2024

Çubuk SPP Sub-Project

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

ÇUBUK MUNICIPALITY

Table of Contents

Figure List

Graphic List

Table List

Annexes

List of abbreviations

AF	Additional Financing
AFAD	Disaster and Emergency Management Authority
CLO	Community Liaison Officers
E&S	Environment and Social
EHS	Environment Health and Safety
EHSMP	Environment Health Safety Management Plan
EIA	Environmental Impact Assessment
EMRA	Energy Market Regulatory Authority
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Monitoring Report
ESP	Environmental and Social Policy
ESS	Environmental and Social Standards
EU	European Union
GIS	Geographic Information System
GM	Grievance Mechanism
GPN	Good Practice Note
İLBANK	Bank of Provinces
IRAP	the Provincial Disaster Risk Reduction Plan
MEP	Ministry of Environment, Urbanization, and Climate Change
MTA	Maden Tetkik ve Arama
NECRRM	Noise Evaluation and Control Regulation
OHS	Occupational Health and Safety
OP	Operation Policy
PIU	Project Implementation Unit
PM	Particulate Matter
PYB	Project Management Unit
SCP	Sustainable Cities Project
SDG	Sustainable Development Goals
SEA	Sexual Exploitation and Abuse
SESA	Strategic Environmental and Social Assessment
SH	Sexual Harassment
SPP	Solar Power Plant
UN	United Nations
USBS	National Water Information System
WB	World Bank

Executive Summary

ILBANK (The Bank of Provinces in Türkiye) 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 Environmental and Social Management Plan (ESMP) will be prepared as defined in the Environmental and Social Management Framework (ESMF) (İLBANK, 2019). 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 Türkiye 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 belonging to municipalities, a solar power plant project located in Çubuk, a district within Türkiye's Ankara province, has been initiated by Çubuk 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.

The installed capacity of the plant is 1110,0 kWp which is exempted from EIA regulation and it is expected to generate 1.245.925,00 kWh of electricity annually.The project site block/lot number was 0/681, but this block was passivated on 03.11.2014 and the new number became 114 Block 1 Lot. The project site is located on a Çubuk/Kargın 114 Block 1 Lot, but this block was subdivided in 2019 and the new numbers are lot 2 and lot 3 of block 114. The land was allocated indefinitely to the Çubuk municipality by the national real estate directorate on 10.02.2014 (Annex 1). 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 project has been financed by the World Bank through a loan agreement with Çubuk 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 Ankara, Çubuk is a significant step towards the development of renewable energy sources in Türkiye. The project in Çubuk has the potential to serve as a model for similar projects in Türkiye.

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 Türkiye's efforts in combatting climate change. It aligns with Türkiye'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 Türkiye's climate action plans.

1. Sub-Project Description

Within the scope of this report, the SPP sub-project details planned by Çubuk Municipality was examined to prepare ESMP for the sub-project. Çubuk district is located in the Ankara province.
This sub-project has been prepared for the establishment of an unlicensed solar power plant project with an installed power of 920,0 kWe belonging to Çubuk district of Ankara province. The project is located on the roof of the livestock market. Since the livestock market has its own consumption transformer, there is no need for transmission line. There is no residential areas near the project area. There are road accesses to the project area with local roads of Çubuk District (Figure 2).

Figure 1: Location of Çubuk District Center and SPP Subproject Area

Figure 2: Local Roads of SPP Sub-project Area

Photograph 1: Photograph of Livestock Market

Photograph 2: Photograph of Livestock Market

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 **1110,0 kWp DC Capacity, 920,0 kWe AC Capacity**. Equipped with 380 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 20.000,00/MWp**. So, the overall power plant decommissioning cost will be, **EU 22.192,00.**

Table 1: Planned SPP Technical Details

Technical Information	
FV Panel Type	Monocrystalline MONOPERC
FV Panel Power Output	380 Wp
FV Panel Count	2920
Annual Degradation	%0,5
Inverter Power Output	60 kW
Inverter Count	16
Total DC Power	1110,0 kWp
Total AC Power	920,0 kWe
Estimated Annual Energy Production	1.245.925,00 kWh
Annual Energy Consumption	1.245.925,00 kWh

Production/Consumption	%100
Decommissioning Cost	EU 18.656,64

Project Land Use Rights

The project site block/lot number was 0/681, but this block was passivated on 03.11.2014 and the new number became 114 Block 1 Lot. The project site is located on a Çubuk/Kargın 114 Block 1 Lot, but this block was subdivided in 2019 and the new numbers are Lot 2 and Lot 3 of Block 114. The land was allocated indefinitely to the Çubuk municipality by the national real estate directorate on 10.02.2014 (Annex 1).

Table 2: Planned SPP Land Information

Land Information	
Type	Main Property
Province, District, , Nbhd.	Ankara, Çubuk, Kargın
Block, Lot	114/2-3
Total Area	34.198,84 m2
Right to Property Use	Municipality - Allocated
EIA Status	There is no EIA process for rooftop solar power plant projects.

Land Acquisition Principles

OP 4.12 (İLBANK, 2019) 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.

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, Çubuk 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. The project will establish a dedicated grievance mechanism (GM) which will be available through a toll-free hotline, email, and a GM within the municipality. This GM will be monitored regularly, and all grievances will be logged, reviewed, and addressed within a specified timeframe. A strong complaints mechanism addresses concerns and regular reporting and audits keep stakeholders informed. Also, public participation meetings will be held where local residents will be informed about the project and their opinions on the project will be gathered. The participation of the public will be ensured, and they will be informed about how to access grievance mechanisms in case of any issues. 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 **Hata! Başvuru kaynağı bulunamadı.**.

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) (T.C. Cumhurbaşkanlığı Mevzuat Bilgi Sistemi, 2022)and WB's Operational Policies (İLBANK, 2019). 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 Türkiye are summarized below:

- Law No. 6203Expropriation 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

Location and Topography

Ankara province is located in the Central Anatolia region. The territory of Ankara province, located in the northern part of the Central Anatolian Plateau, is more like a plateau and provides a transition between mountainous-forested Northern Anatolia and the arid Konya Plain. Ankara, with a surface area of 24,520 square kilometers and its altitude above sea level is around 830 - 850 meters. The highest point of the province is Işık Mountain, with an altitude of 2,015 meters, and the largest plain is the Polatlı Plain with a surface area of 3,789 km².

Çubuk district is located in the northeast part of the Ankara province, and it is approximately 35 km away from the center of Ankara. Located in the Upper Sakarya Section of the Central Anatolia Region, Çubuk district is surrounded by Şabanözü and Orta districts of Çankırı province from the north, Kızılcahamam and Kazan districts of Ankara province from the west, and Kalecik and Akyurt districts from the east.

Figure 3:Geographical location of Ankara Province and Sub-Project Area

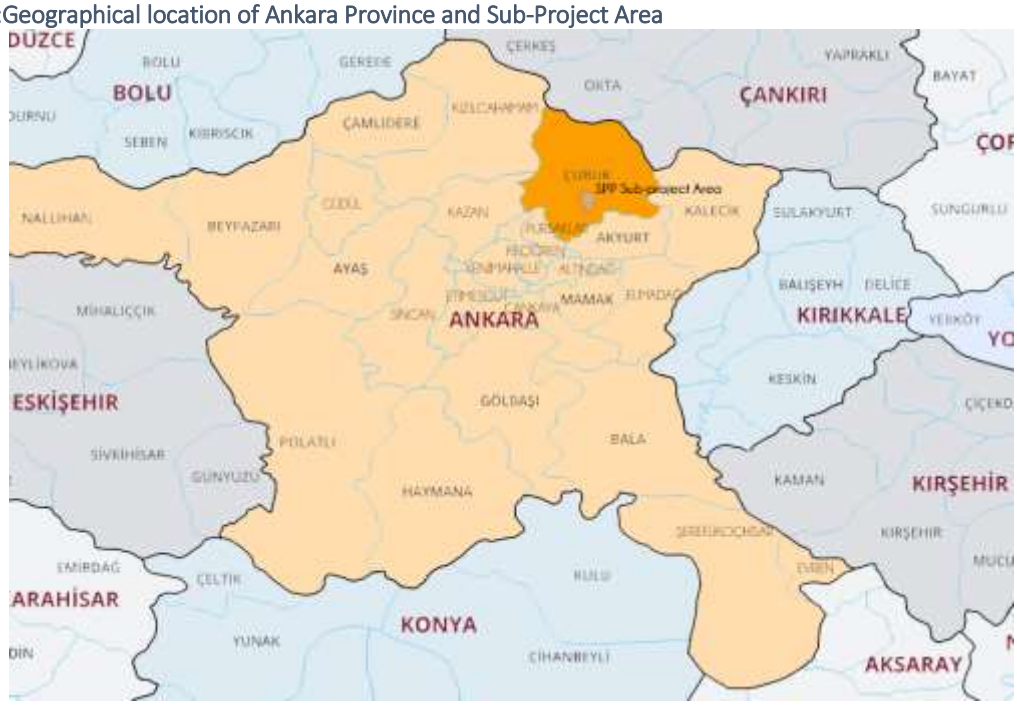
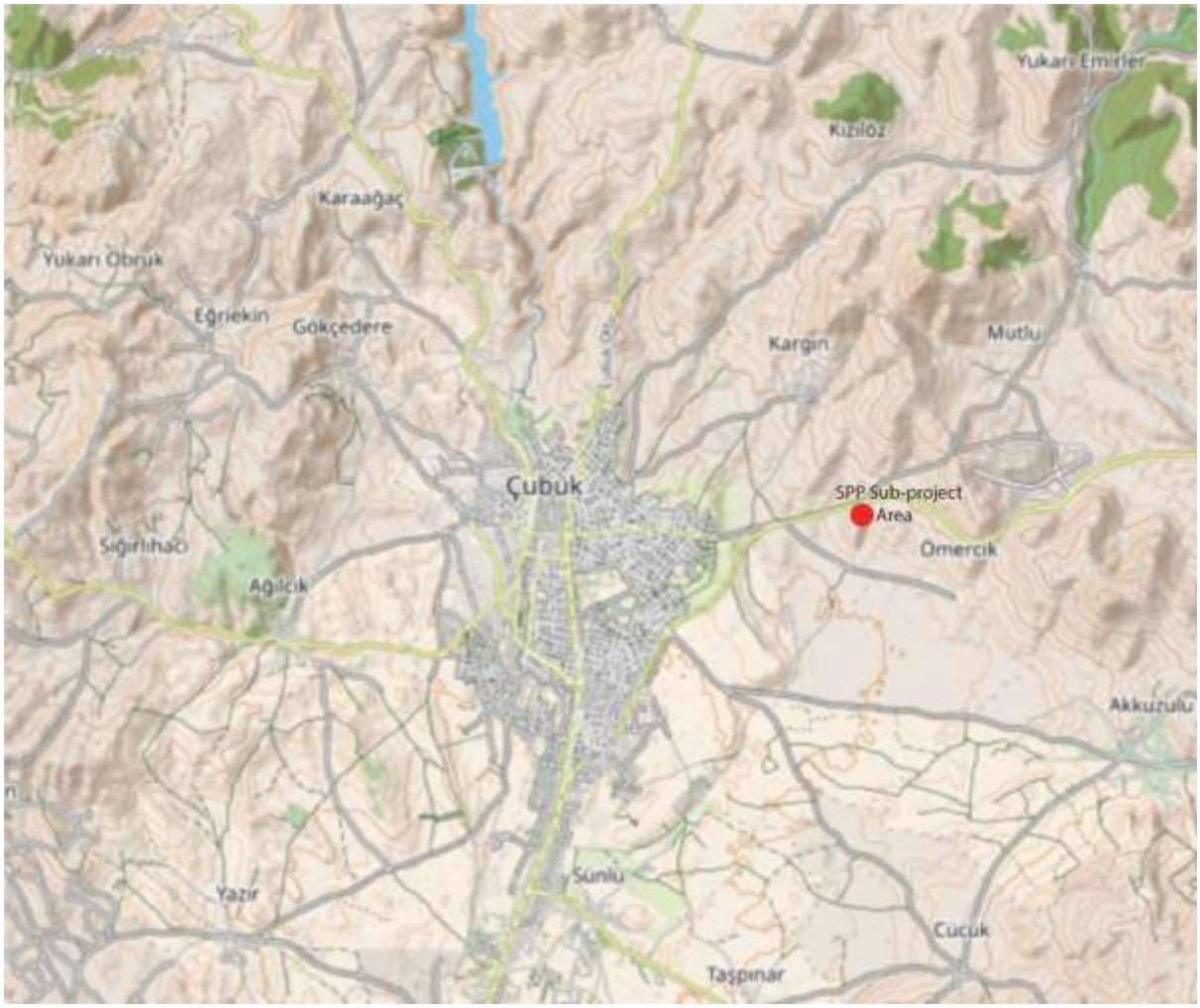


Figure 4: Çubuk District Topography Map

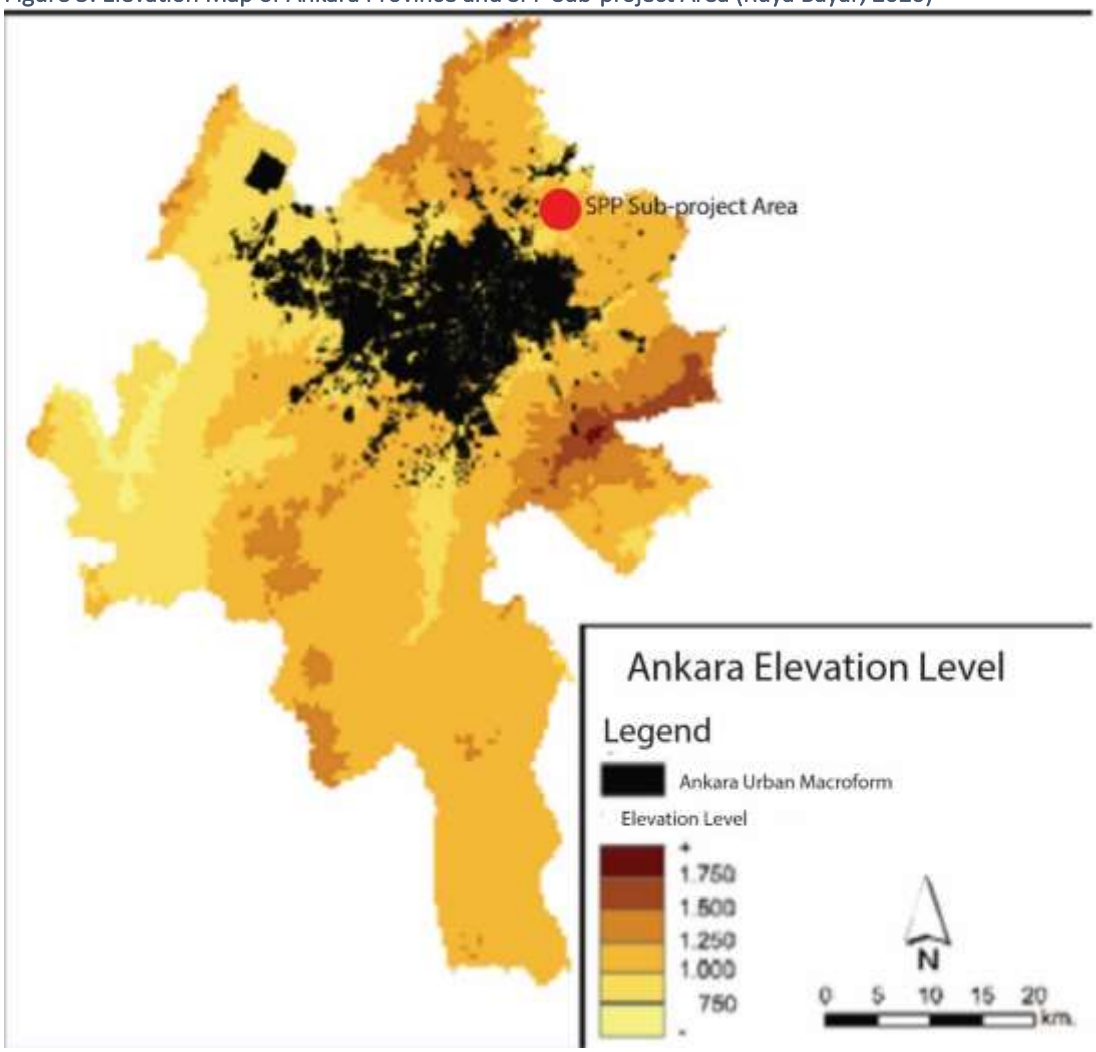


Geography

Çubuk District consists of a plain and plateau area between the southern extensions of the Köroğlu Mountains, which constitute the transition area of the Black Sea Region and the Central Anatolia Region. This area located in the northeast of Ankara province is surrounded by masses which are eroded as erosion surfaces or high plateaus even though they are referred to as mountains today. These plateaus, where villages or towns are located today, are also plateaus. Karyağdı and Mire Mountains, which have an average height of 1400 meters and have the characteristics of a high plateau, form the west of the district, while Işık Mountain and Aydos Mountain surround the district from the north with an elevation of more than 1500 meters. In the east of the district, Idris Mountain and Karbasan Mountain, which reach 1900 meters, are located. Between these elevations, extending

in the northeast-southwest direction, the Çubuk plain, which also gives its name to the district, covers a large area with a length of 20 km and a width of up to 15 km.

Figure 5: Elevation Map of Ankara Province and SPP Sub-project Area (Rüya Bayar, 2020)



Climate

Ankara province and its surroundings in the Central Anatolia region experience a continental climate with cold and rainy winters. A steppe-semi arid climate is observed in the south, while the north exhibits the mild and rainy characteristics of the Black Sea Region. Winters are very cold, and summers are very hot. The annual average precipitation is around 393.2mm, and the annual average temperature is 11.9°C. The highest average temperatures are typically experienced in July-August, while the lowest average temperatures occur in December-January. The annual highest average temperature is 17.90°C, and the annual lowest average temperature is 6.3°C.

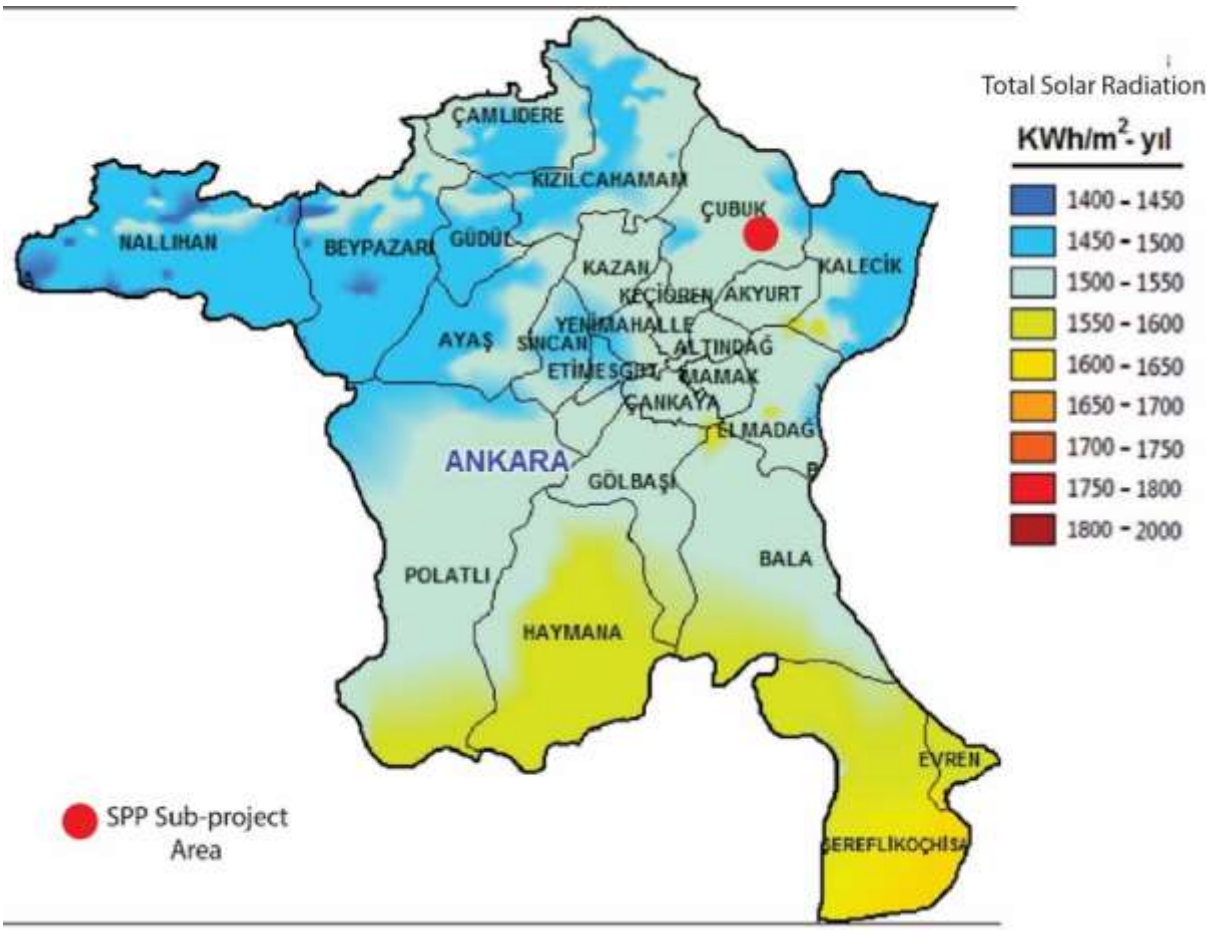
The climate of Çubuk district shows a transitional climate feature due to its geographical location. It is a transition between the typical continental climate of Central Anatolia and the humid climate of the Black Sea region. The climate is hot and dry in summer and cold and rainy in winter. Precipitation is usually in the form of snow in winter.

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 Çubuk's average solar radiation throughout the year is in the range of 1500- 1550 KWh/m2/year (Figure 6). Global radiation values are over 6.00

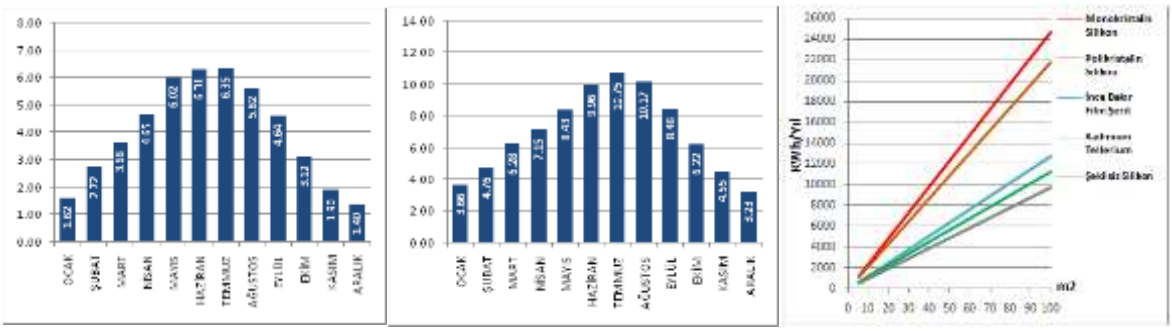
KW/m2/day in May, June, July, and over 5.00 KWh/m2/day in a total of 4 months from May to the end of August (Graphic 1).

In Çubuk, the month with the longest sunshine duration (10.75 hours) is June, and the shortest sunshine duration (3.23 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.

Figure 6: Ankara Province Solar Atlas and Project Area



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



Flora

While steppe (Steppe) is dominant in the south of the district; it turns into forest as it goes north. When the Aydos Mountain in the north is reached, it is seen that the vegetation cover is completely transformed into forest. The tree species in the forests consist of Oak, Beech and Pine. It is noteworthy that there are willow and poplar trees on the valley floors on the sides of the plain.

Earthquake Risks

According to the Provincial Disaster Risk Reduction Plan (IRAP) for 2021 and the Mineral Research and Exploration (MTA) findings, Ankara is surrounded on four sides by the North Anatolian Fault Zone from the north, the Akpınar fault from the southeast, the Tuz Gölü Fault Zone from the south, the Kırıkkale-Erbaa fault from the east and the Eskişehir Fault Zone from the southwest. Ankara city center is 60 - 80 km away from these faults. Ankara has never been at the center of devastating earthquakes (AFAD, 2021).

According to the Türkiye Earthquake Hazard Map, Çubuk District is located between 0.2-0.3 in terms of seismicity. When the sub-project area is examined based on the "Türkiye 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 0.212 PG (Figure 8).There is no active fault line around the SPP Sub-project area and Çubuk district.

Figure 7:Faults in Çubuk and its Region, General Directorate of Mineral Research and Exploration (MTA)

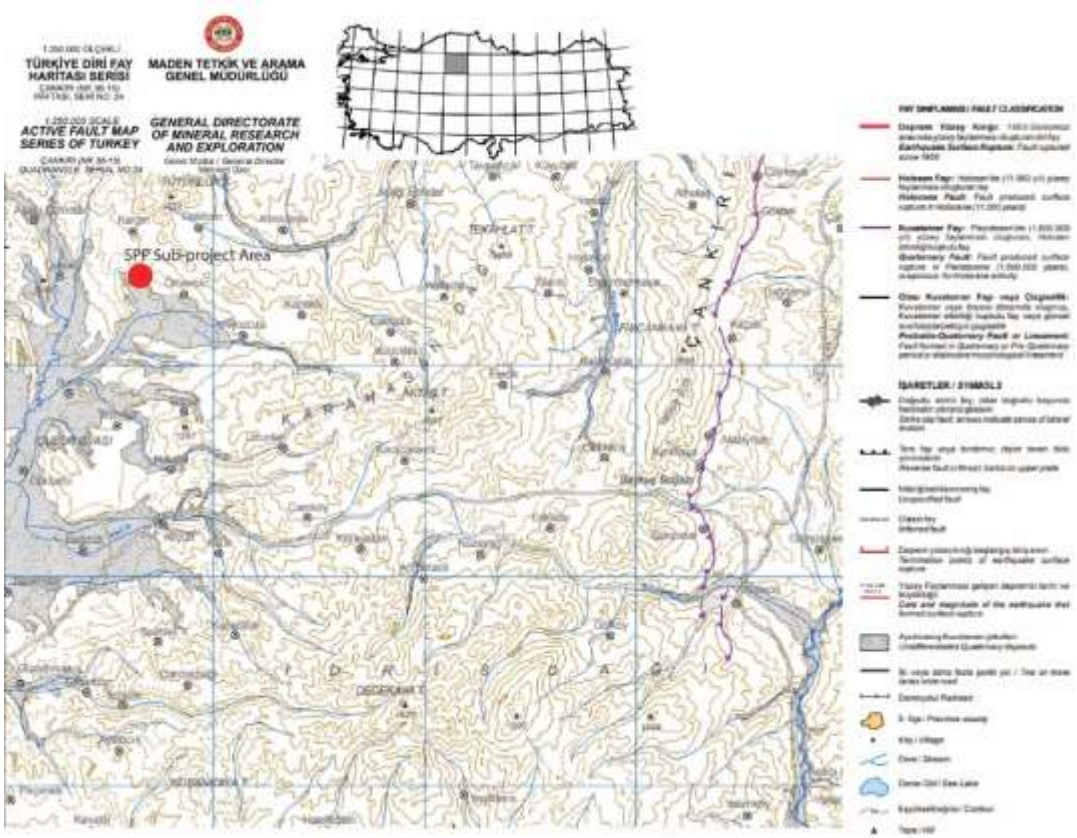
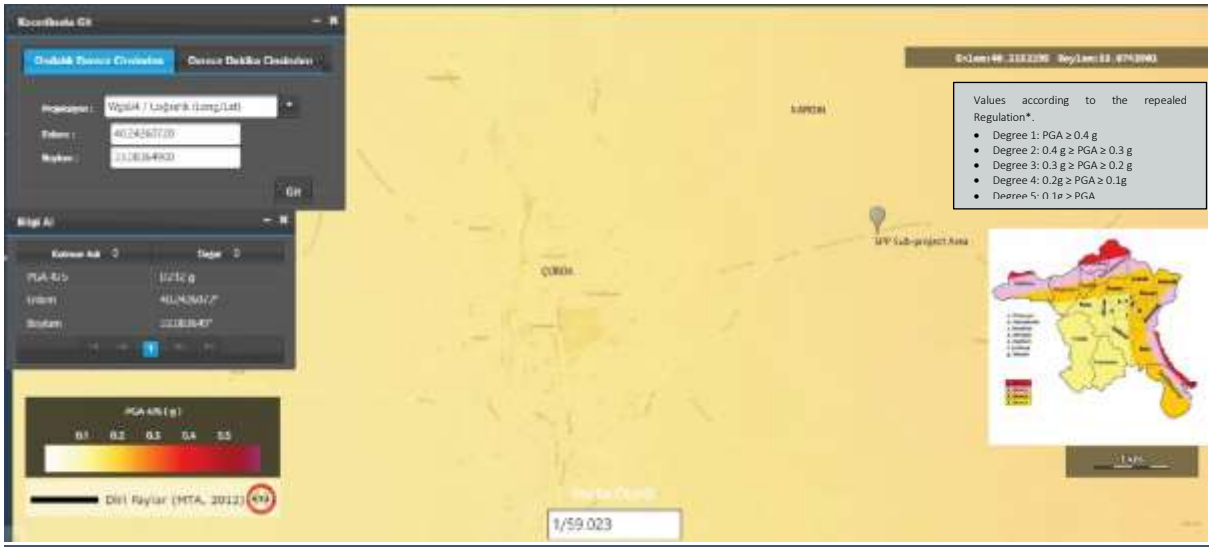


Figure 8:Earthquake Hazard Map of Sub-Project Area and Surroundings, Türkiye Earthquake Hazard Maps Interactive Web Application, 2023, (https://tdth.afad.gov.tr)



*Türkiye 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 Türkiye 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.

Hydrology and Flood Risks

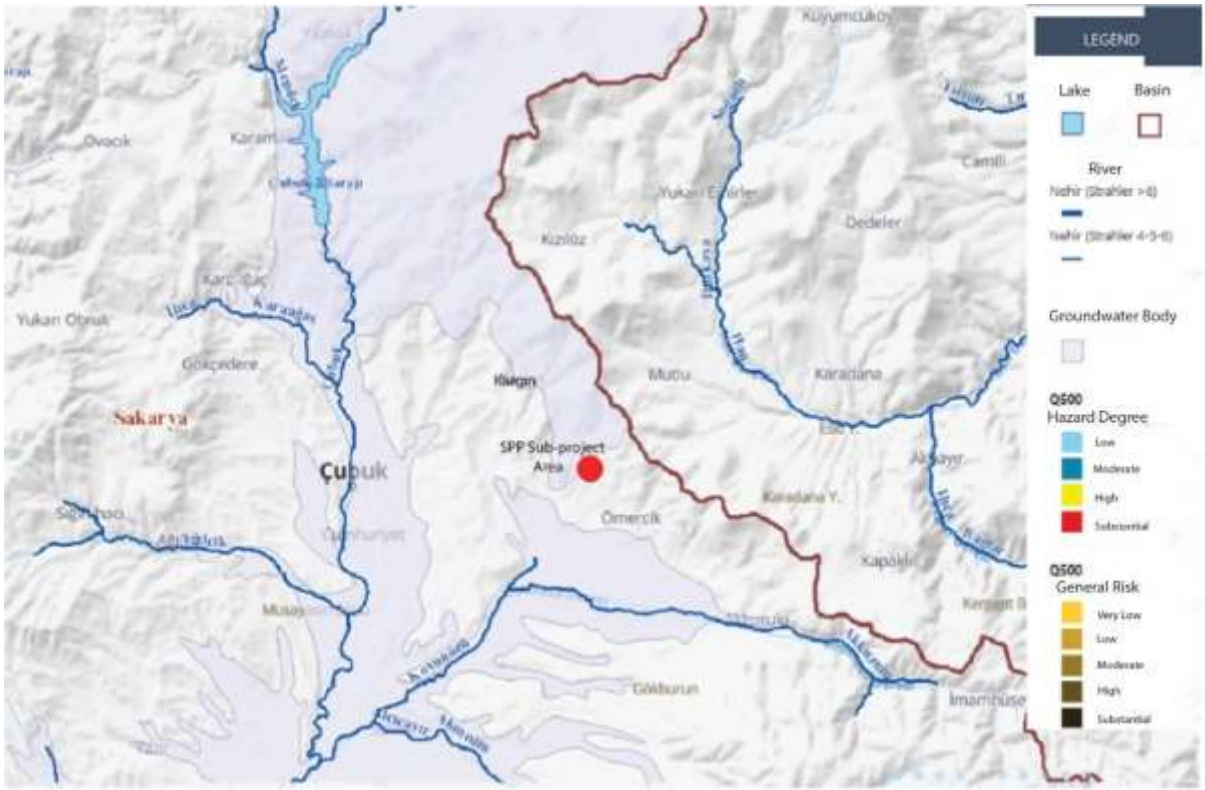
A large part of the Kızılırmak river basin and its large tributaries such as Delice, Acıçay, Devres streams, a part of the Sakarya basin and its large tributaries such as Kirmir Stream, Ankara Stream, a part of the Western Black Sea basin, a part of the Konya closed basin and its large tributaries such as Büyük Melen, Küçük Melen, Gerede constitute the important rivers of Ankara province. The amount of precipitation falling in the region differs in the northern and southern parts. Ankara shows the precipitation regime characteristic of the Black Sea Region in the Kızılcahamam and Çubuk districts located in the north, and the climate characteristic of the Central Anatolia Region in the south. The average annual rainfall of the province is 389.1 mm. Many flood events have occurred in Ankara. It has been observed that the floods that have occurred in the center of Ankara in recent years have mostly occurred due to reasons such as incorrect infrastructure applications (backflow of the sewage system, etc.), surface flooding caused by dense construction (water flowing into the soil without resisting during heavy rains, etc.)

The climate of Çubuk district shows a transitional climate feature due to its geographical location. The climate is hot and dry in summer and cold and rainy in winter. Precipitation is usually in the form of snow in winter. The annual precipitation in Çubuk, which is rainier than the province of Ankara, is 401 mm in the district center, while this amount reaches 448 millimeters as you go north. The most precipitation falls in winter, followed by the spring season. The wettest month is May with 59 mm.

Çubuk II Dam, which is used to meet the water needs of Ankara province and Çubuk district, is located approximately 6 km north of Çubuk district. The construction of Çubuk II dam, which was started in 1961 due to the pollution of Çubuk 1 dam located within the borders of Altındağ district of Ankara, was completed in 1964. The dam was built on the Çubuk Stream; it was constructed in earth filling type and its body volume is 1.100.000 cubic meters. Mendek, Kışla, Bağırcan Çayır and Hacıkadın streams feed the dam lake. Since 2004, water has been supplied to the center of Ankara from the dam, which provides 38 cubic hectometers of drinking and utility water annually.

Çubuk district is rich in terms of groundwater resources. According to the National Water Information System, Çubuk district and SPP Sub-project area is not located in the flood risk area (Figure 9).

Figure 9:National Water Information System (USBS) Flood Risk Analysis and Sensitive Areas and Water Assets (Groundwater etc.) around Subproject Area



Social Baseline

Demography

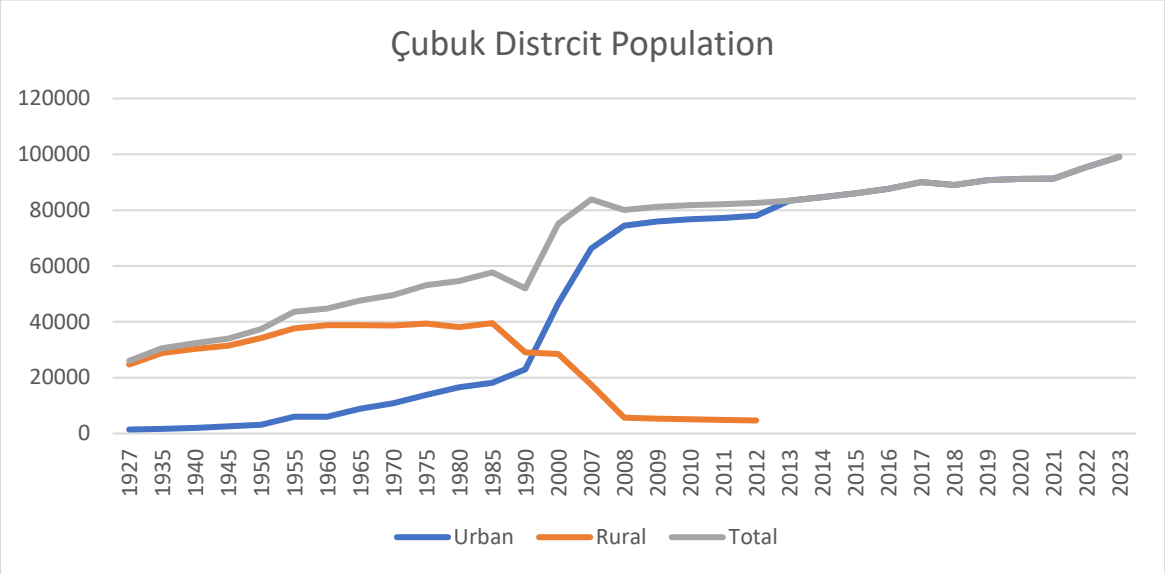
Çubuk district ranks 11th in terms of size among the 25 districts of Ankara in terms of population. The district consists of a total of 84 neighborhoods, including 7 central neighborhoods.

According to the 2023 census, the population of the district center is 99096. There has been a general increase in the urban population of Çubuk district. After 2012, the rural population was calculated as included in the urban population as the villages gained the status of neighborhoods in metropolitan cities.

Table 3: Çubuk Population by Years (TÜİK, 2024)

Year	Urban	Rural	Total	Year	Urban	Rural	Total
1927	1400	24638	26038	**2009**	75937	5333	81270
1935	1674	28875	30549	**2010**	76716	5031	81747
1940	1972	30346	32318	**2011**	77258	4898	82156
1945	2545	31440	33985	**2012**	77958	4656	82614
1950	3143	34232	37375	**2013**	83449		83449
1955	6013	37616	43629	**2014**	84636		84636
1960	5949	38810	44759	**2015**	86055		86055
1965	8857	38744	47601	**2016**	87603		87603
1970	10857	38682	49539	**2017**	90063		90063
1975	13793	39321	53114	**2018**	89046		89046
1980	16510	38106	54616	**2019**	90764		90764
1985	18203	39513	57716	**2020**	91142		91142
1990	22935	29029	51964	**2021**	91363		91363
2000	46605	28514	75119	**2022**	95449		95449
2007	66303	17523	83826	**2023**	99096		99096
2008	74507	5616	80123				

Graphic 2:Çubuk District Population by Years (TÜİK, 2024)



Cultural Heritage

The territory of the district, which has been on the King and Silk Road route since the Early and Middle Ages, traces of the Roman and Byzantine periods are found in the historical development process. The ruins in the Balıkhisar neighborhood in Çubuk, the castles and ruins in Camili and Çatköy, the marble lion statue found during excavations in the Güldarpı neighborhood and the grave ruins in the Yakup Derviş neighborhood are the remains of the Roman and Byzantine periods. In addition, Siyemi Sultan Tomb, Kutuören Village Mosque, Melikşah Village Stone Bath, Mahmutoğlan Village Mosque and Çubuk Karşıyaka Mosque are historical artifacts. The SPP sub-project area is not located in the cultural heritage area.

Economic Sectors and Facilities

The existence of flat and wide plains in Çubuk district has made agriculture and animal husbandry the main source of livelihood. Organized Livestock Facilities, which have been carried out for 10 years under the name of OSB, continue to work, albeit slowly. Pickling has become a sector for the last twenty years, and the district is the production center of the world-famous Çubuk pickles. Every year in the first week of September, Çubuk International Pickle and Culture Festival is organized. Most of the population now work as civil servants and workers in different districts of Ankara, especially in Akyurt, instead of agriculture. The area of the district consists of 54% agricultural land, 21% forest, 17% meadows and pastures, 3% areas not used in agriculture and 5% areas unsuitable for agriculture. Agricultural land is 59% field, 24% fodder crops, 5% orchard and vineyard, 1% vegetables, 5% fallow and 6% not used in agriculture. Livestock breeding is the biggest source of income in the district. The district has the biggest livestock market of Ankara province and its surroundings and animal husbandry is practiced in all villages of the district. In addition to family business in the villages, dairy cow breeding, cattle fattening, and sheep breeding are widely practiced in the plain villages and around the district center.

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 Phase of the Project

Phase Impact and Likelihood (1-5)	**Risk Description**	**Mitigation Measures**	**Responsibility**	**Key Performance Indicators**	**Cost**
Constructional Phase I = 2 L = 2	Risk 1: Noise Resulting from Temporary Traffic Load Noise Caused by Construction Vehicles and Equipment · 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. · ; 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	Çubuk 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 L = 2	· Risk 2: 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. · 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.	Çubuk 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 L = 2	Risk 3: Temporary Blockage of Transportation Roads between Settlements Traffic Vehicles Cause Destruction on Roads and Buildings .	· Plan construction schedules to minimize road closures. · Provide alternative routes for affected communities. · Communicate road closures in advance to residents. · Employ regular road maintenance and repair. · Ensure construction vehicle operators follow road safety guidelines.	Çubuk Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Traffic Grievance Records Visual observations (such as traffic signs and warnings are placed at appropriate locations)	Included in the subproject budget

Phase Impact and Likelihood (1-5)	Risk Description	Mitigation Measures	Responsibility	Key Performance Indicators	Cost
				ESMR Findings	
Constructional Phase I = 2 L = 2	Risk 4: Community health and safety during the execution of works	· Ensure that construction work is performed when the facility is not in use, or outside of regular working hours. · Fence the approach areas and storage areas to prevent unauthorized access. · Provide clear signage to warn the public of construction activities. · Implement dust control measures to minimize air quality impact.	Çubuk Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Constructional Phase I = 1 L = 1	Risk 5: · 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.	Çubuk Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Construction Phase I = 4 L=1	· Risk 6: Earthquake Risk	· 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.	Çubuk Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations Records	Included in the subproject budget
Construction Phase I = 2 L=2	· Risk 7: 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.	Çubuk Municipality/PIU Contractor and/or subcontractor	Visual observations ESMR Findings	Included in the subproject budget
Constructional Phase I = 4 L=1	· Risk 9: Effects on Workforce and OHS	· Shaping early detection mechanisms based on results of monitoring measures, · Legal and regular training, · Utilization of occupational health and safety equipment,	Çubuk Municipality/PIU Contractor and/or subcontractor	Sub-contractor Agreements Grievance Records	Included in the subproject budget

Phase Impact and Likelihood (1-5)	Risk Description	Mitigation Measures	Responsibility	Key Performance Indicators	Cost
		· Regular worker health checks, · OHS Site management Plan, · Risk Assessment, · Emergency Plan · Control of working hours and work permits, · Regular safety inspections.	Supervision Consultant	ESMR Findings	

Table 5: Mitigaton Plan for the Operational Phase of the Project

Phase Impact and Likelihood (1-5)	Risk Description	Mitigation Measures	Responsibility	Key Performance Indicators	Cost
Operational Phase I = 1 L =1	· Risk 2: Dust and Exhaust Emissions from Soil Excavation, Vehicle Traffic and Equipment	· Disposing of excess material and cleaning the location upon the finalization of works.	-Çubuk 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 = 1 L =1	Risk 5: · Chemical Spills and Leaks · Improper Storage and Disposal of Materials · Inadequate Stormwater Management · Inadequate Hazardous Material Handling	· 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. · Develop Disposal of Waste PV Modules Management Plan · Develop Recycling of Project Equipment/Materials Management Plan	Çubuk 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
Operational Phase I=1 L=3	· Risk 6: Earthquake Risk	· Backup plans should be created for the devices and systems used in the solar power plant. · Power supplies must be provided for emergencies.	Çubuk Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations Records	Included in the subproject budget
Operational Phase I=1 L=1	· Risk 7: 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.	Çubuk Municipality/PIU Contractor and/or subcontractor	Visual observations ESMR Findings	Included in the subproject budget
Operational Phase I=3 L=3	· Risk 8: Reflection and Glare Effect	· Develop a detailed procedure for monitoring glare and reflection, including responsibilities, schedules, and data collection methods and regularly report the findings and progress of glare and reflection control measures. · Design of project area according to flight routes.	Çubuk Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Visual observations ESMR Findings	Included in the subproject budget
Operational Phase I = 3 L=1	· Risk 9: Effects on Workforce and OHS	· 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	Çubuk Municipality/PIU Contractor and/or subcontractor Supervision Consultant	Sub-contractor Agreements Grievance Records ESMR Findings	Included in the subproject budget
Operational Phase I = 2 L=2	· Risk 10: Storage of Damaged or End of Lifecycle Panels	· Develop a procedure for temporary storage of damaged or end-of-lifecycle panels on site in secured areas. - Ensure proper delivery to specified recycling areas. · Panels, switches, solar regulators, inverters, etc that break down and become idle during or after the activity in question. The materials will be temporarily stored in the Hazardous Waste Storage Area in the existing facility, classified according to their properties and delivered to licensed recycling companies for recycling. Wastes that cannot be recycled will be given to licensed companies to be disposed of in accordance with the conditions specified in the "Waste Management Regulation", which came into force after being published in the Official Gazette dated 02.04.2015 and numbered 29314.	Çubuk 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 6:Monitoring Plan for the Land Preparation, Construction Phases of the Project

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
Constructional Phase I = 2 L = 2	Risk 1: Noise Resulting from Temporary Traffic Load Noise Caused by Construction Vehicles and Equipment 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. .	· Noise levels generated by traffic. · Noise levels generated by traffic. · Structural and superficial damage from vibrations	· Sound level measurement · Visual inspections and structural assessments.	· Areas with traffic during construction · Areas with equipment operation. · Buildings near construction areas.	· Periodic measurements during construction. · · Regular structural assessments during construction.	· Noise levels exceeding acceptable limits. · Vibration and noise exceeding allowable levels. · Signs of structural or superficial damage.
Constructional Phase I = 2 L = 2	Risk 2: 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
Constructional Phase	Risk 3: Temporary Blockage of	· Analyzing road blockages, duration, and frequency through real-time	· Road blockages, duration, and frequency.	· Record road closure incidents and duration.	· Vehicle operation areas.	· Periodic emissions testing during	· Road closures exceeding

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
I = 2 L = 2	Transportation Roads between Settlements Traffic Vehicles Cause Destruction on Roads and Buildings	assessments of transportation routes. · Analyzing damages to roads and buildings by conducting periodic visual assessments in areas where construction vehicles operate.	· Damage to roads and buildings	· Visual inspections, documenting damages.	· Transportation routes. · Areas where construction vehicles operate.	construction and operation. · Real-time monitoring of road conditions. · Periodic visual assessments	acceptable frequency. · Occurrence of damages to roads and buildings beyond permissible levels.
Constructional Phase I = 2 L = 2	Risk 4: Community Health and Safety During Execution of Works	· Regular inspections of fenced areas and signage to ensure they are maintained and effective. · Monitoring of work hours to ensure that activities are conducted outside of high-traffic or operational hours. · Inspection of approach areas and storage areas to verify they are secured and inaccessible to unauthorized personnel. · Periodic checks for dust levels to ensure compliance with air quality standards.	· Condition and visibility of fencing and signage. · Compliance with established work hours. · Security of approach and storage areas. · Dust particle levels in the surrounding environment	· Visual inspection, regular audits, air quality sampling	· Approach roads, storage areas, and work sites within the project boundary.	· Daily during construction activities. · Weekly (dust monitoring.) · Ad hoc inspections based on complaints or identified risks.	· Breach in fencing or unauthorized access. - Deviation from work hours. - Dust levels exceeding standards.
Constructional Phase I = 0 L = 0	Risk 5: · Chemical Spills and Leaks · Improper Storage and Disposal of Materials · Inadequate Stormwater Management · Inadequate Hazardous Material Handling	· Establish a remote monitoring and control system to allow operators to assess chemical levels and respond to incidents	· Chemical concentrations	· Utilize remote monitoring technologies, such as sensors, meters, or Supervisory Control and Data Acquisition systems, to continuously measure and transmit real-time	· Place monitoring devices strategically in critical areas where chemicals are stored, handled, or processed	· Continuous real-time monitoring is essential for immediate detection of abnormal chemical concentrations	· 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
				data on chemical concentrations			
Construction Phase I = 4 L=1	Risk 6: 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 .	· 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 · Remote sensing technologies, such as energy distribution
Construction Phase I = 2 L=2	Risk 7: Possibility of floods due to excessive rainfall	· Follow up forecasting services to receive timely and accurate information about potential heavy rainfall.	· Monitor the intensity of rainfall from the closest meteorological station data , measured in millimeters per hour. This parameter helps assess how quickly precipitation is accumulating and if it reaches levels that may lead to flooding.	· Ground-based rain gauges, weather radar, and satellite precipitation estimates can be used. .	· Project Site and areas where the workforce is most active and where with heavy equipment use	· Regular and ongoing visual monitoring during periods of intense rainfall events	· Monitor changes in rainfall and water level with scales and indicators from the closest meteorological station data

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
Constructional Phase I = 4 L=1	Risk 9: Effects on Workforce and OHS	· 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, · Conducting emergency drills to ensure swift action in case of emergencies, and ensuring that all employees are familiar with evacuation procedures and emergency protocols,	· 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	· Data collection through incident reports, health assessments, safety inspections, accident investigations and surveys	· Project site and areas where the workforce is most active and where with heavy equipment use	· Regular and ongoing monitoring during periods of intense construction and operation activities	· 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
		· 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.					

Table 7: Monitoring Plan for the Operational Phase of the Project

Phase Impact and Likelihood (1-5)	Risk Description	Monitoring Measures	Parameters	Method	Sampling Locations	Frequency	Detection Limits
Operational Phase I = 0 L =0	Risk 2: 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.					
Operational Phase I = 1 L =1	Risk 3: Temporary Blockage of Transportation Roads between Settlements Traffic Vehicles Cause Destruction on Roads and Buildings	· 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.	· Road blockages, duration, and frequency. · Damage to roads and buildings	· Record road closure incidents and duration. · Visual inspections, documenting damages.	· Vehicle operation areas. · Transportation routes. · Areas where vehicles operate.	· Periodic emissions testing during operation. · Real-time monitoring of road conditions. · Periodic visual assessments	· Road closures exceeding acceptable frequency. · Occurrence of damages to roads and buildings beyond permissible levels.
Operational Phase I = 1 L =1	Risk 5: · Chemical Spills and Leaks · Improper Storage and Disposal of Materials · Inadequate Stormwater Management Inadequate Hazardous Material Handling	· Establish a remote monitoring and control system to allow operators to assess chemical levels and respond to incidents	· Chemical concentrations	· 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	· Place monitoring devices strategically in critical areas where chemicals are stored, handled, or processed	· Continuous real-time monitoring is essential for immediate detection of abnormal chemical concentrations	· limits should be set to detect concentrations that may pose risks, ensuring early detection and response.
Operational Phase I=1 L=	Risk 7: Possibility of floods due to excessive rainfall	· 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. .	· 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.	· Ground-based rain gauges, weather radar, and satellite precipitation estimates can be used. .	· Project Site and areas where the workforce is most active and where with heavy equipment use	· Regular and ongoing monitoring during periods of intense rainfall events	· 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
Operational Phase I=3 L=3	Risk 8: 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=1	Risk 9: Effects on Workforce and OHS	· 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	· 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	· Data collection through incident reports, health assessments, safety inspections, accident investigations and surveys	· Project site and areas where the workforce is most active and where with heavy equipment use	· Regular and ongoing monitoring during periods of intense construction and operation activities	· 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
		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.					
Operational Phase I = 2 L=2	Risk: 10 Storage of Damaged or End of Lifecycle Panels	· Analysis of storage conditions and recycling processes regularly..	· Condition of stored panels	· Visual inspection	· Temporary storage areas on site	· Regular checks	· Presence of damaged panels beyond allowable limits

Measures for Institutuional Arrangements, Capacity Development, and Training

In the context of the Sub-Project aiming to increase renewable energy production in the Çubuk 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 (PMU), and the project owner municipalities are identified as key actors. Roles and capacities of actors aredefined, and necessary adjustments are made for the effective implementation of sub-projects.For the SPP project to be constructed in the Çubuk district, the main actors are the World Bank, ILBANK, Çubuk Municipality, Contractor, Supervision Consultant, and E&S Consultant.

Çubuk Municipality

Renewable energy projects in Çubuk 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 Çubuk 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 8: Roles and Responsibilities for the Implementation of ESMP

Actor/Stakeholders	Responsibilities
Çubuk Municipality	ESMP Management, Implementation of mitigation measures, Monitoring of environmental and social impacts, Establishment of Grievance Mechanism, Reporting on ESMP compliance and progress to ILBANK and WB, Coordination with stakeholders for ESMP implementation;
ILBANK	Monitoring and supervising the process of ESMP implementation. Reporting the progress of ESMP implementation to WB on regular periods Ensuring ESMP requirements are integrated into project activities.
Contractor/Subcontractor(s)	Implementation of ESMP measures during construction. Reporting environmental and social issues to Çubuk Municipality. Ensuring compliance with ESMP requirements in all activities. Informing Çubuk Municipality on construction activities (such as road closures and service interruptions). Managing environmental impacts like waste, noise, and pollution. Internal Reporting to Çubuk Municipality on ESMP Implementation.
Supervision Consultant	Providing guidance on ESMP compliance. Provide necessary information to Alaşehir Municipality Assisting Çubuk Municipality in managing and mitigating impacts. Monitoring the effectiveness of ESMP measures.
WB	Audit the Çubuk Municipality's compliance with the provisions set out in the ESMP managed by the Municipality during the construction and operation phase via the Project Progress Reports

	Visit project sites to conduct its own monitoring at certain intervals or when necessary.

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 Çubuk 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 Çubuk Municipality. Çubuk 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, Çubuk 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.

Documents necessary for the implementation of the ESMP should also be prepared accordingly, and each system required for the project, such as the Grievance Mechanism, should be explained.

NOTE: Details of ESMP disclosure will be inserted here, upon completion.

Institutional Capacity Building and Training

The Project Owner, Çubuk Municipality, will conduct a training and awareness program covering the expectations and commitments of the ESMP. 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 ESMP 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. Monitoring reports to be prepared within the scope of the project will also be submitted every 3 months to ensure supervision. 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 Çubuk 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 Çubuk Municipality Solar Power Plant Project of this project, a comprehensive list of the internal and external stakeholders is given in Table 9**Hata! Başvuru kaynağı bulunamadı.**.

Table 9: **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 Ankara	Low	Low
Formal or informal users of lands allocated to the project	Low	Low

Stakeholder Groups	Level of Interest	Level of Influence
Direct Stakeholders		
Public Administrations at National Level		
The Ministry of Environment, Urbanization and Climate Change.	Low	Low
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		
Çubuk Municipality	High	High
Çubuk Governate	Medium	Medium
Provincial Directorate of Environment, Urbanization and Climate Change	Moderate	High
Mukhtar of Kargın Neighborhood	Moderate	High
Başkent 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 Çubuk	Low	Moderate
Provincial Directorate of Disaster and Emergency	Low	Low
Provincial Directorate of Health	Low	Low
T.C. Zafer Development Agency	Low	Low
Turkish Employment Agency (IS-KUR) –Ankara 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
Ankara Yıldırım Beyazıt University	Low	Low

The types and causes of exposures and how the above-mentioned stakeholder groups are affected (positive/negative) are given in Table 10.

Table 10: 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 Türkiye, 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 11Table 11.

Table 11: 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)
Artıkabat 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

Çubuk Municipality will establish a Grievance Mechanism (GM) 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.The grievance mechanism has been prepared in accordance with the environmental and social standards of the World Bank (World Bank, 2018).

At the earliest convenience, the stakeholders will have access to Çubuk 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 GM 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) (+90 312 837 10 73)
- Personal visit to Çubuk Municipality and Contractor head office/branches
- Grievance boxes (installed at the Çubuk Municipality Units / Contractor)
- Relevant public administrations (district governorship, municipality, headmen)
- Email (bilgi@cubuk.bel.tr)
- Meetings
- Staff and local communication desk of Çubuk Municipality / Contractor
- By written petition to Çubuk Municipality / Contractor
- During site visits and miscellaneous

3. All the submitted grievances are collected at the GM 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 Çubuk 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 GM 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 12Table 12 .

Table 12: 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 GM process and associated taken actions should be declared on Çubuk 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 Çubuk Municipality and information to ILBANK accordingly

Stage of GM	Required Action
	-Communication of grievance response to Complainant by the Çubuk Municipality which is monitored by ILBANK (The timeframe for response at this level is thirty (30) days.) -Application to Court of First Instance by Complainants in case of unresolved grievances
Reporting	The grievances will be analyzed quarterly by Çubuk 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: • Civil Courts of First Instance • Administrative Courts • Commercial Courts of First Instance • Labor Courts, and Ombudsman (https://ebasvuru.ombudsman.gov.tr/)

Monitoring and Reporting

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

Çubuk 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 13.

Table 13: Grievance Mechanism Monitoring Framework

Parameter	Key Performance Indicator	Phase	Frequency	Responsible Party
Public GM	• 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 Çubuk Municipality PIU and Contractor
		Operation	Semi-annually in the first two years; Annually afterwards	- To be assigned by Çubuk Municipality PIU and Contractor
Workers' GM	•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.)	Construction	Monthly	- To be assigned by Çubuk Municipality PIU and Contractor
		Operation	Semi-annually in the first two years; Annually afterwards	- To be assigned by Çubuk Municipality PIU and Contractor

Parameter	Key Performance Indicator	Phase	Frequency	Responsible Party
	• Timeframes for response to each grievance • The number of open or closed grievances • Number of invalid or in progress grievances			
GM	Effectiveness of the GM	Construction	Quarterly	ILBANK

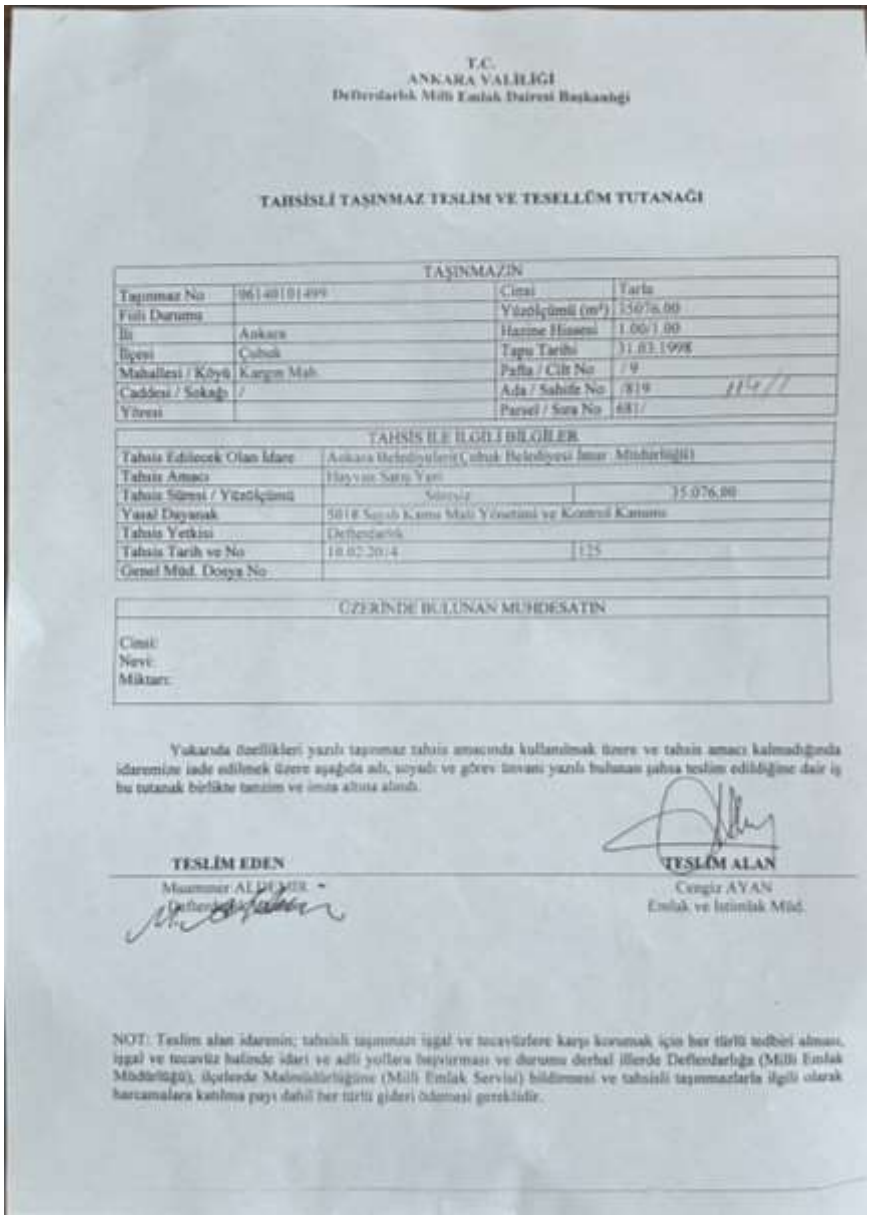
Public Consultation Meeting

The draft version of this ESMP approved by ILBANK and the World Bank was shared with the district residents at a public participation meeting held at the Çubuk Municipality Council on December 5, 2024. The Ardea Project and Consultancy team and the Operations and Subsidiaries Manager working at Çubuk Municipality presented the project's purpose, expected social, environmental and ecological impacts, measures to prevent or reduce the impacts, monitoring and management measures, the path to be followed for complaints or suggestions, and the method of handling the complaint to the participants.

The Public Participation Meeting was held with the participation of the Çubuk Municipality Operations and Subsidiaries Manager and the municipal team, as well as the district residents. At the end of the presentation, the participants asked questions about the possible negative impacts that may occur during the construction of the project, the cost of the project, and the contributions it will provide to the district. Requests and suggestions were also received from them. It was conveyed to the participants that the construction works will start after the contractor is determined by the project owner and the construction is planned to last approximately 5 months. The minutes of the meeting attended by 16 people are given in Annex 3: Minutes of the Public Consultation Meeting.

7. Annexes

Annex 1:Title Deed Allocation Document



T.C.
ANKARA VALİLİĞİ
Defterdarlık Milli Emlak Dairesi Başkanlığı

TAHSİSLİ TAŞINMAZ TESLİM VE TESELLÜM TUTANAĞI

TAŞINMAZIN			
Taşınmaz No	061401E1499	Cinsi	Tarla
Fiili Durumu		Yüzölçümü (m²)	15076.00
İli	Ankara	Hazine Hissesi	1.00/1.00
İlçesi	Çubuk	Tapu Tarihi	31.03.1998
Mahallesi / Köyü	Kargın Mah.	Pafta / Cilt No	/ 9
Caddesi / Sokağı	/	Ada / Sahife No	819
Yönesi		Parsel / Sıra No	681

TAHSİS İLE İLGİLİ BİLGİLER		
Tahsis Edilecek Olan İdare	Ankara Büyükşehir Belediyesi Çubuk Belediyesi İmar Müdürlüğü	
Tahsis Amacı	Hayvan Satış Yeri	
Tahsis Süresi / Yüzölçümü	Süresiz	35.076,00
Yasal Dayanak	5018 Sayılı Kamu Mali Yönetimi ve Kontrol Kanunu	
Tahsis Yetkisi	Defterdarlık	
Tahsis Tarih ve No	10.02.2014	125
Genel Müd. Dosya No		

ÜZERİNDE BULUNAN MÜHDESATIN
Cinsi: Nevi: Miktarı:

Yukarıda özellikleri yazılı taşınmaz tahsis amacında kullanılmak üzere ve tahsis amacı kalmadığında idaremize iade edilmek üzere aşağıda adı, soyadı ve görev ünvanı yazılı bulunan şahsa teslim edildiğine dair iş bu tutanak birlikte tanzim ve imza altına alındı.

TESLİM EDEN
Muammer ALDEMİR
Defterdar

TESLİM ALAN
Cengiz AYAN
Emlak ve İstimlak Müd.

NOT: Teslim alan idaremiz; tahsisli taşınmazı işgal ve tecavüzlere karşı korumak için her türlü tedbiri almalı, işgal ve tecavüz halinde idari ve adli yollara başvurmalı ve durumu derhal illerde Defterdarlığa (Milli Emlak Müdürlüğü), ilçelerde Malmüdürlüğüne (Milli Emlak Servisi) bildirmesi ve tahsisli taşınmazlarla ilgili olarak harcamalara katılma payı dahil her türlü gideri ödemesi gereklidir.

Annex 2:Roles and Responsibilities of Main Actors of SPP Subproject

	Çubuk 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 Çubuk 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, Çubuk 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., ESMP 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 and One OHS Expert	In addition to present team, a support team can be established. The structure of the team and	Assist ILBANK in establishing monitoring team.		Employe competent Environmental, Social, and OHS Experts (at least one Social Expert, one	

		qualification of team members will be defined by ILBANK and WB. Individual freelance consultants can be employed.			Environmental Expert, and one OHS Expert) within the scope of the project	
Project Roles	Preparation of, ESMP and Grievance Mechanism	The main responsible for monitoring, ESMP and Grievance Mechanism 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 municipality 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 ensure that EA documents meet WB requirements	Confirm and Disclose the ESMP on WB's official website			

Construction Phase Responsibilities	• Prepare tender documents for the construction process. • Conduct tenders in accordance with public procurement legislation and WB legal requirements. • 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.	• 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 • Coordinating and communicating with WB inspection officers regarding the environmental and social protection measures of the project implementation in organizing field visits.	Visit project sites from time to time, when necessary, as part of the project	• Implement all commitments determined by Çubuk Municipality. • Supervise the construction and/or rehabilitation works and installation of equipment	• Guide Çubuk Municipality officials and consultants in the implementation of World Bank requirements (documents and procedures) in the E&S framework after approval by Çubuk Municipality • 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	
Monitoring Roles	• Evaluate performance indicators, environmental reviews, monitoring,	• Monitoring the implementation of ESMP and other environmental and	• Oversee the project in accordance	• Monitore construction activities (including	• Report environmental audits, monitoring, and	

	inspections, and results related to ESMP applications. • Prepare Environmental and Social Monitoring Reports (ESMRs) every three months, submit them to ILBANK, and inform them. • Monitor contractor activities.	social mitigation measures, auditing Çubuk Municipality's ESMP implementations and documenting performance, recommendations, and other necessary steps within the scope of overall project supervision • Inform WB through Environmental and Social Monitoring Reports (ESMRs) to be submitted by Çubuk Municipality every three months. • Submit Project Progress Reports to WB every 6 months.	with WB Safeguard Policies and provide technical support and guidance	subcontractor activities) and taking and implementing measures within the scope of the ESMF • Submit Monthly Environmental and Social Monitoring Reports (ESMRs) to the Project Owner Municipality	inspections related to E&S practices to Çubuk Municipality. • Monitore and evaluate the performance of services provided by the contractor • 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. • Halt work in any situation threatening the environment, community, and occupational health and safety. • Analyze and monitor environmental and social accidents/incidents.			• 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 • notify ILBANK and the Çubuk Municipality, exercising the contract authority in case non-compliance persists	
Stakeholder participation Roles	Ensure stakeholder participation, implement the grievance 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

Annex 3: Minutes of the Public Consultation Meeting

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

SUSTAINABLE CITIES PROJECT-II
Additional Financing

ÇUBUK SOLAR POWER PLANT PROJECT

MINUTES of PUBLIC CONSULTATION MEETING

Revision : *REV.00*
Meeting Date : *05 Dec 2024*
Meeting Place: *Çubuk Municipality Council Hall*

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

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

1. PUBLIC CONSULTATION MEETING

Çubuk 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 ILBANK's ESMF. In addition to these studies, following the finalization of the ESMP, a Public Consultation Meeting was held on 07.12.2024 at 14.00 hours. Announcements for the Public Consultation Meeting were published on the official website as well as in national and local newspapers. Additionally, brochures for the meeting were distributed and posted at the offices of the 84 neighborhood mukhtars in Çubuk. The municipal council also made announcements, and information was shared with mukhtars and citizens via WhatsApp.

1.1. Summary

During the Public Consultation Meeting, information about the project was presented by municipal officials and the consultancy firm. The details are as follows:

The Director of Operations and Affiliates at Çubuk Municipality, opened the meeting with a general introduction about the project. Following this, Ardea Project & Consultant team explained the importance of the Çubuk SPP project. It was emphasized that the project is part of the Sustainable Cities Project, financed by the World Bank, and represents a significant step for the municipality in promoting renewable energy and combating climate change. It was stated that the solar energy plant project will use clean energy to cover a significant portion of the municipality's energy costs. Additionally, it was noted that the project is planned to be completed within five months and will provide social benefits to the district.

Through a presentation from the Ardea Project & Consultant team, the project was introduced, and information about the Environmental and Social Management Plan (ESMP) was provided. The location of the livestock market building where the project will be implemented, and other technical details were explained. The suitability of Çubuk district for the solar energy system and its solar exposure potential were highlighted. Under the ESMP, assessments of the environmental and social risks of the project were presented, along with an analysis of the current situation. Details regarding the geography, climate conditions, solar exposure, vegetation, natural and cultural assets, and potential risks such as flooding and earthquakes were shared. It was emphasized that the project could create opportunities for local residents in the future and that using renewable energy sources is crucial in the fight against climate change. The project was described as providing social advantages, being a significant step for Çubuk, and serving as a model for future initiatives.

Lastly, it was highlighted that the grievance mechanism will be given importance during the construction and operational phases of the project.

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 Consultation Meeting have been presented. The details are as follows:

Question 1:

Çubuk Resident:

What environmental impacts might a rooftop solar project have?

Answer 1:

Urban Planner & Social Expert (Ardea Project & Consultant):

The environmental impacts of rooftop solar power plant projects are generally minimal. However, during construction, temporary effects such as dust, noise, and waste generation may occur. During the operational phase, issues like light reflection from the panels and electronic waste at the end of their life cycle may arise. These impacts can be minimized through measures such as recycling plans, anti-reflective coated panels, and dust and noise control measures. These considerations have been fully addressed in the Environmental and Social Management Plan .

Question 2:

Çubuk Resident

How much will the Çubuk district benefit from the solar power plant project, and can the municipality use the electricity produced? Where will it be directly utilized?

Answer 2:

Electrical & Electronics Engineer (Ardea Project & Consultant)

As part of renewable energy initiatives, this system, installed on the livestock market building, is integrated into the national grid through a system connecting homes, factories, and energy transmission lines. The project, with a capacity of 1 MW, will generate enough electricity to meet the daily needs of approximately 200-220 households. Excess electricity is fed into the grid, offsetting municipal energy costs and creating financial benefits that can be used in other municipal initiatives. With rising electricity costs, the investment is expected to pay for itself in 4 to 5 years, or at most 8 years. This makes the project a cost-free source of income, ensuring sustainability and serving as a model for other institutions.

Question 3:

Çubuk Resident:

You mentioned that the lifespan of the project is 30 years. Will the profits go directly to the municipality after loan repayments?

Answer 3:

Director of Operations and Affiliates, Çubuk Municipality:

Yes, the project's lifespan is projected to be 30 years, and the loans are expected to be paid off within approximately 8 years. However, given that the loan is in USD and energy costs are rising rapidly, we anticipate that the investment will amortize itself in 4 to 5 years. After loan repayments are completed, the project will become a direct source of income for the municipality. The revenue from electricity production will go directly to the municipality, supporting other projects and ensuring long-term financial sustainability and economic benefits.

Suggestion 1:

Çubuk Resident:

I think similar solar power plant projects could be implemented on the rooftops of municipal buildings. Such an application could significantly reduce the municipality's energy costs, ensuring more efficient use of resources.

Answer 1:

Electrical & Electronics Engineer (Ardea Project & Consultant):

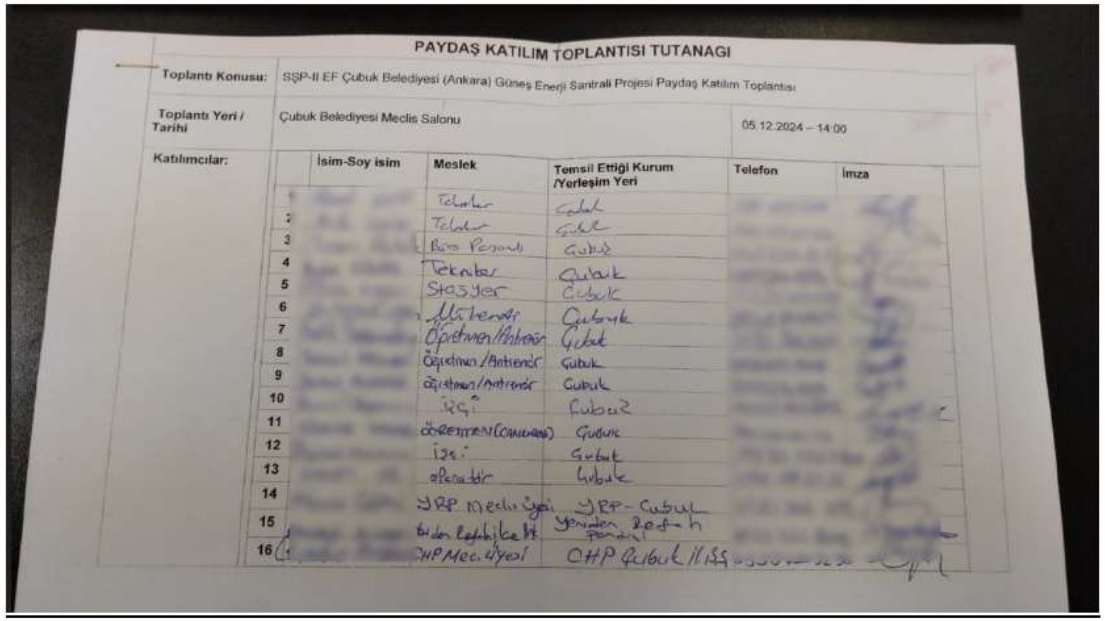
We are committed to developing similar projects. Our goal is to meet the energy needs of public institutions through such initiatives and to implement innovative projects that advance and enhance solar energy systems.

1.3 Conclusion

The Public Consultation Meeting lasted approximately 45 minutes, with the participation of the public, municipality personnel and consultant company officials providing information about the project, and a question-and-answer session held afterwards. The necessary information was provided to the public about the Çubuk SPP project, the public's questions were answered and the next process was conveyed.

2. PARTICIPANT LIST

Figure 1: Participants Signature List



PAYDAŞ KATILIM TOPLANTISI TUTANAGI

Toplantı Konusu:	SŞP-II EF Çubuk Belediyesi (Ankara) Güneş Enerji Santrali Projesi Paydaş Katilim Toplantisi
Toplantı Yeri / Tarihi	Çubuk Belediyesi Meclis Salonu — 05.12.2024 – 14:00

Katılımcılar:

	İsim-Soy isim	Meslek	Temsil Ettiği Kurum /Yerleşim Yeri	Telefon	İmza
2		Teknik	Çubuk		
3		Teknik	Çubuk		
4		Büro Personeli	Çubuk		
5		Teknik	Çubuk		
6		Sağ yer	Çubuk		
7		Müteahit	Çubuk		
8		Öğretmen/Antrenör	Çubuk		
9		Öğretmen/Antrenör	Çubuk		
10		Öğretmen/Antrenör	Çubuk		
11		İŞÇİ	Çubuk		
12		ÖĞRETMEN (ÇANLIBAHÇE)	Çubuk		
13		İşçi	Çubuk		
14		öğretmendir	Çubuk		
15		YRP Meclis Üyesi	YRP - Çubuk Yeniden Refah Partisi		
16		Eski Belediye Başkanı			
		CHP Meclis Üyesi	CHP Çubuk İlçe		

3. ANNEXES

Annex 1: Photos of Public Consultation Meetings

Figure 2: Photos of Meetings-1

7

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

8

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

9

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

10

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

Annex 2: Newspaper Advertisements

Figure 3: Ulus Newspaper Advertisements for Public Consultation Meetings of Çubuk SPP


EĞİTİM ULUS

iDEALiST OLMALIYIZ

Ebeveynlere rehberlik eğitimi

ULUS

11

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

Figure 4: Nethaber Advertisements for Public Consultation Meetings of Çubuk SPP

ANKARA NETHABER

STERLİN 44,49 %0.08 İSTANBUL 17°C

Gündem Asayiş Eğitim Ekonomi Sağlık Siyaset Teknoloji Resmi İlanlar

25.11.2024 - 00:00

ÇUBUK BELEDİYESİ SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ 2- EK GÜNEŞ ENERJİ SANTRALİ (GES) HALK TOPLANTISINA DAVET

ÇUBUK BELEDİYESİ SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ 2- EK GÜNEŞ ENERJİ SANTRALİ (GES) HALK TOPLANTISINA DAVET

Çubuk belediyesi tarafından çalışmaları devam eden sürdürülebilir şehirler projesi için Ankara Çubuk İlçesi çatı tipi (ges) projesi kapsamında paydaşları bilgilendirmek görüş ve öneri almak yatırım kurulum ve işletme dönemlerinde paydaşlar ile işbirliği tesis etmek üzere halkın katılım toplantısı düzenlenecektir .

Toplantının detayları aşağıda verilmiştir.

Halkımıza saygıyla duyurulur.

Bağlı İl ilçe: Ankara Çubuk

Yer : Alatürk mahallesi Alparslan Türkeş caddesi NO:1

Çubuk belediye binası meclis salonu

Tarih: 05.12.2024

Saat: 14:00

Telefon: 0 312 837 10 73

e-posta: isletmeistirakler@cubuk.bel.tr

ÇYSP Raporunu hazırlayan kuruluş
ARDEA proje danışmanlık
Telefon 0 542 822 09 59

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

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

Figure 5: Public Consultation Meeting Brochure and ESMP Documents Published on the Official Website of Çubuk Municipality

13

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

Annex 4: Çubuk Municipality Public Consultation Meeting Brochure

Ayrıca ÇSYP kapsamında uygulanacak izleme ve denetim faaliyetleri de tanımlanacaktır. ÇSYP çalışmaları kapsamında hava ortamları, gürültü, koku, biriken atıklar, projenin kurulacağı alana dair var olan doğal afet riskleri , GES kaynaklı yaşanabilecek yansıma ve parlama gibi etkiler belirlenip ilgili konuların sakınım azaltma önlemleri belirtilecektir.

İzleme gerekllikleri de ÇSYP kapsamındaki izleme tablolarında tanımlanarak sunulacaktır. Buna göre projenin inşaat aşamasında, toz emisyonları, hava kirliliği, inşaat sırasında ve geçici trafik yükünden oluşacak gürültü, atık üretimi ve iş sağlığı ve güvenliği; işletme aşamasında ise kimyasalların depolanması ve kullanımı, santralin yansıma ve parlama etkisi , geçim kaynakları , şikayetler, toplutuk çatışmaları , paydaş katılımı , iş sağlığı ve güvenliği ve İşgücü parametreleri **ÇSYP'de belirtenen şartlara uygun izlenecektir.**

Bu Çevresel ve Sosyal Yönetim Planı (ÇSYP)'nin uygulanmasından sorumlu ana kurum, projenin inşaatından ve işletme aşamalarından da sorumlu olan Çubuk Belediyesidir. Ayrıca, projenin farklı aşamalarında çeşitli taraftar (Yükleniciler , Müşavir firma , Proje Uygulama Birimi, İLBANK vb.) ÇSYP kapsamında çeşitli konularda sorumluluk alacaklardır. Sözü edilen tüm çalışmalar Çubuk Belediyesi tarafından koordine edilecektir. Proje dokümanları Çubuk Belediyesi'nin internet sitesi üzerinden yayınlanacak ve talep edilmesi halinde bu dokümanlar Çubuk Belediyesi tarafından paylaşılacaktır.

5

Çubuk Belediyesi, projeden etkilenebilecek **topluluklar** için endişelerini ve şikayetlerini dinlemek, çözmek ve takip etmek amacıyla bir Şikayet Giderme Mekanizması kurmuştur.

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

Şikâyet Giderme Mekanizmasının kurulumu ve takibi Çubuk Belediyesi tarafından sağlanacaktır. Bu kapsamda proje ile ilgili beklenti, görüş, öneri ve şikayetlerin paylaşılması için aşağıda verilen iletişim kanallarını da ayrıca kullanabilecekterdir.

Çubuk Belediyesi:

Telefon: +90 312 837 10 73

E-mail: akmasa@cubuk.bel.tr

Tüm iç ve dış paydaşlar, proje ile ilgili şikâyetlerini ve geri bildirimlerini doğrudan devlet yetkililerine iletmek için projenin tüm paydaşlarının erişimine açık ve ülke çapında kullanılan Cumhurbaşkanlığı İletişim Merkezi (CİMER) gibi alternatif şikayet mekanizmalarında da yararlanma haklarına sahip olacaklardır.

- **Web sitesi:** www.cimer.gov.tr
- **Çağrı merkezi: 150**
- **Telefon numarası: 0312 590 20 00**

6

SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ – II

Çubuk Belediyesi Güneş Enerjisi Santrali Projesi

Halkın Katılımı Toplantısı Bilgilendirme Broşürü

Tarih : 05.12.2024

Saat: 14.00

Yer : Çubuk Belediye Binası Meclis Salonu

1

14

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

Çubuk GES (Güneş Enerjisi Santrali) Projesi ,

Türkiye'deki şehirlerde sürdürülebilir kalkınmayı destelemek için Sürdürülebilir Şehirler Projesi -II Ek Finansman (SŞP-II-EF) kapsamındaki alt projelerden biridir. ŞSP-II-EF , özellikle sürdürülebilir kentsel gelişime yatırım yapıp, yenilenebilir enerji kaynaklarının gelişmesine, afetlere ve iklim değişikliğinin hafifletilmesine ve risklere karşı şehir direncine ilişkin proje yaklaşımlarını geliştirmeyi amaçlamaktadır. Dünya Bankası (DB) tarafından finanse edilen proje İller Bankası A.Ş. aracılığı ile Çubuk Belediyesi tarafından yürütülecektir.

Çubuk GES Projesi, ülkenin enerji karışımındaki yenilenebilir enerji kaynaklarının payını artırmak, sera gazı emisyonlarını ve fosil yakıtlara olan bağımlılığı azaltmak amaçlanmıştır. Bu projenin temiz enerji sağlama hedefi, Temiz Enerji'yi hedefleyen Sürdürülebilir Kalkınma Hedefi 7 ve Sürdürülebilir Kalkınma Hedefi 8 (SKH 7/ SKH 8) ile uyumludur. Türkiye'nin iklim eylem planları ve taahhütleriyle uyumludur.

Çubuk GES Projesi kapsamında, kurulacak santralin 30 yıllık kullanım süresi ile inşa edilecektir. Santralin kurulu gücü 1110,0 kWp olup, yılda 1.245,925 MWh elektrik üretmesi beklenmektedir. Proje ile hizmet verilmesi öngörülen nüfus yaklaşık 99096 kişidir. Proje, Ankara ili, Çubuk İlçesi, Kargın Mahallesi, 114/2-3 parseli üzerinde hayvan pazarının çatısında 34.198,84 m^2 alana inşa edilecektir (Bkz: Şekil 1).

2

Projenin beklenen sonuçları aşağıdaki gibidir:

-Proje, Ankara'nın Çubuk ilçesinde belediyeye ait olan hayvan pazarının çatısında yer almaktadır. Hayvan pazarının kendi tüketim trafosuna bağlanacak olup, belediyenin enerji tüketim bedelinin bir kısmını güneş enerji santralinden sağlayabilecektir.

- Proje, enerjide fosil yakıtlara olan bağımlılığı azaltacak ve ilçenin ekonomik olarak kalkınmasını sağlayacaktır.

-Proje, Türkiye'nin yenilenebilir enerji kaynakları sektöründe ulusal ve uluslararası kalite standartlarına uyum çabalarına katkı sağlayacaktır.

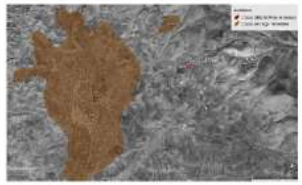
Projenin inşaatının beş (5) ayda tamamlanması planlanmaktadır.

Projenin işe alım sürecinde yerel halka öncelik verilecektir.

Proje, ulusal mevzuatın yanı sıra Dünya Bankası Koruma Politikaları, yönergeler, standartlar ve en iyi uygulama belgeleri de dahil olmak üzere, uluslararası uygulamalarla uyumlu olacaktır.

3

Proje, inşaat ve işletme aşamasında yerel halk için iş fırsatları yaratacaktır. GES projesinin kurulu güç kapasitesinin 2MW'in altında olması nedeniyle, inşaat çalışmalarının oldukça kısa bir zaman diliminde tamamlanabilecektir. Aynı zamanda çatı projesi olduğundan yolların uzun süre kapatılması beklenmemekte, yerel halkın mağduriyet yaşanaması sağlanacaktır.



Şekil 1. Çubuk GES Alt-proje Alanı

Beklenen etkilerin yönetimi için bir Çevresel ve Sosyal Yönetim Planı (ÇSYP) geliştirilmiştir.

ÇSYP, Projenin süresi boyunca olası çevresel ve sosyal etki ve risklerin izlenmesi, değerlendirilmesi ve önemli olumsuz çevresel etkiler için etki azaltma önlemleri önermek amacıyla hazırlanmaktadır.

4

Annex 4: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
The SPP Sub-project will be constructed over the Çubuk livestock market rooftop. 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. The responsible organization leading the implementation of the project, Çubuk 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. The plant will meet the energy of more than 1038 households with 1.245.925,00 kWh of electrical energy production, save the municipality more than 2.81 million EU in energy costs within 30 years and prevent the release of more than 265tons of CO_2 per year into the atmosphere. 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. 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.
Description of how the project can improve gender equality and women's empowerment
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 discrimination 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 the 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.
Description of how the project mainstreams sustainability and resilience
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. 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. By utilizing renewable solar power in electric energy generation, the project aims to reduce the municipality's electricity expenses. This financial benefit enhances the economic sustainability of the local government. 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.
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**
Noise Pollution	Risk 1: 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 near the area will be actively used. There are no residential areas on the parcels around the project area. Transportation to the project area will be provided by highway. For the subproject area in Çubuk, 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**		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 2: Dust and Exhaust Emissions from Soil Excavation, Vehicle Traffic and Equipment	Constructional Phase I = 2 L = 2	**Low**		During the construction phase, temporary exhaust and dust emissions are likely to occur due to activities such as 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.
		Operational Phase I = 1 L =1	**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 3: 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.
		Operational Phase I = 1 L =1	**Low**		Heavy tonnage vehicles will not be used during the operation phase.
Community Health and Safety	Risk 4: Community health and safety during the execution of works	Constructional Phase I= 2 L= 2	**Low**		SPP sub-project area is located far away from the residential area. So, the execution of construction works poses potential risks to community health and safety due to noise, dust, traffic disruptions, and accidental spills or emissions will be quite low.
		Operational Phase I = 0 L =0	**Low**		There is no risk to community health and safety during the operational phase.
Pollution in Groundwater	Risk 5: Chemical Spills and Leaks Improper Storage and Disposal of Materials	Constructional Phase I = 0 L = 0	**Low**		Since the SPP project will be constructed in the rooftop of livestock market, there will be no risk of groundwater pollution.
		Operational Phase I = 1 L =1	**Low**		There is no risk about chemical spills and leaks, improper storage and disposal of materials during the operation phase.

Natural Disaster	Risk 6: Earthquake Risk.	Construction Phase I = 4 L=1	**Low**		Çubuk is located in the active fault line region and 3rd degree earthquake zone, but there is no active fault line in the district center and SPP Sub-project area(Figure 8).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=3	**Low**		Equipment must be well secured in a safe position.
Natural Disaster	Risk 7: Possibility of floods due to excessive rainfall	Construction Phase I = 2 L=2	**Low**		Çubuk district is not located in a flood risk area. When the SPP Sub-project area is examined, flood sensitivity of the project area is low degree (Figure 9).
		Operational Phase I=1 L=1	**Low**		Since mitigation measures will be implemented against flood risk during the construction phase, the flood risk will be reduced during the operation period.
Reflection and Glare Effect	Risk 8: Reflection and Glare Effect	Constructional Phase I = 1 L=1	**Low**	Reflection and glare effect are an effect created by solar power plants (SPP). This effect occurs as a result of reflection or glare 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	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 construction phase due to the complete installation and operation of the panels.
		Operational Phase I=3 L=3	**Moderate**		Since the project area is not located in residential areas, reflection and glare effect will not be high. 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.

				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.	
Workforce and OHS	Risk 9: 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

Risk: 13 Storage of Damaged or End of Lifecycle Panels	Risk: 10 Storage of Damaged or End of Lifecycle Panels	Constructional Phase I=0 L=0	**Low**		There is no risk during the construction phase.
		Operational Phase I=2 L=2	**Low**		Secured areas on-site specifically designated for the temporary storage of damaged or end-of-lifecycle panels will be established. Develop a recycling plan. Develop a recycling plan in collaboration with certified recycling facilities to ensure environmentally responsible disposal of panels.

4.The overall project risk categorization?		
Low Risk	☐	**Category C**
Moderate Risk	☒	**Category Low B**
Substantial Risk	☐	**Category High B**
High Risk	☐	**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			
Is assessment required? (check if "yes")			**Status? (completed, planned)**
if yes, indicate overall type and status	☐	Targeted assessment(s)	Since the project is Category Low B, these assessments are not required.
	☐	ESIA (Environmental and Social Impact Assessment)	
	☐	SESA (Strategic Environmental and Social Assessment)	
Are management plans required? (check if "yes)			
If yes, indicate overall type	☐	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.
	☒	ESMP (Environmental and Social Management Plan which may include range of targeted plans)	
	☐	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	☒	
Gender Equality and Women's Empowerment	☒	
Accountability	☒	
The Environmental and Social Standards of World Bank (ESS)		
1. Biodiversity Conservation and Sustainable Management of Living Natural Resources	☒	

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

Environmental Screening Checklist

Sub-project Information	
Sub-project title	Çubuk Municipality SPP Subproject
Sub-project beneficiaries	Çubuk Municipality
Proposed date of start of work	
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	Ankara,Çubuk,Kargın, Block 114 of Lot 1
Sub-project cost	EU 702.630,00
Status of national EIA process of sub-project	The sub-project area is exempted from EIA regulation Process because there is no EIA process for rooftop project.

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[1]?	☐	☒	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)?	☐	☒	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?	☐	☒	There is no habitat with high sensitivity around the subproject area.
Will the sub-project adversely affect endangered plant and animal species?	☐	☒	There are no endangered flora or fauna species in or near the area.
Will the sub-project affect archaeological sites, historic monuments and settlements?	☐	☒	There is no negative impact on any historical assets located near the project.
Is there woods or forest around the sub-project area?	☐	☒	There is no forest in the subproject area.
Will the sub-project adversely affect the woods and forest?	☐	☒	Since There is no wood or forest area in 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?	☐	☒	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?	☐	☒	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?	☐	☒	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?	☐	☒	No, local people will not be affected by losing access to facilities, services, or natural resources because ıf the sub-project activities.
Is this sub-project intervention requiring private land acquisitions?	☐	☒	The property is allocated for the municipality.
If the land parcel has to be acquired, is the actual plot size and ownership status known?	☐	☒	-
If new land is required and the site is privately owned, can this land be purchased through Willing Buyer–Willing Seller agreement?	☐	☒	-

[1] 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?	☐	☒	-
If public lands will be acquired, are there any formal/informal users utilizing these lands for income generation purposes?	☐	☒	-
Will there be loss of/damage to productive trees, fruit plants or crops that generate livelihood income for the households?	☐	☒	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?	☐	☒	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?	☐	☒	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, NOx, O_3) or ozone-depleting substances (CFC, methyl bromide, etc.)?	☐	☒	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?)	☐	☒	
Will the sub-project produce or cause occupational hazards?	☐	☒	Related measures are planned in this ESMP, and they will be taken into consideration
Will the sub-project cause dust and noise pollution?	☒	☐	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?	☐	☒	-
Will the sub-project cause soil pollution?	☐	☒	-
Will the sub-project result in temporary disruption to the livelihoods of any persons/households?	☐	☒	-
Will the sub-project cause community safety-related hazards?	☐	☒	-
Will the sub-project include significant OHS concerns?	☐	☒	Related measures are planned in this ESMP, and they will be taken into consideration

Will the sub-project cause additional traffic load?	☒	☐	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)?	☐	☒	-
Is there a population that can be negatively affected by the sub-project?	☐	☒	No population in the lot where subproject will be built
Other environmental or social impacts (describe the nature and severity of its impact)	*Preparatory phase:* *Construction phase:* *Operation phase:*		

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.

Annex 5:Consultation Form

	ÇUBUK MUNICIPALITY Çubuk 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 ☐
Telephone:	Face-to-face Interviews ☐
Adress:	Website/E-mail ☐
E-mail:	Other (Explain) ☐

Stakeholder Type				
Public Institution ☐	People Affected by the Project ☐	Private Institution ☐	Professional Chamber ☐	NGO ☐
Interest Groups ☐	Industry Associations ☐	Labor Unions ☐	Media ☐	University ☐

2.CONSULTATION DETAILS	
Questions about the project:	
Project concerns/feedback:	
Responses to the views expressed above:	

Recording *Name-Surname / Signature*	Complainant *Name-Surname / Signature*

Annex 6:Grievance Form

	ÇUBUK MUNICIPALITY Çubuk 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 □	
Telephone:			Face to face □	
Address:			Website / E-mail □	
E-mail:			Other (Explain) □	
Stakeholder Type				
Public Institutions □	People Affected by the Project □	Private Institution □	Chamber of Profession □	NGO □
Interest Groups □	Industry Associations □	Labor Union □	Media □	University □
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 Closure Form

	ÇUBUUK MUNICIPALITY Çubuk Municipality Solar Power Plant Project
	GRIEVANCE CLOSURE FORM
Reference No:	
1.DETERMINATION of CORRECTIVE ACTION	
1	
2	
3	
4	
5	
Responsible Departments	
2.CLOSURE OF THE GRIEVANCE	
This section will be completed and signed by the Complainant in case the complaint specified in the "Grievance Registration Form" is resolved.	

Date: **Name-Surname/** **Signature** **Closure of the Grievance** ……/……./……	**Name-Surname/Signature of the Complainant**

References

AFAD. (2021). *Ankara İl Afet Risk Azaltma Planı.*

İLBANK. (2019, April). *SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ – II EK FİNANSMAN* . Retrieved from Arazi Edinimi ve Yeniden Yerleşim Politika Çerçevesi (LARPF): https://www.ilbank.gov.tr/storage/uploads/uidb/ssp2af_arazi_edinimi_ve_yeniden_yerlesim_politika_cercevesi_larpf_1684677387.pdf

İLBANK. (2019, April). *TURKEY SUSTAINABLE CITIES PROJECT - II Additional Financing (P170612)*. Retrieved from Environmental and Social Management Framework: https://documents1.worldbank.org/curated/ru/921361554098772741/pdf/Environmental-and-Social-Management-Framework.pdf

Rüya Bayar. (2020). LAND SUITABILITY ANALYSIS OF URBAN GROWTH IN ANKARA. *DTCF Journal*.

T.C. Cumhurbaşkanlığı Mevzuat Bilgi Sistemi. (2022, 07 29). *ÇEVRESEL ETKİ DEĞERLEDİRMESİ YÖNETMELİĞİ*. Retrieved from Mevzuat Bilgi Sistemi: https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=39647&MevzuatTur=7&MevzuatTertip=5

TÜİK. (2024).

World Bank. (2018). *Environmental and Social Standards (ESS)*. Retrieved 2024, from https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards

World Bank. (2024). *Environmental and Social Framework*. Retrieved from https://www.worldbank.org/en/projects-operations/environmental-and-social-framework