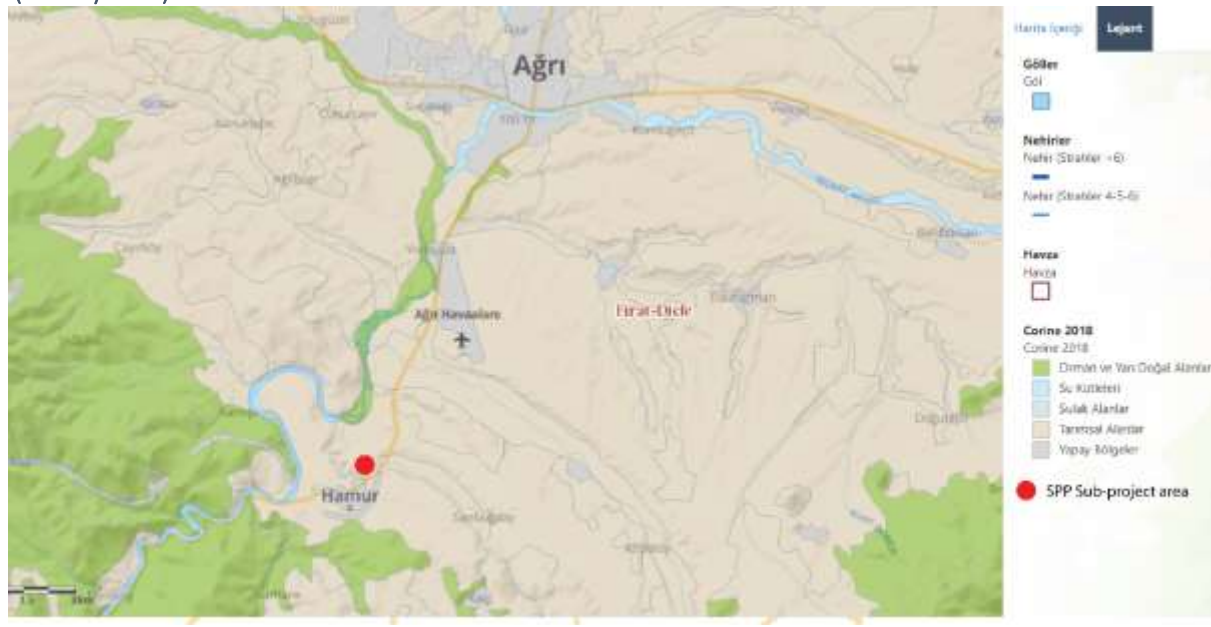
tributary of the Euphrates River (Figure 2). Its surface area is 11,099 km², and there are 47 people per km². Ağrı province, located in the Upper Murat-Van Section of the Eastern Anatolia Region, falls within the Alpine Orogenic Belt. The part of the Eastern Anatolia Region between the Karasu-Aras Mountains and Lake Van generally consists of wide plateaus, and the young and important volcano cones of Eastern Anatolia are lined up along certain lines on these plateaus. Ağrı province is a hydrographic basin surrounded by natural units. The main topographic shapes of Ağrı province are mountains, the valleys between them, hilly areas, erosion surfaces and plains. The provincial territory is surrounded by the natural border of the eastern foothills of Little Ağrı Mountain in the east, the Saç Mountain Pass in the west, the Aras Mountains in the north, and the northern foothills of Süphan Mountain in the south. Parallel to the Murat River, the largest river of the province, there are two large plains (Tutak and Patnos plains) in the north-south direction.

Hamur district is located in the Upper Murat Section of the Eastern Anatolia Region, on a depression area extending between the south of the Ağrı plain and the Aladağ range. The district center, located on the Ağrı-Van highway, is 1650 m above sea level and 12 km away from the city center. Hamur is bordered by Tutak and Patnos to the west and southwest, by Ağrı center district and Taşlıçay to the north and northeast.

Figure 2: Geographical location of Ağrı Province and Sub-Project Area



Figure 3: Hamur District Land Use Due to Corine 2018 Data by National Water Information System (USBS) (January 2024)



Project Land Use Rights

The project site has a single land register deed and its sole owner is Hamur Municipality (Annex 1). The project area is located in Kale neighborhood, and the block/lot number is 107/33. The lot size is 21.724,26 square meters.

Table 2: Planned SPP Land Information

Land Information	
Type	Main Property
Province, District, County, Nbhd.	Ağrı, Hamur, Kale
Block, Lot	107/33
Total Area	21.724,26 m2
Right to Property Use	Municipality - Ownership
EIA Status	"EIA Exempted"

Land Acquisition Principles

OP 4.12 covers only the direct impacts of land acquisition and restrictions of access to legally designated parks and protected areas. "Direct impact" means any consequence immediately related to the taking of a parcel of land or to restrictions in the use of legally designated parks or protected areas. People directly affected by land acquisition may lose their home, farmland, property, business, or other means of livelihood. In other words, they lose their ownership, occupancy, or use rights, because of land acquisition or restriction of access. The key factor is that the state has taken some or all of the land that people owned, used, or occupied; or, in legally designated parks and protected areas, the state has limited people's use rights.

The simplest way to minimize resettlement is to design projects that minimize land acquisition and the number of people affected by loss of land, by physical relocation, or by disruption of income-generating activities. All things being equal, facilities and transportation corridors, for example, are obviously better sited in or through areas with little or no population, to minimize the number of people affected. Of course, a host of economic, technical, and other factors must also be considered, so land acquisition and resettlement are often impossible to avoid altogether.

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In this subproject, in line with the recommendations of the World Bank, an area that was unpopulated and owned by the municipality was selected. Therefore, there is no need for land acquisition and resettlement plans.

2. Environmental and Social Screening

The sub-project was prepared by adopting universal human rights and the accompanying concerns were resolved. Following loan approval, Hamur Municipality will initiate periodically monitored stakeholder participation processes and complaint procedures, taking into account this concern. The main purpose of the project is to meet the electricity needs of the district by utilizing clean energy, reduce input costs and provide economic contribution to various sectors.

There is no direct and negative impact on any social group from the project, which is located in a non-residential area. With the Solar Power Plant (SPP) project, the electrical energy need will be met within the framework of social justice, without creating an unfair and discriminatory impact on the disadvantaged groups in the environment. Using renewable energy for electricity generation ensures efficient use of municipal resources, positively impacts the entire regional population and promotes inclusion.

During the project preparation phase, no concerns were expressed by women's associations/organizations regarding gender equality. The project is not expected to have a negative impact on gender equality, no restrictions are foreseen on women's abilities and it is ensured that there is no discriminatory impact based on gender. Activities do not pose a risk of degradation or depletion of natural resources in communities dependent on these resources.

The project promotes sustainability by harnessing solar energy, reducing dependence on non-renewable fossil fuels and contributing to a more sustainable energy mix. Solar energy projects with lower environmental impact reduce air and water pollution, reduce carbon emissions and minimize their ecological footprint. Energy resilience and flexibility contribute to reducing volatility in energy prices by providing a stable energy source and contributing to stability in urban and rural areas. Incorporating solar energy into the urban energy mix provides diversity, increases energy security and resilience.

Utilizing renewable solar energy, the project aims to increase economic sustainability by reducing the municipality's electricity expenses. Renewable energy investments strengthen communities, promote

employment opportunities, skills development and income diversification. Training activities for stakeholders during the construction and operation phases contribute to long-term sustainability by raising awareness and encouraging environmentally friendly behavior.

The project strengthens accountability through transparent decision-making, active participation, accessible information, responsive complaint mechanisms, regular reporting and open communication. Stakeholders participate in decision-making processes, provide collective input, and regular participation strengthens the sense of ownership and accountability. A strong complaints mechanism addresses concerns and regular reporting and audits keep stakeholders informed. Measurable performance indicators increase transparency and accountability by allowing stakeholders to evaluate the project's success against criteria. Involving stakeholders in decision-making processes ensures inclusiveness and a sense of shared responsibility.

All details related to environmental and social screening are given in Annex 8.

3. Legal Framework

National Legal Framework

The WB's environmental and social safeguards policies require that the borrower country is expected to prepare an Environmental and Social Management Framework (ESMF), integrated with the Regulation on Environmental Impact Assessment (henceforth "EIA Regulation") (Official Gazette No. 31907, July 29, 2022) and WB's Operational Policies. Although the Turkish EIA Regulation does not entirely meet the requirements of international standards in terms of social impacts, there are some legal arrangements for managing several social impacts. In this respect, the following are identified to be a non-exhaustive list of social legal framework applicable for this project:

- Labor Law (No. 4857), published in the Official Gazette no. 25134 dated 10 June 2003
- Law on Occupational Health and Safety (No. 6331), published in the Official Gazette no. 28339 dated 30 June 2012
- Regulation on Contractors and Sub-contractors, published in the Official Gazette no. 27010 dated 27 September 2008

In terms of involuntary resettlement, the relevant legal arrangements of Turkey are summarized below:

- Law No. 6203 Expropriation Law, published in the Official Gazette no. 18215 dated 8 November 1983

Potential impact of the project on known cultural values in Turkish laws, as listed below:

- Law No. 2863 dated 21.07.1983 on the Protection of Cultural and Natural Assets (revised through the amendment issued on 27.07.2004 dated Official Gazette)
- The Regulation on Researches, Drillings and Excavations in Relation to the Cultural and Natural Assets, which was published in the Official Gazette No. 18485 dated 10.08.1994

Labor and Working Conditions:

- Human Resource Policy (dated January 4, 2013 in the Official Gazette numbered 28518) published by ILBANK
- Eligibility Criteria: The Law on Regulating Public Finance and Debt Management (Law No. 4749) restricts borrowing by any institution/municipality if it has overdue payments to Treasury.

In terms of stakeholder analysis:

- The Law on the Right to Information, Law no. 4982 dated November 25, 2014)
- The Law on the use of the Right to Petition, Law no. 3071 dated November 1, 1984

- The Law on the Protection of Personal, Law no. 6698 dated 24 March, 2016

Moreover, the project is the subject of the 30th clause of the "Regulation on Unlicensed Electricity Generation in the Electricity Market", published by the Energy Market Regulatory Authority no. 30772 on May 12, 2019 and amendment published on Official Gazette No: 31479 dated May 09, 2021, updated on Official Gazette No: 31920 dated August 11,2022, final update on Official Gazette No: 32120 dated March 02,2023. Article 1st Paragraph: " In order to meet the electricity needs of the consumption facilities, not exceeding the contractual power of the relevant consumption facilities in the connection agreement; Within the scope of subparagraph (h) of the first paragraph of Article 5, a production facility based on renewable energy sources may be established. Within the scope of this article, a production facility based on renewable energy sources may be established by public institutions and organizations within the scope of subparagraph (c) of the first paragraph of Article 5." Section 26 of the same regulation. In paragraph 30-(3) under the heading "Applications for consumption needs", referring to the article, it reads: "In the production facilities established within the scope of this article, transactions are established within the scope of the fourth paragraph of Article 26 for surplus energy supplied to the grid during each billing period.

It is possible to explain offsetting as comparing the energy consumed monthly and the energy produced by the power plant and if there is excess production, selling this excess energy to the grid. The energy supplied to the network is sold at the unit price at which the subscriber receives the electricity, without considering the distribution price, also this sale is subject to tax.

Since the power plant to be established meets a small part of the municipality's consumption, no sales will take place. The municipality will continue to invest in this regard."

According to the regulation that entered into force on 11.08.2022, if the new power plants to be established in 2019 and after having made additional production at a value above the total amount of energy they consumed last year, this additional production will be given to the grid, free of charge. For example, if the consumer consumed 1 MWh of electricity last year and the solar power plant generates more than 1 MWh of excess energy (which means the energy after the consumption of consumer), up to 1 MWh the energy can be sold to the grid and if the produced energy exceeds 2 MWh (1 MWh for consumption and 1 MWh for sale), excess energy will be given to the grid free of charge.

Indirect and direct government incentives for solar power plants include:

- Article 24 of the Regulation on Unlicensed Electricity Generation in the Electricity Market (official newspaper no. 30772 dated May 12, 2019). It is stated that the surplus productions of Solar Power Plant will be purchased for 10 years at the price determined by the supply company by applying within the scope of 5c of the same regulation with the regulation in the article. The regulation's linking this purchase to a certain period is also considered an indirect incentive of the state.
- In addition, the fact that SPP applications based on self-consumption can be obtained in the same regulation is considered as an indirect incentive.

Laws, decrees and related legislations on which SPP installation and the feasibility are based;

- Law:
 - Electricity Market, Law no. 6446 dated 14 March, 2013
 - Environmental Law, Law No: 2872; Date of Ratification: 1983
- Decree:
 - President's Decision, Number of Decision 1044 (10.05.2019/30770)
- Regulation:
 - Regulation on Unlicensed Electricity Generation in the Electricity Market dated 12/5/2019 and numbered 30772 amendment published on Official Gazette No: 31479

dated May 09, 2021, updated on Official Gazette No: 31920 dated August 11,2022, final update on Official Gazette No: 32120 dated March 02,2023

International Legal Framework

The Environmental, Health, and Safety (EHS) Guidelines are technical reference documents of World Bank. When one or more members of the World Bank Group are involved in a project, these EHS Guidelines are applied as required by their respective policies and standards. These General EHS Guidelines are designed to be used together with the relevant Industry Sector EHS Guidelines which provide guidance to users on EHS issues in specific industry sectors. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. Application of the EHS Guidelines to existing facilities may involve the establishment of site-specific targets, with an appropriate timetable for achieving them. It is mandatory to comply with the EHS Guidelines in the ESMP prepared for this subproject, which is planned to be realized with World Bank financing. Besides, other mandatory international legal framework listed as:

- Operational Policies of World Bank (OP 4.01)
- 2010 Policy on Access to Information (for stakeholder analysis)
- Good Practice Note (GPN) on Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) (for stakeholder analysis)
- European Union Environment Policy
- ILO conventions

4. Baseline Data

Environmental Baseline

Geography

Hamur district was founded on the foothills of the Aladağlar range and the Murat Valley in the south of Ağrı. 65% of the land is mountainous and 35% is flat. It is located in Ağrı - Van highway and 12 km away from Ağrı. The district's altitude above sea level is 1675 m. Its surface area is 898 km². Morphologically, the district consists of a depression on the continuation of the Ağrı Plain in the north, through which the Murat River flows, and very high plateaus and mountains bordering it from the south and west. Hamur district is bordered by high mountains consisting of volcanics in the south and sedimentary rocks in the northwest. Aladağ, located in the south of Hamur, looks like a mountain range parallel to the Ağrı Plain, which extends in the east-west direction in the north. On the Kandil Mountain (2876m) located in the central part of the field and the northern part of Aladağ extending to the south; There are Koçbaşı hill (3510 m), Kandil hill (3044 m) and Bozdağ hill (2838 m). Hilly areas form a step between the higher elevations and the basin floor. Along with the hills, there are valleys, ridges and significant steepnesses deeply incised by streams. The main morphological features of the other hills located on the mountains in question consist of ridges and slopes (Kaya, 2007).

The SPP sub-project area is located in the northeast part of the Kale neighborhood of Hamur district.

Figure 4: Topography Map of Ağrı, and Hamur Settlements



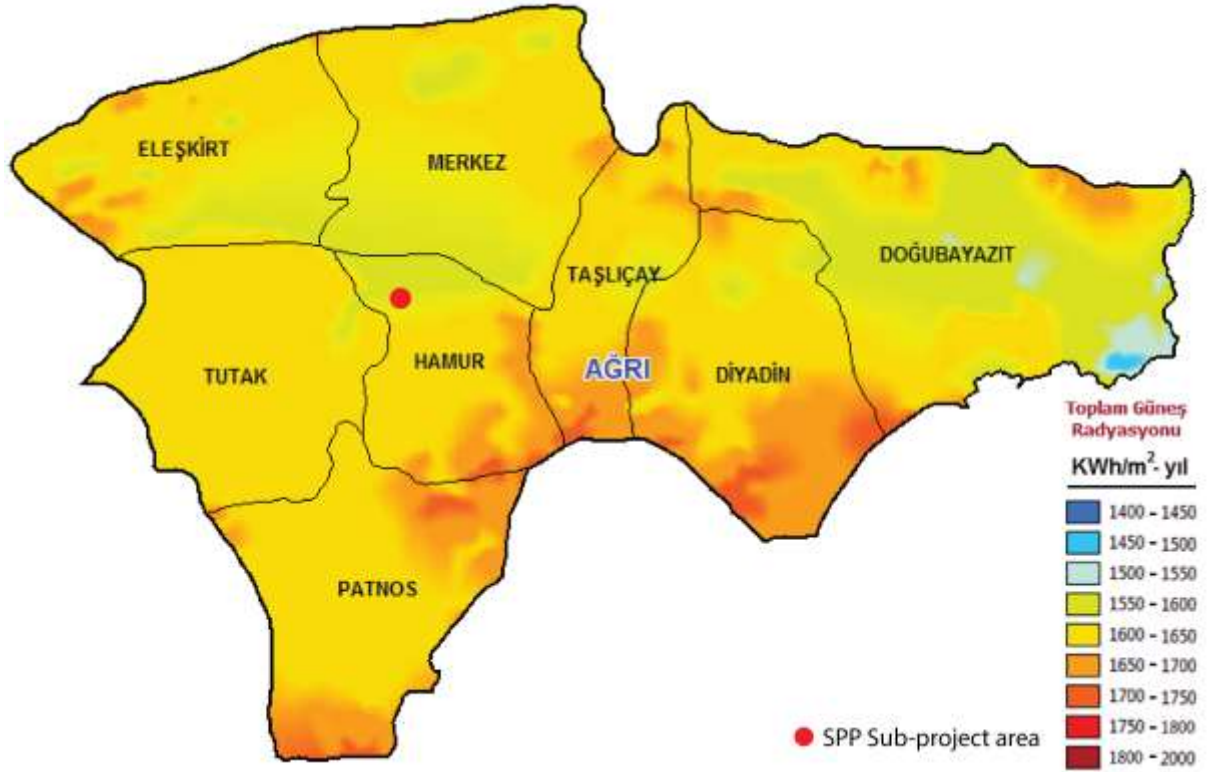
Climate

In terms of climate, Ağrı province is in the most continental and harshest part of Turkey. Winters are very harsh, long, snowy and cold. On the other hand, summers are short and dry. Even if the temperature is not high, the sun is scorching because of the low humidity. This scorching heat in summer gives way to freezing cold in winter. Therefore, the lowest temperature is measured in Ağrı with (-43, -45). The average annual temperature in Ağrı, which is among the most continental climates in Turkey, is 6.1 degrees. The rainfall regime in Ağrı is different. It rains more in spring and autumn. Rainy months in and around Hamur district are April and May months. In winter, precipitation is in the form of snow. The snow that falls remains on the ground for a long time, until mid-April. The average annual precipitation is 500 mm. In mountainous areas, this average is slightly higher. The month with the most rain is April. The month with the least rain is August. Doğubayazıt Plain and Iğdır Plain are the places with the least rainfall in the region. Moreover, this is the warmest place in Ağrı in winter. Clouds that bring rain always come to Ağrı from the west and over the mountain ranges.

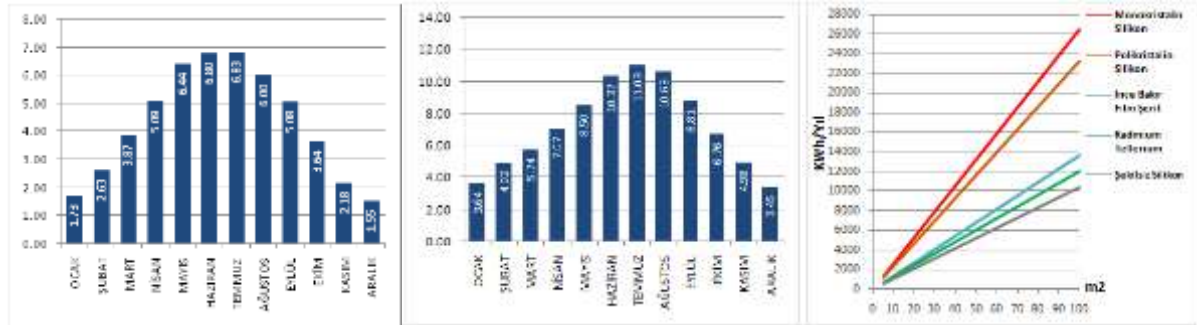
According to the Solar Energy Potential Atlas, Türkiye's average annual total sunshine duration is 2,737 hours, daily total is 7.5 hours, and annual total incoming solar energy is 1,527 kWh/m²/year. It is seen that Hamur's average solar radiation throughout the year is in the range of 1550- 1750 kWh/m²/year (Figure 5). Global radiation values are over 6.00 kWh/m²/day in May, June, July, and August, and over 5.00 kWh/m²/day in a total of 6 months from April to the end of September (Graphic 1).

In Hamur, the month with the longest sunshine duration (11.03 hours) is July, and the shortest sunshine duration (3.45 hours) is December. Generally, the duration of sunshine is above 7 hours in six months (from April to September) throughout the year in most seasons. Since the district's sunshine duration is close to Turkey average, it turns out that project area in Hamur is an important investment area for solar energy.

Figure 5: Ağrı Province Solar Atlas and Project Area



Graphic 1: a) Hamur district Radiation Values b) Hamur District sunshine Times c) Hamur PV type-Area-Energy That Can Be Produced



Flora and Fauna

Hamur district and its surroundings are located in the Irano - Turanian steppe region in terms of vegetation. The effect of morphological features makes itself felt in the vegetation as well as in the climate. While natural steppes are spreading in the flat and nearly flat plains surrounded by high mountainous areas due to lack of rainfall, mountain-meadow vegetation has appeared in the higher areas. In the high parts of the mountains surrounding the south of the Hamur district (1900-2000 m.), there are occasionally sub-alpine and alpine meadows. Natural steppe vegetation can be seen in the low areas of the district, and high-mountain vegetation can be seen in the higher areas.

Photograph 1: The SPP Sub Project Area



Earthquake Risks

According to the Provincial Disaster Risk Reduction Plan (IRAP) for 2022 and the Mineral Research and Exploration (MTA) findings, Ağrı has active fault lines. Ağrı city center and its affiliated districts are located in the seismic zone in terms of seismicity and are under the influence of the Erciş Fault, Erzurum Fault, Malazgirt Fault, Kağızman Fault passing through the north of the Eleşkirt plain, Tutak Fault passing through the south of the plain, and subsequently Çaldıran Faults. Since Ağrı province is located in a tectonically active region, it has been exposed to many earthquake disasters throughout history. Since the city center offers a geologically massive land feature and tectonically active faults pass through the districts, the majority of devastating earthquakes occur within the district borders. (AFAD, 2022) Historical period throughout the province, from 1900 to the present; There have been 5 damaging earthquakes, the largest of which and the one that caused the most loss of life and property was the 5.1 magnitude earthquake that occurred in 2004, with the epicenter in Doğubayazıt district. In general, it is seen that the earthquakes that occur throughout the province are of magnitude 4 and most of them occur in areas that are currently tectonically active.

According to the Turkey Earthquake Hazard Map, Hamur District is located around 0.2-0.3 in terms of seismicity. When the project area is examined based on the "Turkey Earthquake Hazard Map" that came into effect with the Cabinet's decision dated 22.01.2018 and numbered 2018/11275, it is observed that the largest ground acceleration value is approximately around 0.254 PG (Figure 7) which indicates that the area is a 2nd degree earthquake zone.

The Hamur fault is a right-lateral strike-slip fault, starting from the near east of the Hamur district of Ağrı province and trending towards the south-southwest, with a length of approximately 19 or 25 km.

Figure 6: Faults in Hamur and its Region, General Directorate of Mineral Research and Exploration (MTA)



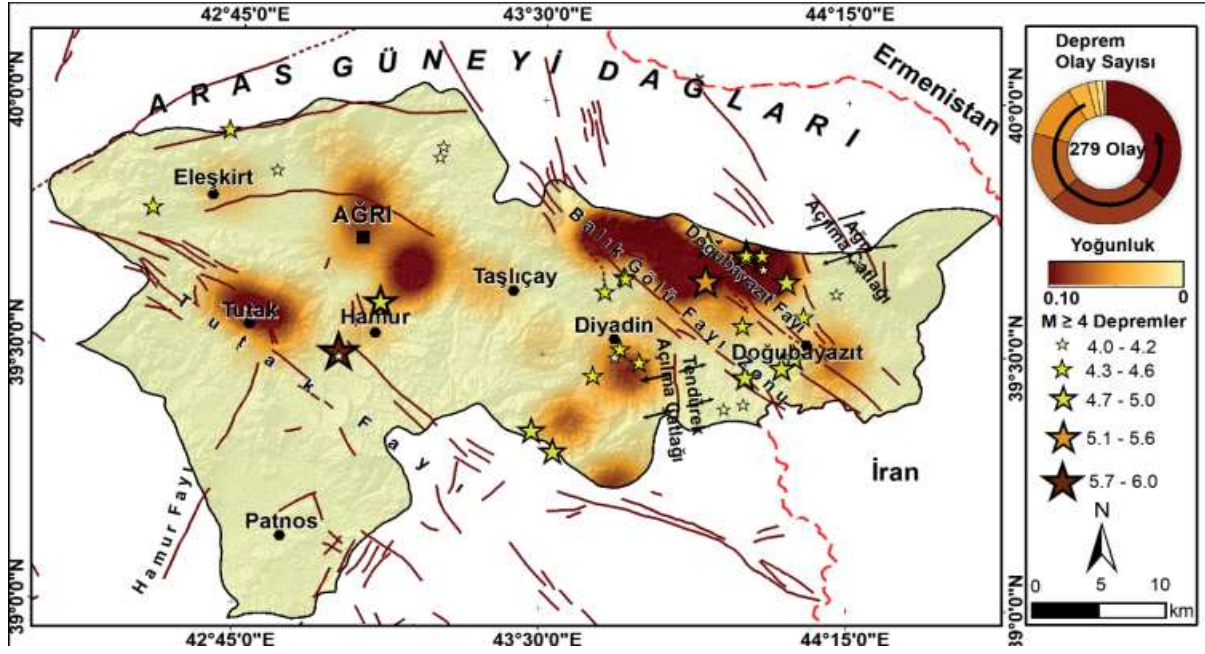
Figure 7: Earthquake Hazard Map of Sub-Project Area and Surroundings, Türkiye Earthquake Hazard Maps Interactive Web Application, 2023, (<https://tdth.afad.gov.tr>)¹



*Turkey Earthquake Zones Map, which came into force with the decision of the Council of Ministers dated 18.4.1996 and numbered 96/8109, was abolished on 01.01.2019. The New Turkey Earthquake Hazard Map and Building Earthquake Regulation was published in the Official Gazette No. 30364 on 18 March 2018 and entered into force on 01.01.2019.

Figure 8: Spatial Intensity Map of Earthquakes in Ağrı Province (1990-2018), (Toprak & Sunkar, 2022)

¹ Hazard map showing the PGA value created for a 10% probability of exceedance in 50 years (475 years of recurrence)



Hydrology and Flood Risks

Ağrı province is situated Euphrates basin. The province of Ağrı has a very tight drainage and river system due to its generally mountainous and rugged terrain, surrounded by depressed plains, and being a river basin in terms of geomorphology.

Ağrı Province is one of the provinces where floods and flood events are most common in Turkey and ranks first in the country in terms of damage caused by floods and floods. More than 18,000 structures were damaged in floods and overflow events that occurred between 1948 and 2016 (Avcı, 2017).

The total annual precipitation is 523.8 mm. Summer is the least rainy season in Ağrı, where the excess rainfall coincides with the spring period. Precipitation and snowmelt falling in a short time due to heavy downpours in the spring cause floods and floods. Due to rainfall and snowmelt in the spring, the Murat River and its tributaries overflow from time to time, and settlements, highways and agricultural areas on the plain and valley floor are affected by floods. Most floods and overflows in the province occurred in May and August. The increase in May is due to snow melt and increased precipitation, and the increase in August is due to heavy downpours in the summer.

Hamur District is at risk of waterflows and floods. The district center and villages have been exposed to many floods in the past years (Figure 10). The overflow of Murdar Brook which is in the Hamur urban settlement and is branch of Mandalık Creek and Mandalık Creek and sudden floods from high mountainous areas caused loss of life in many urban and rural settlements, caused losses in the livestock and agricultural sectors, and damaged structures. In addition, the area where the project will be established is close to the flood risk area (Figure 11).

Figure 9: Hamur District and Surrounding Water Streams



Figure 10: Floods in the Past in Hamur District by Atlas 2023



Figure 11: Hamur District Flood Propagation Areas (Q50, Q100, Q500) (SYGM, 2018) (AFAD, 2022)



Figure 12: Sensitive Areas and Water Assets (Groundwater etc.) around Subproject Area

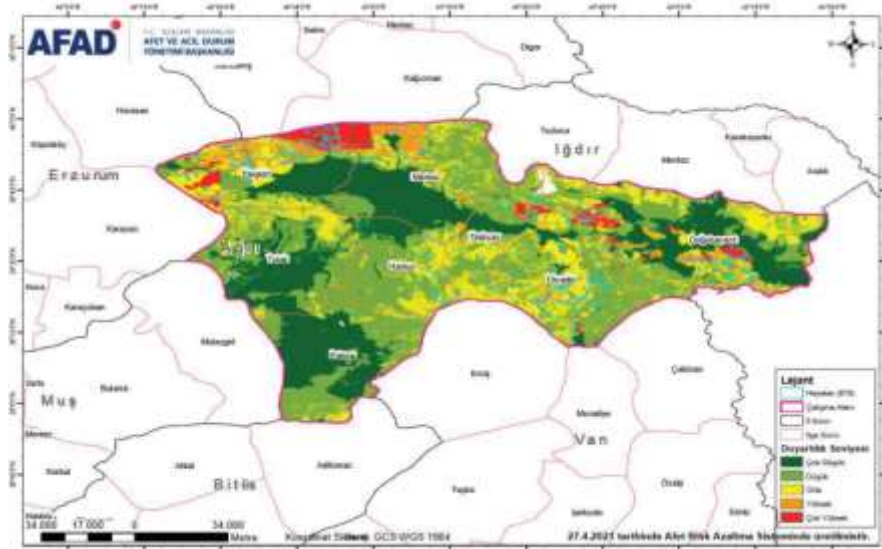


Landslide Risk

Ağrı province is one of the regions where mass movements are most intense. When we look at the general structure of Ağrı province, it is seen that mass movements develop in many places due to the fact that the land is mountainous and rugged in most places, the slope is high, and seasonal rainfall is high. Due to the fact that the ground characteristics generally consist of fine-grained unsorted clastic

materials, the underground water level rises due to seasonal precipitation, and the groundwater is trapped by these fine-grained clay, silt and sand units, the strength of the ground decreases and landslides occur in many places. The places where landslides are most common include the central district Eleşkirt, the northern parts of Diyadin and Doğubayazıt districts, and the Hamur district, which are places where the topographic slope changes suddenly. The SPP Sub-project area in Hamur district is located low-moderate level of risk according to Figure 13.

Figure 13: Ağrı Province Landslide Susceptibility Map



Social Baseline

Demography

Hamur, which was a township in Beyazıt province before the Republic period, was connected to Ağrı in 1927 and became a district on April 1, 1958. Ağrı province is one of the regions with rapid migration. Ağrı province is one of the settlements where gradual migration occurs. The city of Ağrı, the provincial center, and the cities of Doğubayazıt and Patnos, the district centers, receive immigration from the rural parts of the province and other district centers. In addition, there are migration movements from these cities to other cities, especially metropolitan cities. The main reason for this gradual migration is inadequate employment conditions and unemployment.

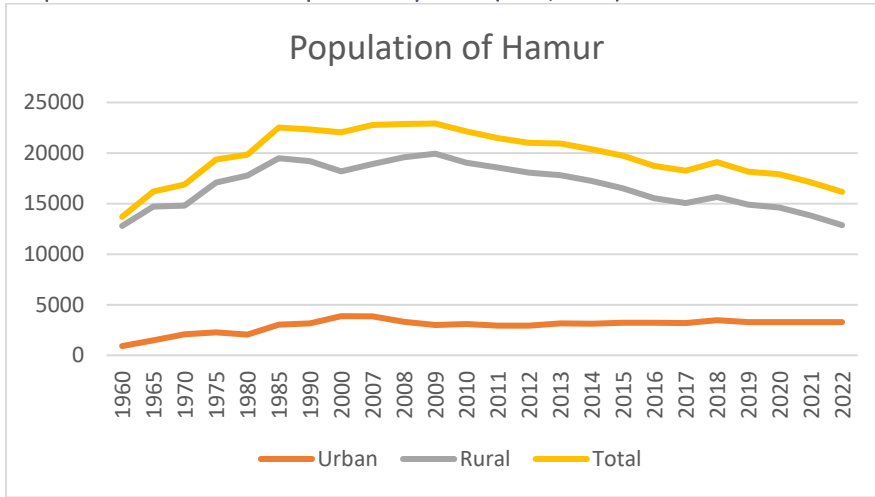
Hamur is the least populated district of Ağrı province. The district population growth rate decreased after 2011. The increase in the population of the district, which lost population due to migration due to limited livelihoods, is very low. Although the natural population growth rate is high, the population growth rate in Hamur district, which constantly loses population due to migration, remains well below the general average of Ağrı province (Kaya, 2007).

Table 3: Hamur Population by Years (TÜİK, 2023)

Year	Urban	Rural	Total	Year	Urban	Rural	Total
1960	910	12790	13700	2012	2945	18066	21011
1965	1486	14697	16183	2013	3136	17795	20931
1970	2060	14814	16874	2014	3127	17237	20364
1975	2267	17092	19359	2015	3199	16522	19721
1980	2055	17766	19821	2016	3210	15514	18724
1985	3034	19479	22513	2017	3198	15063	18261
1990	3154	19190	22344	2018	3456	15659	19115

2000	3865	18187	22052	2019	3272	14880	18152
2007	3863	18907	22770	2020	3293	14615	17908
2008	3307	19568	22875	2021	3276	13830	17106
2009	2987	19934	22921	2022	3282	12870	16152
2010	3098	19051	22149				
2011	2918	18563	21481				

Graphic 2: Hamur District Population by Years (TÜİK, 2023)

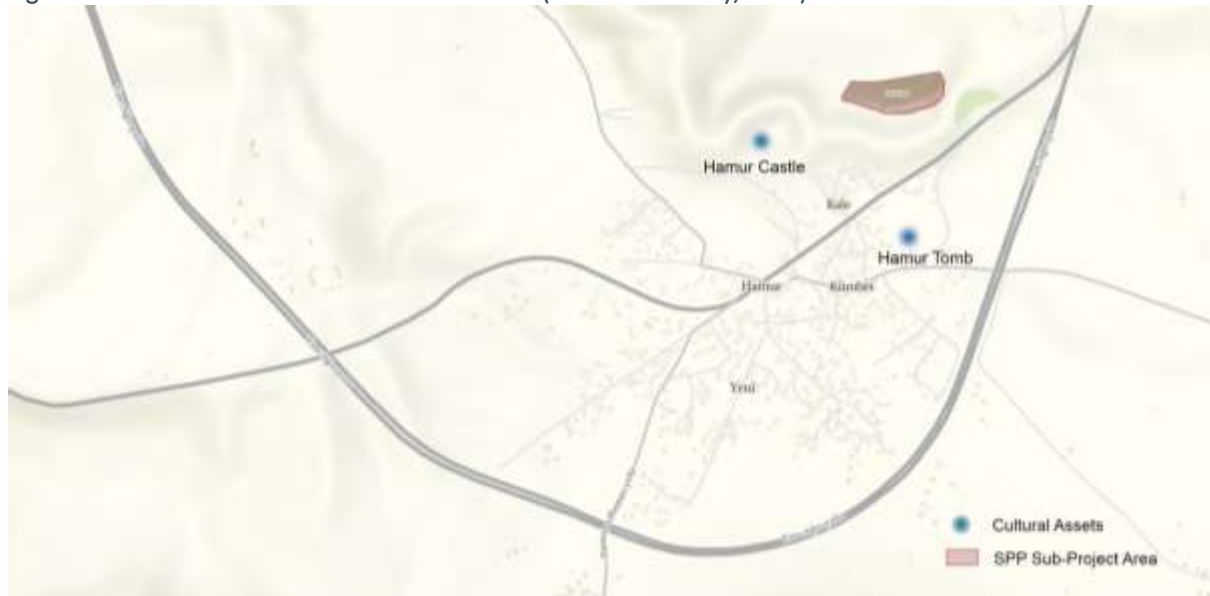


Cultural Heritage

Considering that the history of the Hamur District dates back to the 14th century BC and that there are first-degree archaeological sites such as the Hamur Castle and cemeteries around the subproject area, and that there are important monumental structures in the villages of the district, it is seen that the district is important in terms of cultural assets. The lot where the solar panels will be installed is 100 meters from the Hamur Castle, and approximately 200 meters from the Tomb and cemetery area (Figure 14).

The Castle was established on a wide plain formed on steep rocks, on the shores of the deep valley formed by the Mandalık (or Hamur) Creek, west of the Kale town center. Since the castle was located on the border during the Ottoman period, it was frequently exposed to raids and wars, and it lost its former importance and was used mostly as a border watchtower. In the last periods of the empire, it was used as the castle of the notables who emerged in the region. The well-hewn stones of the castle, which was completely destroyed during the Ottoman-Russian wars and World War I, have recently been dismantled by the local people and used in other structures. It is difficult to obtain precise information about the architectural structure of the castle. In particular, all of the outer walls have been destroyed and no trace has survived to the present day. Only the platform and some wall ruins of the inner castle have survived to the present day (Kültür Portalı, 2023).

Figure 14: Cultural Assets in Hamur District Center (Culture Inventory, 2019)



Photograph 2: Hamur Castle located on the opposite bank of Mandalık Creek passing through the southern edge of the project area (Kültür Portalı, 2023)



Economic Sectors and Facilities

The economy of Ağrı, which is one of the provinces that is not very developed in terms of socio-economics, is basically based on agriculture and animal husbandry.

In addition, the trade and services sectors that develop depending on these sectors constitute the most important employment areas in the province. Although there have been significant developments in education and tourism functions in recent years, unemployment rates are gradually increasing due to inadequate agricultural policies implemented in the province, whose economy is basically based on agriculture and animal husbandry. The province of Ağrı, whose main economy is based on animal husbandry and agriculture, constantly emigrates due to very limited livelihoods, and has not been adequately utilized even though its potential resources are diverse and rich. Ağrı Province is expressed as an important livestock center of Turkey. Livestock farming is more common due to the geographical structure of the province, the presence of large plateaus and pastures, and the soil not being suitable for agriculture.

Agricultural lands, which constitute only 20.4% of the total surface area of Hamur district, a large part of which consists of mountainous and hilly areas, are located mostly in the northern and eastern parts of the district, which is the continuation of the Ağrı plain. Grain and forage crops are the most

cultivated products. The meadow, pasture and plateau areas, which constitute approximately 76.2% of the district's land, are generally located on the mountainous areas surrounding the district from the south and west. For this reason, livestock farming is the most important source of income for the district population. The character of agricultural activities in Hamur district has emerged largely depending on the natural environmental characteristics. Although the main economy of Hamur district is based on animal husbandry and agriculture, there is constant migration due to very limited livelihoods. Agricultural activities are gaining importance in the village settlements in the south of the Ağrı plain, including the northern parts of the Hamur district. In these areas where partially irrigated agriculture is carried out, vegetables, forage crops and grains are cultivated. In the higher elevations, wheat and barley are replaced by large meadows. In areas where the altitude approaches 2000 meters, pasture and pasture areas cover large areas. The largest share in arable land belongs to grain agriculture with 65.7%, followed by forage crops with 32.5%, vegetable agriculture with 1.3% and legumes with 0.5%. A large part of the population living in Hamur district is engaged in animal husbandry. In the area, which consists mostly of high mountainous and hilly areas, large meadow and pasture areas that are not suitable for cultivation activities in terms of slope, lithological structure and soil properties and can be used as pasture have significantly increased the livestock potential. As a matter of fact, 68500 hectares (67.3%) of the land in the region consists of meadows and pasture areas, and 8000 hectares (8.9%) consists of plateau areas.

5. Environmental and Social Management Plan

Mitigation Plan for the Land Preparation, Construction and Operation Phases of the Project

Table 4: Mitigation Plan for the Land Preparation, Construction and Operation Phases of the Project

Phase Impact and Likelihood (1-5)	Risk Description	Mitigation Measures	Responsibility	Key Performance Indicators	Cost
Land Preparation Phase I = 3 L = 4	· Risk 1: Stripping of the Vegetative Topsoil Layer and Soil Compaction	· Implement re-vegetation plans using native species. · Application of organic soil conditioners to restore soil fertility. · Adjust construction equipment to minimize soil compaction. · Implement proper construction techniques and compaction control.	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Operational Phase I = 0 L = 0	· Risk 1: Stripping of the Vegetative Topsoil Layer and Soil Compaction	· The provisions of the Regulation on the Control of Excavation Soil, Construction and Demolition Wastes will be complied to.	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Constructional Phase I = 4 L = 2	· Risk 2: Leakage of Contaminants into the Soil and Waste and Chemical Storage	· Develop spill response and cleanup procedures. · Provide spill containment kits at refueling areas. · Implement proper storage practices for waste and chemicals. · Install secondary containment systems. · Develop and implement an emergency response plan outlining the steps to be taken in the event of a leak or spill	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Operational Phase I = 0 L = 0	· Risk 2: Leakage of Contaminants into the Soil and Waste and Chemical Storage	· Wastes generated should only be temporarily stored on site in the temporary storage area that is maintained/equipped with appropriate precautions according to the type of wastes, when needed, and wastes should be transported to licensed disposal facilities with licensed transport vehicles appropriate to the type of waste. Information related to the operations in this context should be recorded and records should be kept.	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Constructional Phase I = 2 L = 2	Risk 3: Noise Resulting from Temporary Traffic Load Noise Caused by Construction Vehicles and Equipment Blasting, Stone, and Rock Removal · Vibration Effects	· Implement traffic management plans to reduce congestion and optimize routes; use noise barriers, if necessary, to reduce noise propagation · Schedule noisy construction activities during the daytime; Equip vehicles and machinery with noise-reduction technologies. · Ensure blasting and rock removal are performed during permitted hours; Implement vibration dampening measures by using isolation mounts, tuned mass dampers, shock absorbers. · Set vibration limits for construction activities. · Notify and compensate affected property owners for any damage	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Traffic Grievance Records Visual observations (such as traffic signs and warnings are placed at appropriate locations) ESMR Findings	Included in the subproject budget

Phase Impact and Likelihood (1-5)	Risk Description	Mitigation Measures	Responsibility	Key Performance Indicators	Cost
Operational Phase I = 0 L = 0	Risk 3: Noise Resulting from Temporary Traffic Load Noise Caused by Construction Vehicles and Equipment Blasting, Stone, and Rock Removal	· Restricting works during daytime (e.g. 7AM to 5PM).	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Traffic Grievance Records Visual observations (such as traffic signs and warnings are placed at appropriate locations) ESMR Findings	Included in the subproject budget
Constructional Phase I = 3 L = 4	· Risk 4: Dust and Exhaust Emissions from Soil Excavation, Vehicle Traffic and Equipment	· Implement dust control measures, such as watering construction areas. · Use dust screens or barriers to prevent dust dispersion. · Use dust screens or barriers to prevent dust dispersion. · Promote the use of eco-friendly construction equipment. · Pave or stabilize dirt roads to reduce dust emissions. · Enforce speed limits to minimize dust generation. · Maintain vehicles to reduce emissions. · Use low-emission or electric vehicles whenever possible. · Encourage the adoption of clean fuel options. · Develop an emissions control and reporting program.	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Traffic Grievance Records Visual observations (such as traffic signs and warnings are placed at appropriate locations) ESMR Findings	Included in the subproject budget
Operational Phase I = 0 L = 0	· Risk 4: Dust and Exhaust Emissions from Soil Excavation, Vehicle Traffic and Equipment	· Disposing of excess material and cleaning the location upon the finalization of works.	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Traffic Grievance Records Visual observations (such as traffic signs and warnings are placed at appropriate locations) ESMR Findings	Included in the subproject budget
Constructional Phase I = 2	Risk 5: Temporary Blockage of	· Plan construction schedules to minimize road closures. · Provide alternative routes for affected communities.	Hamur Municipality/PIU	Traffic Grievance Records	Included in the subproject budget

Phase Impact and Likelihood (1-5)	Risk Description	Mitigation Measures	Responsibility	Key Performance Indicators	Cost
L = 2	Transportation Roads between Settlements Traffic Vehicles Cause Destruction on Roads and Buildings	<ul style="list-style-type: none"> · Communicate road closures in advance to residents. · Employ regular road maintenance and repair. · Ensure construction vehicle operators follow road safety guidelines. 	Contractor and/or subcontractor Supervision Consultant	Visual observations (such as traffic signs and warnings are placed at appropriate locations) ESMR Findings	
Operational Phase I = 0 L = 0	Risk 5: Temporary Blockage of Transportation Roads between Settlements · Traffic Vehicles Cause Destruction on Roads and Buildings	· Positioning clear warning and information signs around the construction zone. Imposing time constraints (e.g. 7AM to 5PM) for works. Considering disabled, women, children and people with special needs while locating and marking alternative roads (roundabouts)	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Traffic Grievance Records Visual observations (such as traffic signs and warnings are placed at appropriate locations) ESMR Findings	Included in the subproject budget
Constructional Phase I = 3 L = 1	Risk 6: · Chemical Spills and Leaks · Improper Storage and Disposal of Materials · Inadequate Stormwater Management · Inadequate Hazardous Material Handling	· Establish safe delivery/storage/handling procedures in accordance with material safety data sheets (MSDSs) Immediately contain and clean-up any spilled material.	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Operational Phase I = 0 L = 0	Risk 6: · Chemical Spills and Leaks · Improper Storage and Disposal of Materials	· Wastes generated should only be temporarily stored on site in the temporary storage area that is maintained/equipped with appropriate precautions according to the type of wastes, when needed, and wastes should be transported to licensed disposal facilities with licensed transport vehicles appropriate to the type	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget

Phase Impact and Likelihood (1-5)	Risk Description	Mitigation Measures	Responsibility	Key Performance Indicators	Cost
	<ul style="list-style-type: none"> Inadequate Stormwater Management Inadequate Hazardous Material Handling 	<ul style="list-style-type: none"> of waste. Information related to the operations in this context should be recorded and records should be kept. Develop Disposal of Waste PV Modules Management Plan Develop Recycling of Project Equipment/Materials Management Plan 			
Constructional Phase I = 5 L=2	<p>Risk 7:</p> <ul style="list-style-type: none"> Fragmentation of forest habitats, Loss of nesting grounds and/or high biodiversity/sensitive habitats of rare, threatened, or endangered species, Placing obstacles to wildlife movement 	<ul style="list-style-type: none"> Minimizing the areas requiring the removal of vegetation. Special measures if needed to avoid damage to protected trees or species. 	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Operational Phase I=0 L=0	<p>Risk 7:</p> <ul style="list-style-type: none"> Fragmentation of forest habitats, Loss of nesting grounds and/or high biodiversity/sensitive habitats of rare, threatened, or endangered species, Placing obstacles to wildlife movement 	<ul style="list-style-type: none"> Monitoring the areas requiring the removal of vegetation. 	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Construction Phase I = 3 L=4	<ul style="list-style-type: none"> Risk 8: Earthquake Risk 	<ul style="list-style-type: none"> Parameters suitable for 1st degree earthquake zones should be taken into consideration in construction. During construction, current earthquake safety standards and regulations must be followed. The design of the solar power plant should be made considering the earthquake resistance in accordance with the earthquake risk of the region. 	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations Records	Included in the subproject budget
Operational Phase I=1	<ul style="list-style-type: none"> Risk 8: Earthquake Risk 	<ul style="list-style-type: none"> Backup plans should be created for the devices and systems used in the solar power plant. 	Hamur Municipality/PIU	Visual observations	Included in the subproject budget

Phase Impact and Likelihood (1-5)	Risk Description	Mitigation Measures	Responsibility	Key Performance Indicators	Cost
L=2		· Power supplies must be provided for emergencies.	Contractor and/or subcontractor Supervision Consultant	Records	
Land Preparation Phase I = 4 L=2	· Risk 9: Possibility of floods due to excessive rainfall	· In order to prevent soil erosion at the construction site, precautions such as temporary coatings, sedimentation ponds and erosion control barriers should be taken. · A water management plan should be created to regulate water management at the construction site and control flood waters. · Construction materials and equipment should be stored safely, considering the flood risk.	Hamur Municipality/PIU Contractor and/or subcontractor	Visual observations ESMR Findings	Included in the subproject budget
Operational Phase I=0 L=0	· Risk 9: Possibility of floods due to excessive rainfall	· Flood risk should be reduced by establishing an effective water management and drainage system during the operation phase of the solar power plant. · If necessary, facilities such as regulators and dams for flood control should be constructed in the operation area.		Visual observations ESMR Findings	Included in the subproject budget
Constructional Phase I = 1 L=1	· Risk 10: The possibility of discovering artifacts or other cultural and historical items of value.	· Discontinuing all works. Contact responsible authorities. Organizing all necessary measures to protect the location. No works to proceed until official notification is received. · Chance Finds Procedures will be prepared prior to construction works.	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant Niğde Museum	Visual observations	Included in the subproject budget
Operational Phase I=3 L=3	· Risk 10: The possibility of discovering artifacts or other cultural and historical items of value.	· If artifacts are found during the construction phase, all works will be stopped, and the works for the facility will be restarted when the Museum gives permission for the continuation of the works. · Monitoring regularly by the Museum in the operational phase	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant Niğde Museum	Visual observations	Included in the subproject budget
Constructional Phase I = 4 L=1	· Risk 11: Reflection and Glare Effect	· Establish criteria or thresholds that, when exceeded, trigger the need for mitigation measures. For example, if glare affects specific areas or receptor points significantly, mitigation measures should be initiated.	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Operational Phase I = 3 L=1	· Risk 11: Reflection and Glare Effect	· Develop a detailed procedure for monitoring glare and reflection, including responsibilities, schedules, and data collection methods	Hamur Municipality/PIU Contractor and/or subcontractor	Visual observations ESMR Findings	Included in the subproject budget

Phase Impact and Likelihood (1-5)	Risk Description	Mitigation Measures	Responsibility	Key Performance Indicators	Cost
		<ul style="list-style-type: none"> and regularly report the findings and progress of glare and reflection control measures. Design of project area according to flight routes. 	Supervision Consultant		
Constructional Phase I = 4 L=1	· Risk 12: Effects on Workforce and OHS	<ul style="list-style-type: none"> · Shaping early detection mechanisms based on results of monitoring measures, · Legal and regular training, · Utilization of occupational health and safety equipment, · Regular worker health checks, · OHS Site management Plan, · Risk Assessment, · Emergency Plan · Control of working hours and work permits, · Regular safety inspections. 	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Sub-contractor Agreements Grievance Records ESMR Findings	Included in the subproject budget
Operational Phase I=4 L=1	· Risk 12: Effects on Workforce and OHS	<ul style="list-style-type: none"> · For sub-projects that may have labor influx issues, camp sites should be arranged to properly accommodate workers and meet their needs within the camp site. Workers must be provided with relevant trainings as needed. Workers will sign and receive a training on the Code of Conduct. Nearby communities will be consulted regarding the locations of the work camp. · Develop Labor Management Plan 	Hamur Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Sub-contractor Agreements Grievance Records ESMR Findings	Included in the subproject budget

Monitoring Plan for the Land Preparation, Construction and Operation Phases of the Project

Table 5: Monitoring Plan for the Land Preparation, Construction and Operation Phases of the Project

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
Land Preparation Phase I = 4 L = 2	Risk 1: Stripping of the Vegetative Topsoil Layer and Soil Compaction	· Analysis organic matter content and compaction levels of soil in the project site regularly.	· Soil Organic Matter Content · Soil compaction levels	· Sampling and laboratory analysis · Soil compaction tests	· Project site · Areas with construction and traffic intensity	· Before and after topsoil stripping · Periodic checks during and after construction	· Any significant decrease in soil organic matter content

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
							· Soil compaction beyond allowable limits
Constructional Phase I = 4 L = 2	Risk 2: Leakage of Contaminants into the Soil and Waste and Chemical Storage	· Analysis contaminants and waste in the soil of the project site regularly.	· Presence of oil, lubricants, or fuels in soil. · Soil leachate quality.	· Visual inspection, soil sampling, and chemical analysis. · Regular sampling and analysis of leachate.	· Areas near equipment refueling stations and vehicle storage. · Near waste and chemical storage areas	· Regular checks during refueling and maintenance	· Presence of contaminants
Operational Phase I = 0 L = 0	Risk 2: Leakage of Contaminants into the Soil and Waste and Chemical Storage	· Analysis contaminants and waste in the soil of the project site regularly.	· Presence of oil, lubricants, or fuels in soil. · Soil leachate quality.	· Visual inspection, soil sampling, and chemical analysis. · Regular sampling and analysis of leachate.	· Areas near equipment refueling stations and vehicle storage. · Near waste and chemical storage areas	· Regular checks during refueling and maintenance	· Presence of contaminants
Constructional Phase I = 2 L = 2	Risk 3: Noise Resulting from Temporary Traffic Load Noise Caused by Construction Vehicles and Equipment Blasting, Stone, and Rock Removal Vibration Effects	· Conduct periodic sound level measurements at key locations in areas with traffic during construction. · Regularly measure noise levels during equipment operation in areas with equipment activities. · Continuously monitor vibration and noise levels during blasting operations near blasting sites.	· Noise levels generated by traffic. · Noise levels generated by traffic. · Vibration levels and noise from blasting · Structural and superficial damage from vibrations	· Sound level measurement · Vibration and noise measurements during blasting operations · Visual inspections and structural assessments.	· Areas with traffic during construction · Areas with equipment operation. · Near blasting sites. · Buildings near construction areas.	· Periodic measurements during construction. · Continuous monitoring during blasting activities. · Regular structural assessments during construction.	· Noise levels exceeding acceptable limits. · Vibration and noise exceeding allowable levels. · Signs of structural or superficial damage.
Operational Phase I = 0 L = 0	Risk 3: Noise Resulting from Temporary Traffic Load Noise Caused by Construction Vehicles and Equipment	· Conduct periodic sound level measurements at key locations in areas with traffic during construction. · Regularly measure noise levels during equipment	· Noise levels generated by traffic. · Noise levels generated by traffic. · Vibration levels and noise from blasting	· Sound level measurement · Vibration and noise measurements during blasting operations	· Areas with traffic during construction · Areas with equipment operation. · Near blasting sites. · Buildings near construction areas.	· Periodic measurements during construction. · Continuous monitoring	· Noise levels exceeding acceptable limits. · Vibration and noise exceeding allowable levels.

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
	Blasting, Stone, and Rock Removal Vibration Effects	operation in areas with equipment activities. · Continuously monitor vibration and noise levels during blasting operations near blasting sites.	· Structural and superficial damage from vibrations	· Visual inspections and structural assessments.		during blasting activities. · Regular structural assessments during construction.	· Signs of structural or superficial damage.
Constructional Phase I = 3 L = 4	Risk 4: Dust and Exhaust Emissions from Soil Excavation, Vehicle Traffic and Equipment	· Continuous measurement of dust concentration and particulate matter (PM) emissions using air quality monitoring equipment in construction areas with soil excavation. · Periodic air quality measurements along traffic routes in traffic-prone areas within the site. · Periodic emission measurements from the exhaust systems of vehicles and construction equipment in vehicle operation areas.	· Dust concentration and particulate matter (PM) emissions. · Dust concentration and particulate matter (PM) emissions. · Emissions from vehicles and construction equipment.	· Dust concentration measurements using air quality monitoring equipment. · Air quality measurements along traffic routes. · Emission measurements from the exhaust systems	· Construction areas with soil excavation · Traffic-prone areas within the site · Vehicle operation areas	· Continuous monitoring during excavation activities · Periodic measurements during project activities · Periodic emissions testing during construction and operation	· Dust levels exceeding acceptable thresholds. · Emissions exceeding permissible levels
Operational Phase I = 0 L = 0	Risk 4: Dust and Exhaust Emissions from Soil Excavation, Vehicle Traffic and Equipment	· Continuous measurement of dust concentration and particulate matter (PM) emissions using air quality monitoring equipment in construction areas with soil excavation. · Periodic air quality measurements along traffic routes in traffic-prone areas within the site. · Periodic emission measurements from the	· Dust concentration and particulate matter (PM) emissions. · Dust concentration and particulate matter (PM) emissions. · Emissions from vehicles and construction equipment.	· Dust concentration measurements using air quality monitoring equipment. · Air quality measurements along traffic routes. · Emission measurements from the exhaust systems	· Construction areas with soil excavation · Traffic-prone areas within the site · Vehicle operation areas	· Continuous monitoring during excavation activities · Periodic measurements during project activities · Periodic emissions testing during construction and operation	· Dust levels exceeding acceptable thresholds. · Emissions exceeding permissible levels

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
		exhaust systems of vehicles and construction equipment in vehicle operation areas.					
Constructional Phase I = 2 L = 2	Risk 5: Temporary Blockage of Transportation Roads between Settlements Traffic Vehicles Cause Destruction on Roads and Buildings	<ul style="list-style-type: none"> Analyzing road blockages, duration, and frequency through real-time assessments of transportation routes. Analyzing damages to roads and buildings by conducting periodic visual assessments in areas where construction vehicles operate. 	<ul style="list-style-type: none"> Road blockages, duration, and frequency. Damage to roads and buildings 	<ul style="list-style-type: none"> Record road closure incidents and duration. Visual inspections, documenting damages. 	<ul style="list-style-type: none"> Vehicle operation areas. Transportation routes. Areas where construction vehicles operate. 	<ul style="list-style-type: none"> Periodic emissions testing during construction and operation. Real-time monitoring of road conditions. Periodic visual assessments 	<ul style="list-style-type: none"> Road closures exceeding acceptable frequency. Occurrence of damages to roads and buildings beyond permissible levels.
Operational Phase I = 0 L = 0	Risk 5: Temporary Blockage of Transportation Roads between Settlements Traffic Vehicles Cause Destruction on Roads and Buildings	<ul style="list-style-type: none"> Analyzing road blockages, duration, and frequency through real-time assessments of transportation routes. Analyzing damages to roads and buildings by conducting periodic visual assessments in areas where construction vehicles operate. 	<ul style="list-style-type: none"> Road blockages, duration, and frequency. Damage to roads and buildings 	<ul style="list-style-type: none"> Record road closure incidents and duration. Visual inspections, documenting damages. 	<ul style="list-style-type: none"> Vehicle operation areas. Transportation routes. Areas where construction vehicles operate. 	<ul style="list-style-type: none"> Periodic emissions testing during construction and operation. Real-time monitoring of road conditions. Periodic visual assessments 	<ul style="list-style-type: none"> Road closures exceeding acceptable frequency. Occurrence of damages to roads and buildings beyond permissible levels.
Constructional Phase I = 3 L = 1	Risk 6: <ul style="list-style-type: none"> Chemical Spills and Leaks Improper Storage and Disposal of Materials Inadequate Stormwater Management Inadequate Hazardous Material Handling 	<ul style="list-style-type: none"> Establish a remote monitoring and control system to allow operators to assess chemical levels and respond to incidents 	<ul style="list-style-type: none"> Chemical concentrations 	<ul style="list-style-type: none"> Utilize remote monitoring technologies, such as sensors, meters, or Supervisory Control and Data Acquisition systems, to continuously measure and transmit real-time data on chemical concentrations 	<ul style="list-style-type: none"> Place monitoring devices strategically in critical areas where chemicals are stored, handled, or processed 	<ul style="list-style-type: none"> Continuous real-time monitoring is essential for immediate detection of abnormal chemical concentrations 	<ul style="list-style-type: none"> limits should be set to detect concentrations that may pose risks, ensuring early detection and response.

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
Operational Phase I = 0 L = 0	Risk 6: <ul style="list-style-type: none"> Chemical Spills and Leaks Improper Storage and Disposal of Materials Inadequate Stormwater Management Inadequate Hazardous Material Handling 	<ul style="list-style-type: none"> Establish a remote monitoring and control system to allow operators to assess chemical levels and respond to incidents 	<ul style="list-style-type: none"> Chemical concentrations 	<ul style="list-style-type: none"> Utilize remote monitoring technologies, such as sensors, meters, or Supervisory Control and Data Acquisition systems, to continuously measure and transmit real-time data on chemical concentrations 	<ul style="list-style-type: none"> Place monitoring devices strategically in critical areas where chemicals are stored, handled, or processed 	<ul style="list-style-type: none"> Continuous real-time monitoring is essential for immediate detection of abnormal chemical concentrations 	<ul style="list-style-type: none"> limits should be set to detect concentrations that may pose risks, ensuring early detection and response.
Constructional Phase I = 5 L = 2	Risk 7: <ul style="list-style-type: none"> Fragmentation of forest habitats, Loss of nesting grounds and/or high biodiversity/sensitive habitats of rare, threatened, or endangered species, Placing obstacles to wildlife movement 	<ul style="list-style-type: none"> Habitat Monitoring 	<ul style="list-style-type: none"> Wildlife Movement the integrity of vegetation structure, including canopy cover and understory vegetation, to gauge habitat quality. 	<ul style="list-style-type: none"> Employ remote sensing technologies, such as satellite imagery and GIS (Geographic Information System), to analyze landscape patterns and changes over time. Conduct on-the-ground surveys to assess vegetation structure and identify signs of habitat fragmentation 	<ul style="list-style-type: none"> Representative locations across the forested area, focusing on areas identified as potential fragmentation zones or areas with critical habitat connections. core habitat areas, potential corridors, and areas around the forest periphery. 	<ul style="list-style-type: none"> Regular assessments throughout the year to capture seasonal variations 	<ul style="list-style-type: none"> Thresholds for beyond which fragmentation is considered a significant concern.
Operational Phase I=0 L=0	Risk 7: <ul style="list-style-type: none"> Fragmentation of forest habitats, Loss of nesting grounds and/or high biodiversity/sensitive habitats of rare, 	<ul style="list-style-type: none"> Habitat Monitoring 	<ul style="list-style-type: none"> Wildlife Movement the integrity of vegetation structure, including canopy cover and understory vegetation, to gauge habitat quality. 	<ul style="list-style-type: none"> Employ remote sensing technologies, such as satellite imagery and GIS (Geographic Information System), to analyze landscape 	<ul style="list-style-type: none"> Representative locations across the forested area, focusing on areas identified as potential fragmentation zones or areas with critical habitat connections. 	<ul style="list-style-type: none"> Regular assessments throughout the year to capture seasonal variations 	<ul style="list-style-type: none"> Thresholds for beyond which fragmentation is considered a significant concern.

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
	threatened, or endangered species, Placing obstacles to wildlife movement			patterns and changes over time. · Conduct on-the-ground surveys to assess vegetation structure and identify signs of habitat fragmentation	· core habitat areas, potential corridors, and areas around the forest periphery.		
Construction Phase I = 3 L=4	Risk 8: Earthquake Risk	· Earthquake activities should be constantly monitored with sensitive earthquake sensors and monitoring systems placed in the project area. · Continuous monitoring systems should be established for solar power panels, support structures, inverters and other structural elements. · Structural strengthening works should be carried out within a certain period in order to minimize the damages that may occur under the influence of earthquakes.	· Liquefaction rates · Soil classification · earthquake design classes · settlement suitability data	· Ground survey · Structural strengthening · Earthquake sensors and monitoring systems · Seismic isolation technologies	· Project Site and surrounding areas	Continuous monitoring with real-time updates. Continuous monitoring with real-time or periodic reviews. · Immediate reporting for any incidents and periodic documentation for routine checks	· Alarming system according to the earthquake intensity · Preventive systems that are automatically activated according to vibration level detection · Ground movement sensor · Remote sensing technologies, such as energy distribution
Operational Phase I=1 L=4	Risk 8: Earthquake Risk	· Earthquake activities should be constantly monitored with sensitive earthquake sensors and monitoring systems placed in the project area.	· Liquefaction rates · Soil classification · earthquake design classes · settlement suitability data	· Ground survey · Structural strengthening · Earthquake sensors and monitoring systems	· Project Site and surrounding areas	Continuous monitoring with real-time updates. Continuous monitoring with	· Alarming system according to the earthquake intensity · Preventive systems that are automatically

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
		<ul style="list-style-type: none"> Continuous monitoring systems should be established for solar power panels, support structures, inverters and other structural elements. Structural strengthening works should be carried out within a certain period in order to minimize the damages that may occur under the influence of earthquakes. 		<ul style="list-style-type: none"> Seismic isolation technologies 		<ul style="list-style-type: none"> real-time or periodic reviews. Immediate reporting for any incidents and periodic documentation for routine checks 	<ul style="list-style-type: none"> activated according to vibration level detection Ground movement sensor Remote sensing technologies, such as energy distribution
Construction Phase I = 3 L=4	Risk 9: Possibility of floods due to excessive rainfall	<ul style="list-style-type: none"> Utilize advanced weather forecasting services to receive timely and accurate information about potential heavy rainfall. Early warning systems should be in place to alert relevant authorities and the public. 	<ul style="list-style-type: none"> Monitor the intensity of rainfall, measured in millimeters per hour. This parameter helps assess how quickly precipitation is accumulating and if it reaches levels that may lead to flooding. 	<ul style="list-style-type: none"> Ground-based rain gauges, weather radar, and satellite precipitation estimates can be used. 	<ul style="list-style-type: none"> Project Site and areas where the workforce is most active and where with heavy equipment use 	<ul style="list-style-type: none"> Regular and ongoing monitoring during periods of intense rainfall events 	<ul style="list-style-type: none"> detect changes in rainfall and water level with scales and indicators
Operational Phase I=1 L=2	Risk 9: Possibility of floods due to excessive rainfall	<ul style="list-style-type: none"> Utilize advanced weather forecasting services to receive timely and accurate information about potential heavy rainfall. Early warning systems should be in place to alert relevant authorities and the public. 	<ul style="list-style-type: none"> Monitor the intensity of rainfall, measured in millimeters per hour. This parameter helps assess how quickly precipitation is accumulating and if it reaches levels that may lead to flooding. 	<ul style="list-style-type: none"> Ground-based rain gauges, weather radar, and satellite precipitation estimates can be used. 	<ul style="list-style-type: none"> Project Site and areas where the workforce is most active and where with heavy equipment use 	<ul style="list-style-type: none"> Regular and ongoing monitoring during periods of intense rainfall events 	<ul style="list-style-type: none"> detect changes in rainfall and water level with scales and indicators

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
Land Preparation Phase I = 4 L=2	Risk 10: The possibility of discovering artifacts or other cultural and historical items of value.	· Coordinate with relevant regulatory authorities and heritage preservation agencies to ensure compliance with cultural heritage protection regulations	· Chance findings	· Coordination with the Museum affiliated to the Ministry.	· Project Site	· -	· Once a chance finding discovered
Operational Phase I=0 L=0	Risk 10: The possibility of discovering artifacts or other cultural and historical items of value.	· Coordinate with relevant regulatory authorities and heritage preservation agencies to ensure compliance with cultural heritage protection regulations	· Chance findings	· Coordination with the Museum affiliated to the Ministry.	· Project Site	· -	· Once a chance finding discovered
Constructional Phase I = 1 L=1	Risk 11: Reflection and Glare Effect	· Implement visual monitoring protocols to observe and record glare and reflection events. · Use specialized glare measurement tools to provide quantitative data. · Conduct monitoring during different times of the day and under various weather conditions to capture variations.	· The intensity and frequency of glare and reflection from the solar panels and surrounding areas and the times of the day, seasons, or specific weather conditions when glare and reflection effects are most pronounced.	· The intensity and frequency of glare and reflection from the solar panels and surrounding areas and the times of the day, seasons, or specific weather conditions when glare and reflection effects are most pronounced.	· The intensity and frequency of glare and reflection from the solar panels and surrounding areas.	· The intensity and frequency of glare and reflection from the solar panels and surrounding areas.	· Define specific detection limits that indicate the threshold beyond which glare and reflection effects become significant and may require corrective action.
Operational Phase I=3 L=3	Risk 11: Reflection and Glare Effect	· Implement visual monitoring protocols to observe and record glare and reflection events. · Use specialized glare measurement tools to provide quantitative data.	· The intensity and frequency of glare and reflection from the solar panels and surrounding areas and the times of the day, seasons, or specific weather conditions when	· The intensity and frequency of glare and reflection from the solar panels and surrounding areas and the times of the day, seasons, or specific weather conditions when	· The intensity and frequency of glare and reflection from the solar panels and surrounding areas.	· The intensity and frequency of glare and reflection from the solar panels and surrounding areas.	· Define specific detection limits that indicate the threshold beyond which glare and reflection effects become significant and

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
		<ul style="list-style-type: none"> Conduct monitoring during different times of the day and under various weather conditions to capture variations. 	glare and reflection effects are most pronounced.	glare and reflection effects are most pronounced.			may require corrective action.
Constructional Phase I = 4 L=1	Risk 12: Effects on Workforce and OHS	<ul style="list-style-type: none"> To establish an incident reporting system and encourage its use by employees for reporting and documenting workplace incidents, Regular health assessments according to 6331 Law, its regulation and WB ESP to monitor employees' health conditions and facilitate prompt intervention or preventive measures for emerging health issues, Periodically identifying factors contributing to workplace stress and conducting workplace stress surveys to eliminate stressors, Regular inspections by relevant regulatory authorities to identify potential hazards in the construction area and alleviate the physical and mental fatigue of workers during intensive construction periods, 	<ul style="list-style-type: none"> Workforce health and safety indicators, including accident rates, workplace stress levels, and health-related incidents/ near misses, injuries, and safety violations/near misses, fire and environmental incidents/near misses 	<ul style="list-style-type: none"> Data collection through incident reports, health assessments, safety inspections, accident investigations and surveys 	<ul style="list-style-type: none"> Project site and areas where the workforce is most active and where with heavy equipment use 	<ul style="list-style-type: none"> Regular and ongoing monitoring during periods of intense construction and operation activities 	<ul style="list-style-type: none"> Define thresholds for incident rates and workforce stress levels that warrant corrective action

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
		<ul style="list-style-type: none"> · Conducting emergency drills to ensure swift action in case of emergencies, and ensuring that all employees are familiar with evacuation procedures and emergency protocols, · Maintaining effective and transparent communication among employees, employers, and relevant stakeholders, establishing continuous communication channels for reporting any safety concerns or issues, · Monitoring and regulating working and break hours to prevent excessive fatigue, ensuring that employees take regular breaks. 					
Operational Phase I=4 L=1	Risk 12: Effects on Workforce and OHS	<ul style="list-style-type: none"> · To establish an incident reporting system and encourage its use by employees for reporting and documenting workplace incidents, · Regular health assessments according to 6331 Law, its regulation and WB ESP to monitor employees' health conditions and facilitate prompt intervention or preventive measures for emerging health issues, · Periodically identifying factors contributing to 	<ul style="list-style-type: none"> · Workforce health and safety indicators, including accident rates, workplace stress levels, and health-related incidents/ near misses, injuries, and safety violations/near misses, fire and environmental incidents/near misses 	<ul style="list-style-type: none"> · Data collection through incident reports, health assessments, safety inspections, accident investigations and surveys 	<ul style="list-style-type: none"> · Project site and areas where the workforce is most active and where with heavy equipment use 	<ul style="list-style-type: none"> · Regular and ongoing monitoring during periods of intense construction and operation activities 	<ul style="list-style-type: none"> · Define thresholds for incident rates and workforce stress levels that warrant corrective action

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
		<p>workplace stress and conducting workplace stress surveys to eliminate stressors,</p> <ul style="list-style-type: none"> · Regular inspections by relevant regulatory authorities to identify potential hazards in the construction area and alleviate the physical and mental fatigue of workers during intensive construction periods, · Conducting emergency drills to ensure swift action in case of emergencies, and ensuring that all employees are familiar with evacuation procedures and emergency protocols, · Maintaining effective and transparent communication among employees, employers, and relevant stakeholders, establishing continuous communication channels for reporting any safety concerns or issues, · Monitoring and regulating working and break hours to prevent excessive fatigue, ensuring that employees take regular breaks. 					

Measures for Institutional Arrangements, Capacity Development, and Training

In the context of the Sub-Project aiming to increase renewable energy production in the Hamur district, institutional arrangements for managing environmental and social issues need to be established to ensure its implementation with minimized potential impacts. In the Environmental and Social Management Framework of the World Bank's Sustainable Cities Project-II Additional Financing (World Bank, 2019), ILBANK Project Management Unit (PYB), and the project owner municipalities are identified as key actors. Roles and capacities of actors should be defined, and necessary adjustments should be made for the effective implementation of sub-projects. For the SPP project to be constructed in the Hamur district, the main actors are the World Bank, ILBANK, Hamur Municipality, Contractor, Supervision Consultant, and E&S Consultant.

Hamur Municipality

Renewable energy projects in Hamur Municipality are managed by the Technical Works Directorate with a staff of three, including an environmental engineer, a civil engineer, and a land surveyor. There is currently no unit used as a complaint mechanism in Hamur Municipality. According to the ESMP, the Technical Works Directorate, Research Project Directorate, Plan-Project Directorate, Headman Affairs, Human Resources and Training Directorate, and Culture and Social Affairs Directorate teams within the municipality should be involved in a Project Management Unit.

Table 6: Roles and Responsibilities of Main Actors of SPP Subproject

	Hamur Municipality	ILBANK	WB	Contractor	Supervision Consultant	E&S Consultant
Financial Roles	Requestor	Financial intermediary	Main finance source			
Application Process	Submit Demand Based Applications	Review / analyze the applications in order to provide information to WB Prepare Hamur Municipality's subproject documents in accordance with WB requirements,	Concur the final selection of eight participating municipalities.			
Preparation Process	Welcome and apply the relevant laws and regulations that are introduced by WB through ILBANK	Coordinate the selected municipalities to ensure all the relevant rules and regulations will be adopted throughout the project. Organize internal working structure for the investment options. Although the project site is in the low risk category, in case of need, Hamur Municipality officials and consultants are guided on WB requirements (documents and procedures) regarding impact factors such as cultural assets, land acquisition and involuntary settlement, natural habitats, forests and	Assist ILBANK in Developing Performance and Monitoring Database system during the preparation phase. Provide technical guide for ILBANK. Implementation and inspection of the ESMP of the subproject and development of recommendations	Ensure compliance with all requirements of the ESMF and management plans. Ensure conformity with project standards and obtaining all relevant permits and licenses	Identify and managing environmental, social, and OHS-related risks	Preparing Environmental and Social Assessment Reports, i.e., ESMF and Resettlement Action Plans (and, if necessary, RAP/LRP), for approval by ILBANK and the World Bank.
Number of Staff	One Social and One Environmental Expert	In addition to present team, a support team	Assist ILBANK in establishing monitoring		Employe competent Environmental,	

		can be established. Structure of the team and qualification of team members will be defined by ILBANK and WB. Individual freelance consultants can be employed.	team.		Social, and OHS Experts (at least one Social Expert, one Environmental Expert, and one OHS Expert) within the scope of the project	
Project Roles	Preparation of ESIA, ESMP and Grievance Mechanism	The main responsible for monitoring ESIA, ESMP and Grievance process Provide written comments to consultants	Overall review of the project development stages		Draft time-bound action plans for the contractor in case of non-compliance	
	Tendering all the project works and consulting services	Supervise and monitor the whole process to ensure the proper application of the WB's environmental and social safeguard policies are applied.	Review of incoming reports to see the Bank standards are in progress. Recommend additional measures to strengthen the management framework and improve implementation performance.			
Disclosure Roles	Disclose ESMP on the official website of municipalities after approval of Ilbank and WB	Confirm and Disclose the ESMP on Ilbank's official website Disclosure of official approval of environmental and social assessment documents and related procedures for the project in accordance with WB safeguarding requirements, to perform the overall quality assurance function to	Confirm and Disclose the ESMP on WB's official website			

		ensure that EA documents meet WB requirements				
Construction Phase Responsibilities	Prepare tender documents for the construction process.	Obtaining the opinions of affected groups and local environmental/social experts on the environmental and social aspects of the project implementation and organizing field visits with these groups when necessary	Visit project sites from time to time, when necessary, as part of the project	Implement all commitments determined by Hamur Municipality.	Guide Hamur Municipality officials and consultants in the implementation of World Bank requirements (documents and procedures) in the E&S framework after approval by Hamur Municipality	
	Conduct tenders in accordance with public procurement legislation and WB legal requirements.	Coordinating and communicating with WB inspection officers regarding the environmental and social protection measures of the project implementation in organizing field visits.		Supervise the construction and/or rehabilitation works and installation of equipment	Ensure the provision of sufficient capacity to carry out C&S audits effectively in accordance with ESMF requirements when the implementation of mitigating measures by the Contractor is deemed necessary	
	Share the ESMP with the Contractor, guide the Contractor in preparing sub-management plans, and approve these plans.					
	Update the ESMP when necessary and share additional commitments with the Contractor.					
	Coordinate actions and evaluations in case of changes due to engineering/design changes, route/location					

	changes, legislative changes related to environmental and social issues, authorization provision changes, new environmental/social data, construction/operation strategy changes.					
Monitoring Roles	Evaluate performance indicators, environmental reviews, monitoring, inspections, and results related to ESMP applications.	Monitoring the implementation of ESMP and other environmental and social mitigation measures, auditing Hamur Municipality's ESMP implementations and documenting performance, recommendations, and other necessary steps within the scope of overall project supervision	Oversee the project in accordance with WB Safeguard Policies and provide technical support and guidance	Monitore construction activities (including subcontractor activities) and taking and implementing measures within the scope of the ESMF	Report environmental audits, monitoring, and inspections related to E&S practices to Hamur Municipality.	
	Prepare Environmental and Social Monitoring Reports (ESMRs) every three months, submit them to ILBANK, and inform them.	Inform WB through Environmental and Social Monitoring Reports (ESMRs) to be submitted by Hamur Municipality every three months.		Submit Monthly Environmental and Social Monitoring Reports (ESMRs) to the Project Owner Municipality	Monitore and evaluate the performance of services provided by the contractor	
	Monitor contractor activities.	Submit Project Progress Reports to WB every 6 months.			Ensure regular (monthly) reporting of the Contractor's C&S performance to the Municipality and ILBANK	
Training Responsibilities	Provide necessary training on Environmental and Social Management issues to Project Management Unit (ILBANK) and relevant directorates.				Provide necessary environmental and social training to the contractor and subcontractor personnel	

Urgent Action Roles	Ensure compliance with project standards and take urgent actions in case of non-compliance.			Promptly notifying the Project Owner of unexpected situations, such as environmental, social, and occupational issues or accidents, incidents, or time loss, and maintaining an on-site incident log throughout the project lifespan. An incident report, including root cause analysis and corrective actions needed, will be submitted to ILBANK and the World Bank within 30 days.	Ensure the tracking and analysis of environmental and social incidents	
	Halt work in any situation threatening the environment, community, and occupational health and safety.				notify ILBANK and the Municipality, exercising the contract authority in case non-compliance persists	
	Analyze and monitor environmental and social accidents/incidents.					
Stakeholder participation Roles	Ensure stakeholder participation, implement the grievance redress mechanism, and ensure continuous information transfer through open communication.	Provide guidance on public participation and announcement requirements when necessary			Provide guidance on public participation and announcement requirements in accordance with World Bank requirements	Taking part in organizing the introduction ESMP to the public and NGOs within the scope of the project and stakeholder engagement events

Implementation of ESMP Disclosure

Ensuring the full integration and implementation of this ESMP into all project preparation and planning activities constitutes one of the key responsibilities of Hamur Municipality. It will provide a framework for all physical works and participation processes within the scope of the project. It will be an integral part of the matrices prepared for the tender processes related to physical works. The technical requirements, conservation, preservation, and monitoring measures outlined in the ESMP will be strictly adhered to in the tender documents, and it will be explicitly stated that the processes will be subject to review according to this plan.

The ESMP, prepared in accordance with the requirements of the World Bank Safeguard Policies, will be publicly disclosed and will be the responsibility of ILBANK. Hamur Municipality will publish the final approved ESMP on its website. Additionally, a unit, easily accessible by affected groups such as Muhtar offices and local NGOs as outlined in the Stakeholder Analysis section of this plan report, will be established.

Like all management plans, the ESMP has a dynamic structure. It will be periodically reviewed during the implementation and operation phases of the project, deficiencies, malfunctions, and issues will be reported, and based on these reports, it will be updated and approved when deemed necessary. For each approved updated version of this ESMP, Hamur Municipality is responsible for sharing it with the public and providing explanations through communication channels. Thus, the implementation of the ESMP and the actions taken during the implementation process will be transparently shared with the public. The ESMP and Stakeholder Engagement Mechanism must be disclosed to all stakeholders and the public as part of environmental and social impact assessment studies.

It is expected that this ESMP will be completed by the Consultant before the project's implementation phase. Documents necessary for the implementation of the ESMP should also be prepared accordingly, and each system required for the project, such as the Grievance Redress Mechanism, should be explained.

Institutional Capacity Building and Training

The Project Owner, Hamur Municipality, will conduct a training and awareness program covering the expectations and commitments of the ESMF. The Supervision Consultant, in collaboration with the Project Owner, needs to organize a workshop to identify priority topics for the training. The target audience for the training programs includes employees and contractors responsible for implementing the ESMP. The Project Owner must provide training to employees and subcontractors before the construction phase begins. The training is expected to last at least two days and should be held twice a year. Depending on the level of responsibility for implementing the ESMP, advanced training programs should also be considered.

The code of conduct, including compliance with behavioral rules addressing gender-based violence, sexual harassment, sexual exploitation, and abuse, will be explicitly stated in the personnel's contract terms. The consequences of non-compliance with behavioral rules will be clearly outlined in the contract. Measurement and evaluation should be conducted at the end of the training provided to personnel.

This aims to enhance the competence of the personnel. Based on the review results, adjustments to the training program can be made if necessary, including changes in trainers or repeating the training. The training program/modules will cover a range of topics, including but not limited to:

- Objectives of the ESMF concerning project activities,
- Workshops by ILBANK to familiarize municipalities and their potential consultants with WB safeguard policies,
- Requirements in management plans and monitoring activities to be conducted within this framework,
- Environmental and social data collection, reporting, and monitoring,
- Understanding sensitive environmental and social receptors in the project area and surroundings,

- Raising awareness about potential risks and impacts arising from project activities,
 - Trainings related to management of air emissions, waste management, etc.
 - Routine training on fire safety and first aid
- Complaints redress mechanism developed within the project scope, the officer responsible for the mechanism, and employee rights,
- Risks and measures related to community health and safety, personal protective equipment and information on works and occupational safety
- Occupational health and safety, first aid, emergency preparedness, and emergency scenarios
- Rules for maintaining behavior and workplace harmony,
- Communication with the local community,
- Training on behavioral rules covering gender-based violence, sexual harassment, sexual exploitation, and abuse,
- Principles of traffic and road safety,
- Waste separation, storage, and training on environmental planning
- Capacity building activities such as training, workshop, study tours
- ESF Borrower Training roll out program.

Environmental and Social Monitoring Report

The Environmental and Social Monitoring Report serves as a crucial tool for recording performance indicators, parameters, and measurement values at specified intervals to be used in the measurement of safeguards and monitoring measures. It is critical for anticipating potential issues that may arise throughout the project's life cycle and determining mitigation, reduction, and improvement strategies to effectively address these issues. The results will be assessed for compliance with established standards by comparing them with national legislative requirements and the World Bank EHS Guidelines. Visual observations, along with documented significant issues, will be presented in written form. The report should focus on both positive practices and negative findings, with photographic evidence supporting negative observations. For each negative observation, a corrective action should be proposed with a reasonable deadline. Any analysis/sample collection/measurement report should be provided as an annex to the report, along with the relevant assessment and required improvement activities. The findings of the Environmental and Social Monitoring Reports will ensure the dynamic and living nature of this ESMP. Therefore, the ESMP should be reviewed and revised by the Municipality's PIU unit based on these findings.

Long-term monitoring reports are used to objectively evaluate the environmental and social performance of the project and determine its sustainability. This is a vital tool for understanding the long-term impacts of the project, developing strategies for future similar projects, and keeping the ESMP updated over time. Monitoring reports identify issues that can be improved and localized by assessing the project's environmental and social governance. It is expected to be used to develop strategic management to strengthen relationships among stakeholders influenced by the project and minimize its impacts. Additionally, long-term monitoring reports are used to evaluate the project's societal acceptance and reputation. Continuous communication with stakeholders, obtaining feedback, and developing effective response strategies to this feedback are important in this regard. The experience gained will contribute to identifying potential problems in advance and developing emergency intervention strategies.

Documenting and monitoring the environmental and social performance of the project for the World Bank and ILBANK enhances trust in the project and increases the municipality's future financial reliability. Furthermore, monitoring reports contribute to the development of good practice standards in the renewable energy sector, the widespread implementation of similar projects at the district and even provincial levels, and the localization of relevant standards, thereby contributing to regional development and sustainable development goals.

In addition to all these, it will provide an important baseline for physical spatial planning studies that determine the future of cities. It is expected to generate important data in terms of identifying criteria that can be used in determining suitable areas for renewable energy and integrating them into planning processes. Long-term evaluations obtained through monitoring reports will be crucial for ensuring the sustainability of planning decisions throughout the life cycle of projects, assessing environmental and social changes, and providing opportunities to enhance planning processes.

6. Stakeholder Engagement

This Stakeholder Analysis is based on the relevant Turkish legislation and international regulations by considering the project is exempt from EIA and classified as a Category B Project according to the WB OP 4.01. In conformity, relevant WB OPs (i.e., WB OP 4.01 and WB's 2010 Policy on Access to Information) and EU Directives. In this regard, the relevant national and international policies considered are given below.

Stakeholder Identification and Analysis

The purpose of a stakeholder identification is to determine and prioritize the project stakeholders for consultation that may be affected (either directly or indirectly in positive or negative way) by the project or that have an interest in the project but are not necessarily directly impacted by it.

The following categories of stakeholders have been identified as being affected by or potentially interested in the Hamur Municipality Solar Power Project.

- Project affected parties,
- National governmental and non-governmental organizations (NGOs),
- Local governmental organizations and NGOs,
- Residents (potentially PAPs including landowners/users/ renters/ informal users of the lands),
- Local businesses
- Vulnerable groups
- Refugees

In the stakeholder identification process, the dynamics between the stakeholders, the risks, and opportunities of being involved in the project are considered. The basis of stakeholder identification is the level of interest and interaction with the project. Accordingly, stakeholders can be grouped under the following categories.

- Direct Stakeholders
- Indirect Stakeholders
- Other Interested Parties

Within the scope Hamur Municipality Solar Power Plant Project of this project, a comprehensive list of the internal and external stakeholders is given in Table 7.

Table 7: Comprehensive List of the Stakeholder Identified for the Project

Stakeholder Groups	Level of Interest	Level of Influence
Direct Stakeholders		
Directly Affected Communities		
Residents in the project area of influence	Moderate	Low
Vulnerable individuals/groups in the project area of influence	Low	Low
SuTP living in project areas of Ağrı	Low	Low
Formal or informal users of lands allocated to the project	Low	Low
Public Administrations at National Level		
The Ministry of Environment, Urbanization and Climate Change.	Low	Low

Stakeholder Groups	Level of Interest	Level of Influence
Direct Stakeholders		
Ministry of Energy and Natural Resources	High	High
Turkish Energy Market Regulatory Board	Low	Low
Ministry of Industry and Technology	Low	Low
General Directorate of Energy Affairs	High	High
General Directorate of ILBANK	High	High
Directorate General of Migration Management	Low	Low
Public Administrations/Authorities/Agencies at Provincial Level		
Hamur Municipality	High	High
Hamur Municipality	Medium	Medium
Provincial Directorate of Environment, Urbanization and Climate Change	Moderate	High
Mukhtar of Kale Neighborhood	Moderate	High
Aras Electricity Distribution Company	High	High
Contractors/Sub-contractors and Supervision Consultant Companies	High	High
Indirect Stakeholders		
Indirectly Affected Communities		
Residents outside of the project area of influence	Low	Low
Vulnerable individuals/groups outside of the project area of influence	Low	Low
Public Administrations at National Level		
Ministry of Agriculture and Forestry	Low	Low
Public Administrations/Authorities/Agencies at Provincial Level		
Governorship Hamur	Low	Moderate
Provincial Directorate of Disaster and Emergency	Low	Low
Provincial Directorate of Health	Low	Low
T.C. Serhat Development Agency	Low	Low
Turkish Employment Agency (IS-KUR) –Ağrı Branch	Low	Moderate
Other Interested Parties		
Chamber of Environmental Engineers	High	High
International Solar Energy Society (GUNDER)	Moderate	Moderate
International Refugee Rights Association	Low	Low
Business enterprises located in the Project area	Moderate	Moderate
Ağrı İbrahim Çeçen University	Low	Low

The types and causes of exposures and how the above-mentioned stakeholder groups are affected (positive/negative) are given in Table 8.

Table 8: The Potential Impacts of Project Activities on Social Components

Social Component	Type of Potential Impact (Positive/Negative)	Potential Impact Definition
Emergency Response	Positive	After the increase in the electricity prices in Turkey, municipalities are having difficulties paying them. After the implementation of this project, it is expected to be offset the energy demand and decrease in carbon footprint.
Local Employment	Positive	Employment opportunities for local engineers and manpower.
Transportation/Traffic	Negative	Safety issues due to increase in traffic, damages on roads, generation of greenhouse gas emissions / noise.
OHS and Community H&S	Negative	Water pollution, air emissions/noise and visual pollution
Tourism	Negative	Aesthetic issues.

As part of the stakeholder identification process, it is also important to identify individuals and groups that may be differentially or disproportionately affected by the Project because of their disadvantaged or vulnerable status. The potential vulnerable/disadvantaged groups can be listed as follows:

- Households with physically and / or mentally disabled family members,

- People with chronic diseases,
- Elderly people over 65 years of age who live alone and in need of care,
- Female-headed households,
- Households where the head of the household is a child,
- Households with low or no income, and
- Refugee households.

Considering the potential vulnerable/disadvantaged groups, the summary of project stakeholder needs is given in Table 9.

Table 9: Potential Vulnerable/Disadvantaged Groups and their needs

Community	Stakeholder group	Key characteristics	Language needs	Preferred notification means (e-mail, phone, radio, letter)	Specific needs (accessibility, large print, childcare, daytime meetings)
Tepeköy Neighborhood	Parents with young children	The number of households affected and which of children - To be Determined (TBD)	Official language	Written information, radio	Childcare for meetings—late afternoon preferred timing
	Refugees	The number of extended families TBD, poverty level	Language alternative	Visit with translator and civil society representative	Graphics, education on process
	Persons with disability	The number of disabled person TBD	Official language and/or sign language	Written information, radio and/or face-to-face with competent person on sign language if possible	Accessibility i.e., providing transportation
	Other groups	The number of person TBD	Official language	Written information, radio Visit at their own places	Graphics, education on process

Stakeholder Engagement Plan

Stakeholder Engagement is a control mechanism that ensures the implementation of key principles during the project. The engagement activities will not be scheduled in a manner due to the small capacity of solar power plant project. To maximize stakeholder engagement, it prevents disruption of local stakeholders' daily work and regulates the timing and number of engagement activities. Accordingly, recording the findings and feedback together in accordance with all engagement activities, sharing them with the responsible parties, and following the process are essential. Also, engagement activities need to be culturally appropriate, provide equal access to relevant stakeholders, and enable their feedback. No stakeholder engagement activities will be scheduled for this project.

Grievance Mechanism

Hamur Municipality will establish a Grievance Redress Mechanism (GRM) to receive, resolve, and follow the concerns and complaints of the Project affected communities. All grievances will be effectively received, recorded, and responded to within a predetermined timeline and based on their contents.

At the earliest convenience, the stakeholders will have access to Hamur Municipality PIU and Contractor dedicated CLOs for responses to responses to grievance. Stakeholders will be informed on

the Satisfactory responses to the grievances and corrective activities. The GM for the stakeholders will be operated according to the following procedure.

1. Following tools will be used so that all stakeholders can be informed regarding the Project's GRM process:
 - Web page
 - Email address
 - Public meetings
 - Telephone
 - Frequently Asked Questions (Brochure, web page, bulletin, etc.)
2. Grievances can be submitted by the channels outlined below:
 - Telephone (Call Center and units)(0472 451 20 55)
 - Personal visit to Hamur Municipality and Contractor head office/branches
 - Grievance boxes (installed at the Hamur Municipality Units / Contractor)
 - Relevant public administrations (district governorship, municipality, headmen)
 - Email (belediye@hamur.bel.tr)
 - Meetings
 - Staff and local communication desk of Hamur Municipality / Contractor
 - By written petition to Hamur Municipality / Contractor
 - During site visits and miscellaneous
3. All the submitted grievances are collected at the GRM Section of PIU Department.
4. The submitted grievances are recorded in databases by CLOs of PIU and Contractor.
5. PIU and Contractor CLOs or any contact person who received the grievance confirm the grievance reception via phone and/or email within 2 days.
6. The response to the relevant grievance will be drafted by CLOs of PIU / Contractor and approved by Project Managements.
7. After responding to the relevant grievance, necessary revisions will be made on the Grievance Form with respect to the result of GM process which will be communicated with relevant Complainant within 10 working days. The required actions for valid grievances will be taken within 15 working days. If applicant accepts the resolution within 30 days, the submitted grievance is marked as closed. If the applicant does not sign-off Complaint Close-Out Form due to insufficient satisfaction, a meeting will be organized by the PIU management on relevant complaint and if necessary, with the participation of Contractor. The compliant can participate this meeting to submit his/her Project-related concern face to face to the management. The aim of this meeting is to find alternative solutions of which both parties agree with.
8. All the grievances will be monitored by recording them via the monitoring and evaluation system which will be established within the scope of GM.
9. Regarding grievances received by Contractor; the grievances which are within the scope of Contractor responsibility will be handled by itself and reporting to the PIU during monitoring activities. The grievances within the scope of Hamur Municipality responsibility will be immediately communicated with PIU by Contractor and handled by the PIU accordingly. Contractor CLO is responsible for recording and tracking grievances.

10. If the complaint cannot be resolved with the existing process, applicants can always apply to relevant legal institutions. Such institutions can be summarized as follow:

- Civil Courts of First Instance
- Administrative Courts
- Commercial Courts of First Instance
- Labor Courts, and Ombudsman (<https://ebasvuru.ombudsman.gov.tr/>)

During construction and operational activities, the GRM described above shall continue to be driven by stakeholders' views, making this procedure accessible to all affected stakeholders. Requests that require urgent remedy and/or support shall be responded to and given support within the same day. All outstanding grievances/requests shall be recorded within two business days, reviewed, and assessed within ten business days, and concluded not later than 15 business days. Corrective actions shall be taken to resolve the grievance. GM Flow Chart is given in Table 10 .

Table 10: Grievance Mechanism Flowchart

Stage of GM	Required Action
Grievance submission	Receiving the grievance by any above-mentioned communication channel. (Following to receive more sensitive grievances i.e., SEA/SH, child abuse or abuse, necessary action will be taken within 48 hours. For such cases at the workplaces, the complaint will be directed by the GM focal point (based in ILBANK headquarter) to relevant legal authorities/service providers such as Ministry of Family and Social Services and Prosecutors Office.)
Grievance registration	Grievance Form and Grievance Register Table are used during registration process. After grievance registration, feedback will be sent to the Complainant for the purpose of confirmation within two (2) days. Anonymous registration will be conducted if a Complainant requests that complaint of whom is handled anonymously.
Grievance assessment	Grievances are assessed within 10 working days with the clarification of the fact that relevant grievance is compliance with admissibility criteria. The Complainant will be informed appropriately in case of invalid grievances.
Responses to the grievances	According to the grievance type, consultation with stakeholders in question can be conducted on site. After grievance assessment, grievance will be responded appropriately via previously mentioned communication channels. Application to ILBANK or Court of First Instance is also available for Complainants if a resolution cannot be figured out for whose grievances.
Grievance closure	As long as alternative agreement is not conducted, grievance of Complainant is closed within fifteen (15) Business Days as of submission date and the Grievance Close Out Form is filled accordingly. In the case of grievances cannot be closed within fifteen (15) Business Days, it is ensured that well documented mitigatory circumstances related to which are reported. Regarding the anonymous grievances, outcome of GMGRM process and associated taken actions should be declared on Hamur Municipality website for the purpose of informing relevant Complainants.
In the case of unresolved grievances	ILBANK monitors GM process according to following outline: -Confirmation of grievance submission -Assessment of grievance by the Hamur Municipality and information to ILBANK accordingly -Communication of grievance response to Complainant by the Hamur Municipality which is monitored by ILBANK (The timeframe for response at this level is thirty (30) days.)

Stage of GM	Required Action
	-Application to Court of First Instance by Complainants in case of unresolved grievances
Reporting	The grievances will be analyzed quarterly by Hamur Municipality PIU considering the frequencies, types, and resolution methods of which. By doing this, for instance, complaints submitted by majority of Contractor/Subcontractor(s) and/or those originated from certain works can be determined in a better way. The outcomes are reported to the PIU management by CLOs
Right to Appeal	If the complaint cannot be resolved with the existing process, applicants can always apply to relevant legal institutions. Such institutions can be summarized as follow: <ul style="list-style-type: none"> • Civil Courts of First Instance • Administrative Courts • Commercial Courts of First Instance • Labor Courts, and Ombudsman (https://ebasvuru.ombudsman.gov.tr/)

Monitoring and Reporting

Hamur Municipality PIU and the Contractor CLO will record all incoming corporate grievance/comment databases.

Hamur Municipality PIU will assess the number and nature of grievances/comments (if any) quarterly and their effectiveness to address grievances/comments based on the number and percentage of closed grievances. The monitoring framework is described in Table 11.

Table 11: Grievance Mechanism Monitoring Framework

Parameter	Key Performance Indicator	Phase	Frequency	Responsible Party
Project GRM	<ul style="list-style-type: none"> • Number of grievances/comments received during per consultation • Types of the grievances/comments (community HS, employment, local procurement etc.) • Timeframes for response to each grievance • The number of open or closed grievances • Number of invalid or in progress grievances 	Construction	Quarterly	- To be assigned by Hamur Municipality PIU and Contractor
		Operation	Semi-annually in the first two years; Annually afterwards	- To be assigned by Hamur Municipality PIU and Contractor
Workers' GRM	<ul style="list-style-type: none"> • Number of grievances/comments received by own workers • Number of grievances/comments received by indirect workers • Types of the grievances/comments regarding worker management and working conditions (e.g. Worker rights, OHS, etc.) • Timeframes for response to each grievance • The number of open or closed grievances 	Construction	Monthly	- To be assigned by Hamur Municipality PIU and Contractor
		Operation	Semi-annually in the first two years; Annually afterwards	- To be assigned by Hamur Municipality PIU and Contractor

Parameter	Key Performance Indicator	Phase	Frequency	Responsible Party
	• Number of invalid or in progress grievances			
GM	Effectiveness of the GM	Construction	Quarterly	ILBANK

Public Participation Meetings

The draft version of this ESMP approved by ILBANK and the World Bank was shared with the district people at a Public Participation Meeting in Hamur on June 24, 2024, in the Hamur Municipality Meeting Hall. Hamur mayor İsmet Aslan presented to the participants the purpose of the Project, expected social, and environmental impacts, measures to prevent or mitigate impacts, monitoring and management measures, grievance or suggestion procedure and grievance handling.

The public participation meeting was held with the participation of the Mayor of Hamur Municipality, mukhtars of the settlements in the impact area, municipality employees and neighborhood tradesmen, and residents of the district. At the end of the presentation, questions were asked by the participants on the possible negative impacts of the Project construction, its contribution to the district, and whether the Project will cover its own cost. The participants were informed that the construction works will start after the contractor is determined by the Project Owner and the construction is planned to take approximately 6 months. The Public Participation Meeting lasted approximately 1 hour, with the consultant company officials giving information about the project and the question-and-answer session held afterward. 50 people attended the meeting and the minutes of the meeting are attached in Annex 4.

7. Annexes

Annex 1: Land Register Document of SPP Project Area

T.C. HAMUR BELEDİYESİ Tapu Malik Hisseler Listesi														
Tarih: 31.07.2023														
Malik Bilgi	Bilgi	İl İlçe	Mahalle/Merkezi	Çift Sayfa	Nispetik / Yınsolçaman	Ada/Parsel	Hisse Payı - Hisse Alanı	İşlem Adı	Yerineye	İştirak No	Bogamuz Birtim	Arsa Payı	Duru	Terkin İşlemi
{SN:1833333} DEVLET SU İŞLERİ GENEL MÜDÜRLÜĞÜ (DSİ) VKN:31.90025631	İlçe Dışı	AĞRI / HAMUR	KALE M / GÖL(KAYAB.)	3 / 227	TARLA / 21.724.26	107 / 33	1.000 / 1.000 - Alan: 21724.26	Tasahhüt Devir (Kırsanlık arazi)	24.04.2012 - 181	0	Blok No, Tip, Kat.		Alınış	
													Kayıt Sayısı	1



T.C.
AĞRI VALİLİĞİ
İl Tarım ve Orman Müdürlüğü

GIDANI KORU
TOPRAK KURUMU

E-40769328-230.04.02-1660753

Ağrı İli, Hamur İlçesi, Kale Mahallesi 107
ada 33 numaralı parsel Hk.

HAMUR BELEDİYE BAŞKANLIĞI
(Yazı İşleri Müdürlüğü)

Hamur Belediye Başkanlığı, Yazı İşleri Müdürlüğü'nün 25.05.2021 tarih ve E.657 sayılı yazısı.

İlgi tarih ve sayılı yazınız ile Ağrı İli, Hamur İlçesi, Kale Mahallesi sınırları içerisinde yer alan ada 33 nolu taşınmaz 2.1724 ha (21724,26 m²) alana sahip cinsi "Tarla" olan parselin "Güneş Enerjisi Üretimi" amaçlı cinsinin "Arsa" olarak değiştirilmesi için Kurum görüşümüz talep edilmektedir. Söz konusu başvuru parseli İl Müdürlüğümüz teknik personelleri tarafından 26.05.2021 tarihinde de gerçekleştirilen etüt çalışması neticesinde **Kuru Marjinal Tarım Arazisi (KTA)** olduğu tespit edilmiştir.

Başvuru talebi ile ilgili olarak 5403 sayılı Toprak Koruma ve Arazi Kullanımı Kanunu kapsamında "Güneş Enerjisi Üretimi" amacıyla cinsinin "arsa" olarak değiştirilmesi **UYGUN** görülmüştür.

Toprak Koruma ve Arazi Kullanım Kanunu kapsamında verilen bu izin, talep edilen amaç dışında kullanılmaz, farklı bir amaç için kullanılması durumunda yeniden izinlendirilmesi gerekmektedir. Verilen izin dışı amaçla kullanım izinleri, 09/12/2017 tarihli Resmi Gazete'de yayımlanan Tarım Arazilerinin Kullanılması ve Planlanmasına Dair Yönetmeliğin 12. Maddesinin (8) fıkrası "Arazi kullanımına ilişkin verilen izinler, izin tarihinden itibaren iki yıl içerisinde, tarım dışı amaçlı kullanımlarda planların onaylanmaması, tarımsal amaçlı yapılarda ise ruhsata bağlanmaması durumunda geçersiz kabul edilir." hükmü kapsamındaki iki yıllık süre, Yönetmeliğin yürürlüğe girdiği tarihten önce izin verilmiş olsa dahi, Yönetmeliğin yürürlüğe girdiği tarihten itibaren başlayacaktır. Bilgilerinize rica ederim.

Ahmet Vezir BAYCALI
Vali a.
Vali Yardımcısı

Annex 3: Official Decision of Aras Electricity Distribution Company

Evrak Tarih ve Sayısı: 14/09/2021-194731



ARAS ELEKTRİK DAĞITIM ANONİM ŞİRKETİ
GENEL MÜDÜRLÜĞÜ
Sistem İşletme Koordinatörlüğü

Sukitpasa Mahallesi
TEK Lejyonlar Sokak
No: 57 25050
Yokutiyev / ERZURUM
Tel: +90 (850) 200 20 20
Faks: +90 (442) 242 27 80
Vergi Dairesi: Kazım Karabekir
Vergi No: 0720 398 522

Sayı : -122.03-
Konu : HAMUR BELEDİYESİ GES bağlantı görüşü ve
bağlantı anlaşmasına çağrı mektubu.

HAMUR BELEDİYE BAŞKANLIĞI
Melik Özmen Cad. No:66 Hamur/AĞRI

Elektrik Piyasasında Lisanssız Elektrik Üretim Yönetmeliğinin 12. Maddesinin 2. fıkrasında "Komisyon; TEİAŞ, TEDAŞ ve İlgili Şebeke İşletmecisinin birer temsilcisinden olmak üzere üç üyeden oluşur ve oy çokluğu ile karar alır. Komisyon başkanı TEİAŞ temsilcisidir. Komisyonca alınan kararlar tüyellerce imzalanır ve ilgili dosyalarda muhafaza edilir." denilmektedir.

Yukarıda belirtilen yönetmelik maddesine göre komisyon toplanarak HAMUR BELEDİYESİ GES için Elektrik Piyasasında Lisanssız Elektrik Üretim Yönetmeliğinin Madde 30/(1)(2) "Kamu kurumu ve kuruluşları tarafından, tüketim tesislerinin elektrik ihtiyacını karşılamak üzere, ilgili tüketim tesislerinin bağlantı anlaşmasındaki sözleşme gücünü geçmeyecek şekilde 5 inci maddenin birinci fıkrasının (c) bendi kapsamında yenilenebilir enerji kaynaklarına dayalı üretim tesisi kurulabilir. Bu madde kapsamındaki tesisler için aynı dağıtım bölgesinde yer almak koşuluyla üretim ve tüketim tesislerinin aynı ölçüm noktasında olması şartı aranmaz." kapsamında çağrı mektubu verilmesine karar verilmiştir.

Şirketimizce yapılan incelemeler neticesinde Ağrı ili Hamur ilçesi Kale mahallesi 107 ada 33 parselde kurulması planlanan 990 kW gücündeki HAMUR BELEDİYESİ GES'in aşağıda belirtilen şartlar ile Dağıtım Sistemine bağlanması uygun görülmüştür.

a) Ağrı TM-2 DM-8'den beslenen, TR14599 CBS Nolu Hamur DM-4 içerisinde bulunan boş hücre yerine kesicili çıkış hücresi tesis edilecektir.

b) Santral sahası ile DM-4 arası bağlantı uygun kesitte ENH veya XLPE yeraltı kablo ile yapılacaktır.

c) Santral sahası içerisine yapılacak olan TR binası içerisine 1 adet otoproduktör hücresi tesis edilecektir.

d) Üretim tesisine ait projeler Enerji ve Tabii Kaynaklar Bakanlığınca veya Bakanlığın yetki verdiği kuruluşlar ve/veya tüzel kişiler tarafından onaylanması gerekmektedir.

e) Tesiste kullanılacak ölçüye esas sayaç, akım ve gerilim trafoları EPDK Elektrik Piyasasında kullanılacak sayaçlar hakkındaki tebliğe uygun dengeleme ve uzlaştırma sisteminin gerektirdiği haberleşmevi sağlanabilecek çift yönlü ölçüm yapabilen saatlik sayaç takılacaktır.

f) Tesis Otomatik Sayaç Okuma Sistemine(OSOS) uygun olarak talep sahibi tarafından yapılacaktır.

g) Elektrik Piyasasında Dağıtım Sisteminde sunulan elektrik enerjisinin tedarik sürekliliği, ticari ve teknik kalitesi hakkında yönetmeliğinde belirtilen parametrelerin izlenmesi, raporlanması ve kontrol için kurulacak olan sistem, haberleşme ünitesi (RTU, modem, besleme sistemleri) ve Kalite Kaydedici Enerji Analizörü vb. ekipman ve altyapı talep sahibi tarafından temin ve tesis edilecektir.

h) Bağlantı noktasından üretim santraline doğru olan tesislerin mülkiyeti, işletmesi, bakım ve onarımı tesis sahibine; bağlantı noktasından şebeke tarafına doğru olan tesislerin ise mülkiyeti, işletmesi, bakım ve onarımı Şirketimize ait olacaktır.

Mevki: Hamur Belediyesi

Mimar: Alper Çel - Sistem İşletme Koordinatörlüğü (Koordinatör (V)) - 14/09/2021

Yeni Sistem - Genel Müdürlüğüne (Tebliğ) (Genel Müdürlüğüne) - 14/09/2021

www.arasedas.com

194731-2021-09-14

info@arasedas.com

Evrakı Doğrulamak İçin:

https://ebys.arasedas.com/au/Version/Validate_Doc.aspx?ID=B5R3LFEZEYS

Evrak Barkodu:

B5R3LFEZEYS



ARAS ELEKTRİK DAĞITIM ANONİM ŞİRKETİ
GENEL MÜDÜRLÜĞÜ
Sistem İşletme Koordinatörlüğü

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Yakutiye / ERZURUM
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Faks: +90 (80) 242 27 80
Vergi Dairesi: Kazım Karabekir
Vergi No: 0720 398 522

- i) Dağıtım şirketi hattında enerji kesildiği anda, kısa devre arızası oluşması durumunda veya olağandışı şebeke koşullarının varlığında dağıtım şebekesinde adalanma oluşmaması için, üretim santrali, dağıtım şebekesine enerji verilmeyecek şekilde tesis edilecek ve işletilecektir.
- k) Kumanda panosu üzerinde "hat enerjili" sinyali oluşturulacak ve ayrıca hücre kapısına "hat enerjili" lambası tesis edilecektir.
- l) Hatta gerilim varken, hat kesicisi ile toprak bıçağının kapatılmasına kilitleme konulacak ve hücre kapısının açılması elektrik kilitleme ile engellenecektir.
- m) Yeraltı kablolarının kazı ve kanal işleri için gerekli müsaadeler ve çalışmalar talep sahibi tarafından yapılacak olup dağıtım şirketinin bilgisi ve kontrolü dahilinde yapılacaktır.
- n) Santral sahası içerisindeki her türlü hukuki ve fenni mesuliyetler, tesisinizin geçtiği bölgedeki arazi sorunları YG ve AG hatlarının Orman arazisi, sit alanı, demiryolu, karayolu, DSİ kanal geçişlerindeki alınması gereken izinler ve PTT hatları ile paralellik ve kesişmelerindeki sorumluluk proje müellifine ve tesis sahibine ait olacaktır.
- o) Dağıtım şirketinin bilgisi dışında üretim tesisinin dağıtım sistemine bağlantısı yapılmayacaktır.
- p) Dağıtım sistemine AG ve YG seviyesinden bağlanacak üretim tesislerinin yapımı, işletmeye alınması, işletilmesi ve iş güvenliği sorumluluğu üretim yapan gerçek veya tüzel kişiye aittir. Gerçek veya tüzel kişi bu kapsamda; AG seviyesinden yapılacak bağlantılar için, üretim tesisinin geçici kabulü yapılmıyaya kadar, YG seviyesinden yapılacak bağlantılar için, üretim tesisinin projelendirilmesi aşamasından başlamak üzere işletme süresince, ilgili teknik mevzuata göre görev yapacak yetkili işletme sorumlusu (elektrik mühendisi) istihdam etmek ve/veya bu konuda gerekli hizmetleri almakla yükümlüdür.
- r) Üretim tesisine ait bağlantı noktasında koruma sistemlerinin ayarları bağlantı tipine göre (YG/AG) Elektrik Piyasasında Lisanssız Elektrik Üretimine İlişkin Yönetmeliğin uygulanmasına dair tebliğin 17.3 maddesinde yer alan tabloda belirtilen sınır değerlerine uygun olacaktır.
- s) Tesislerde kullanılacak teçhizatlar TS, CENELEC, IEC, EN ve diğer uluslar arası standartlara uygun olacaktır.
- t) Tüm tesis ve uygulamalar yürürlükteki mevzuatlar doğrultusunda yapılacaktır.
Gereğini arz/rica ederiz.

Murat Alper GÜL
Sistem İşletme Koordinatörü (V)
e-imza

Yusuf Yaşar BABUR
Genel Müdür Yardımcısı (Teknik)
e-imza

DAĞITIM

Gereği:
Hamur Belediye Başkanlığı
Melik Özmen Cad. No:66 Hamur/AGRI

Bilgi:
Genel Müdür Yardımcılığı (Teknik) Müşteri
Teknik Hizmetler Koordinatörlüğüne
Genel Müdür Yardımcılığı (Teknik) Yatırımlar
ve Tesis Koordinatörlüğüne
Genel Müdürlük Ağrı İl Koordinatörlüğüne

www.arasedas.com

Evrak Doğrulmak İçin :
http://ebys.arasedas.com/evr/View/Validete_Doc.aspx?d=BSR3LFZEYS



info@arasedas.com

Evrak Buhodü:
BSR3LFZEYS



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SUSTAINABLE CITIES PROJECT-II Additional Financing

HAMUR SOLAR POWER PLANT PROJECT

MINUTES of PUBLIC PARTICIPATION MEETING

Revision : REV.00

Meeting Date : 24 June 2024

Meeting Place: Hamur Municipality Meeting Hall



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1. PUBLIC PARTICIPATION MEETING

Hamur Solar Power Project which will be financed under SCP-II-AF is one of the sub-projects to support sustainable development.

The Environmental and Social Management Plan (ESMP) has been prepared in accordance with Turkish environmental and social legislation, WB Safeguard Policies including Operational Policies (OPs), WBG General EHS Guidelines and Industrial Sector Guidelines and İLBANK's ESMF. In addition to these studies, following the finalization of the ESMP, a Public Participation Meeting was held on 24 June 2024 at 11.00 hours.

1.1. Summary

In this subsection, the municipality officials presented information about the project during the Public Participation Meeting. Details are as follows:

Hamur Mayor İsmet Aslan gave general information about the project and made the opening speech of the meeting. The importance of Hamur SPP project was explained. The mayor İsmet Aslan explained how costly the municipality's energy consumption is and Solar Power Plant project will reduce these costs and the use of fossil fuels will be reduced thanks to this project.

The location of the project, distance to the nearest settlement, and other technical details of the project are explained. Within the scope of ESMP, the environmental and social risks of the project were evaluated, the baseline data analysis was made, and the geography of the area, climate conditions, sunshine duration, vegetation, natural and cultural values, and natural disasters such as floods and earthquakes were explained. The project may create future opportunities for the people living in the region, and using renewable energy resources is important in the fight against climate change. It was announced that the project could be a pioneer for Hamur and may create social advantages for the future.

It was stated that the grievance mechanism was given importance during the construction and operational phase of the project. It was stated that a grievance mechanism will be established within the municipality and progress and monitoring reports will be prepared at regular intervals and these will be submitted to İLBANK and the World Bank. It was explained that through the grievance mechanism, which is an important criterion for the WB, everyone living in Hamur can express their opinions and suggestions on the project.

3





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1.2. Question & Answer Session

In this sub-section, the opinions, requests, and questions of the participants and the relevant answers received during the Public Participation Meeting have been presented. The details are as follows:

Question 1:

Metin Yiđit, Council Member of Yeniden Refah Party:

When will the project be operational and what will be the total cost of the project to the municipality?

Answer 1:

İsmet Aslan, Mayor of Hamur Municipality

It has been announced that the construction of the project will be completed and operational by 31.12.2024. It is stated that the cost of the project will be EUR 1.000.000,00.

Question 2:

Mehmet Yür, Resident from Hamur:

Will the plant be affected by cold weather?

Answer 2:

İsmet Aslan, Mayor of Hamur Municipality:

It was explained that the power plant will not be adversely affected by conditions such as wind and snowfall, and that the efficiency may decrease in these conditions, but despite the cold weather conditions, the efficiency of the project is high due to the annual temperature and solar radiation rates. It was explained that in the EU countries, even at lower irradiation times, a lot of efficiency is obtained, so the project is an important investment for Hamur.

He also stated that Hamur's higher elevation and lower nighttime temperature will extend the life of the project and increase the utilization of sunlight during the daytime.

4





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Question 3:

Erhan Andiç, Personnel from Hamur Municipality:

What will be the lifetime of the project, and will the project be affected by lightning?

Answer 3:

İsmet Aslan, Mayor of Hamur Municipality:

The life of the project is 30 years. It was explained that warning and preventive systems for risks such as lightning and fire will be installed at the project site during the construction of the project, and that such risks will be reduced by installing preventive systems such as lightning rods.

1.3 Conclusion

The Public Participation Meeting lasted approximately 1 hour, with the municipality officials giving information about the project and the question-and-answer session held afterward. Necessary information was provided to the public about the Hamur Solar Power Plant Project and their questions were answered.





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2. PARTICIPANT LIST

Figure 1: Participants Signature List

PAYDAŞ KATILIM TOPLANTISI TUTANAĞI

Toplantı Konusu:	SSP-II EF Hamur Belediyesi (Ağrı) Güneş Enerji Santrali Projesi Paydaş Katılım Toplantısı				
Toplantı Yeri / Tarihi:	Hamur Belediyesi Toplantı Salonu			24.04.2024 - 11:00	
Katılımcılar:	İsim-Soyisim	Meslek	Temsil Ettiği Kurum / Yerleşim Yeri	Telefon	İmza
1	A. Serbest	Hamur Belediyesi / Hamur			
2	Y. Enelli	" "			
3	Y. Enelli	" "			
4	A. Serbest	" "			
5	A. Serbest	" "			
6	A. Serbest	" "			
7	A. İsgü	" "			
8	A. Duhtar	" "			
9	A. İsgü	" "			
10	A. Serbest	" "			
11	A. Serbest	" "			
12	A. İsgü	" "			
13	A. İsgü	" "			

6





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18	L	lip	İşçi	9		
19	A	ı	İşçi	6		
20	D	ıca	İşçi	6		
21	F	ıng	Giftçi	6		
22	B	ınt		6		
23	F	ıng		6		
24	H	ıst	Serbest	6		
25	m	ıca		9		
26	V	ıllı		6		
27	F	ırs	İşçi	6		
28	C	ıca	Memur	6		
29	L	ıllı	İşçi	6		
30	S	ıca	İşçi	6		
31	B	ıca	İşçi	6		
32	S	ıca	İşçi	6		
33	B	ıca	İşçi	6		
34	B	ıca	İşçi	6		

7





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47	M	Serbest	//		
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8





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3. ANNEXES

Annex 1: Photos of Public Participation Meetings

Figure 2: Photos of Meetings-1



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Annex 2: Newspaper Advertisements

Figure 3: Korkusuz Newspaper Advertisements for Public Participation Meetings of Hamur SPP



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Figure 4: Memleket Newspaper Advertisements for Public Participation Meetings of Hamur SPP



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Annex 3: Documents and Announcements regarding ESMP and Public Participation Meeting Published in the Official Website of Hamur Municipality

Figure 5: ESMP Documents Published on the Official Website of Hamur Municipality



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Annex 4: Hamur Municipality Public Participation Meeting Brochure

Ayrıca ÇSYP kapsamında uygulanacak işleme etki eden diğer faaliyetleri de tanımlanacaktır. ÇSYP çalışmalar kapsamında toprak ve hava kirliliği, gürültü, koku, su kaynakları, etkiler, trafik, ekosistem, projenin kurtulacağı alanlar dışı var olan doğal alan riskleri, OES kayınları değerlendirilerek yansımaları ve parlama etkileri gibi olumsuzluklar değerlendirilecektir.

İşleme gereklilikleri de ÇSYP kapsamında işleme tabiiyetinde tanımlanarak sunulacaktır. Buna göre projenin inşaat aşamasında, üslup, yapı, kayıtlar ve yerleşim, kirlenme ve kirlenmelerin önlenmesi ve yerleşim alanlarının korunması, toprak ve su kirliliği, toz emiyenler, projenin inşaatı sırasında ve geçici trafik yükünden oluşacak gürültü, ışık kirliliği ve ışık yansıması ve güvenliği, işletme aşamasında ise kimyasalların depolanması ve kullanımı, atıklar, gürültü, santralin yansımaları ve parlama etkileri, göçmen kaynaklı etkiler, toprak kirliliği, toprak kirliliği, iş sağlığı ve güvenliği ve ilgili parametreler ÇSYP'de belirlenen şartlara uygun olarak izlenecektir.

Bu Çevresel ve Sosyal Yönetim Planı (ÇSYP)'nin uygulanmasından sorumlu ana kurum, projenin inşaatından ve işletme aşamasından da sorumlu olan Sencak Belediyesi'dir. Ayrıca, projenin farklı aşamalarında çeşitli taraflar (Yükleniciler, Müşavir firmalar, Proje Uygulama Birimi, İBANK, vb.) ÇSYP kapsamında görevi konusunda sorumluluk altındadır. Bütün edilen tüm paydaşlar Sencak Belediyesi tarafından koordine edilecektir.

Proje dokümanları ayrıca Sencak Belediyesi'nin internet sitesinden yayınlanacaktır ve talep edilmesi halinde bu dokümanlar Sencak Belediyesi tarafından paylaşılacaktır.

Sencak Belediyesi, Projeden etkilenen topluluğun endişelerini ve şikayetlerini almak, görmek ve takip etmek için bir **Şikayet Giderme Mekanizması** kurmuştur.

Tüm şikayetler, önceden belirlenmiş bir zaman çizelgesi içinde ve işlemlerine göre etkin bir şekilde alınacak, kaydedilecek ve yanıtlanacaktır.

Şikayet Giderme Mekanizması'nın kurulmasından ve uygulanmasından sorumlu kurum Sencak Belediyesi olacaktır. Bu kapsamda proje ile ilgili beklentiler, görüşler, öneriler ve şikayetlerin paylaşılması için aşağıda verilen iletişim kanalları da ayrıca kullanılacaktır.

Paydaş Katılım Toplantıları

Hamur Belediyesi
Telefon: +90 0472 455 20 55
belediye@hamur.bel.tr

Tüm iç ve dış paydaşlar, projeye ilgili şikayetlerini ve geri bildirimlerini doğrudan devlet yetkililerine iletmek için alternatif ve iyi bilinen bir kanal olarak tüm proje paydaşlarının erişimine açık olan ve ülke çapında kullanılan Cumhurbaşkanlığı İletişim Merkezi (CİMER) gibi diğer şikayet giderme mekanizmalarından da yararlanma hakkına sahip olacaktır.

- www.cimer.gov.tr
- Çağrı merkezi: 150
- Telefon numarası: +90 312 590 20 00

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SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ-II
Hamur Belediyesi
Güneş Enerjisi Santrali Projesi
Halkın Katılımı Toplantısı
Bilgilendirme Broşürü
24 Haziran 2024
10:00
Hamur Belediye Başkanlığı

THE WORLD BANK
SÜRDÜRÜLEBİLİR ŞEHİRLER
İBANK
ARDEA





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Hamur Belediyesi GES Projesi ("Proje"), Türkiye'deki şehirlerde sürdürülebilir kalkınmayı desteklemek için Sürdürülebilir Şehirler Projesi-II Ek Finansman (SSP-II-EF) kapsamındaki alt projelerden biridir. SSP-II-EF, özellikle sürdürülebilir kentsel gelişime yatırım yapıp, yenilenebilir enerji kaynaklarının geliştirilmesine, afetlere ve iklim değişikliğinin hafifletilmesine ve risklere karşı politika dinencine ilişkin proje yaklaşımlarını geliştirmeyi amaçlamaktadır.

Dünya Bankası (DB) tarafından finanse edilen proje, Her Bankası A.Ş. öncülüğünde Sarcas Belediyesi tarafından yürütülmektedir.

Proje, Hamur İlçesinde enerji ihtiyacını karşılamayı, temiz enerji kullanarak yerel kalkınmaya katkı sağlamayı amaçlamaktadır.

Hamur Belediyesi GES Projesi, belediyeli kullanıcıları enerjiden temiz ve yenilenebilir enerji kaynaklarından elde edilen belediyeli hizmet maliyetlerini azaltmayı hedeflemektedir. Bu kapsamda Proje, kurulacak santralin 25 yıllık kullanım süresi için inşaat ve işletme maliyetleri, GES projelerinin kurulu gücü 1000 kW'dır. Proje ile yıllık üretilen enerji miktarı yaklaşık 3250 tWh'dır. Proje, Ağrı İl Hamur İlçesi Kale Mahallesi 107 ada 33 parsel üzerinde yaklaşık 17.000 m² alana inşa edilecektir.

Projenin beklenen sonuçları aşağıdaki gibidir:

- Proje, Ağrı'nın Hamur Belediyesinde enerji talebini karşılamak için kurulan santral enerji ihtiyacını karşılamak için gerekli enerjiyi sağlayacaktır.

- Proje, enerjide fosil yakıtlara olan bağımlılığı azaltacak ve belediyenin ekonomik olarak sürdürülebilirliğini sağlayacaktır.

- Proje, Türkiye'nin yenilenebilir enerji kaynakları bakımından ulusal ve uluslararası norm standartlarına uyum sağlamak için katkı sağlayacaktır.

- Temiz enerji kaynakları kullanarak iklim değişikliği mükabilesinde aktif rol oynayacak ve yerel halkın çevresel ve ekonomik refahına katkı sağlayacaktır.

Projenin inşaatın ilk 10 ayda tamamlanması planlanmaktadır.

Projenin işe alın sürecinde yerel halka öncelik verilecektir.

Proje, ulusal mevzuatın yanı sıra DB Kurumu Politikaları, yönetmelik, standartlar ve diğer ilgili uygulamalarla uyumlu olacaktır.


Proje, inşaat ve işletme aşamalarında yerel halk için faydalar yaratacaktır. GES projelerinin kurulu gücü kapasitesinin 1 MW'ın altında olması nedeniyle, inşaat çalışmalarının etkisi kısa bir zaman diliminde tamamlanması beklenmektedir. yerel halkın inşaat faaliyetleri nedeniyle proje bölgesindeki yaşam kalitesini etkileyeceği beklenmemektedir.




Beklenen etkilerin yönetimi için bir Çevresel ve Sosyal Yönetim Planı (CSYP) geliştirilecektir.

CSYP, Projenin süresi boyunca oluşabilecek çevresel ve sosyal etki ve risklerin izlenmesi, değerlendirilmesi ve önemi olumsuz çevresel etkiler için etki azaltma önlemlerini önermek amacıyla hazırlanmaktadır.


Annex 5: Consultation Form

	HAMUR MUNICIPALITY Hamur Municipality Solar Power Plant Project			
	Consultation Form			
Person Filling Out the Form:			Date and Time:	
Meeting Agenda:			Consultation Record No:	
1. CONSULTATION INFORMATION				
Interviewed Institution:			Contact Type	
Name and Surname of the Interviewee:			Telephone/Helpline <input type="checkbox"/>	
Telephone:			Face-to-face Interviews <input type="checkbox"/>	
Adress:			Website/E-mail <input type="checkbox"/>	
E-mail:			Other (Explain) <input type="checkbox"/>	
Stakeholder Type				
Public Institution <input type="checkbox"/>	People Affected by the Project <input type="checkbox"/>	Private Institution <input type="checkbox"/>	Professional Chamber <input type="checkbox"/>	NGO <input type="checkbox"/>
Interest Groups <input type="checkbox"/>	Industry Associations <input type="checkbox"/>	Labor Unions <input type="checkbox"/>	Media <input type="checkbox"/>	University <input type="checkbox"/>
2. CONSULTATION DETAILS				
Questions about the project:				
Project concerns/feedback:				
Responses to the views expressed above:				
Recording <i>Name-Surname / Signature</i>			Complainant <i>Name-Surname / Signature</i>	

Annex 6: Grievance Form

	HAMUR MUNICIPALITY Hamur Municipality Solar Power Plant Project			
	Grievance Form			
Person Filling Out the Form:			Date and Time:	
Meeting Agenda:			Reference No:	
1. INFORMATION ABOUT THE COMPLAINANT				
Full Name: If the complainant requests that this grievance be processed anonymously, it will be recorded as anonymous, and the request will be fulfilled.			How the Grievance Was Received	
Turkish ID Number:			Telephone <input type="checkbox"/>	
Telephone:			Face to face <input type="checkbox"/>	
Address:			Website / E-mail <input type="checkbox"/>	
E-mail:			Other (Explain) <input type="checkbox"/>	
Stakeholder Type				
Public Institutions <input type="checkbox"/>	People Affected by the Project <input type="checkbox"/>	Private Institution <input type="checkbox"/>	Chamber of Profession <input type="checkbox"/>	NGO <input type="checkbox"/>
Interest Groups <input type="checkbox"/>	Industry Associations <input type="checkbox"/>	Labor Union <input type="checkbox"/>	Media <input type="checkbox"/>	University <input type="checkbox"/>
2. DETAIL INFORMATION ABOUT GRIEVANCE				
Grievance Explanation:				
Proposed Solution Method by the Complainant:				
Name-Surname/Signature of the Recording Personnel			Name-Surname/Signature of the Complainant	

Annex 7: Grievance Close-Out Form

	HAMUR MUNICIPALITY Hamur Municipality Solar Power Plant Project	
	GRIEVANCE CLOSE-OUT FORM	
Reference No:		
1.DETERMINATION of CORRECTIVE ACTION		
1		
2		
3		
4		
5		
Responsible Departments		
2.CLOSURE OF THE GRIEVANCE		
<i>This section will be completed and signed by the Complainant in case the complaint specified in the "Grievance Registration Form" is resolved.</i>		
Date: /...../.....	Name-Surname/ Signature Closure of the Grievance	Name-Surname/Signature of the Complainant

Annex 8: Environmental and Social Screening Checklist

This checklist is used by executing agency to review the potential environmental and social safeguard impacts of subprojects and determine whether the subprojects will trigger relevant safeguard policies of World Bank. It is a tool to screen, classify and evaluate the project activities during project preparation.

Integrating Basic Principles to Strengthen Social and Environmental Sustainability

1. Determination of Basic Principles to Strengthen Project, Social and Environmental Sustainability
Description of how the project mainstreams a human rights-based approach
<p>There is no settlement within the project area. Therefore, during the preparation phase, no human rights concerns related to the project have arisen. A credit application has been submitted for the project, and once the credit application is approved, the implementation process will commence. With the initiation of the project, stakeholder engagement processes and complaint procedures will be initiated. These processes will be subject to a monitoring mechanism. Opinions obtained during this process will be reviewed at specific intervals and resolved.</p> <p>The responsible organization leading the implementation of the project, Hamur Municipality, is highly willing to fulfill its obligations. The SPP sub project is a sustainable and clean energy resource and provides environmental sustainability in the project area and reduces dependence on fossil fuels. One of the fundamental reasons for the solar power plant project is the use of clean energy to meet the district's electric energy need. Therefore, there is no risk of local governments not fulfilling their responsibilities due to the reduction in energy costs and the potential contributions it will bring to various sectors.</p> <p>In the conducted assessments, it has been observed that there will be no adverse impact on the human rights of the affected population or marginalized groups. The SPP project is designed to meet the electric energy needs of the district. Therefore, there will be no unjust or discriminatory effects on disadvantaged groups within the population residing in the vicinity. The utilization of renewable energy to meet the energy requirements will enable the efficient use of municipal resources, generating positive effects for the entire district population. This approach fosters equal distribution of local government resources and services among the entire population, promoting inclusivity. Additionally, there is no identified risk of conflict or violence among the communities and authorities affected by the project.</p>
Description of how the project can improve gender equality and women's empowerment
<p>Women's groups have not raised gender equality concerns regarding the project during the stakeholder engagement process, grievance processes, or public statements. The project is not anticipated to involve or lead to adverse impacts on gender equality and/or the situation of women and girls. The project is not expected to reproduce discriminations against women based on gender, particularly regarding participation in design and implementation or access to opportunities and benefits. There are no foreseen limitations on women's ability to use, develop, and protect natural resources, considering different roles and positions of women and men in accessing environmental goods and services. There are no activities that could lead to natural resources degradation or depletion in communities that depend on these resources for their livelihoods and well-being. The project is not expected to exacerbate risks of gender-based violence.</p>
Description of how the project mainstreams sustainability and resilience
<p>By harnessing solar energy, the project reduces dependence on non-renewable fossil fuels, contributing to a more sustainable energy mix and reducing greenhouse gas emissions. Solar power projects typically have a lower environmental impact compared to traditional energy sources. They help mitigate air and water pollution, reduce carbon emissions, and minimize the ecological footprint associated with energy generation.</p> <p>Solar power projects contribute to energy resilience by providing a stable and predictable source of energy. This can be especially important for urban areas, ensuring a more stable energy supply and helping to mitigate the impact of energy price volatility. Incorporating solar power into the urban energy mix contributes to the diversification of energy sources. This diversification enhances energy security, making the urban area less vulnerable to disruptions in the supply chain of any single energy source. This involves using technology to optimize energy production, storage, and distribution, creating more efficient and resilient energy systems. By reducing reliance on fossil fuels, solar power projects contribute to mitigating climate change impacts.</p> <p>By utilizing renewable solar power in the electric energy generation, the project aims to reduce the municipality's electricity expenses. This financial benefit enhances the economic sustainability of the local government.</p> <p>Renewable energy investments empower communities by providing them with opportunities for potentially creating jobs, thereby enhancing the social dimension of sustainability. This contributes to economic sustainability by fostering employment opportunities and skill development within the community. It would facilitate income diversification by offering opportunities for local businesses, such as maintenance services, security, and other support functions. With the increasing number of renewable energy implementations, there is the potential to promote the use of clean energy in various sectors. The project has training activities for stakeholders and the responsible. This educational aspect contributes to the long-term sustainability of the region by raising awareness and promoting environmentally conscious behaviors.</p>

Description of how the project strengthens accountability to stakeholders

The project strengthens accountability to stakeholders through transparent decision-making, active engagement, accessible information, responsive grievance mechanisms, regular reporting, clear communication, measurable performance indicators, and inclusive decision-making processes.

The project promotes transparency by involving stakeholders in the decision-making process. Through open communication and consultation, stakeholders are informed about project objectives, progress, and potential impacts. This transparency would enhance accountability by ensuring that decisions are made collectively and with the input of relevant stakeholders.

The project would facilitate regular stakeholder engagement activities such as meeting, workshops, etc. , providing a platform for dialogue between the implementing entities and stakeholders. These activities allow stakeholders to express concerns, provide feedback, and actively participate in shaping project outcomes. Regular engagement fosters a sense of ownership and accountability among stakeholders. In doing so, the project ensures that relevant information is easily accessible to stakeholders. This includes providing updates, reports, and documentation related to the project's environmental, social, and economic aspects. Accessible information empowers stakeholders to make informed decisions and holds project implementers accountable for the project's overall impact.

A robust grievance mechanism is established to address concerns raised by stakeholders. This mechanism allows stakeholders to report issues, express grievances, and seek resolution. The responsiveness of the grievance mechanism demonstrates a commitment to accountability by addressing concerns in a timely and effective manner.

The project engages in regular reporting and audits, providing stakeholders with detailed insights into project activities and outcomes. Regular reporting ensures accountability by keeping stakeholders informed about the project's adherence to sustainability goals, financial management, and overall performance.

The project defines and conveys measurable performance indicators, allowing stakeholders to assess the project's success against predetermined benchmarks. This transparency in performance evaluation enhances accountability by providing stakeholders with objective criteria to gauge the project's impact.

Involving stakeholders in decision-making processes ensures inclusivity and accountability. By considering diverse perspectives, the project strengthens its commitment to meeting the needs and expectations of all stakeholders, fostering a sense of shared responsibility.

Identifying and Managing Social and Environmental Risks

	2. The Potential Social and Environmental Risks?	3. The level of significance of the potential social and environmental risks?			6. Description of the assessment and management measures for each risk rated Moderate, Substantial or High
Risk Topic	Risk Description (broken down by event, cause, impact)	Impact and Likelihood (1-5)	Significance (Low, Moderate Substantial, High)	Comments (optional)	Description of assessment and management measures for risks rated as Moderate, Substantial or High
Land and Soil	Risk 1: Stripping of the Vegetative Topsoil Layer and Soil Compaction	Land Preparation Phase I = 3 L = 4	Moderate		During the land preparation phase of project, there may be a risk of soil quality deterioration, which can affect vegetation and the ecosystem, leading to decreased efficiency. Subproject lot was converted from "Field" to "Land" according to the decision of the Ağrı Governorship Provincial Directorate of Agriculture and Forestry in 2021, It was stated that the area was surveyed as Dry Marginal Agricultural Land. However there are large agricultural lands around the project area and because Mandalık (Merkeş or Hamur) Creek, which connects to the Murat River, runs right on the southern edge of the land. Additionally, soil erosion and structural ground problems may arise as a result of soil excavation.
		Operational Phase I = 0 L = 0	Low		It is not possible to affect the Stripping of the Vegetative Topsoil Layer and the Compaction of the Soil in the area during the operation phase of the project. There is a possibility that the soil content may change only during the life cycle of the project.
	Risk 2: Leakage of Contaminants into the	Constructional Phase I = 4	Moderate		Leakage of pollutants into the soil of the subproject area or waste and chemical storage is possible during the construction phase. Leaks of enterprises to cross the

	Soil and Waste and Chemical Storage	L = 2			Mandalik (Merkeş or Hamur) Creek, which branches into the Murat River from the southern part of the area, will also pose a threat to water resources. The construction phase will last less than a year, and as long as the mitigation and monitoring measures specified in this ESP are implemented, these risks will be eliminated.
		Operational Phase I = 0 L = 0	Low		During the operation phase, there are no activities that will cause pollutants to enter the area.
Noise Pollution	Risk 3: Noise Resulting from Temporary Traffic Load Noise Caused by Construction Vehicles and Equipment Blasting, Stone, and Rock Removal Vibration Effects	Constructional Phase I = 2 L = 2	Low		During construction, the road nearby the area will be actively used. The average distance of the nearest residential units in the project area to the parcel boundary is distributed between 100-200 meters. For the subproject area in Hamur, it is possible that impacts that will harm human health and the environment will occur during the construction phase. However, the construction period is quite short due to the characteristics of SPP. Measures have been developed for the short construction process. By implementing the measures, the impacts will be minimized.
		Operational Phase I = 0 L = 0	Low		However, since the installed power capacity of the power plant is below 1 MW, the construction work is expected to be completed in a very short time. The potential impact of this risk was assessed as extremely low, given that it would not cause long-term noise pollution.
Air Pollution	Risk 4: Dust and Exhaust Emissions from Soil Excavation, Vehicle Traffic and Equipment	Constructional Phase I = 3 L = 4	Moderate		During the construction phase, temporary exhaust and dust emissions are likely to occur due to activities such as soil excavation, leveling works, vehicle traffic and equipment use. Since the power plant installation is

					expected to be completed quickly, it is evaluated that the impact level will be low. However, since there are residential units within 100-200 meters, precautionary measures have been developed to protect against temporary exhaust and toxic emissions.
		Operational Phase I = 0 L = 0	Low		After the completion of the construction phase of the power plant and its commissioning, no activities that will cause air pollution are foreseen.
Traffic Congestion & Surrounding Residents	Risk 5: Temporary Blockage of Transportation Roads between Settlements Traffic Vehicles Cause Destruction on Roads and Buildings	Constructional Phase I = 2 L = 2	Low		Traffic load will increase during the construction phase. Due to the increasing traffic load, especially with the use of heavy tonnage vehicles, road surface improvements become mandatory during the construction phase. There are residential area in the immediate vicinity of the subproject area, and possibility of temporary closures in transportation connections between settlements would be moderate.
		Operational Phase I = 0 L = 0	Low		Heavy tonnage vehicles will not be used during the operation phase.
Pollution in Groundwater	Risk 6: Chemical Spills and Leaks Improper Storage and Disposal of Materials	Constructional Phase I = 3 L = 1	Low		To mitigate the risk of groundwater pollution during the construction of solar power plants, it is essential to implement best practices in environmental management. However, according to the national Water Information System, there is no underground water body in the immediate vicinity of Hamur District County (Figure 12). This includes proper storage and handling of materials, implementation of erosion control measures, appropriate stormwater management, and adherence to regulatory guidelines for environmental protection. Environmental impact assessments and monitoring

					during the construction phase are also crucial to identify and address potential sources of pollution promptly.
		Operational Phase I = 0 L = 0	Low		There is no risk about chemical spills and leaks, improper storage and disposal of materials during the operation phase.
Impacts on plants and animals, ecosystems, protected areas and landscapes	Risk 7: Fragmentation of forest habitats, Loss of nesting grounds and/or high biodiversity/sensitive habitats of rare, threatened, or endangered species, Placing obstacles to wildlife movement	Constructional Phase I = 5 L = 2	Low		The project area is located in an area that can be considered a dry agricultural land and there is no permanent woodland vegetation. There are no trees on the lot where the subproject area will be built. However, there are trees around it. In this context, the necessary precautions were determined during construction.
		Operational Phase I = 0 L = 0	Low		During the operation phase, solar power plants are not likely to damage the surrounding habitat.
Natural Disaster	Risk 8: Earthquake Risk.	Construction Phase I = 3 L = 4	Moderate		Ağrı is located in the active fault line region. For this reason, the construction must be carried out in accordance with the earthquake risk, taking into account active faults, and the relevant regulations must be complied with.
		Operational Phase I = 1 L = 4	Low		Equipment must be well secured in a safe position.
Natural Disaster	Risk 9: Possibility of floods due to excessive rainfall	Construction Phase I = 3 L = 4	Moderate		The fact that the sub project area where the project will be established is close to the flood risk area (Figure 11), increases the possibility of floods due to excessive rainfall in this area.

		Operational Phase I=1 L=2	Low		Since mitigation measures will be implemented against flood risk during the construction phase, the flood risk will be reduced during the operation period.
Cultural Heritage	Risk 10: The possibility of discovering artifacts or other cultural and historical items of value.	Land Preparation Phase I = 4 L=2	Moderate	If excavation sites are encountered in the sub project area, a rapid response plan should be prepared and experts should be called to manage the excavations, and project plans should be revised if necessary and additional measures should be taken to protect the excavation areas.	Considering that the history of the Hamur District dates back to the 14th century BC and that there are first-degree archaeological sites such as the Hamur Castle and cemeteries around the subproject area, and that there are important monumental structures in the villages of the district, it is seen that the district is important in terms of cultural assets. The fact that Hamur, where is an important archaeological and cultural region, increases the possibility of finding new archaeological values in any excavation to be carried out in this area. However, the subproject area is not located within the archaeological, historical and urban protected area. If any artifacts are discovered in the subproject area, the land preparation or construction activities will be stopped immediately and the Museum Directorate must be notified.
		Operational Phase I=0 L=0	Low		The likelihood and impact for this risk have been evaluated as 0 during this period, since: <ul style="list-style-type: none"> • In case of discovery of a artifacts before the operation phase, the operations will be stopped. • The necessary operations will be carried out before the operation phase. • There would be no excavation activity during the operation phase.
Reflection and Glare Effect	Risk 11: Reflection and Glare Effect	Constructional Phase I = 1 L=1	Low	Reflection and glare effect is an effect created by solar power plants (SPP). This effect occurs as a result of reflection or glare	During the construction phase, the level of glare and reflection effects is quite low. During the operation phase, this impact level is higher compared to the

				from sunlight on photovoltaic panels or from a bright sky. The severity of reflection and glare effects may vary depending on the time of year and the geographical location of the power plant. Additionally, impact significance may vary depending on potential receptor points (settlements in the impact area, transportation routes, airports, etc.). Since photovoltaic panels absorb sunlight, the reflection and glare effects in PV type systems are generally lower than in systems using other solar energy technologies.	<p>construction phase due to the complete installation and operation of the panels.</p> <p>After determining the area with reflection risk in the Solar Power Plant area, visual monitoring should be carried out in the first year of operation to observe the reflection and glare effects. The lot where the solar panels will be installed is 100 meters from the Hamur Castle, 100 meters from the Millet Garden, an open-green area, and approximately 200 meters from the Tomb and cemetery area. According to the results obtained by monitoring the reflection and glare effects of Solar Panels on cultural and open green areas during the operation period, a landscape design containing vegetative shading elements should be made at determined points to minimize the reflection and glare effects.</p>
		Operational Phase I=3 L=3	Moderate		
Workforce and OHS	Risk 12: Effects on Workforce and OHS	Constructional Phase I = 4 L=1	Low		The number of personnel needed during the construction phase will be higher. The factors that threaten occupational health are slightly more than the operational phase. Measures have been developed in accordance with the relevant regulations due to national and international legal frameworks.
		Operational Phase I = 3 L=1	Low		Since only maintenance and repair activities will be carried out during the operation phase, the number of working personnel is low and occupational health and safety risks are lower. Measures have been developed in

					accordance with the relevant regulations due to national and international legal frameworks
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4. The overall project risk categorization?

Low Risk	<input type="checkbox"/>	Category C
Moderate Risk	<input checked="" type="checkbox"/>	Category Low B
Substantial Risk	<input type="checkbox"/>	Category High B
High Risk	<input type="checkbox"/>	Category A

5. The requirements of the SES based on the identified risks and risk categorization

Only required for Moderate, Substantial and High-Risk projects

<u>Is assessment required? (check if "yes")</u>			Status? (completed, planned)
if yes, indicate overall type and status	<input type="checkbox"/>	Targeted assessment(s)	Since the project is Category Low B, these assessments are not required.
	<input type="checkbox"/>	ESIA (Environmental and Social Impact Assessment)	
	<input type="checkbox"/>	SESA (Strategic Environmental and Social Assessment)	
Are management plans required? (check if "yes")			
If yes, indicate overall type	<input type="checkbox"/>	Targeted management plans (e.g. Gender Action Plan, Emergency Response Plan, Waste Management Plan, others)	Since the project is moderate risk, these management plans are not required. However, in the cope of SCP II AF, Simplified ESMP has been prepared for this project with low risk.
	<input checked="" type="checkbox"/>	ESMP (Environmental and Social Management Plan which may include range of targeted plans)	
	<input type="checkbox"/>	ESMF (Environmental and Social Management Framework)	
Based on identified risks, which Principles/Project-level Standards triggered?		Comments (not required)	
Overarching Principle: Leave No One Behind			
Human Rights	<input checked="" type="checkbox"/>		
Gender Equality and Women's Empowerment	<input checked="" type="checkbox"/>		
Accountability	<input checked="" type="checkbox"/>		
The Environmental and Social Standards of World Bank (ESS)			
1. Biodiversity Conservation and Sustainable Management of Living Natural Resources	<input checked="" type="checkbox"/>		

2. Assessment and Management of Environmental and Social Risks and Impacts	<input checked="" type="checkbox"/>	
3. Community Health, Safety and Security	<input checked="" type="checkbox"/>	
4. Cultural Heritage	<input checked="" type="checkbox"/>	
5. Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	<input type="checkbox"/>	
6. Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	<input type="checkbox"/>	
7. Labor and Working Conditions	<input checked="" type="checkbox"/>	
8. Resource Efficiency and Pollution Prevention and Management	<input checked="" type="checkbox"/>	
9. Financial Intermediaries	<input checked="" type="checkbox"/>	
10. Stakeholder Engagement and Information Disclosure	<input checked="" type="checkbox"/>	

Environmental Screening Checklist

Sub-project Information	
Sub-project title	Hamur Municipality SPP Subproject
Sub-project beneficiaries	Hamur Municipality
Proposed date of start of work	04.03.2024
Brief description of sub-project	One of the main justifications of the SPP sub-project is to use clean energy to meet the electric energy need of district.
Site area, location	Ağrı, Hamur, Kale, Lot 107 of Block 33
Sub-project cost	EU 792.000,00
Status of national EIA process of sub-project	The sub-project is exempt from EIA due to Regulation on Environmental Impact Assessment (Official Gazette No. 31907, July 29, 2022)-Annex II, because of total AC power is lower than 999 kWe.

Environmental and social impacts related to the proposed sub-project – the existing situation			
	Yes	No	Details
Will the sub-project adversely affect legally protected areas or internationally recognized areas of high biodiversity value ² ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The sub-project will not affect any protected areas or internationally recognized areas of high biodiversity value, since there is no such areas around the-project area.
Will the sub-project be located in or near the environmentally sensitive or protected area (in accordance with national legislation)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The sub-project will not be located in or near the environmentally sensitive or protected area (in accordance with national legislation), since there is no such areas around the-project area.
Will the sub-project adversely affect critical habitats such as forest ecosystems, wetlands, marshlands, and aquatic ecosystems or natural habitats?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There is no habitat with high sensitivity around the subproject area.
Will the sub-project adversely affect endangered plant and animal species?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There are no endangered flora or fauna species in or near the area.
Will the sub-project affect archaeological sites, historic monuments and settlements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There is no negative impact on any historical assets located near the project.
Is there woods or forest around the sub-project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There are no woods or forest around the subproject area
Will the sub-project adversely affect the woods and forest?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Since There are no woods or forest around the subproject area, it will not affect adversely any woods or forest.
Is there any combustible and flammable subsidence material around the sub-project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No, there is not any combustible and flammable subsidence material around the sub-project area.
Is there underground facilities such as gas pipeline, electrical facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No, there is not underground facilities such as gas pipeline, electrical facilities
Are there any overhead lines such as high-voltage lines in or near the sub-project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No, there is not any overhead lines such as high-voltage lines in or near the sub-project area
Will people permanently or temporarily lose access to facilities, services, or natural resources because of the sub-project activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No, local people will not be affected by losing access to facilities, services, or natural resources because if the sub-project activities.
Is this sub-project intervention requiring private land acquisitions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The property is allocated for the municipality.
If the land parcel has to be acquired, is the actual plot size and ownership status known?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
If new land is required and the site is privately owned, can this land be purchased through Willing Buyer–Willing Seller agreement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-

² Internationally recognized areas of high biodiversity value include World Heritage Natural Sites, Biosphere Reserves, Ramsar Wetlands of International Importance, Key Biodiversity Areas, Important Bird Areas, and Alliance for Zero Extinction Sites, among others.

Will the sub-project require the acquisition of public lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
If public lands will be acquired, are there any formal/informal users utilizing these lands for income generation purposes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
Will there be loss of/damage to productive trees, fruit plants or crops that generate livelihood income for the households?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There is no productive trees, fruit plants or crops in the land where the SPP subproject will be built
Is there any soil contamination observed at the sub-project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Currently, no soil contamination observed, but monitoring measure will be applied to control over.

Impacts of sub-project (in case of rooftop solar sub-project only):			
Will the sub-project affect the daily operation of the building and people?			
Is the building protected under the law for the protection of cultural heritage?			
Is the building of special significance to any vulnerable group (i.e. disabled people, minorities, youth, etc.)?			

Environmental and social/impacts related to sub-project construction/installation			
	Yes	No	Details
Will the sub-project involve the use of forest trees or other natural resources as building materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The sub-project does not involve the use of forest trees or other natural resources as building materials.
Will the sub-project emit greenhouse gases (CO ₂ , NO _x , O ₃) or ozone-depleting substances (CFC, methyl bromide, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The sub-project will not emit greenhouse gases
Will the sub-project use, produce, or discharge hazardous and toxic materials (e.g., hospital waste, industrial waste, or other?)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Will the sub-project produce or cause occupational hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Related measures are planned in this ESMP, and they will be taken into consideration
Will the sub-project cause dust and noise pollution?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The sub-project would cause dust and noise only in construction phase. Measures related to this issue has been developed in this ESMP. In the operational phase there will be no dust and noise.
Will the sub-project cause water pollution?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
Will the sub-project cause soil pollution?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
Will the sub-project result in temporary disruption to the livelihoods of any persons/households?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
Will the sub-project cause community safety-related hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
Will the sub-project include significant OHS concerns?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Related measures are planned in this ESMP, and they will be taken into consideration

Will the sub-project cause additional traffic load?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The sub-project would cause traffic load in construction phase. In operational phase there will be no traffic load originated from the sub-project.
Will the sub-project cause any adverse impact on the closest sensitive receptors (if there is any)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	-
Is there a population that can be negatively affected by the sub-project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No population in the lot where subproject will be built
Other environmental or social impacts (describe the nature and severity of its impact)	<u>Preparatory phase:</u> <u>Construction phase:</u> <u>Operation phase:</u>		

According to OP4.01, OP 4.10 and OP 4.12 of World Bank, the following social safeguard documents shall be prepared for the subproject:

1. According to the Environmental screening checklist above the subproject is in Category low B in terms of risk. and recommendations of World Banks that is Category low B project does not need environmental management plan and does not need to take environmental protection measures to mitigate the impact, however, in any situation, a simplified ESMP has been prepared. In this regard, it reveals that the World Bank has not triggered the relevant safeguards policies, except for this simplified ESMP.
2. According to the social screening checklist above, there is no reason to trigger World Bank Social Safeguard Documents such as Resettlement Action Plan, Reemployment Plan, Job Transfer Training.

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