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Non-Technical Summary of the Environmental and Social Impact Assessment (ESIA)

Construction of the 100 MW “Spitalla Solar” Photovoltaic Park, Spitallë, Albania

July 2025

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REPORT SUMMARY

TITLE OF PROJECT	Construction of the 100 MW "Spitalla Solar" Photovoltaic Park, Spitallë, Albania
TITLE OF DOCUMENT	Non-Technical Summary of the Environmental and Social Impact Assessment (ESIA)

Report prepared by:

ABKONS sh.p.k with No. LN-9678-06-2015/2

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List of Acronyms and Abbreviations

AC	Alternating Current
AKM	National Environmental Agency (Agjencia Kombëtare e Mjedisit)
AU	Administrative Unit
BA	Biodiversity Area
BMP	Biodiversity Management Plan
CESMP	Construction Environmental and Social Management Plan
CHA	Critical Habitat Assessment
CO_2	Carbon Dioxide
DC	Direct Current
DCM	Decision of the Council of Ministers
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EPC	The contractor responsible for the engineering, procurement, and construction of the project
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESR	Environmental and Social Requirement
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
IBA	Important Bird Area
IBAT	Integrated Biodiversity Assessment Tool
IFC	International Finance Corporation
IUCN	International Union for Conservation of Nature
MW	Megawatt
NTS	Non-Technical Summary

PDA	Project Development Area
PPE	Personal Protective Equipment
PV	Photovoltaic
SCADA	Supervisory Control and Data Acquisition
SEP	Stakeholder Engagement Plan
WP	Way (Survey) Point

1. Introduction

1.1. Purpose of the Non-Technical Summary

This document provides a Non-Technical Summary (NTS) of the Environmental and Social Impact Assessment (ESIA) prepared for the proposed 100 MW Spitalla Solar Photovoltaic (PV) Project located in Spitalla, in Sub/Administrative Unit No. 4 of the City/Administrative Unit of Durrës, Durrës Municipality, Albania.

The purpose of this NTS is to present the main findings of the ESIA in a clear and accessible manner, enabling stakeholders and the general public to understand the proposed project, the environmental and social conditions of the project area, and the potential impacts associated with the project's construction and operation.

The NTS summarises the key elements of the ESIA, including:

- A description of the proposed project and its main components.
- The existing environmental and social conditions within the project area.
- The potential environmental and social impacts identified during the ESIA process.
- The mitigation and management measures proposed to avoid, minimise, or manage these impacts.

The ESIA has been undertaken in accordance with Albanian environmental legislation and relevant international environmental and social standards, including the Environmental and Social Policy (October 2024) of the European Bank for Reconstruction and Development (EBRD).

1.2. Overview of the Project

The proposed Spitalla Solar PV Project will be developed by Spitalla Solar Sh.p.k., established by Voltalia S.A., an international renewable energy developer and operator. Spitalla Solar Sh.p.k. is registered as a limited liability company founded on 25 March 2021 to implement the photovoltaic project in Spitalla, within the Municipality of Durrës, Albania. The company was established to implement the Project Development Agreement concluded between the Ministry of Infrastructure and Energy of the Republic of Albania and Voltalia S.A.

Spitalla Solar Sh.p.k. is responsible for the development, construction, financing, commissioning, and operation of the solar power facility and its associated infrastructure. This includes the installation and maintenance of photovoltaic panels and supporting facilities, as well as the transmission infrastructure required to connect the power plant to the Albanian electricity grid. The company will also secure the necessary rights of way for the transmission line linking the plant to the national electricity network.

The project consists of the construction and operation of a solar photovoltaic power plant with an installed capacity of approximately 100 MW, located in the Spitalla area of the Municipality of Durrës in western Albania. Once operational, the facility will generate electricity from solar energy and supply it to the national grid.

The project is expected to contribute to Albania's renewable energy generation and support the diversification of the national energy mix. Albania has significant potential for solar energy development, and the implementation of renewable energy projects forms part of the country's long term energy strategy, aimed at strengthening energy security, reducing dependence on energy imports, and promoting sustainable economic development while minimising environmental impacts.

The project has been classified as Category B under the Environmental and Social Policy (October 2024), of the European Bank for Reconstruction and Development (EBRD). Category B projects are those that may have potential environmental and social impacts that are typically site-specific, limited in scale, and can be readily addressed through appropriate mitigation measures.

At the national level, environmental assessment requirements are defined under Law No. 10440 dated 07 July 2011 “On Environmental Impact Assessment” (as amended), including amendments introduced by Law No. 12/2015. In accordance with this legislation, the proposed project falls under Annex II, Section 3 – Energy Industry, which covers industrial installations for electricity generation and related energy infrastructure. Based on the screening decision issued by the National Environment Agency of Albania (AKM), reference No. AN070520250025 dated 16 June 2025, the project has been classified as requiring a Deep Environmental Impact Assessment (EIA) procedure.

1.3. ESIA Preparation

A comprehensive Environmental and Social Impact Assessment (ESIA) is undertaken in accordance with Albanian environmental legislation and the requirements of Environmental and Social Policy (October 2024), of the European Bank for Reconstruction and Development (EBRD). The ESIA evaluates the environmental and social conditions within the project area, identifies potential impacts associated with the construction and operation of the project, and defines appropriate mitigation and management measures.

The ESIA is prepared through a structured process that includes the collection and review of existing information, field surveys, and consultations with relevant stakeholders. The preparation of the ESIA includes the following key steps:

- Review of available data and documentation, including national environmental legislation, planning documents, and previous studies relevant to the project area.
- Environmental and social baseline studies to understand existing conditions within the project site and its surrounding area.
- Identification and assessment of potential environmental and social impacts associated with the construction and operation of the project.
- Development of mitigation and management measures to avoid, minimise, or manage potential impacts.
- Preparation of an Environmental and Social Management Plan (ESMP) outlining the measures required to manage impacts during project implementation.

The ESIA process also includes stakeholder engagement activities, allowing relevant authorities and interested parties to provide input during the assessment process. The findings of the ESIA are presented in the main ESIA report and summarised in this Non-Technical Summary.

In line with national regulatory requirements and lender disclosure standards, the ESIA documentation is publicly disclosed for a minimum period of 60 days, allowing stakeholders and interested parties to review the project and provide comments.

1.4. Structure of the Document

This Non-Technical Summary (NTS) is organised into several sections that provide an overview of the proposed project, the environmental and social conditions of the project area, and the main findings of the Environmental and Social Impact Assessment (ESIA). The structure of the document is outlined below.

- Section 1 – Introduction: Provides an overview of the project and explains the purpose of the Non-Technical Summary and the ESIA.
- Section 2 – Legal and Policy Framework: Summarises the relevant Albanian legislation and applicable international environmental and social standards.
- Section 3 – Project Background and Description: Presents the project rationale, location, and the main components and activities associated with the proposed solar photovoltaic power plant.
- Section 4 – Consideration of Alternatives: Describes the alternatives assessed during project development, including the no-project option, and the reasons for selecting the preferred option.

- Section 5 – ESIA Process: Outlines the methodology used in the ESIA, including data collection, baseline studies, and stakeholder consultation.
- Section 6 – Environmental and Social Conditions: Provides an overview of the existing environmental and social conditions within the project area.
- Section 7 – Environmental and Social Benefits of the Project: Summarises the expected environmental, social, and economic benefits associated with the development of the project.
- Section 8 – Potential Environmental and Social Impacts: Summarises the potential impacts during construction and operation and the mitigation measures proposed to manage these impacts.
- Section 9 – Environmental and Social Management and Monitoring Plans: Describes the key measures and monitoring activities to ensure that environmental and social impacts are properly managed.
- Section 10 – Grievance Mechanism: Explains how stakeholders can provide feedback or submit grievances related to the project.

2. Applicable National Legislation and International Standards

The Environmental and Social Impact Assessment (ESIA) for the project is prepared to ensure compliance with both Albanian environmental legislation and the environmental and social standards of the European Bank for Reconstruction and Development (EBRD).

2.1. The Environmental Regulatory Framework of Albania

The environmental regulatory framework of the Republic of Albania establishes the requirements for environmental protection, environmental impact assessment, permitting, and environmental management. The relevant Albanian legislation for each environmental topic is presented in table below:

Table 1: Key Albanian Legislation on Environment

Environmental Topic	Relevant Albanian Legislation	Main Objective
Environmental Protection	Law No. 10431/2011 “On Environmental Protection” (as amended)	Establishes the general framework for environmental protection, environmental permitting, and environmental responsibilities of institutions and project developers.
Environmental Impact Assessment	Law No. 10440/2011 “On Environmental Impact Assessment” (as amended, including Law No. 67/2024)	Establishes procedures for screening, preparation, review, and approval of Environmental Impact Assessments, including public consultation requirements.
Climate Change	Law No. 155/2020 “On Climate Change”	Establishes the national framework for climate change mitigation and adaptation, including measures to reduce greenhouse gas emissions and strengthen climate resilience.
Biodiversity and Protected Areas	Law No. 9587/2006 “On Biodiversity Protection” (as amended, including Law No. 69/2024) and Law No. 81/2017 “On Protected Areas” (as amended, including Law No. 21/2024)	Establish the national framework for biodiversity conservation, protection of habitats and species, and management of protected areas.
Water Resources	Law No. 40/2023 “On Water Resources” Law No. 111/2012 “On Integrated Water Resources Management” (as amended, including Law No. 6/2018)	Establishes the national framework for the protection, management, and sustainable use of surface and groundwater resources in line with integrated water management principles.
Air Quality	Law No. 162/2014 “On Protection of Ambient Air Quality”	Establishes air quality standards and measures to prevent and reduce air pollution.

Environmental Topic	Relevant Albanian Legislation	Main Objective
Noise	Law No. 9774/2007 "On the Assessment and Management of Environmental Noise" (as amended)	Regulates environmental noise levels and measures to protect human health from excessive noise.
Waste Management	Law No. 57/2025 "On Integrated Waste Management"	Establishes the national framework for waste prevention, collection, recycling, treatment, and environmentally sound disposal of waste in line with EU waste management principles.
Occupational Health and Safety	Law No. 10237/2010 "On Safety and Health at Work"	Establishes requirements for the protection of workers' health and safety during project implementation.
Cultural Heritage	Law No. 27/2018 "On Cultural Heritage and Museums"	Establishes procedures for the protection and management of cultural heritage, including chance finds during construction.
Public Participation	DCM No. 247/2014 (as amended)	Establishes procedures for public information, consultation, and participation in environmental decision-making.

2.2. The relevant EBRD Environmental and Social Requirements

In accordance with the Environmental and Social Policy (October 2024) of the European Bank for Reconstruction and Development, the project has been classified as Category B. This category applies to projects where potential environmental and/or social impacts are typically site-specific and can be readily identified and addressed through appropriate mitigation measures.

An Environmental and Social Impact Assessment (ESIA) has therefore been undertaken to identify potential environmental and social risks and impacts associated with the construction and operation of the project and to define appropriate mitigation and management measures in line with the relevant EBRD Environmental and Social Requirements and applicable national legislation. The relevant EBRD Environmental and Social Requirements applicable to the project are summarised below.

Table 2: The EBRD Environmental and Social Requirements (E&S Policy October 2024)

Environmental and Social Requirement	Scope	Relevance to the Project
ESR 1 – Assessment and management of environmental and social risks and impacts	Requires the identification, assessment, and management of environmental and social risks and impacts through appropriate management systems.	The project has undergone an Environmental and Social Impact Assessment (ESIA) and will implement an Environmental and Social Management Plan (ESMP) to manage risks and impacts during construction and operation.
ESR 2 – Labour and working conditions	Establishes requirements for fair treatment of workers, safe and healthy working conditions, and protection of labour rights.	The project will employ workers during construction and operation phases. Labour management procedures and occupational health and safety measures will be implemented in accordance with national legislation and EBRD requirements.
ESR 3 – Resource efficiency and pollution prevention and control	Promotes efficient use of resources and the prevention or reduction of pollution and emissions.	The project will implement measures to manage resource use, waste generation, air emissions, and other potential sources of pollution associated with construction and operation activities.
ESR 4 – Health, safety and security	Addresses potential risks to community health, safety, and security associated with project activities.	Potential risks related to construction activities, traffic, and site safety will be managed through appropriate health and safety procedures and traffic management measures.
ESR 5 – Land acquisition, restrictions on land use and involuntary resettlement	Establishes requirements for managing impacts related to land acquisition and potential economic displacement.	The project site is located within an industrial development area. Land acquisition and land use arrangements have been assessed to ensure compliance with national legislation and EBRD requirements.

Environmental and Social Requirement	Scope	Relevance to the Project
ESR 6 – Biodiversity conservation and sustainable management of living natural resources	Ensures protection of biodiversity, natural habitats, and ecosystem services.	Biodiversity baseline studies have been conducted to assess potential impacts on habitats and species, and mitigation measures have been defined to avoid or minimise potential impacts.
ESR 7 – Indigenous Peoples	Requires protection of the rights, culture, and livelihoods of Indigenous Peoples where relevant.	This requirement is not applicable, as there are no Indigenous Peoples as defined by EBRD present in Albania.
ESR 8 – Cultural heritage	Requires the protection and preservation of cultural heritage and the implementation of chance find procedures where applicable.	A chance find procedure will be implemented during construction in the event that archaeological or cultural heritage artefacts are discovered.
ESR 9 – Financial intermediaries	Establishes environmental and social requirements for financial intermediary institutions involved in project financing.	This requirement is not applicable as the project is not financed through a financial intermediary.
ESR 10 – Stakeholder engagement	Requires transparent disclosure of project information and engagement with stakeholders throughout the project lifecycle.	Stakeholder engagement activities have been undertaken as part of the ESIA process, and a Stakeholder Engagement Plan (SEP) and grievance mechanism will be implemented.

The ESIA for the Project has been prepared in accordance with both Albanian environmental legislation and the environmental and social requirements of international lenders (EBRD). Where gaps or differences exist between national legislation and lender standards, the more stringent requirement is applied, and additional mitigation and management measures are incorporated through the Environmental and Social Management Plan (ESMP) to ensure alignment with international good practice and effective environmental and social risk management.

3. Project Description

3.1. Project Background

3.1.1. Renewable Energy Development in Albania

Albania's electricity sector has traditionally relied heavily on hydropower, which accounts for the majority of domestic electricity generation. However, hydropower production is highly dependent on hydrological conditions, making the national electricity system vulnerable to seasonal and annual variations in water availability and resulting in increased reliance on electricity imports during periods of low rainfall.

In response, the Government of Albania has undertaken efforts to diversify the national energy mix and strengthen energy security through the development of additional renewable energy sources, particularly solar and wind power. Albania benefits from favourable climatic conditions, including high solar irradiation levels, which create suitable conditions for the development of solar photovoltaic (PV) projects.

The promotion of renewable energy is supported by national policies and regulatory mechanisms aimed at encouraging private investment and increasing domestic electricity generation. The development of solar PV projects therefore contributes to improving the reliability of energy supply, reducing greenhouse gas emissions, and supporting Albania's commitments under international climate agreements while facilitating the transition toward a more sustainable and resilient energy system.

3.1.2. Rationale for the Project

The development of the Spitalla Solar Photovoltaic (PV) Project is driven by the need to diversify Albania's electricity generation mix and enhance the security and reliability of the national energy supply.

The development of solar photovoltaic generation provides an opportunity to complement hydropower resources by introducing an additional renewable energy source that is not dependent on water availability.

Solar energy generation typically peaks during periods of high solar irradiation, which often coincide with periods of lower hydropower generation, thereby contributing to a more balanced and resilient electricity system.

The project also supports Albania's national energy and climate objectives by increasing the share of renewable energy in the country's energy mix and contributing to the reduction of greenhouse gas emissions. The development of solar energy infrastructure is aligned with Albania's commitments under international climate agreements and the country's efforts to harmonise its energy and environmental policies with European Union standards.

In addition to environmental benefits, the project is expected to generate positive economic and social impacts, including temporary employment opportunities during the construction phase, local economic activity through procurement of goods and services, and increased investment in renewable energy infrastructure.

Overall, the Spitalla Solar PV Project contributes to the transition toward a more sustainable, diversified, and resilient energy sector in Albania while supporting national and international climate and energy objectives.

3.1.3. Project Development History

The Spitalla Solar Photovoltaic Park is a solar energy project awarded to Voltalia following an international competitive tender organised by the Ministry of Infrastructure and Energy and supported by the European Bank for Reconstruction and Development (EBRD). The project location, land area, installed capacity, grid connection point, and the terms and conditions of the Power Purchase Agreement were defined by the Ministry of Infrastructure and Energy.

In March 2021, Voltalia was announced as the winning bidder with a tariff of 29.89 €/MWh for a period of 15 years. Following the award, the Project Development Agreement and the Power Purchase Agreement were implemented. In parallel, Voltalia initiated the Environmental and Social Impact Assessment process and commenced the required technical studies for project development.

3.2. Project Description

3.2.1. Project Location

The proposed Spitalla Solar Photovoltaic (PV) Plant is located in the Municipality of Durrës, within Durrës County. The Project Area is situated within the planned Spitalla Industrial Park area, near the Porto Romano industrial and energy zone. The surrounding area includes industrial and energy-related developments to the north, the city of Durrës to the south, the hills of Shënavlash and Rrashbull to the east, and a series of hills extending towards the Adriatic Sea to the west.

The Project Site is located near Spitalla within Administrative Unit No. 4 of the City/Administrative Unit of Durrës. Nearby settlements include the villages of Adriatik (Katund i Ri Administrative Unit), Vrinas/Shënavlash (Rrashbull Administrative Unit).

The site benefits from a strategic location in close proximity to key infrastructure and urban centres. It is located approximately 40 km from Tirana, 6 km north of the city of Durrës, 7 km from the Port of Durrës and the Durrës railway station, and approximately 9 km from the Tirana–Durrës highway.

The proposed solar PV plant will be developed within cadastral zone No. 8517, covering an area of approximately 123 hectares.

To enable connection of the solar PV plant to the national electricity transmission network, additional infrastructure will be constructed, including a new substation and a 110 kV transmission line linking the project to the Porto Romano Transmission Substation, located approximately 2 km southwest of the Project Site within the same administrative unit.

The exact location of the Project Site and the proposed transmission line route is presented in the figure below.

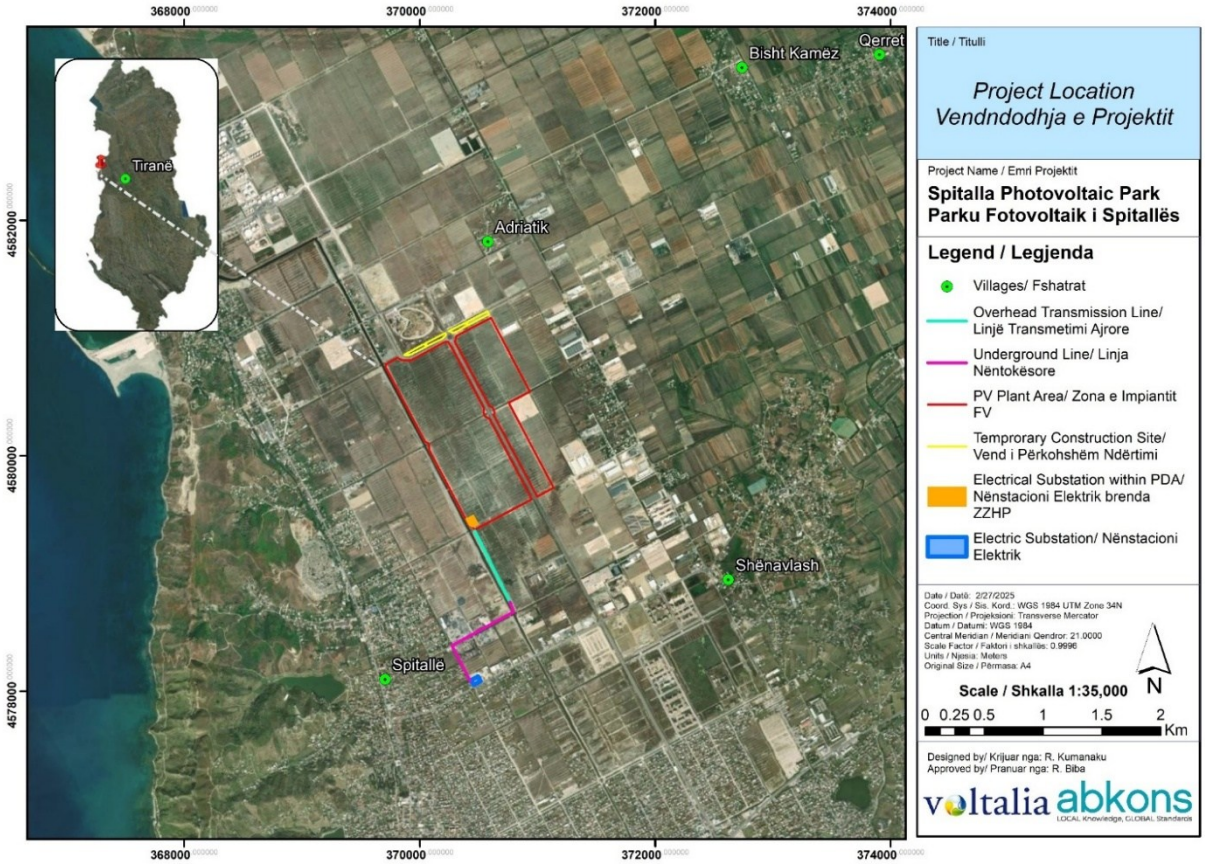

Figure 1: Project Development Area (PDA) and Transmission Line Route

3.2.2. Site Characteristics and Current Land Use

The Project Site is located within the planned Spitalla Industrial Park area in the Municipality of Durrës and is characterised by predominantly flat terrain with low elevation. The area consists mainly of saline soils, which limit its suitability for agricultural use and have contributed to the relatively limited intensity of land use within the site.

At present, the land within the Project Site is largely undeveloped and sparsely vegetated, with no permanent structures or intensive economic activities. The soil conditions and proximity to coastal and lagoon environments have historically restricted agricultural productivity, and the area has therefore remained largely unused.

The surrounding area is influenced by industrial and infrastructure developments, particularly associated with the nearby Porto Romano industrial and energy zone. The broader landscape includes a combination of industrial areas, infrastructure corridors, and scattered settlements located at some distance from the Project Site.

Given its current land characteristics, low agricultural value, and proximity to existing energy and industrial infrastructure, the site has been identified as suitable for the development of the proposed solar photovoltaic plant.

3.2.3. Main Project Components

The Spitalla Solar Photovoltaic (PV) Project is a utility-scale solar power plant with an installed capacity of 100 MWp (DC), designed to generate renewable electricity and deliver approximately 90 MW (AC) to the national electricity transmission network. The plant will use single-axis tracking technology, which allows

the solar panels to follow the movement of the sun from east to west during the day, thereby increasing electricity production.

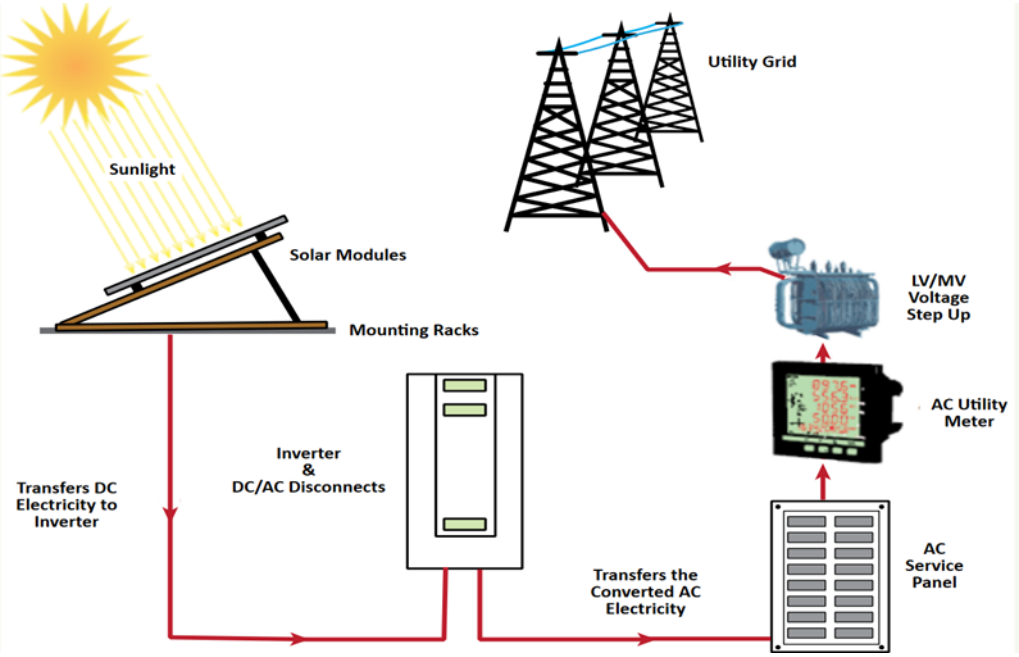

Figure 2: Overview of Utility Scale Solar PV Plant (IFC, 2015)

The main components of the project are presented in Figure 2 above and include the following:

- Solar PV Modules: Solar photovoltaic modules convert sunlight into electricity in the form of direct current (DC). The project will include a large number of solar modules mounted on steel support structures distributed across the project site.
- Tracking System: The PV modules will be installed on single-axis tracking structures that rotate during the day to optimise the angle of the modules towards the sun, improving the overall efficiency and energy yield of the plant.
- Inverters and Electrical Equipment: Electricity generated by the PV modules will be converted from direct current (DC) to alternating current (AC) through inverters. The electricity will then be collected through underground cables and transmitted to the plant's internal electrical infrastructure.
- Step-up Substation: An on-site step-up substation will be constructed to increase the voltage of the electricity produced by the solar plant from medium voltage to 110 kV, enabling efficient transmission to the national electricity grid.
- Grid Connection Infrastructure: The project will be connected to the national electricity transmission network at the Porto Romano Substation through an approximately 2 km transmission line, consisting of both underground and overhead sections.
- Monitoring and Control Systems: The plant will be equipped with a Supervisory Control and Data Acquisition (SCADA) system that will allow operators to monitor, control, and manage the performance of the solar plant and associated electrical infrastructure.
- Supporting Infrastructure: Additional infrastructure required for the operation of the solar PV plant will include internal access roads, underground cabling, security fencing, lighting systems, and facilities for operation and maintenance. Temporary construction compounds and storage areas will also be established during the construction phase.

Together, these components will enable the efficient generation, control, and transmission of renewable electricity from the Spitalla Solar PV Plant to the national electricity network.

3.2.4. Photovoltaic Technology

The Spitalla Solar Photovoltaic (PV) Project will utilise photovoltaic technology to convert solar energy directly into electricity. Photovoltaic modules consist of semiconductor cells, typically made of silicon, which generate electrical current when exposed to sunlight through the photovoltaic effect.

The solar PV modules will be installed on single-axis tracking structures, which allow the panels to rotate throughout the day and follow the movement of the sun from east to west. This technology increases the amount of solar radiation captured by the modules and improves the overall energy yield compared to fixed-tilt systems.

Electricity generated by the PV modules is produced in the form of direct current (DC). This electricity is transmitted through electrical cables to inverters, where it is converted into alternating current (AC) suitable for transmission through the electricity grid. The converted electricity is then collected through medium-voltage cables and transferred to the project's internal substation.

At the step-up substation, the voltage is increased to match the requirements of the national transmission network before the electricity is exported to the grid through the transmission line connecting the plant to the Porto Romano substation.

Solar photovoltaic technology is widely used for large-scale electricity generation due to its reliability, low environmental impact, and absence of direct greenhouse gas emissions during operation. In addition, PV systems require relatively limited maintenance and operate without producing noise, air emissions, or waste during normal operation.

The selection of photovoltaic technology for the Spitalla Solar PV Project reflects both the high solar irradiation potential of the project area and the project's objective to contribute to Albania's renewable energy generation and climate change mitigation efforts.

3.2.5. Grid Connection

The electricity generated by the Spitalla Solar Photovoltaic (PV) Plant will be exported to the national electricity transmission network through a dedicated grid connection infrastructure. Electricity produced by the solar PV modules will first be collected through underground medium-voltage cables and transmitted to the project's internal step-up substation.

At the substation, the voltage of the electricity will be increased from medium voltage (30 kV) to high voltage (110 kV) in order to enable efficient transmission and integration into the national grid. The project will then be connected to the Porto Romano Transmission Substation, which forms part of the Albanian national electricity transmission system.

The connection will be established through an approximately 2 km transmission line, consisting of both underground and overhead sections. This hybrid configuration has been selected during the project design phase as the most suitable option from a technical, environmental, and social perspective.

The transmission line and associated electrical infrastructure will be designed and constructed in accordance with Albanian legislation and applicable international standards, ensuring safe and reliable operation of the grid connection. Measures such as appropriate tower design, safety signage, and bird diverters will be implemented where relevant to reduce potential environmental and safety risks.

Through this grid connection infrastructure, the electricity generated by the Spitalla Solar PV Plant will be delivered to the national electricity network, contributing to the supply of renewable energy within Albania's power system.

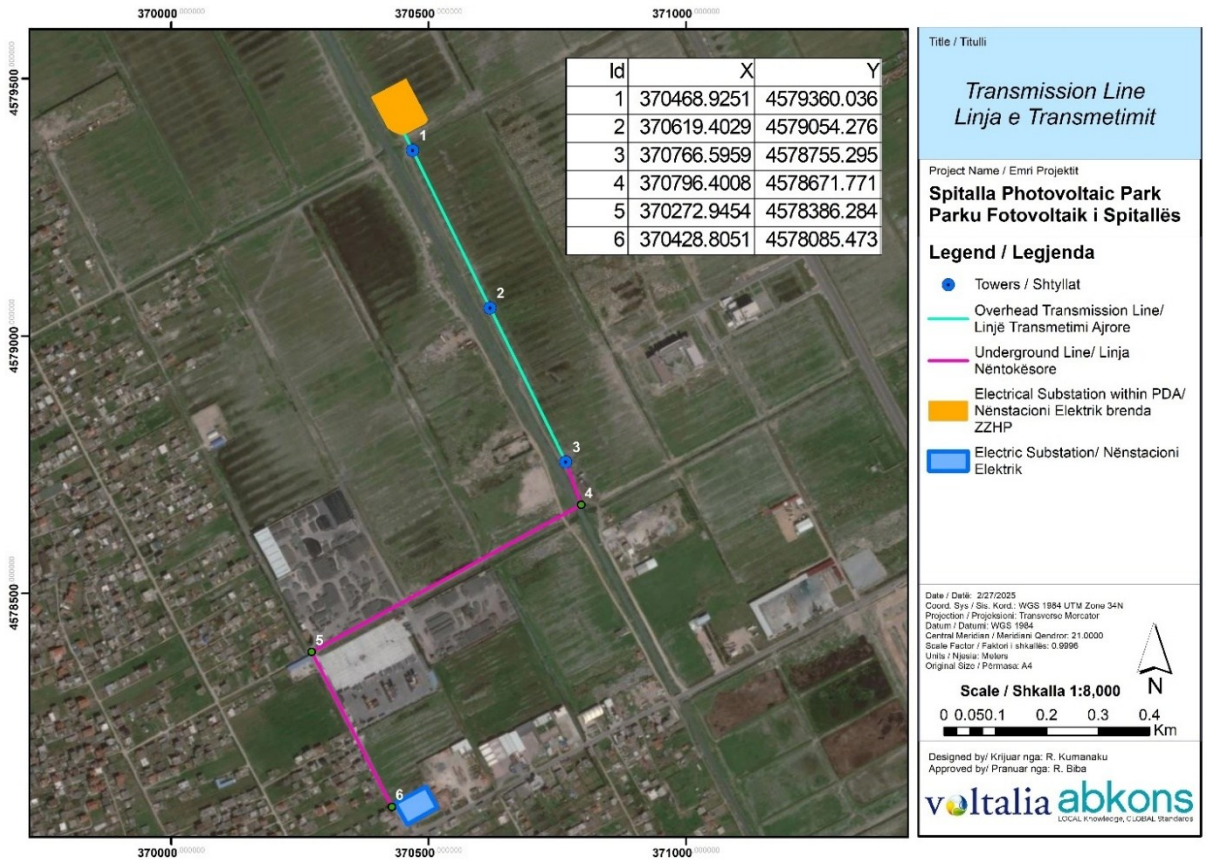

Figure 3: Proposed Transmission Line Route

3.2.6. Construction Activities

The construction of the Spitalla Solar Photovoltaic (PV) Project will involve several stages, including site preparation, installation of solar equipment, construction of electrical infrastructure, and connection to the national electricity grid.

Initial works will include site preparation and ground levelling, as well as the construction or improvement of internal access roads to allow the movement of construction equipment and materials. Mounting structures will then be installed, and solar PV modules will be placed on these structures. Electrical cables will be installed underground to connect the modules to inverters and the plant's electrical systems.

Construction will also include the development of an on-site substation, auxiliary buildings for control and maintenance, and installation of security fencing and monitoring systems. In addition, a transmission line of approximately 2 km will be constructed to connect the project to the Porto Romano substation and the national electricity grid.

Temporary facilities such as site offices, storage areas, and equipment laydown areas will be established during the construction phase.

Following completion of construction works, the project will undergo testing and commissioning before entering commercial operation.

3.2.6.1. Workforce Requirements

During the construction phase, which is expected to last approximately 18 months, the workforce will gradually increase as construction activities progress, reaching a peak of approximately 200 workers. The workforce will include engineers, technical specialists, skilled workers, and semi-skilled and unskilled labour. Where possible, the project will prioritise the employment of local workers from surrounding communities.

No workers' accommodation will be established on-site, and non-local workers will be accommodated in existing facilities in nearby towns.

3.2.7. Operation and Maintenance

During the operational phase, the Spitalla Solar Photovoltaic (PV) Plant will generate electricity from solar energy and deliver it to the national electricity transmission network. The operational phase is expected to last approximately 25–30 years.

Operation of the plant will mainly involve the monitoring and management of the solar PV system and associated electrical infrastructure. The facility will be supervised through a central control and monitoring system (SCADA), which allows operators to monitor electricity production, equipment performance, and system conditions in real time.

Routine operation and maintenance (O&M) activities will include regular inspection of solar modules, electrical equipment, and supporting infrastructure. Maintenance activities may include cleaning of solar panels where necessary, inspection and maintenance of mounting structures and trackers, checking electrical connections and cables, and servicing inverters and transformers.

Periodic maintenance of the internal access roads, drainage system, fencing, and security infrastructure will also be undertaken to ensure safe and efficient operation of the facility. Vegetation management may be carried out within the site to prevent shading of solar panels and maintain safe access to equipment.

Most maintenance activities will be undertaken by a small team of trained technicians, who will carry out routine inspections and respond to any technical issues identified through the monitoring system.

Overall, the operation of the solar PV plant will involve limited on-site activity, with no significant emissions, waste generation, or noise expected under normal operating conditions.

3.2.7.1. Workforce Requirements

During the operational phase, which will extend throughout the project's operational lifetime (typically around 25–30 years), the workforce requirements will be significantly lower. A small team of qualified personnel will be responsible for the operation, monitoring, and maintenance of the solar PV plant and its associated infrastructure.

3.2.8. Decommissioning

At the end of the operational life of the Spitalla Solar Photovoltaic (PV) Plant, which is expected to be approximately 25–30 years, the project will either be repowered, extended, or decommissioned, depending on the technical condition of the equipment and future energy needs.

If the facility is decommissioned, activities will involve the safe dismantling and removal of the solar PV infrastructure and associated electrical equipment. Key activities will include the removal of solar panels, mounting structures, inverters, transformers, electrical cables, and other above-ground infrastructure. Transmission line components and substation equipment may also be dismantled where required.

Decommissioning activities will involve the use of construction machinery and vehicles similar to those used during the construction phase, including cranes, trucks, and lifting equipment. Materials removed from the site will be reused, recycled, or disposed of through licensed waste management facilities, in accordance with applicable environmental regulations.

3.2.8.1. Workforce Requirements

The workforce required during the decommissioning phase is expected to be smaller than during construction, but will still include engineers, technicians, and skilled workers responsible for dismantling equipment and managing waste streams.

Following the removal of project infrastructure, site rehabilitation activities will be undertaken. These activities may include removal of foundations where required, reinstatement of land contours, and restoration of the site to a condition consistent with surrounding land use or future development plans.

All decommissioning and rehabilitation works will be carried out in accordance with applicable national legislation, environmental requirements, and international good practice, ensuring that environmental and social impacts are properly managed.

4. Consideration of Alternatives

As part of the Environmental and Social Impact Assessment (ESIA), different project alternatives were considered in line with international good practice and the requirements of international financial institutions. The analysis examined options related to project implementation, technology choice, site selection, and design configuration, with the aim of identifying the most technically feasible and environmentally and socially appropriate solution. The following alternatives were considered:

- No-Project Alternative
- Alternative energy generation options
- Site selection considerations
- Alternative layout and grid connection design options

4.1. No-Project Alternative

Under the No-Project Alternative, the Spitalla Solar PV Project would not be developed, and the site would remain in its current condition. This option would avoid any environmental or social impacts associated with the construction and operation of the project.

However, the No-Project scenario would also result in the loss of several potential benefits. Albania's electricity system is currently highly dependent on hydropower, which is vulnerable to seasonal variations and drought conditions. The proposed solar project would provide an additional renewable energy source, helping diversify the national energy mix and improve energy security.

The project would also contribute to reducing greenhouse gas emissions, supporting Albania's climate commitments, and promoting the development of renewable energy infrastructure. In addition, the project would generate economic benefits through employment opportunities and local investment.

Considering these factors, the development of the project is considered to provide greater overall benefits compared with the No-Project alternative.

4.2. Site Selection

Alternative locations for the solar PV plant were not considered because the project site was designated by the Ministry of Infrastructure and Energy through an international competitive tender process. The selected site is located within the planned Spitalla Industrial Park area, which is identified as a suitable location for energy and industrial development.

The site has several advantages that support its suitability for the project, including:

- Availability of state-owned land
- Proximity to existing energy and industrial infrastructure
- Suitable solar irradiation conditions
- Access to the electricity transmission network
- Limited agricultural value of the land

These characteristics make the site appropriate for the development of a large-scale solar PV facility.

4.3. Technology and Design Alternatives

Different technical solutions were evaluated during the project design phase in order to optimise the performance of the solar plant and minimise potential environmental and social impacts.

Solar photovoltaic technology was selected as the most appropriate option for electricity generation at the site due to Albania's high solar irradiation levels, the relatively low environmental footprint of solar energy, and the ability to deploy the technology quickly compared with other power generation options.

Several internal layout configurations for the PV plant were also assessed during the design process to ensure compatibility with land boundaries, nearby infrastructure, and operational requirements. The final layout represents an optimised configuration that avoids conflicts with surrounding infrastructure while maintaining technical efficiency.

Different options for the transmission line connection to the Porto Romano substation were also assessed, including:

- A fully overhead transmission line
- A fully underground transmission line
- A hybrid solution combining overhead and underground sections

4.4. Selected Project Option

Based on the technical, environmental, social, and economic considerations evaluated during the ESIA process, the selected project configuration includes:

- Development of a 100 MWp solar photovoltaic plant at the designated Spitalla site
- Installation of solar panels on single-axis tracking systems
- Construction of an on-site step-up substation
- Connection to the national electricity grid through an approximately 2 km hybrid transmission line, combining overhead and underground sections

The selected configuration represents the most balanced option, ensuring technical feasibility, cost efficiency, and reduced environmental and social impacts while supporting Albania's renewable energy development objectives.

5. ESIA Process

5.1. ESIA Scope and Methodology

The ESIA defined an Area of Interest to assess the potential environmental and social impacts of the project. This area includes both locations directly affected by the project and surrounding areas where indirect impacts may occur.

Two spatial levels were considered:

- Project Development Area (PDA) – This includes the solar PV plant site and associated infrastructure such as access roads, the step-up substation, construction areas, and the transmission line corridor. These areas are expected to experience direct impacts during the construction and operation phases.

- Area of Interest (AoI) – This includes surrounding areas potentially affected indirectly by the project. For the purposes of the ESIA, the AoI includes a 2 km buffer around the PV plant and substation and a 500 m buffer on each side of the transmission line corridor.

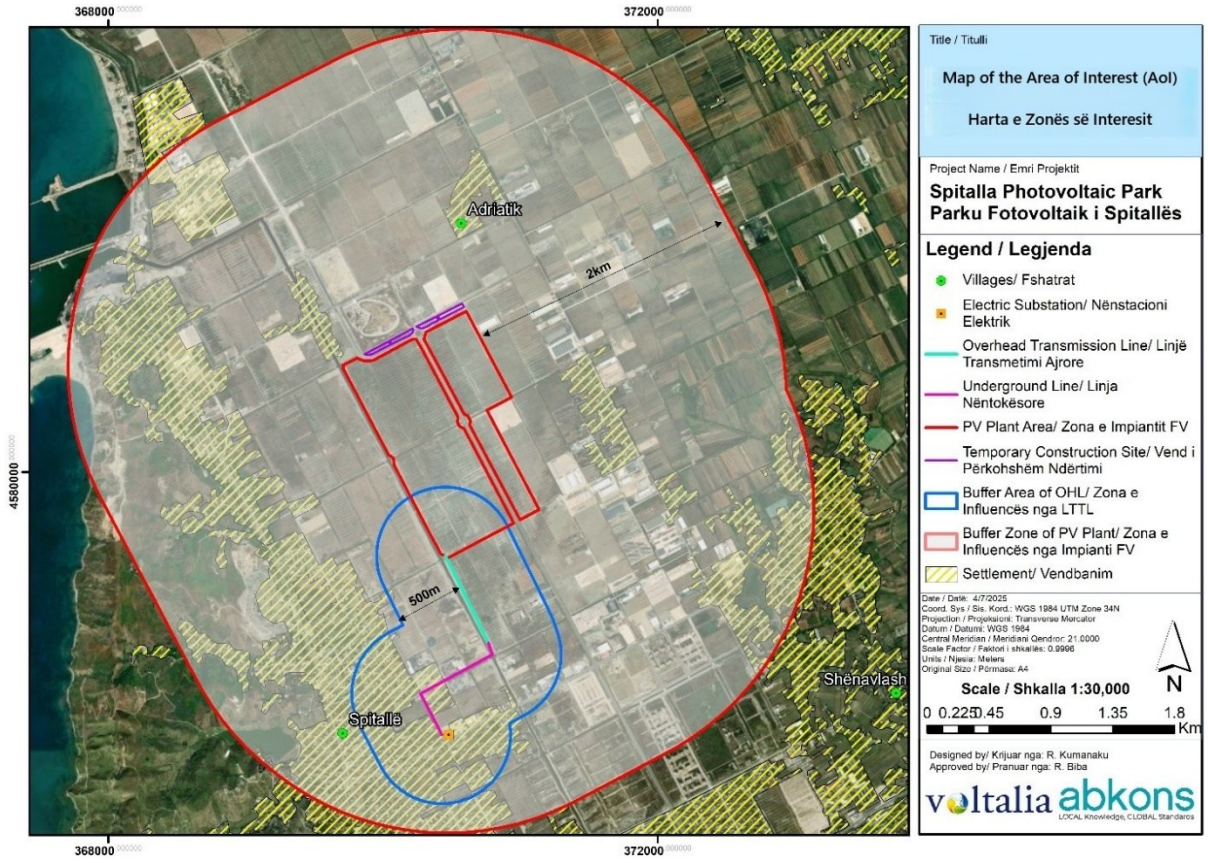

Figure 4: Map of Project Area of Interest (AoI)

The ESIA methodology included the review of available information, field surveys, identification of environmental and social receptors, assessment of potential impacts, and the development of mitigation and management measures in line with EBRD Environmental and Social Requirements (ESRs) (October 2024) and applicable national legislation.

5.2. Environmental and Social Studies

Baseline environmental and social conditions were assessed in order to establish a reference point for the evaluation of potential project impacts. The baseline studies were based on a combination of desk-based research and field surveys conducted between January 2021 and February 2025.

Information was obtained from national databases, government institutions, scientific studies, and publicly available sources, and was complemented by field investigations undertaken within both the Project Development Area and the wider Area of Interest.

The studies covered key environmental and social topics, including:

- Climate and meteorology
- Air quality
- Noise levels
- Geology and soil conditions
- Hydrology and water resources

- Landscape and topography
- Biodiversity, including flora, fauna, and habitats
- Land use and ecological characteristics
- Socio-economic conditions of nearby communities
- Cultural heritage

Baseline measurements for air quality, noise, soil, surface water, and groundwater were carried out to support the assessment of potential impacts associated with the construction and operation of the project.

5.3. Stakeholder Consultations

Stakeholder engagement forms an integral part of the ESIA process and is undertaken in accordance with EBRD Environmental and Social Requirement 10: Information Disclosure and Stakeholder Engagement, as well as Albanian legal requirements for public participation.

The ESIA documentation, including the Non-Technical Summary, will be publicly disclosed for a minimum period of 60 days, allowing stakeholders to review the project information and provide comments.

A Stakeholder Engagement Plan (SEP) and a Project Grievance Mechanism have been established to enable stakeholders to raise questions, provide feedback, or submit complaints during the project lifecycle. Stakeholder engagement will continue throughout the construction and operational phases of the project.

Consultation activities were conducted with relevant national and local authorities, local communities, and other interested stakeholders during the preparation of the ESIA. The purpose of stakeholder engagement is to ensure transparency, provide information about the project, and allow stakeholders to express their views and concerns.

Between June and August 2025, the Voltalia Social Team conducted a range of outreach activities with local communities, landowners, nearby businesses, and representatives of Administrative Units No. 4, Rrashbull, and Katund i Ri. Engagement activities included community meetings in the villages of Spitallë, Shënavlash, and Adriatik, direct discussions with landowners and local businesses, and distribution of informational materials such as brochures, posters, and grievance forms. Stakeholders were informed about the project, the ESIA process, and the deadline for submission of claims related to compensation and mitigation measures.

A community awareness campaign was carried out in August 2025 to provide project updates, encourage participation in the Public Hearing, and explain the grievance mechanism available to stakeholders. Engagement methods included face to face meetings, telephone communication, and information dissemination through local administrative representatives.

The highest level of participation was recorded in Spitallë, the community located closest to the project site, where residents raised questions mainly related to employment opportunities, potential construction related impacts such as noise, dust, and traffic, and the process for submitting claims. Overall, feedback was constructive and generally supportive of the project.

Public notification of the public hearing was conducted through multiple channels to ensure broad outreach and transparency, including announcements published in the national newspaper Panorama, broadcasts on ABC News television, and the placement of posters and informational materials at the Municipality of Durrës, Administrative Unit offices, and nearby communities.

6. Existing Environmental and Social Conditions

6.1. Physical Environment

This section summarises the key environmental conditions within the Project Development Area (PDA) and the surrounding Area of Interest (AoI). The information is based on field surveys, monitoring campaigns, and available national data sources. It provides the baseline against which potential project impacts are assessed in the ESIA.

6.1.1. Climate

The project area, located near Spitalla in the Durrës region, has a Mediterranean climate influenced by the Adriatic Sea. The climate is characterised by mild and wet winters and hot, dry summers, conditions that are generally favourable for solar energy production.

Average annual temperatures are around 16°C, with the coldest month (January) averaging approximately 6.5°C and the warmest months (July–August) averaging around 26°C. Long-term observations indicate a gradual increase in temperatures over the past decades, consistent with broader regional climate trends.

Average annual precipitation is approximately 985 mm, with most rainfall occurring between October and February, reflecting the typical seasonal pattern of Mediterranean climates. Summers are generally dry.

Wind conditions are moderate throughout the year. Summer winds are generally mild, while stronger winds may occur during winter months. The dominant wind direction in the area is from the north, while stronger winds may originate from the south and south-east.

Overall, the climatic conditions in the area are suitable for the development and operation of a solar photovoltaic project.

6.1.2. Air Quality

Air quality in the project area is generally good, as the site is located in a largely open and semi-industrial area with limited sources of significant emissions. The main local sources of air pollution include road traffic, transport related to nearby industrial activities, and occasional dust from unpaved roads.

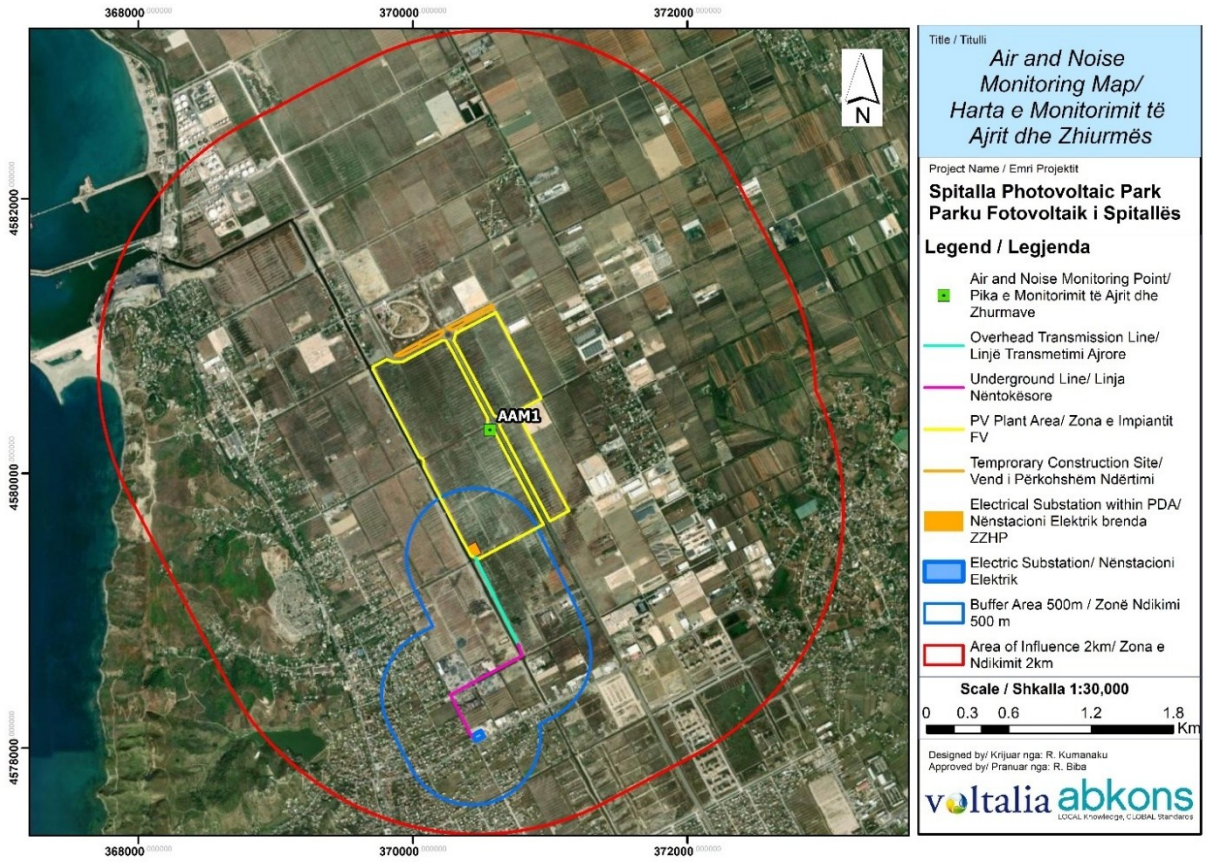

Figure 5: Air Monitoring Location Map

Ambient air quality monitoring was conducted in May 2023 within the Project Development Area. Measurements included particulate matter, nitrogen dioxide, sulphur dioxide, carbon monoxide, ozone, and other parameters.

The results showed that all measured pollutants were within Albanian, EU, and World Health Organization guideline limits, indicating that the current air quality conditions are acceptable and do not present constraints for the project.

Some localised dust may occur during dry periods due to traffic on unpaved roads; however, these impacts are intermittent and manageable through standard dust control measures.

6.1.3. Geology and Soils

The project area is located within the Durrës coastal plain, which historically formed part of the former Durrës swamp area. The geology of the region includes Miocene and Pliocene sedimentary formations overlain by more recent Quaternary alluvial and marsh deposits.

Surface soils are generally alluvial and saline, with high concentrations of salts due to shallow groundwater and historic marine influence. These conditions limit agricultural productivity and have resulted in the land being classified as currently unsuitable for agriculture under FAO land capability classifications.

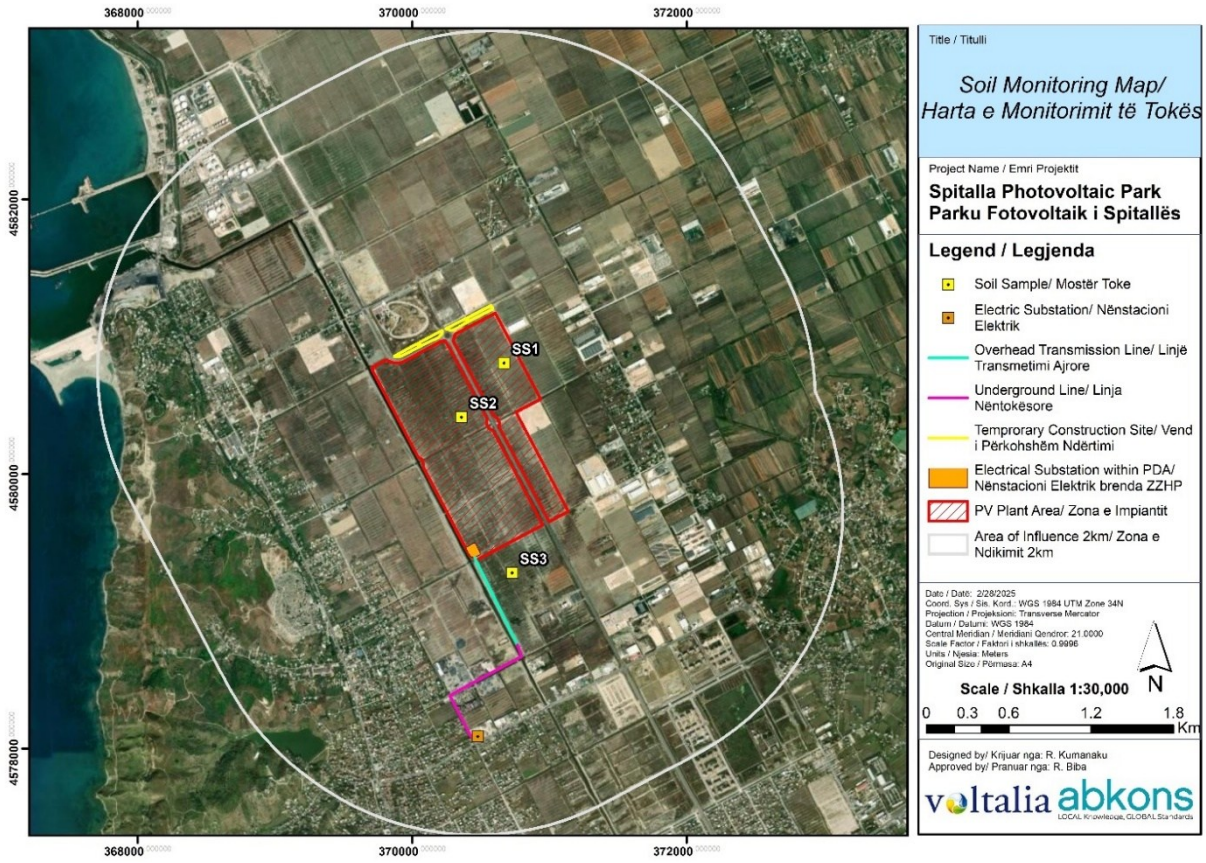

Figure 6: Location map of Soil Quality Monitoring Samples

Soil sampling conducted within the project area indicates that the soils are generally not contaminated by heavy metals, although they have low fertility and high salinity.

Due to the saline nature of the soils and their corrosive properties, appropriate construction materials and protective measures will be required for underground infrastructure.

The region is also located in an area of high seismic activity, which is typical for western Albania. Historical earthquakes have affected the wider Durrës region, and seismic considerations will therefore be incorporated into the engineering design of the project infrastructure.

6.1.4. Surface Water and Groundwater

Surface water in the wider area is influenced by the Erzen River, drainage channels, and the historic marshland drainage system developed in the 1960s. The project area is drained through a network of primary, secondary, and tertiary channels that discharge towards the Porto Romano pumping station, which pumps water to the Adriatic Sea.

Due to the flat topography and low elevation of the area, some parts of the site are below sea level and may be susceptible to flooding during periods of heavy rainfall, particularly if drainage infrastructure is not functioning effectively.

Surface water quality monitoring conducted in nearby drainage channels indicates moderate organic pollution, likely related to runoff from surrounding settlements and agricultural areas. However, heavy metals were found to be within acceptable limits, suggesting that there is no significant industrial contamination of surface waters.

Groundwater in the region occurs in several aquifers associated with river deposits and sedimentary formations. Shallow groundwater is influenced by historic lagoon and swamp deposits and may have high

salinity and limited suitability for potable use. Overall, groundwater resources in the area are considered limited and of variable quality.

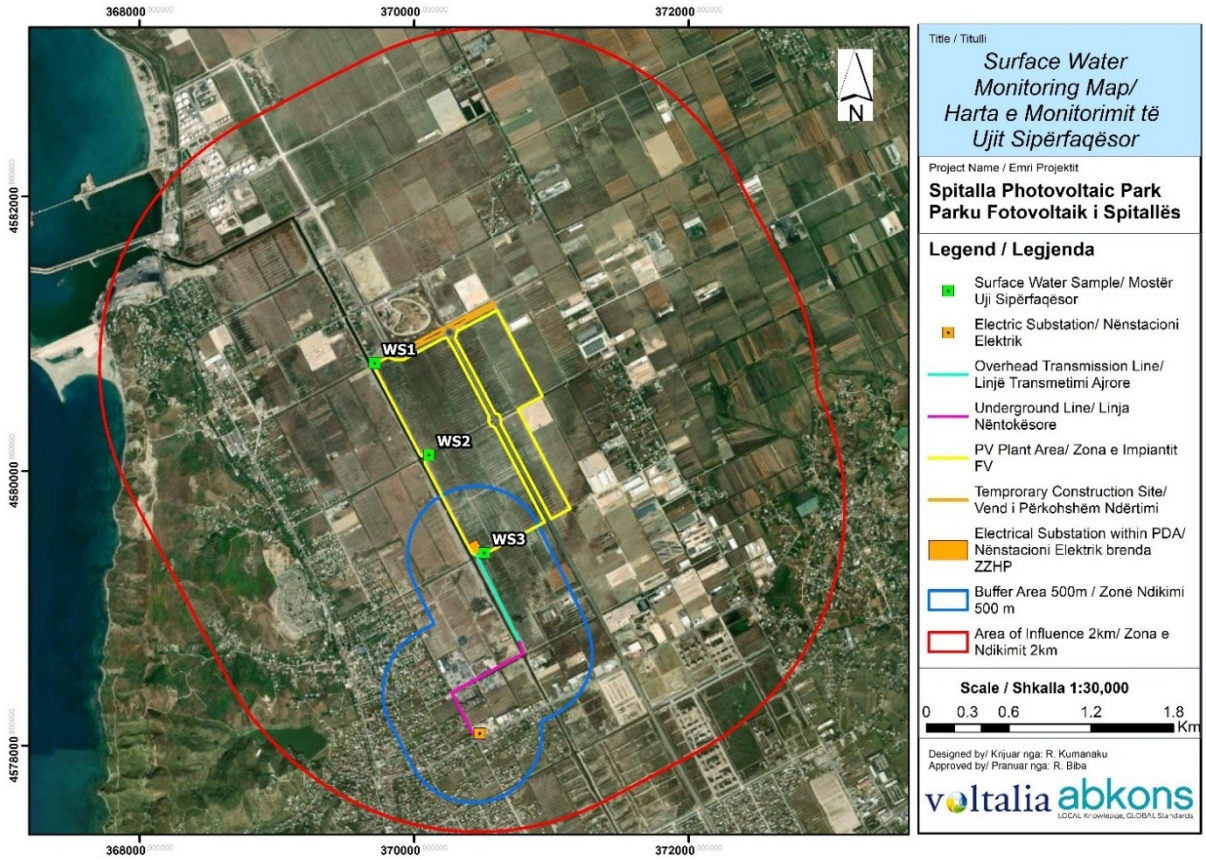

Figure 7: Location map of Water Monitoring Sample

6.1.5. Noise

The existing noise environment in the project area is generally quiet, reflecting the largely undeveloped nature of the surrounding land. The main sources of noise are traffic along the nearby access road and occasional agricultural activities.

Noise monitoring carried out in May 2023 within the project area recorded an average daytime noise level of approximately 56 dBA near the main road. These levels are within the applicable national and international guideline values for residential areas.

The nearest sensitive receptors are nearby villages such as Adriatik and Vrinas, located approximately 600 m to 1.6 km from the project site, as well as the urban area of Spitalla, located less than 2 km away.

Although current noise levels are relatively low, future industrial development and port activities in the area may lead to increased background noise levels over time.

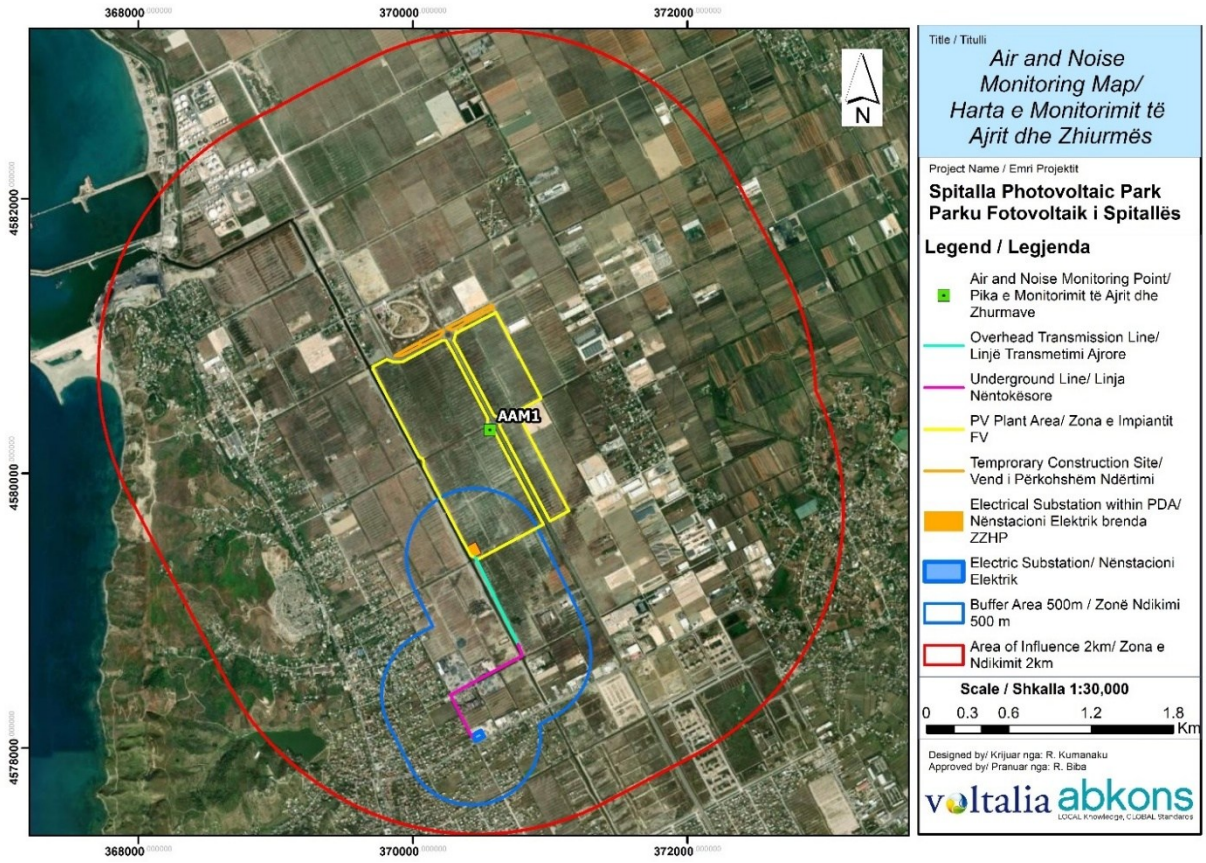

Figure 8: Noise Monitoring Location Map

6.1.6. Landscape

The project area forms part of the coastal lowland landscape of the Durrës region, characterised by flat terrain, reclaimed former marshland, and drainage channels. The surrounding area includes a mixture of industrial facilities, infrastructure, and open land.

Historically, the site formed part of the Durrës swamp, which was drained during large-scale land reclamation works carried out between 1961 and 1967. While these works created large areas of flat land, the soils remained unsuitable for agriculture due to salinity and waterlogging.

Today, the landscape is largely modified by human activity and includes nearby infrastructure such as the Porto Romano industrial area, the rehabilitated Eco-Park Durrës landfill, and transport corridors connecting Durrës with Tirana.

Overall, the landscape in the project area is considered low sensitivity, as it has already been significantly altered by previous land reclamation and industrial development.

Figure 9: View of Project Development Area

6.2. Biological Environment

A biodiversity assessment was undertaken to characterise the ecological conditions within the Project Development Area (PDA) and the surrounding Area of Interest (AoI). The assessment comprised a review of available scientific literature and biodiversity databases, complemented by field surveys conducted by qualified biodiversity specialists in 2021, with follow up visits undertaken in 2023–2024 to verify and update findings from the desk based review.

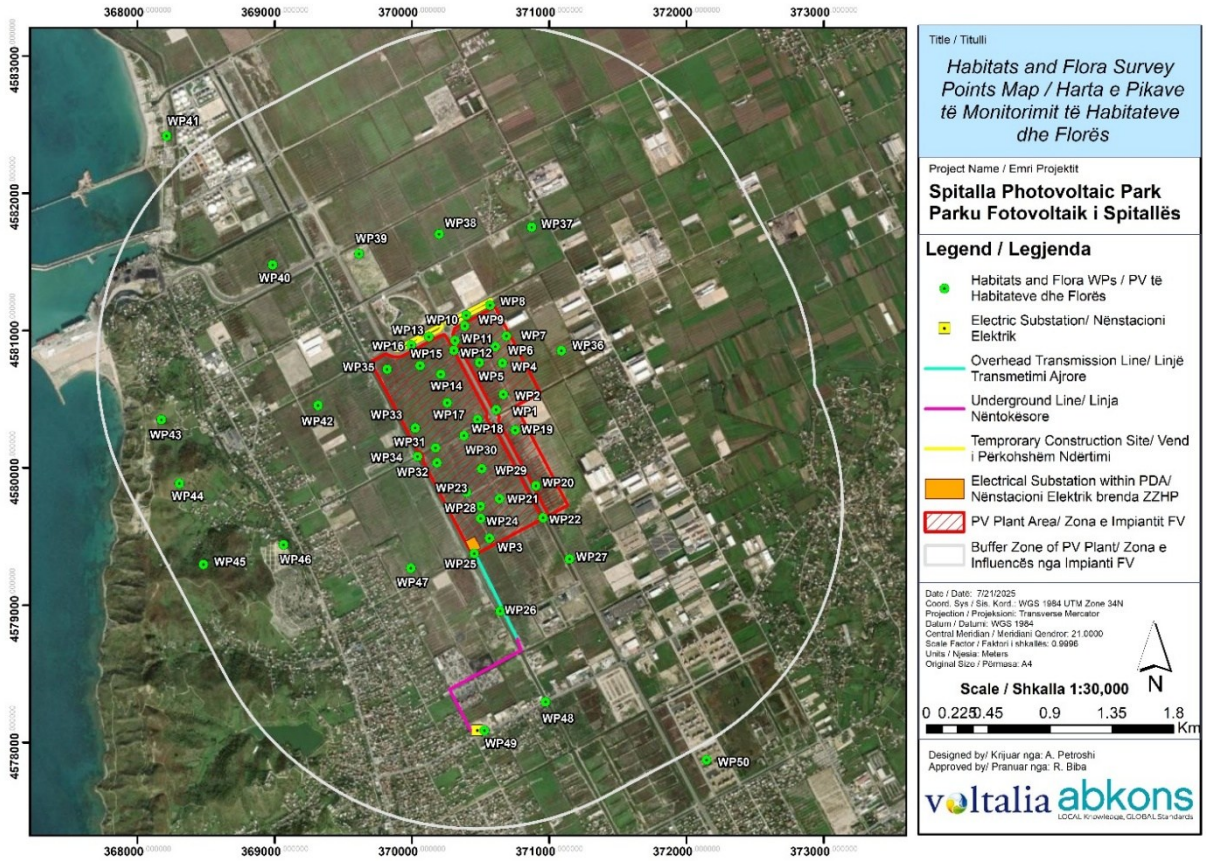

Figure 10: Habitats and flora survey points (WPs)

Key information sources included the International Union for Conservation of Nature, IUCN, Red List of Threatened Species, the Integrated Biodiversity Assessment Tool, IBAT, and relevant European Union legislation, including the Habitats Directive and the Birds Directive. The assessment aimed to identify

biodiversity receptors of conservation importance and to establish the baseline ecological conditions in the project area.

The surveys examined habitats, plant species, terrestrial fauna, birds, and aquatic ecosystems within and around the project site. The assessment was conducted in accordance with Albanian legislation and the biodiversity requirements of EBRD ESR 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources.

6.2.1. Habitats

6.2.1.1. Main habitats

The project site is located in a low-lying coastal plain near Durrës, which historically formed part of a wetland system known as the Durrës Swamp. During the twentieth century the area was drained and used for agriculture. Following the abandonment of farming activities around 30 years ago, natural vegetation gradually recolonised the area.

Six main habitat types were identified within the Project Development Area, including the locations of temporary construction sites and the power transmission line of the Spitalla solar project. These include natural coastal habitats such as salt marshes and Mediterranean salt meadows, as well as reed habitats along canals and drainage channels. The area also includes human influenced habitats, such as agricultural land, industrial areas, and ruderal vegetation typically found along roadsides and near settlements. The assessment also estimated the area and proportion of each habitat type that may be affected by the project.

The wider area of interest contains additional habitats such as semi-natural grasslands, agricultural fields, coastal sand dunes, shrub vegetation, and small pine plantations. Most habitats within the PDA have been modified by historical land use and therefore have relatively low conservation value.

6.2.1.2. Threatened habitats

Seven habitat types were identified within the Project Development Area and the surrounding Area of Interest, several of which are recognised under the EU Habitats Directive. Two habitats of higher conservation concern were recorded in the wider Area of Interest, including periodically exposed saline shores with pioneer vegetation and Mediterranean temporary water bodies, which are classified as threatened on the European Red List. These habitats occur only in small and scattered areas. Other habitats, such as coastal saltmarshes and white dunes, are considered Near Threatened, while the remaining habitats, including Juniperus shrubland and Mediterranean phrygana, are classified as Least Concern.

6.2.1.3. Protected Areas

There are no protected areas located within or immediately adjacent to the Project Development Area. The nearest protected site is the Grape Managed Area / Natural Park, located approximately 9 km to the northeast of the project site. This area is classified as an IUCN Category IV Managed Nature Reserve and includes forest, shrubland, water bodies, and sandy areas.

Several natural monuments are also located within the wider region, including Kallmi Beach, about 2 km southwest of the site, and two ancient tree monuments, Çinari i Balliasit and Rrapi i Rubjekës, located approximately 9 km and 11.5 km from the project area respectively.

In addition, the Lalzi Bay Important Bird and Biodiversity Area (IBA) are located about 3 km northwest of the site and supports a large number of wintering and migratory bird species. The Rrushkull Nature Managed Reserve, located approximately 8 km northeast of the project area, is an important wetland habitat used by migratory birds and for breeding of waterbirds and passerines.

6.2.2. Flora

The project area has been significantly influenced by past human activities, particularly swamp drainage and agriculture. Agricultural use stopped around 30 years ago due to high soil salinity, leading to land abandonment and the natural development of salt meadow vegetation. These habitats now provide important nesting and feeding areas for wildlife, especially birds. In contrast, the main drainage canal in the area is heavily polluted and largely lacks vegetation.

Vegetation in the Project Development Area and its surrounding Area of Interest mainly consists of salt tolerant plants, sand adapted vegetation, and grasslands. Surveys identified 226 plant species from 58 plant families, representing about 6 percent of Albania's total flora. The plant community reflects Mediterranean ecological conditions and shows signs of past land degradation, with limited tree and shrub growth.

Sixteen invasive plant species were recorded in the wider area, mainly in disturbed or roadside habitats, with four species found within the project area. These species can spread quickly and compete with native vegetation.

No endemic or globally threatened plant species were identified within the Project Development Area. However, several plant species listed in the Albanian Red List were recorded in the wider Area of Interest.

6.2.3. Terrestrial Fauna

No important bat roosting sites were identified within the Project Development Area or the surrounding Area of Interest. However, night surveys confirmed that bats, mainly from the Pipistrellus genus, use the area for foraging.

The wider study area may also be used by several mammal species, including the European badger, Western polecat, and golden jackal, which are listed in the Albanian National Red List. Although suitable habitat exists, their presence was not confirmed during field surveys.

Temporary ponds and drainage channels in the wider area provide important breeding habitats for amphibians and reptiles, particularly during spring and early summer. The presence of the Albanian water frog, a globally vulnerable species with a limited distribution, was confirmed in drainage channels within the Area of Interest, although not within the project footprint.

These drainage channels and associated habitats also support several other amphibian and reptile species and are considered ecologically sensitive areas. As a result, the project applies the principle of avoidance to protect these habitats and minimise potential disturbance during construction and operation.

6.2.4. Aquatic Habitats

Aquatic habitats in the Spitalla PV project area consist mainly of a network of drainage channels and temporary ponds. Although many of these water bodies are affected by pollution and past human activities, they still provide habitat for a range of aquatic plants and animals.

Aquatic invertebrates typical of lowland streams and drainage systems were recorded during surveys. The presence of both sensitive and pollution tolerant species indicates mixed ecological conditions, with some channels showing signs of nutrient pollution. The main drainage channel is highly eutrophic, largely due to wastewater discharges and limited water circulation.

Fish communities are dominated by non-native species commonly found in disturbed aquatic environments, such as mosquitofish and carp species. No native fish species of conservation importance were recorded. The European eel, historically present in the area and protected under EU legislation, was not observed, likely due to habitat degradation and disrupted water connectivity.

Aquatic vegetation surveys identified typical wetland plants, including reeds and submerged aquatic plants. These habitats provide shelter and breeding areas for amphibians, reptiles, and birds. Some plant species indicate relatively stable aquatic conditions, while others suggest nutrient enrichment in certain channels.

Overall, although the main drainage channels are degraded, smaller secondary and tertiary channels with aquatic vegetation still retain moderate ecological value and function as important habitats for aquatic biodiversity. Maintaining these habitats will be important for preserving local ecological balance during project implementation.

6.2.5. Avifauna (Birds)

Bird surveys conducted in the Project Development Area and the surrounding Area of Interest recorded 74 bird species, including 20 species of conservation concern listed under the EU Birds Directive, the Bern Convention, and the Albanian Red List. Fourteen of these species were recorded within the project area and eight along the proposed transmission line.

The area is mainly used by birds associated with open landscapes, including species such as Short toed Lark, Crested Lark, Collared Pratincole, Yellow Wagtail, and Tawny Pipit. Several birds of prey were also observed, including Common Kestrel and Short toed Snake Eagle. In addition to breeding species, the area is used by resident and migratory birds, particularly species associated with nearby wetlands and coastal habitats.

Open agricultural fields and abandoned land within the project area provide feeding and breeding habitats for several ground nesting birds, including species of conservation importance such as Collared Pratincole, Greater Short toed Lark, Tawny Pipit, Red backed Shrike, and Black winged Stilt.

The transmission line corridor is also used by some bird species as a foraging area, particularly birds of prey, while nearby drainage channels provide feeding habitat for waterbirds. The wider study area is located near the Adriatic migratory route and close to the Lalzi Bay Important Bird and Biodiversity Area and the Rrushkull Nature Managed Reserve, which are important sites for migratory and wintering birds.

Although the project area has been modified by past agricultural activities, it still provides habitats used by several bird species. Potential impacts during project implementation may include temporary disturbance during construction and habitat loss for some ground nesting species. Appropriate mitigation measures will therefore be implemented to reduce potential impacts on bird populations.

6.2.6. Critical Habitat Assessment – Summary of Main Findings

A Critical Habitat Assessment (CHA) was carried out in accordance with the requirements of IFC Performance Standard 6 and EBRD ESR 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources, to determine whether the Project Development Area and the wider Ecologically Appropriate Area of Analysis contain habitats or species that qualify as Critical Habitat.

The assessment reviewed species populations, habitat conditions, and conservation status at global and national levels. Where information was limited, a precautionary approach was applied. The evaluation concluded that no Critical Habitat is present within the Project Development Area or the transmission line corridor, and none of the assessed ecosystems meet the criteria for highly threatened or unique ecosystems or areas associated with key evolutionary processes.

Several habitats and species were identified as Priority Biodiversity Features (PBFs) due to their conservation importance. These include Mediterranean salt marshes, Mediterranean salt meadows, reedbeds and drainage channels, as well as several bird species associated with wetlands and open habitats. Although these features are important at the national or regional level, available data indicate that they do not reach the quantitative thresholds required for Critical Habitat designation under IFC PS6 or EBRD ESR 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources.

Certain species of conservation interest, such as the Albanian water frog, pygmy cormorant, glossy ibis, and several Annex I bird species, were recorded within the wider study area. However, their populations within the Ecologically Appropriate Area of Analysis are not considered globally significant and therefore do not trigger Critical Habitat status.

Overall, while the project area contains habitats and species of ecological value, these are classified as Priority Biodiversity Features rather than Critical Habitat. Consequently, project implementation will focus on applying appropriate mitigation and management measures to achieve no net loss of biodiversity and to avoid or minimise impacts on sensitive habitats and species.

6.3. Socio-Economic Environment

6.3.1. Population and Settlements

The Project is located within the administrative boundaries of Durrës Municipality. According to the 2023 Census of Population and Dwellings conducted by INSTAT, the Municipality of Durrës has a total population of 150,859 residents, living in approximately 48,413 households and 46,812 inhabited dwellings.

The majority of the population is concentrated in the city/Administrative Unit of Durrës, which accounts for 101,421 residents. The remaining population is distributed across the surrounding Administrative Units, including Rrashbull (20,071 residents), Sukth (13,395 residents), Katund i Ri (7,524 residents), Manëz (4,765 residents), and Ishëm (3,683 residents)[1].

Approximately 67.2% of the municipality's population lives in the city of Durrës (Administrative Unit), while the remaining 32.8% is distributed across the surrounding administrative units (Rrashbull, Sukth, Katund i Ri, Manëz, and Ishëm). This indicates a strong urban concentration of population in the city of Durrës, with about two thirds of the municipal population residing in the urban centre and with smaller populations living in the surrounding semi-urban and rural administrative units.

The Project Development Area (PDA) is located within Administrative Unit No. 4 of the city of Durrës, which is the most populated sub-unit of the city and is situated at the transition zone between urban and rural areas, in a location characterised by relatively low population density and limited residential development. Nearby settlements include the villages of Adriatik (Katund i Ri Administrative Unit), Vrinas/Shënavlash (Rrashbull Administrative Unit), and Spitallë (Administrative Unit No. 4 of the city of Durrës). These communities are located approximately 100 to 600 metres from the project site.

6.3.2. Land Use and Economic Activities

Land use within the Project Development Area mainly consists of unused or low-productivity land, formerly used for agriculture. Due to saline soil conditions and the absence of a functioning irrigation system, agricultural productivity is limited. As a result, most farming activities take place several kilometres away from the project site.

In nearby settlements, the local economy is characterised by a combination of livestock rearing, small-scale agriculture, public sector employment, and industrial activities.

The wider Porto Romano and Spitallë areas have gradually developed into an industrial and economic zone, hosting businesses related to construction materials, manufacturing, logistics and import-export activities. The proximity to the Port of Durrës and the national transport network has supported this economic development.

Remittances from family members working abroad also represent a significant source of household income in the surrounding communities.

The solar PV plant will be constructed primarily on state-owned land. One informal land user has been identified within the project area and will be addressed through appropriate project procedures consistent with national legislation and international standards.

[1] Source: INSTAT, Census of Population and Dwellings 2023.

6.3.3. Infrastructure

The project area benefits from relatively good access to infrastructure and public services due to its location near Durrës city and the Porto Romano industrial zone.

The road network provides connections to national roads and the port area, facilitating access for industrial activities and transportation. The area is currently undergoing infrastructure improvements, including upgrades to major roads and the development of new transport corridors.

Public utilities and services are generally available in the surrounding communities. Drinking water is supplied through the regional water distribution system, and electricity infrastructure is well developed due to the presence of industrial facilities and the nearby electrical substation.

Educational facilities include several primary schools and the Aleksandër Moisiu University of Durrës and New University Campus, located approximately 700 metres from the project area. Basic healthcare services are provided through local health centres, with more specialised services available in Durrës city.

Despite the presence of drainage channels, the wider area is occasionally affected by seasonal flooding, mainly due to limited maintenance of the drainage system.

6.3.4. Cultural Heritage

Durrës is one of the oldest cities in Albania and has a long historical and cultural heritage dating back to ancient Illyrian and Roman periods. Several archaeological sites and historical features are located within the wider region.

Cultural heritage sites identified in the wider area include archaeological remains such as ancient cemeteries, traces of Roman infrastructure, and historical fortification structures near Porto Romano. However, these sites are located at a distance from the Project Development Area.

Baseline surveys and archaeological assessments conducted for the ESIA did not identify any archaeological remains or cultural heritage features within the project footprint or along the transmission line route.

Nevertheless, given the historical significance of the wider Durrës region, a chance finds procedure will be implemented during construction. This procedure ensures that any archaeological artefacts or remains discovered during earthworks will be properly reported and managed in coordination with the relevant cultural heritage authorities.

7. Environmental and Social Benefits of the Project

The proposed solar photovoltaic (PV) project will provide several environmental, social, and economic benefits at both the national and local levels. By generating renewable electricity, the project will contribute to Albania's energy transition, reduce greenhouse gas emissions, and support sustainable economic development in the region.

7.1. Renewable Electricity Generation

The project will produce electricity from solar energy using photovoltaic technology. Solar power is a renewable energy source that does not rely on fossil fuels and produces electricity without direct emissions during operation.

The installation of a large-scale solar PV facility will increase the share of renewable electricity in Albania's energy mix and contribute to the country's efforts to strengthen sustainable and clean energy production. Solar energy also provides a reliable source of electricity during periods when hydropower generation may be reduced due to lower rainfall.

By utilizing available solar resources, the project will contribute to a more resilient and sustainable national energy system.

7.2. Reduction of Greenhouse Gas Emissions

Electricity produced by the solar PV plant will replace electricity that would otherwise be generated from fossil fuel sources within the regional energy system. As a result, the project will contribute to reducing greenhouse gas emissions associated with electricity production.

The reduction of carbon dioxide (CO_2) emissions will support Albania's commitments under international climate agreements and national climate policies aimed at mitigating climate change.

By generating clean electricity over its operational lifetime, the project will contribute to lowering the carbon intensity of the electricity sector and supporting global efforts to address climate change.

7.3. Contribution to Albania's Energy Diversification

Albania's electricity system is currently heavily dependent on hydropower generation, which accounts for the majority of domestic electricity production. While hydropower is a renewable energy source, electricity generation can vary significantly depending on annual rainfall and hydrological conditions.

The development of solar energy projects will help diversify the national energy mix and reduce reliance on a single energy source. Increasing the share of solar power will enhance the stability and resilience of Albania's energy supply, particularly during dry periods when hydropower production may decline.

The project therefore supports national strategies aimed at expanding renewable energy sources and strengthening long-term energy security.

7.4. Employment Opportunities

The project is expected to create employment opportunities during both the construction and operational phases.

During the construction phase, approximately 200 workers will be required, including engineers, technical specialists, and skilled and unskilled workers. Where possible, the project aims to employ workers from nearby communities, providing short-term employment and opportunities for local contractors and service providers. Workers are expected to be accommodated within surrounding towns using existing hotels, guesthouses, and rental housing, which may also generate indirect economic benefits for local businesses.

Given that workers will be housed within local communities rather than in dedicated camps, some level of interaction with the public is anticipated. This includes the use of local services such as accommodation, food, transport, and retail. While this can contribute positively to the local economy, it may also create potential pressures on local services and community dynamics. Appropriate management and mitigation measures will be implemented as part of the Project's environmental and social management framework to ensure that such interactions are conducted in a respectful and controlled manner.

During the operational phase, a smaller number of staff will be required for the operation, maintenance, and security of the facility. These positions will provide long-term employment opportunities in technical and operational roles, contributing to sustained local economic benefits

7.5. Local Economic Development

In addition to direct employment, the project is expected to generate indirect economic benefits for the local area. Local businesses may benefit from increased demand for services such as transportation, accommodation, food services, and supply of materials during the construction phase.

The presence of the project may also contribute to broader economic development in the area by supporting infrastructure improvements and strengthening the local energy supply.

Overall, the project represents an investment in renewable energy infrastructure that supports sustainable economic development, promotes clean energy production, and contributes to Albania's long-term environmental and energy objectives.

8. Potential Environmental and Social Impacts

The Environmental and Social Impact Assessment (ESIA) evaluates potential impacts associated with the construction, operation, and eventual decommissioning of the photovoltaic (PV) plant and associated transmission line. The assessment identifies potential risks to environmental and social receptors and proposes mitigation measures to avoid, minimise, or manage these impacts in accordance with the EBRD Environmental and Social Policy and Albanian legislation.

8.1. Construction Phase

During the construction phase, temporary environmental and social impacts may occur due to earthworks, installation of solar panels, construction of access roads and electrical infrastructure, and increased movement of workers and equipment. These impacts are expected to be localised and temporary.

8.1.1. Dust and Air Quality

Construction activities such as earthworks, vehicle movement, and transportation of materials may generate dust emissions and temporarily affect local air quality. Dust may arise particularly during dry and windy conditions.

Mitigation measures will include regular watering of exposed surfaces, covering of transported materials, and maintaining construction equipment in good working condition. With these measures in place, impacts on air quality are expected to be minor and temporary.

8.1.2. Noise

Noise will be generated by construction machinery, equipment operation, and vehicle movements. These activities may temporarily increase noise levels within the project area.

Construction activities will be limited to daytime working hours where possible, and equipment will be properly maintained to minimise noise emissions. Given the distance from major residential areas, noise impacts are expected to be minor and temporary.

8.1.3. Soil Disturbance

Ground preparation, excavation, and installation of foundations for mounting structures and transmission line pylons may result in soil disturbance and potential erosion.

Soil management measures will include limiting earthworks to designated areas, implementing erosion control measures, and restoring disturbed areas after construction. Topsoil will be stored and reused for site rehabilitation.

8.1.4. Water Management

Construction works may temporarily affect drainage channels or surface water flows, particularly during earthworks and trenching activities.

Measures will be implemented to maintain natural drainage patterns and prevent sediment runoff into nearby channels. Sediment control systems such as silt fences and sediment traps will be used where necessary.

8.1.5. Waste Generation

Construction activities will generate different types of waste, including packaging materials, construction debris, and domestic waste from the workforce.

All waste will be managed in accordance with national regulations and the project's Environmental and Social Management Plan. Waste will be segregated, stored appropriately, and transported to licensed waste management facilities.

8.1.6. Biodiversity Disturbance

Temporary disturbance to habitats and wildlife may occur due to vegetation clearance, noise, and human presence. Some habitats within the project area include drainage channels, ruderal vegetation, and low-productivity agricultural land.

The Project will mainly affect lowland wetland and semi-natural habitats within the site. The most impacted habitats are:

- Mediterranean salt meadows (1410), which represent the majority of the site;
- Salt marshes (1310) located along drainage canals;
- Reedbeds and drainage channels (72A0) supporting aquatic and semi-aquatic biodiversity.

These habitats will be partially cleared or disturbed during construction, resulting in habitat loss, fragmentation, and temporary degradation. Additional indirect impacts may affect nearby sensitive habitats, including Mediterranean salt steppes (1510), which are considered a priority habitat but are located outside the project footprint.

In terms of flora, no endemic or globally threatened plant species were recorded within the Project area. However, several species of national conservation interest occur in the surrounding area, including Tamarix hampeana, Hypericum perforatum, Pinus pinea, and Juniperus oxycedrus, which may be indirectly affected.

Fauna that may be disturbed includes:

- Amphibians, such as Pelophylax shqipericus (Albanian water frog), Hyla arborea, and Bufotes viridis;
- Reptiles, including Emys orbicularis (European pond turtle), Mauremys rivulata, and water snakes (Natrix spp.);
- Mammals, mainly common species such as red fox (Vulpes vulpes);
- Bats, particularly pipistrelle species using the area for foraging;
- Birds, including ground-nesting and wetland species, as well as migratory birds using nearby lagoons and drainage systems.

Potential impacts include disturbance, temporary displacement, and limited mortality risk during construction, particularly for less mobile species such as amphibians and reptiles, and for breeding birds.

Overall, impacts are mainly short-term and localized during construction, and with mitigation measures in place, residual impacts are expected to be minor.

Mitigation measures will include limiting vegetation clearance to necessary areas, maintaining buffer zones around drainage channels, and implementing a Biodiversity Management Plan to protect sensitive species and habitats.

8.1.7. Traffic Impacts

The transport of construction materials, equipment, and workers will increase traffic along local access roads.

Traffic management measures will be implemented to ensure safe vehicle movement and minimise disruption to local communities. These measures include designated transport routes, speed limits, and coordination with local authorities.

8.1.8. Community Health and Safety

Construction activities may pose temporary risks to nearby communities, including increased traffic, dust, and potential safety hazards associated with construction works.

The project will implement health and safety procedures, including site security, signage, and restricted access to construction areas. Community awareness measures will also be implemented where necessary.

8.1.9. Employment

The impacts associated with worker accommodation in surrounding towns and interaction with the public are generally minor and manageable, and can be summarized as follows:

- Increased demand on local services, including accommodation, food, and transport, which may create temporary pressure on local infrastructure.
- Potential community disturbance, such as noise, waste generation, or increased traffic associated with worker presence.
- Risk of social conflicts or misunderstandings between workers and local communities, particularly if cultural differences or inappropriate behaviour occur.
- Pressure on accommodation availability, which could affect local residents if not properly managed.
- Positive economic impacts, including increased income for local businesses such as hotels, restaurants, and service providers.

8.2. Operation Phase

Once operational, the photovoltaic plant will generate renewable electricity with minimal environmental disturbance. Most impacts during this phase are expected to be limited and manageable.

8.2.1. Water Intake

During operation, water will be required mainly for cleaning of PV modules. Although wet cleaning may require up to approximately 220 m^3 per session and up to 860 m^3 per year in a maximum scenario, the Project will primarily rely on monthly dry cleaning, with wet cleaning expected only 2–4 times per year.

Importantly, water will not be abstracted from groundwater or surface water resources. Instead, it will be sourced from authorized local suppliers and delivered by water trucks, thereby avoiding any direct pressure on natural water bodies.

Additional measures, such as rainwater harvesting, efficient water use, and potential reuse, will further reduce overall demand. Moreover, any water runoff from panel cleaning is expected to evaporate or be absorbed into the ground, with no need for drainage systems.

Given the limited, infrequent, and externally supplied water demand, and the absence of direct abstraction, the Project will not adversely affect local water resources, and the impact on water intake is therefore assessed as negligible.

8.2.2. Noise from Electrical Equipment

Low levels of noise may be generated from electrical equipment such as transformers and inverters. These installations will be located within the project area and designed in accordance with applicable noise standards.

Given the distance from residential areas, operational noise impacts are expected to be negligible to minor.

8.2.3. Landscape and Visual Impacts

The solar panels and associated infrastructure will alter the visual appearance of the project area. However, the site is located within a predominantly industrial and infrastructure-dominated landscape, which reduces the sensitivity of visual receptors.

As a result, landscape and visual impacts are expected to be minor.

8.2.4. Waste Management

Operational waste generation will be limited and will mainly include maintenance materials, packaging, and small quantities of electrical components.

Waste will be managed through proper storage, segregation, and disposal in accordance with national waste management regulations.

8.2.5. Biodiversity Interactions

The presence of solar panels, fencing, and electrical infrastructure may interact with local wildlife. Potential issues include habitat modification and possible collision risks for birds with transmission lines.

Mitigation measures include wildlife-friendly fencing design, installation of bird diverters on overhead transmission lines, and implementation of biodiversity monitoring as part of the Biodiversity Management Plan.

8.3. Decommissioning Phase

During the decommissioning phase, all Project infrastructure, including photovoltaic panels, mounting structures, cables, and associated facilities, will be dismantled and removed. Environmental impacts during this phase are expected to be temporary, localized, and generally lower than during construction.

The main potential impacts include:

- Waste generation, particularly from dismantled solar panels, metals, cables, and other materials. If not properly managed, this could lead to pollution risks.
- Soil disturbance, caused by removal of foundations and underground infrastructure, which may result in temporary erosion or compaction.
- Dust and noise emissions from dismantling activities, machinery use, and transportation of materials.
- Minor risks to water resources, such as sediment runoff during removal works, although these are expected to be limited.
- Disturbance to local biodiversity, due to temporary human activity and movement of equipment.
- Temporary employment reduction, as jobs associated with the operation phase will cease, potentially affecting local workers.
- Increased traffic and disturbance to local communities, due to transport of dismantled materials and equipment.
- Occupational health and safety risks for workers during dismantling activities, if not properly managed.

These impacts will be managed through the implementation of the Waste and Hazardous Materials Management Plan and other environmental and social management measures, including proper waste

segregation, recycling of materials (including solar panels), site restoration, traffic management, and occupational health and safety procedures.

Following decommissioning, the site will be rehabilitated and restored, allowing natural vegetation to recover. With these measures in place, the overall environmental and social impact of the decommissioning phase is expected to be minor and short-term.

8.4. Cumulative Impacts

Cumulative impacts arise when the effects of the project combine with those of other existing or planned developments in the surrounding area.

The project is located within a rapidly developing area near Porto Romano and Durrës, where several infrastructure and industrial projects are planned or under development. These include:

- Development of the Port of Durrës relocation project in Porto Romano
- Rehabilitation and expansion of the Spitalla wastewater treatment plant
- Development of the Durrës Eco Park
- Ongoing urban development and reconstruction activities following the 2019 earthquake
- Various industrial and logistics developments in the surrounding economic zone

While these developments may collectively contribute to environmental pressures such as habitat fragmentation, traffic increase, and landscape change, the relatively small footprint of the solar PV project and the implementation of mitigation measures mean that the project's contribution to cumulative impacts is expected to be minor.

9. Environmental and Social Management Plan (ESMP) and Monitoring Programme

9.1. Environmental and Social Management Plan (ESMP)

An Environmental and Social Management Plan (ESMP) has been prepared as part of the Environmental and Social Impact Assessment (ESIA) to ensure that potential environmental and social impacts associated with the project are properly managed throughout all phases of the project lifecycle.

The ESMP provides a framework for implementing mitigation measures identified during the ESIA and ensures that project activities are carried out in compliance with:

- Albanian environmental and social legislation
- The EBRD Environmental and Social Policy (October 2024) and relevant Environmental and Social Requirements
- Good international industry practice.

The ESMP translates the findings of the ESIA into practical actions that will be implemented during design, construction, operation, and decommissioning of the solar photovoltaic plant and the associated transmission line.

The ESMP defines:

- mitigation measures required to avoid or reduce impacts
- environmental and social monitoring requirements
- institutional responsibilities for implementation

- reporting and supervision procedures.

The ESMP will be implemented by the Project Developer and its contractors, who will be required to comply with all environmental and social obligations defined in the ESMP.

To support effective implementation, the ESMP will be integrated into the project's Environmental and Social Management System (ESMS) and contractual requirements for contractors.

9.2. Management Plans

To ensure that the project is implemented responsibly and in line with national legislation and international standards, a series of environmental and social management plans will be prepared and implemented by the Project Developer and the EPC contractor.

9.2.1. Plans Prepared by the Developer

The Developer will establish key management frameworks to guide the overall implementation of the project:

- Code of Conduct: A Code of Conduct will apply to all project staff and contractors, based on Voltalia's ethics policies. It will set clear standards for professional behaviour, compliance with laws and regulations, and responsible conduct toward workers, communities, and the environment.
- Contractor and Vendor Management: The Developer will manage contractors through clear contractual obligations, defined roles and responsibilities, and regular monitoring of performance. Contractors will be required to comply with environmental, social, health and safety, and cultural heritage requirements.
- Stakeholder Engagement Plan: A Stakeholder Engagement Plan will guide communication with local communities, authorities, and other stakeholders throughout the life of the project. It will ensure transparency, regular consultations, and access to information. A community grievance mechanism will also be in place to allow stakeholders to raise concerns or complaints, which will be addressed in a timely and transparent manner.
- Compensation Plan: A Compensation Plan will address any impacts related to land use, access restrictions, or asset damage associated with the project. The plan aims to minimise land acquisition and ensure fair compensation in accordance with Albanian legislation and international standards. Where necessary, affected people will be compensated at replacement value and supported to restore their livelihoods.

9.2.2. Plans Prepared by the EPC Contractor

Before construction begins, the EPC contractor will prepare and implement several detailed management plans to manage potential impacts during construction:

- Recruitment and Labour Management Plan: This plan will define workforce requirements and recruitment procedures. Priority will be given to local employment, particularly for unskilled positions, to maximise economic benefits for nearby communities. A worker grievance mechanism will also be established.
- Worker Accommodation Strategy: Accommodation for non-local workers will follow international standards to ensure appropriate living conditions and minimise potential impacts on surrounding communities.
- Biodiversity Management Plan: Measures will be implemented to protect habitats and species identified in the ESIA, including monitoring programmes and habitat restoration where needed.
- Invasive Species Management Plan: Procedures will be implemented to prevent the introduction and spread of invasive plant species within the project area.

- Waste and Hazardous Materials Management Plan: This plan will ensure proper waste handling, storage, recycling, and disposal, following the waste hierarchy of reduction, reuse, and recycling.
- Construction Environmental and Social Management Plan: This overarching plan will guide the management of environmental and social impacts during construction, including air quality, water protection, noise, waste management, biodiversity protection, and community health and safety.
- Construction Traffic Management Plan: Measures will be implemented to manage construction traffic safely, minimise disruptions to local roads, and inform communities about traffic-related activities.
- Emergency Response Plan: Procedures will be established to respond effectively to potential emergencies such as accidents, fires, spills, or natural events.
- Chance Find Procedure: A formal procedure will ensure that any unexpected archaeological or cultural heritage discoveries during construction are protected and reported to relevant authorities.
- Security Management Plan: Security arrangements will be implemented to protect workers and project assets while respecting human rights and ensuring appropriate interaction with local communities.

9.3. Key Mitigation Measures

9.3.1. Key Mitigation Measures During Construction

To minimise environmental and social impacts during construction and decommissioning, the project will implement the following key measures through the Environmental and Social Management System (ESMS) and Construction Environmental and Social Management Plan (CESMP).

Air Quality

- Control dust through water spraying on roads and construction areas.
- Limit vehicle speeds on unpaved roads and enforce designated transport routes.
- Cover trucks carrying construction materials.
- Maintain construction machinery regularly to reduce emissions.
- Avoid open burning of materials on site.
- Provide protective equipment for workers exposed to dust.

Soil Protection

- Remove and store fertile topsoil for later restoration of the site.
- Minimise land disturbance to only areas necessary for construction.
- Store excavated materials in designated areas away from water bodies.
- Prevent spills through proper storage of fuels, oils, and chemicals.
- Reuse excavated soil for landscaping and site restoration where possible.

Water Resources

- Protect drainage channels and maintain existing irrigation and water flow patterns.
- Implement erosion and sediment control measures such as silt fences and drainage systems.
- Avoid excavation during periods of heavy rainfall.
- Maintain construction vehicles and equipment to prevent oil or fuel leaks.

- Stabilise exposed soil surfaces to prevent runoff and sedimentation.

Landscape and Visual Impacts

- Limit vegetation clearance to the minimum required for construction.
- Use existing access roads where possible.
- Maintain clean and organised construction sites through good housekeeping.
- Restore disturbed areas progressively during construction.
- Protect trees and vegetation near construction areas.

Noise and Vibration

- Restrict construction works to daytime hours where possible.
- Maintain equipment and machinery to reduce noise levels.
- Install temporary noise barriers if necessary, near sensitive receptors.
- Provide personal protective equipment for workers exposed to high noise levels.

Traffic and Transport

- Implement a Construction Traffic Management Plan.
- Inform local communities about construction traffic and road closures.
- Schedule heavy vehicle movements outside peak traffic hours.
- Train drivers in safe driving practices and enforce speed limits.
- Conduct awareness campaigns on road safety in nearby communities.

Waste Management

- Implement a Waste and Hazardous Materials Management Plan.
- Separate and recycle waste where possible.
- Store hazardous materials safely and dispose of them through licensed operators.
- Maintain clean construction sites to avoid litter and pollution.
- Manage wastewater and sewage from worker facilities properly.

Biodiversity and Habitats

- Implement a Biodiversity Management Plan to protect habitats and species, which includes specific mitigation measures for sensitive receptors such as amphibians (frogs) and reedbed habitats associated with drainage channels. For amphibians, measures include pre-construction surveys, protection of breeding habitats through buffer zones, avoidance of works during breeding periods, and monitoring of potential impacts during construction and operation. For reedbeds and drainage channels, the BMP includes minimization of disturbance, maintenance of natural hydrological conditions, and restoration/rehabilitation of any affected areas to support habitat recovery. Monitoring and adaptive management measures are included to ensure the effectiveness of mitigation actions throughout the Project lifecycle.
- Restrict vegetation clearance to defined project areas.
- Establish buffer zones around drainage channels and wetlands.
- Avoid construction activities during sensitive wildlife breeding periods where possible.
- Restore habitats and vegetation after construction using native plant species.

- Train workers on biodiversity protection and prohibit hunting or disturbance of wildlife.

Flora Protection and Invasive Species

- Protect rare or sensitive plant species where identified.
- Monitor and prevent the spread of invasive species.
- Clean construction equipment before entering the project site.
- Restore vegetation using native plant species.

Fauna and Bird Protection

- Provide biodiversity awareness training for all workers.
- Establish “no-go zones” around sensitive habitats.
- Restrict vehicle movement to designated access roads.
- Install bird diverters on transmission line cables to reduce collision risks.
- Conduct bird nesting surveys and avoid disturbance during breeding seasons.

Land Use and Livelihoods

- Implement a Compensation Plan for affected land users.
- Ensure compensation is provided before construction begins.
- Restore temporarily used land after construction.
- Maintain open communication with landowners and local communities.
- Provide a grievance mechanism to address concerns.

Employment and Local Economy

- Prioritise hiring local workers where skills are available.
- Ensure fair recruitment and equal employment opportunities for men and women.
- Follow national labour laws and international labour standards.
- Promote safe working conditions and worker rights.
- Related to worker accommodation and interaction with the public will be conducted the audit of accommodation facilities, including hotels and other housing options, to ensure they meet EBRD and IFC standards for worker welfare and living conditions.
- Development and implementation of a Worker Accommodation Strategy under the Recruitment and Labour Management Plan (RLMP), defining how workers will be housed in existing facilities and ensuring appropriate standards.
- Equal treatment of all workers, including migrant workers, ensuring fair living conditions, access to grievance mechanisms, and compliance with national and international labour standards.
- Implementation of grievance mechanisms accessible to both workers and non-employee workers, allowing concerns related to accommodation or community interaction to be raised and addressed.
- Regular monitoring and audits of contractors, including labour and OHS audits, to ensure compliance with worker welfare, accommodation standards, and community-related requirements.
- Clear policies and codes of conduct, supported by human resource procedures aligned with EBRD ESR2 and IFC PS2, ensuring appropriate worker behaviour and minimizing risks of negative interaction with local communities.

- Collaboration with local institutions and prioritization of local employment, reducing the need for external workforce and limiting potential pressure on local accommodation and services.

Community Health and Safety

- Implement occupational health and safety procedures in line with international standards.
- Establish emergency response procedures.
- Restrict unauthorised access to construction areas.
- Conduct community awareness campaigns on traffic and safety risks.
- Implement measures to prevent gender-based violence and harassment.

Cultural Heritage

- Implement a Chance Find Procedure to protect any archaeological or cultural heritage items discovered during construction.
- Stop work immediately and notify authorities if cultural heritage is discovered.

9.3.2. Key Mitigation Measures During Operation

During the operational phase of the solar plant and transmission line, the following measures will be applied:

- Maintain vegetation cover using native plant species to reduce soil erosion.
- Restrict maintenance vehicles to designated access routes.
- Implement a Waste Management Plan for operational waste.
- Continue biodiversity monitoring and habitat protection measures.
- Maintain vegetation buffers and landscape screening around the solar plant where possible.
- Provide ongoing employment opportunities and maintain fair labour practices.
- Maintain safety systems to prevent electrical hazards and unauthorised access.
- Continue stakeholder engagement and grievance management throughout the project lifetime.

9.4. Environmental and Social Monitoring Programme

An Environmental and Social Monitoring Programme will be implemented during both construction and operation to ensure compliance with national legislation, international standards, and the commitments set out in the ESIA and ESMP. Monitoring will be carried out by the EPC contractor and the project developer, with support from accredited laboratories and specialists when needed. Regular inspections, measurements, and reporting will help identify any issues early and ensure that corrective actions are taken to protect the environment and local communities throughout the project lifecycle.

9.4.1. Construction Phase Monitoring

During construction, monitoring will focus on managing potential environmental and social impacts associated with site preparation, civil works, and installation activities. Key monitoring activities include:

- Air quality: Monitoring of dust and air pollutants (such as particulate matter and gases) near sensitive receptors, including nearby settlements and biodiversity areas.
- Surface water quality: Inspections and periodic testing of drainage channels and nearby water bodies to detect potential pollution or sediment runoff.
- Noise and vibration: Monitoring of noise levels and vibration in areas where construction activities may affect nearby communities or sensitive receptors.

- Soil quality: Visual inspections and testing where necessary to identify potential contamination, erosion, or accidental spills.
- Biodiversity protection: Monitoring of flora and fauna, particularly in sensitive habitats and drainage channels, during land clearing and excavation activities.
- Landscape and site restoration: Monitoring implementation of rehabilitation and restoration measures after construction activities.
- Cultural heritage: Monitoring excavation works and applying “chance find” procedures if archaeological or cultural heritage items are discovered.
- Local employment and economy: Tracking the use of local labour and ensuring fair recruitment and training practices.
- Land use and compensation: Monitoring the implementation of compensation agreements with affected landowners and land users.
- Community engagement: Maintaining consultations with local communities and monitoring the project grievance mechanism.
- Infrastructure and utilities: Monitoring potential impacts on roads, irrigation channels, and other public infrastructure.
- Occupational and community health and safety: Monitoring working conditions, training, incident reporting, and the availability of medical and safety equipment.
- Traffic management: Monitoring traffic movements, road conditions, and the implementation of the Construction Traffic Management Plan.

9.4.2. Operational Phase Monitoring

During the operational phase, monitoring will continue to ensure that the solar plant operates in an environmentally and socially responsible manner. Key monitoring activities include:

- Air emissions and environmental conditions: Periodic monitoring of emissions and environmental performance indicators.
- Surface water quality: Regular inspections and testing of nearby drainage channels and water bodies.
- Biodiversity monitoring: Ongoing monitoring of habitats and species identified during the ESIA and implementation of the Biodiversity Action Plan.
- Waste management: Monitoring the generation, storage, and disposal of waste to prevent soil or water contamination.
- Community health and safety: Monitoring potential impacts such as traffic risks, noise, or dust affecting nearby communities.
- Occupational health and safety: Regular inspections, workforce health checks, safety training, and monitoring of incidents and near misses.
- Community engagement and social monitoring: Continued consultation with local communities, review of grievances, and monitoring of workforce interactions with local residents.
- Local employment and economic contribution: Monitoring employment opportunities for local workers and the project’s contribution to the local economy.

9.5. Commitment to Environmental and Social Management

The project developer is committed to implementing the ESMP and ensuring that environmental and social risks are effectively managed throughout the project lifecycle.

Through the implementation of mitigation measures, monitoring programmes, and stakeholder engagement activities, the project aims to ensure that environmental and social impacts remain low and manageable, while supporting sustainable energy development in Albania.

10. Grievance Mechanism

Voltalia has established a Grievance Mechanism to ensure that any individual or group who has a concern or complaint related to Voltalia's activities under the Spitalla Solar Project can raise their concerns and receive a response regarding how the issue will be addressed. The procedure applies to both past and current project activities. The mechanism has been established in recognition of the importance of transparency, accountability, and responsible project management, and is aligned with the EBRD Environmental and Social Standards, which Voltalia applies in the development and implementation of the project. It is disclosed at: https://spitallasolar.com/mekanizmi-i-ankesave/

Concerns or complaints from project-affected people and other interested stakeholders can be submitted freely and will be addressed in a fair, objective, and constructive manner. All grievances will be handled in accordance with applicable data protection and confidentiality requirements, including relevant Albanian legislation on personal data protection and the EBRD. Personal information provided through the grievance process will be treated confidentially, used only for the purpose of addressing the complaint, and stored securely to protect the privacy of individuals submitting grievances.

10.1. How Can a Complaint be Submitted

Complaints or concerns can be submitted through the following channels. Complaints may also be submitted anonymously, if desired.

- Direct communication with the Voltalia site management team or contractors working on the project.
- By telephone at: +355 68 402 7034
- By submitting the complaint at one of the entry points of the Spitalla project site
- By sending an email to: spitalla@voltalia.com
- By completing the online grievance form available through the designated project link: https://engage-voltalia.boreal-is.com/portal/engagevoltalia
- By sending a written letter to the following address: Voltalia Albania, Bajram Curri Boulevard, European Trade Centre (ETC), 14th Floor, Tirana, Albania.