2022

Climate Resilience Agriculture Development (CRAD) Project in Albania

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

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ABBREVIATIONS AND ACRONYMS

Acronyms	Description
AKSHI (NAIS)	Agjensia Kombetare e Shoqerise se Informacionit (National Agency of Information Society)
AU	Administrative Units
AARD	Agency of Agriculture and Rural Development
BI	Business Intelligence
BIP	Border Inspection Posts
CAP	Common Agriculture Policy
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
DCM	Decision of the Council of Ministers
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessments
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plans
FAO	Food and Agriculture Organization
IFSV	Institute for Food Safety and Veterinary
ISUV	Food Safety and Veterinary
IDMIS	Irrigation and Drainage Management Information System
IPPC	Terrestrial Animals and Aquatic Codes, and International Plant Protection Convention
HACCP	Hazard Analysis and Critical Control Point
GIS	Geographic Information System
LMP	Labour Management Procedures
MoARD	Ministry of Agriculture, Rural Development
M&E	Monitoring and Evaluation
MoTE	Ministry of Tourism and Environment
NAVPP	National Agency for Veterinary and Plant Protection
NEA	National Environmental Agency
NFA	National Food Authority
NP	National Park
OIE	World Organisation for Animal Health
PMEF	Performance Monitoring and Evaluation Framework
PMT	Project Management Team
PMEF	Performance Monitoring and Evaluation Framework
SEP	Stakeholder Engagement Plan
SER	State of the Environment Report
RAP	Resettlement Action Plan
REA	Regional Environmental Agencies
RPF	Resettlement Policy Framework
RS	Remote Sensing
UN	United Nations
WA	Water Administration
WSS	Water Supply & Sewerage
WTO-SPS	World Trade Organization Sanitary and Phytosanitary
WHO	World Health Organization
WUO	Water Users' Organizations

WRIP	Water Resources and Irrigation Project

EXECUTIVE SUMMARY

Brief description of the project. Environmental and Social Management Framework (ESMF) of Albania Climate Resilience and Agriculture Development Project known as "CRAD" project, will be implemented by the Ministry of Agriculture of Albania with support of the World Bank.

The project will contribute to improvement of farm incomes, rural livelihoods, food security and climate resilience, sustainable natural resources management and agricultural enterprise development.

Scope of project. The Project Development Objective is to increase competitiveness and climate resilience of priority agri-food value chains.

Project Components. The project will implement a series of activities in Albania, which is considered as a project area. The proposed project would include the following four components.

Component 1 will focus on supporting resilient and climate-smart agriculture, productivity improvements, and improving market access through investments to shorten the value chain, strengthen the resilience of food supply and develop a modern and reliable irrigation delivery services and drainage network for high-value agricultural production.

The project would support:

(i) development of five Micro Food Hubs in the peri-urban areas of main cities in the regions of Tirana, Shkodra/Lezha, Vlora and Gjrokastra to provide better market access to local producers while supporting short supply chains and resiliency in urban food supply;

(ii) development of two typical food product clusters in the regions of Berat and Dibra, to create the enabling environment for the valorization of two typical food products (olive oil and processed fruits and vegetables) through the aggregation of producers (consortium), and the improvement of quality and market access with the development of their technical and marketing capacity;

(iii) development of a Climate Smart Agriculture IT Platform to collect all the relevant information such as soil type, hydrometeorological data, agriculture practices (i.e. use of fertilizers, pesticides, irrigation, etc.), and guide the farmers toward resilient agriculture practices; and

(iv) modernizing selected irrigation and drainage schemes for high-value agricultural production through support of innovative interventions to advance resilience, productivity, and sustainability of the agriculture sector.

Component 2 will focus on addressing weak compliance and control mechanisms related to food safety, veterinary and phytosanitary standards which currently impede competitiveness and create market access inequalities both in the local and export markets. The project would provide support to increase institutional capacity to implement the food safety, veterinary and phytosanitary requirements through:

(i) establishment and upgrading of Border Inspection Posts to increase the competent authority capacity to perform official controls (documentary, identity and physical controls) for live animals, products of animal and non-animal origin, plants and plant products as well as agricultural inputs;

(ii) improvement of diagnostic support in the areas of food safety, veterinary and plant health analyses; and

(iii) development of storage capacity for detained goods which do not comply with food safety, veterinary or plant health standards.

Component 3 will focus on establishing a sustainable and effective monitoring and evaluation (M&E) system for agricultural and rural development policy in Albania. Support will be provided to build the monitoring capacity of the Ministry of Agriculture and Rural Development and municipalities to increase their ability to measure and analyze agricultural policy impacts to support evidence-based policymaking, as well as to ensure capacity for project implementation and monitoring.

Project area. The Project through its 1st component will support climate-smart agriculture and access to markets whereby through subcomponent 1.1 the Project will have activities in:

- peri urban areas in Tirana, Shkodra/Lezha, Vlora, and Gjrokastra region whereby Micro Food Hubs (MFH) will be established, and these MFHs will support short urban supply chains
- in Dibra and Berat the Project will support the development of food clusters.

Through subcomponent 1.2 the Project will support the Modernization of Irrigation schemes:

- In Murrsi in the Municipality of Konspol;
- in Divjaka Municipality, and
- in the Lushnje region, (The Project will not invest in physical improvement in Lushnje but will update the designs only).

Through its 2nd component, Enhancing Compliance with Food Safety and Quality Standards, the project will establish and upgrade the Border Inspection Control points in Bllatë, Hani i Hotit, Kapshticë, and Vlorë.

The beneficiaries of the Project activities will be all citizens that in one or another way are part of the agriculture products supply chain either from the supply or demand side or as consumers. Thus, the irrigation activities are mainly focused on Divjaka municipality (500 ha) and the Janjari scheme network (2,200 ha).

Other activities have a regional focus on the traditional agriculture regions Mid Albania, the area between Berat, Lushnjë, and Fier; Korca and Prespa region; Tirana – Durres surrounding; Lezhe and Laci region; and other regions.

This ESMF will guide the screening of the proposed Project interventions to ensure that they do not affect negatively the natural and social environment. It outlines several principles, which include:

- a systematic procedure for participatory screening for project specific sites and activities related to environmental and social considerations.
- a step-by-step procedure for predicting the main potential environmental and social impacts of the planned activities.
- a generic environmental and social management plan for addressing negative externalities during activities implementation (planning, construction and operation);
- a step-by-step monitoring and evaluation system for implementation of mitigation measures.
- an outline of recommended capacity building measures for environmental and social planning and monitoring of the activities; and

It is prepared in compliance with the requirements of both the beneficiary Government of Albania (GoA), and World Bank WB ESF. The ESMF sets the tone and will be used in conjunction with the Resettlement Policy Framework (RPF), Labour management Procedures (LMP), Stakeholder Engagement Plan (SEP) (prepared separately to guide the borrower in addressing the risks and impacts and the concerns of the stakeholders who may be affected by or are interested in the project).

MARD will be the lead project implementing agency and will have overall responsibility for project management, implementation, and monitoring and evaluation (M&E). The NFA, the ISUV, the National Authority for Veterinary Control and Plant Protection, the Regional Directorate of Irrigation and Drainage and the National Agency for Information Society (AKSHI) will be supporting implementing and beneficiary institutions/agencies.

GENERIC ENVIRONMENTAL AND SOCIAL RISKS

ENVIRONMENTAL RISK RATING

The environmental risk is rated as moderate given the civil works in the project. Although long-term effects will probably be positive, project activities can generate some risks, mostly those of components 1.2 and 2. Project activities may have environmental risks generated mainly by civil works that are assessed to be of a small to medium scale and are likely to have a number of predictable and easily mitigated environmental impacts. Irrigation rehabilitation and civil works may generate site-specific risks such as disposal of excavated material during construction or rehabilitation activities, occupational health and safety of workers during construction phases, increased dust levels and noise that may have health-related effects on the community, and the risk of contamination of surface and groundwater resources during construction. The anticipated environmental impacts of the project will largely be mitigated and managed through an appropriate study that will be prepared based on the initial review and in accordance with the project's Environmental and Social Management Framework (ESMF). There will be no impact on protected areas, habitats, or cultural heritage as they are located far away from the project area. The entire project is subject to an ESMF, in which potential environmental and social impacts are determined and general mitigation measures are provided.

SOCIAL RISK RATING

The social risk rating for the project is considered moderate to low. It can be considered that the project will not be associated with possible effects on human health project will not be associated with possible effects on human health if, during the construction phase of civil works, some health and safety issues for workers occur. The chances of physical or economic displacement due to land acquisition are very small. Most probably, there will be no need for land acquisition or displacement of dwellings or any facility because the site is not known yet. It is anticipated that these risks will be mitigated and managed primarily through appropriate due diligence documents that will be prepared prior to the assessment and by reviewing the associated high-risk activities.

SEA/SH (Sexual Exploitation and Abuse and Sexual Harassment) risk is low, given that there will be no labor influx or labor camps. All the labor will come from the local municipality or neighboring municipalities, and thus the workers are well established in the project area. This, in combination with the country's risk level, makes the SEA/SH risk low. However, the project will establish a robust GRM that will be able to respond also to SEA/SH-related complaints. In addition, extra measures will be taken with the contractors to ensure that employees sign the Code of Conduct related to SEA/SH.

INSTITUTIONAL ARRANGEMENT

Project implementation will be mainstreamed within the existing institutional structures. The MARD will continue to be the primary Project Management Team (PMT) of the Project with responsibilities including fiduciary aspects, with financial management (FM) of loan proceeds and procurement of

goods, works, and services for the project; compliance with social and environmental ESF; and ensuring citizen communication and consultation, as well as routine communication with the World Bank.

Potential Environmental Impacts Caused by Project Activities

	Activities	Component	Related Potential Impacts
CONSTRUCTION PHASE	• Construction activities: • Civil works and the construction of the facilities and associated equipment • Installation of modern pumps in the station. • Installation of solar panels in drainage pumping stations	Air	Emission of pollutants from engines of construction machinery and equipment (CO, VOC, NO_2, SO_2, Particulate)
			Dust "lifting" due to earthworks and vehicle movements
		Noise	Noise, vibration by vehicle movements, transport of materials etc.
		Water	Temporarily reduction of irrigation capacity during rehabilitation works of the existing canals. During site clearance, runoff and drainage from the works area would be the main sources of potential water quality impact. Site runoff and drainage may contain increased loads of suspended solids and contaminants. Potential sources of pollution from site drainage include the release of cement materials with rain wash; wash water from dust suppression sprays; and fuel and lubricants from maintenance of construction vehicles and mechanical equipment etc.
		Waste	Production of debris waste from demolition of existing infrastructures and construction activities waste; Waste generation by workers during food consumption, Soil from excavation activities
		Land	Land occupation due to the installation of the working areas; Soil contamination due to potential accidental leakage of oily product; Impacts on livelihood activities directly dependent upon projected affected land.
		Biological Environment	Disturbance or depletion of natural habitats in the surrounding natural areas
		Socio-Economic	Disturbance of public health and quietness due to construction activities;

	Activities	Component	Related Potential Impacts
			Employment and working conditions at the construction site Negative socio-economic impact associated with land acquisition and disturbance to socio-economic activities One of the prominent impacts will be the traffic and road safety risks to workers, affected communities, and agricultural interface users throughout the construction period. Disproportionate socio-economic impact on vulnerable people
OPERATION PHASE	Irrigation and drainage of agricultural lands Transport of agriculture products to the markets for sale	Air	Vehicle movements for transport agricultural product in the markets
		Noise	Noise generated during transporting and selling the products in the markets.
		Water	Increasing contamination risk and/or damage in lowland areas in case of non-appropriate quality of irrigation waters, potential pollution by misuse of pesticides by farmers.
		Land	The direct impact on residents in the project area who use the land for production and housing will be affected during the rehabilitation works on the irrigation and drainage system. These activities will require temporary land use where farmers will not have access to their land. Disordering socio-economic activities in the area.
		Waste	Misuse of Pesticides from farmers, Organic waste produced in the markets during packing and unpacking of the products, Low quality products
		Socio-Economic	Better linkage and access for farmers in the markets to sell their products. Monitoring and control of the products in the laboratory for food safety for consumers. Improved energy supply and efficiency for irrigation

In the following Table a preliminary comparison between the impacts with and without the Project is presented.

Table 1: Impacts with and without the project

Impacts	Without the project	With the project
Positive impacts	No impact such as dust, noise, air pollution	Better linkage and access for farmers in the markets to sell their products. Monitoring and control of the products in the laboratory for food safety for consumers. Improved energy supply and efficiency for irrigation
Negative impacts	Increasing contamination risk and/or damage in lowland areas in case of non-appropriate quality of irrigation waters, potential pollution by misuse of pesticides by farmers.	The municipalities of the project area will be affected by the project activities such as dust, noise, pollution.

Land Acquisition and potential impacts to assets

Main impact	Description of impact and the likelihood of its occurrence
Permanent loss of residential land, agricultural land, forest land and/or pastures	The occurrence of this impact might be expected mainly in connection to the purchase of land for the construction of above-ground installations and structures where public land is not available. In this case negotiated settlements cannot be reached with owners of affected properties, their land will be acquired through a compulsory procedure, as defined by the law. They will lose ownership of the land, and will in fact have an impact permanent (a lifetime of permanent loss). Categories of population that may be more vulnerable to this impact include: • People/entities who have no other land available for use; and • Elderly, single headed households for whom it may be difficult to find replacement land on their own and may need assistance. It should be noted that some of these people may have family members or friends who are not living with them, however, will be able to support them in finding replacement land if necessary. In order to fully mitigate impacts which will arise from the construction activities, the project will compensate owners for their land by providing full Replacement Value, to enable them to purchase an alternative similar plot of land. Through the monitoring procedures, the project will determine any subsequent relative impacts on this group and will formulate any additional mitigation measures that are needed. The exact scope of the impact will be determined and reported after the completion of the census and socio-economic survey.
Temporary loss of residential, agricultural, forest land and/or pastures	This impact will occur in connection to the acquisition of temporary rights over land, more specifically the establishment of the Construction corridor. A certain % of the land will be temporarily affected by the Project during construction. It should, however, be noted that depending on their size and where and how much of the construction activities passes through them not all plots of land will be affected to the same extent. As stated earlier, residential areas were avoided during the definition of the pipeline routes. Compensation will be paid for these affected lands based on their discounted net income. In addition, all land will be reinstated. Proper topsoil conservations and full

Main impact	Description of impact and the likelihood of its occurrence
	restoration are key for minimizing this impact, however the fact that productivity will also be lost will be taken into account when calculating compensation. All of this land will be available for use after construction ends, however a part of the land will be under certain land use restrictions. The exact scope of the impact will be determined and reported after completion of the census and socio-economic survey.
Loss of annual/perennial crops and trees	This impact has a very low potential of occurrence. However, affected annual and perennial crops and trees require a separate inventory and valuation in addition to that which will be done for the affected land. The age, type and size of each affected tree / perennial crop will be taken into account during valuation, which will be done based on the capitalization of net income methodology. Similarly, affected annual crops will be valued by agricultural specialists, also using the capitalization of net income methodology. The exact scope of the impact will be determined and reported after completion of the census and socio-economic survey.
Loss of non-residential structures (fences, barns, sheds, etc.) and infrastructure	The Project's impact on fences, barns, sheds, etc., is expected to be extremely modest. The owners of the affected nonresidential structures will be compensated based on the full Replacement Value of their assets. The exact scope of the impact will be determined and reported after completion of the census and socio-economic survey.
Damage / temporary disruptions to services, infrastructure and / or irrigation systems	Increased construction-related traffic on local roads could cause disruptions to services, however, with proper planning and provision of information as well as road repairs, impacts can be successfully mitigated. Construction activities could also cause temporary disruption to infrastructure i.e. electricity or telephone lines and therefore mitigation measures similar to those used for disruptions to irrigation measures, as described below will be used to minimize impacts. In order to minimize impacts on irrigation systems, special care will be taken by the contractors. The contractors will cooperate with local authorities to ensure that alternative water sources are used where necessary, during the time when irrigation channels are out of order and promptly restoring water flows.
Damage / temporary disruptions of access to public properties and resources (pastures, rivers, canals, forests)	During construction access to public properties could temporarily be disrupted or damaged. This impact could be easily avoided/mitigated with proper planning and provision of information. Some disruption to livestock activity may arise. However, these impacts will be mitigated with the creation of passageways to allow passage from one side of the pasture to the other, where necessary. Users of pastures would not be entitled to compensation under national legislation, however in cases when they suffer income losses, the Project will make provision for these losses to be compensated.
Severance impacts (fragmentation of land plots, obstruction of access to land plots or severance of communities)	This impact has a very low potential of occurrence. Those that believe their land would no longer be usable will be able to request that the full plot is acquired by the Project and their requests will be taken into consideration and fulfilled where reasonable. The exact scope of the impact will be determined and reported after the completion of the census and socio-economic survey.
Temporary loss of business income	This impact has a very low potential of occurrence. This impact is possible for a number of different groups of affected people/entities, however having in mind the overall amount of land that will be impacted significant losses of business income are not expected. Loss of business income could occur for individuals/companies as a result of increased traffic on local roads, preventing them to reach their destinations or reaching them on time (e.g. companies that depend on the transport of goods). It is impossible to assess the level of impact at present, however it has been determined that in some areas roads are in poor condition and there are no alternative roads that could be used.

Main impact	Description of impact and the likelihood of its occurrence
	Preventative measures have to be undertaken by the project to ensure that traffic flows are well managed to prevent these impacts. The project may also cause some injury to livestock, i.e. as a result of falling into trenches, being injured by vehicles or eating dangerous wastes. This could further impact the owners' livelihoods, particularly those dependent on livestock. Primarily prevention measures will be utilized to avoid such impacts, but if they occur, owners will be compensated at full Replacement Value. All of these impacts will be mitigated mostly through provision of compensation at full Replacement Value. The exact scope of the impact will be determined and reported after completion of the census and socio-economic survey.

Potentila Positive Impact o

Overall, the CRAD project is expected to have mainly positive long-term socio-economic impacts.

The advantages of the proposed project may be direct consequences of the project or indirect consequences that arise in project implementation.

On the other hand, although the avoidance of Physical Displacement will be one of the main associated criteria used for the choice of locations during construction activities, the project may have potential impacts on both publicly owned and privately owned assets and land.

Advantages can be identified in the following areas:

- economic;
- health;
- convenience/ environment; and
- ecological.

Economic benefits

Economic benefits are increasing the added value of cash flow in local and national economy for the duration of the investment through increased agricultural production, improved services for communities and citizens, creation of new jobs, etc. These uses do not include increases in the value of funds, subsidies or taxes.

In the short term, the improvement/modernization of irrigation network and improvement in the system of management will provide enhanced services related to irrigation and more cost effective agriculture products, bringing more income for the farmers and more market competition.

Health benefits

Health benefits include improvement of human health such as reduced mortality, reduced number of chronic diseases, and reduced bad reproductive or developmental effects.

The largest advantage of ensuring clean irrigation water is also a positive impact on reducing the number of diseases, especially if it is introduced together with improved hygiene habits, which is the case for a longer period of time. Reduced number of diseases and improved health community has economic benefits in the form of improved operational efficiency, reduced number of absences from work or school because of illness, and reduced household expenses for medication and treatment.

Convenience Benefits

Benefits that improve convenience include better access to recreational activities (landscape, nature walks, etc.) and better living conditions (noise, air quality, water quality, etc.), which does not always

bring direct economic benefits, but in any case, they are present. For example, improved standards of living and comfort will indirectly lead to increased productivity in the work of household members.

Ecological benefits

Ecological benefits such as protection of natural ecosystems and biodiversity are mostly indirect ones. Human knowledge about natural ecosystems is still limited, but the methods for economic evaluation of ecosystem services are developed and implemented nowadays, so also these benefits can be economically evaluated. These values are the benefits associated with the inherited values of resources in an unmodified state for future generations and altruistic values to enjoy a resource by others. That is why ecological benefits are usually not related to direct use by individuals and humankind. They rather exist due to the fact that individuals can appreciate the ecological resource that they are not using or are only planning to do so.

1 INTRODUCTION

1.1 BACKGROUND

The project, which will be financed by the World Bank, was commissioned by the Albanian Ministry of Agriculture and Rural Development (MARD). The MARD is responsible, among other things, for the operation, maintenance, and modernisation of the I&D infrastructure (I&D = irrigation and drainage), as well as for the safety of the irrigation dams and flood protection systems.

1.2 PURPOSE AND OBJECTIVES OF THE ESMF

Climate and Resilience Agriculture Development Project (CRAD) consists of numerous of activities. According to the World Bank's Environmental and Social Standards (ESSs) of the Environmental and Social Framework (ESF), the Borrower will carry out the Environmental and Social Assessment before appraisal and prepare, consult the ESMF by conclusion of appraisal.

This document examines the risks and impacts associated with the project and sets out the principles, rules, guidelines, and procedures to assess any potential risks and impacts of project activities. . It highlights information about the project location area and provides measures to reduce and mitigate the risks and negative project impacts.

The purpose of the ESMF is to ensure that the project has concrete plans and processes in place to avoid, minimize, and/or mitigate the risks and potential adverse project-related environmental and social (E&S) impacts once the project activities and/or subprojects are identified, planned, and implemented.

This ESMF is developed based on a desk review of project-relevant government laws, regulations, ordinances, and other legal instruments; various background papers, and reports pertaining to environmental and social conditions in the proposed project areas.

This ESMF follows the requirements of both Albanian Legislations, EU Environmental and Social Acquis and the World Bank's ESF and ESSs, taking into consideration the related World Bank Directives (e.g., E&S, Disadvantaged or Vulnerable Individuals and Groups), and related Guidance Notes for Borrowers (on ESSs application, etc.).

The ESMF will be used during implementation to screen out high-risk sub-projects and assess the level and requirements of due diligence for each of the project activities.

The ESMF also identifies and outlines detailed management and mitigation measures and implementation arrangements related to all physical activities which will be defined during project implementation.

Finally, to ensure that the project is carried out in accordance with the Environmental and Social Standards (ESSs) the Borrower will prepare the Environmental and Social Commitment Plan (ESCP), which will be part of the Loan Agreement.

The specific objectives of this ESMF are to:

- assess the potential environmental and social risks and impacts of the project, both positive and negative, and propose mitigation measures which will effectively address these risks and impacts;

- specify appropriate roles and responsibilities and outline the necessary reporting procedures for managing and monitoring E&S issues/concerns related to subprojects, technical assistance, and activities;
- mainstream all relevant environmental and social issues into the design and implementation of the sub-projects;
- facilitate the disclosure of project information to stakeholders through accessible means and understandable language;
- strengthen relations with project beneficiaries, communities, and other stakeholders, and minimize complaints, claims, incidents, and denunciations that may be made to the project;
- strengthen the capacities of communities for sustainable and climate-resilient agricultural production and to better manage climate change threats;
- contribute to the implementation of public policies on climate change adaptation and mitigation and green growth, as well as the national government's equity policy for rural women.

2 PROJECT DESCRIPTION

This chapter describes projects objectives, components, beneficiaries, and location. The components are shown below.

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2.1 PROJECT OBJECTIVES & COMPONENTS

The Project Development Objective is to increase competitiveness and climate resilience of priority agri-food value chains.

The proposed project is highly consistent with the World Bank's overall development frameworks – Resilience, Inclusion, Sustainability, and Efficiency (RISE) and World Bank Group Climate Change Action Plan 2021–2025: Green, Resilient and Inclusive Development (GRID), in terms of addressing long-term development challenges and contributing to post pandemic build back better. The project aligns with Albania's National Strategy for Development and Integration (NSDI) in the focus areas of European integration, growth and competitiveness and sustainable use of resources. The project also strongly aligns with Albania revised Nationally Determined Contribution (NDC), prepared in accordance with the Paris Agreement, in which Albania committed to an unconditional emission reductions target of 20.9% by 2030 compared to business as usual, increasing from the initial goal to reduce emission by 11.5% by 2030 compared to 2016 levels. The project also aligned with the objectives of Albania's Strategy for Agriculture, Rural Development and Fisheries 2021 – 2027 (SARDF 2021 – 2027) to promote sustainable food production and quality through the development of a competitive and innovative agri-food sector and strengthen the sustainable management of natural resources and the response to the climate change. The proposed project would include the following components:

The project will have the following components:

1. Component 1: Promoting Climate Smart Agriculture and Access to Markets
    a. Sub-Component 1.1 Promoting Climate Smart and Resilient Value Chains
        i. Development of short value chains
        ii. Promotion of typical products and value addition
        iii. Development of a Climate Smart Agriculture (CSA) IT Platform

   b. Sub-Component 1.2 Modernizing Selected Irrigation and Drainage Schemes for High-value Agricultural Production
      i. Modernization and pressurization of Divjaka Irrigation Scheme
      ii. Modernization of Mursi Irrigation Scheme
      iii. Revitalization of Lushnja Irrigation Scheme
      iv. Modernization of drainage systems
2. Component 2: Enhancing Compliance with Food Safety and Quality Standards
   a. Establishment and upgrading of Border Inspection Posts (BIPs)
   b. Improvement of inspection capacities and diagnostic support in the areas of food safety, veterinary and plant health analyses
   c. Development of storage capacity
3. Component 3: Strengthening Evidence-based Analysis Capacity of MARD and Municipalities
   a. Development of a consistent and comprehensive data collection system and enhancement of the MARD policy effectiveness and efficiency capacity
   b. Strengthen of irrigation and drainage performance monitoring and management
   c. Project management

Component 1: Promoting Climate Smart Agriculture and Access to Markets. This component aims at supporting resilient and climate smart agriculture, productivity and quality improvements and improving market access through investments to shorten value chains, strengthen resilience of food supply, introduce digital technology and develop a modern and reliable irrigation delivery services and drainage network for high-value agricultural production.

Sub-Component 1.1 Promoting Climate Smart and Resilient Value Chains. This sub-component will support a resilient food distribution system and promote value addition of agriculture production. Activities under the sub-component include:

Development of short value chains. The objective of this activity is to strengthen resiliency of urban food supply, in particular through a better access to market of local products produced in the peri-urban areas of main cities to meet HoReCa[1] and consumers demand for local fresh and safe agriculture products supported in particular by an exponential rise of tourism sector in Albania these last years. The project will develop five Micro Food Hubs (MFH) in the peri-urban areas of main cities in the regions of Tirana, Shkodra/Lezha, Vlora, and Gjrokastra to provide better market access to local producers and linkages with urban outlets, while supporting short supply chains and resiliency in urban food supply[2]. MFH are defined as "a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand"[3]. The MFH address different gaps namely: (i) create a link between farmers, producers, and buyers; (ii) provide individual farmers and producers the means to market and sell their products together as one larger entity, allowing them the opportunity to sell to high-volume buyers; (iii) offer farmers and producers the ability to receive fair and consistent pricing for their products; (iv) help farmers extend their season which, in turn, helps provide buyers with a more consistent supply of fresh local foods; (v) provide value adding services, including sorting and grading, basic processing, temporary (cold)

[1] Hotel, Restaurant and Cafe
[2] These locations have been strategically selected in areas of overlap of supply, growing urban, agri-business and tourism demand and in selected cases vicinity with location of the project-supported irrigation schemes.
[3] Barham, James, Debra Tropp, Kathleen Enterline, Jeff Farbman, John Fisk, and Stacia Kiraly. Regional Food Hub Resource Guide. USDA.

storage, transportation, and/or packaging to improve products quality and marketability; and (vi) facilitate information flow and sharing. Finally, MFHs decrease transaction costs by providing a single point of purchase for source-identified products from local and regional producers for wholesalers, distributors, retailers, and food-service buyers. The typology identified for the project are small wholesale-type MFH as they focus on selling to small wholesale clients, such as restaurants and convenience and specialty stores. Specifically, the project will support: (i) technical assistance for the preparation of feasibility studies, business plans, environmental and social requirements, and detailed designs following climate-resilient design standards and construction supervision plans for all facilities; (ii) civil works for the construction of the facilities and associated equipment (e.g. sorting, grading and packing lines); and (iii) operational guidance for the start-up of activities. The facilities will be built on state-owned land and will be owned by the State. The MFH facilities will be managed through a subsidized concession agreement to a private operator (group of producers, agri-food sector companies, retailers or HoReCA actors). The concession will be granted according to the participation or association of a minimum number of local producers to the operations of the MFH. This activity has been assessed through the MFD cascade approach, the establishment of MFHs by public expenditure will correct market failures to support transition towards short supply chains and improved local sourcing, benefiting to private operators in the retail and HoReCa sector as well as to producers, leveraging private investments and enhancing business development.

(i) **Promotion of typical products and value addition.** The objective of this activity is to enhance rural development through a better integration of the different actors and the development of value-added products. In the last years Albania has witnessed a sharp increase in rural tourism which is key for rural development and drives the demand for local food products from national and international visitors. It participates to the objective of the of the Government of Albania (GoA) to diversify current tourism focus on seaside for a sustainable development of the sector. The project will support the development of two typical food product clusters in the regions of Berat and Dibra. The principle of a cluster is to bring together companies, researchers, trainers, and other partners all working within the same sector to combine their efforts in terms of research and development, promotion or training to benefit from synergies and economy of scales. The main priorities of the clusters will be to create the enabling environment for the valorization of two typical food products (olive oil and processed fruits and vegetables) through the aggregation of producers (consortium), and the improvement of quality and market access with the development of their technical and marketing capacity. The project will support: (i) the technical assistance to build consortium of producers, develop their technical and marketing capacities, and promote quality, branding and commercialization, and (ii) the construction of processing units to increase value-added of local products. The facilities will be owned by the State and given under subsidized concession agreement to a consortium of producers.

(ii) **Development of a Climate Smart Agriculture (CSA) IT Platform**. The objective of this activity is to collect all the relevant information such as soil type, hydrometeorological data, agriculture practices (e.g. use of fertilizers, pesticides, irrigation, etc.), and guide the farmers toward resilient agriculture practices. The CSA platform data acquisition will be automated via various sensors in weather stations, soil moisture sensors, cameras, etc. Stakeholders of the platform will also be able to enter data (e.g. results of pests monitoring devices) via a web interface and mobile apps. Based on the collected data and stored algorithms, the platform will provide automated recommendations, e.g. for fertilizer and pesticide use. Access to the platform will be provided via web and mobile applications to all interested parties. However, it is expected that, in particular in its initial phase its

main users will be farmers and administrations. The project will support the implementation of the platform in pilot areas throughout Albania for a total estimated size of 2,000 ha. The selection of the area will be based, among others, on the agriculture production area and on potential synergies with other project supported activities. Criteria for the selection will be included in the Project Operations Manual (POM). The project will support (i) the CSA platform software development, and (ii) the purchase of the necessary hardware and of the sensors to be installed in the pilot area to be covered under the project including maintenance. The platform will be hosted and run by the National Agency for Information Society (AKSHI) in charge of all IT systems in the country, while its procurement will be carried out by MARD as the main implementing agency in close coordination with AKSHI. The platform will also integrate irrigation information provided through the modernization of irrigation schemes supported under sub-component 1.2.

Sub-Component 1.2 Modernizing Selected Irrigation and Drainage Schemes for High-value Agricultural Production. This subcomponent will support innovative structural interventions including technology innovations on renewable energy supply for irrigation and drainage pumping stations expected to reduce Greenhouse Gas (GHG) emissions, to advance resilience, productivity, and sustainability of the agriculture sector. Selected priorities have been assessed taking into consideration the government's development priorities, financial viability, technical feasibility (studies and detailed design for the modernization of the irrigation schemes were completed in 2019 under the previous Water Resources and Irrigation Project [WRIP]) and implementation readiness. In particular, modernization of the Divjaka and Mursi irrigation schemes from open channels to pressurized irrigation will allow for better management of water resources and addressing of climate change impact in areas with high value agriculture crops production. The project will not provide support to farmers for on-farm irrigation investments as beneficiaries of the irrigation schemes have access to substantial amount of EU Instrument for Pre-Accession Assistance for Rural Development grant funds as well as national support for such investments. Background information on the irrigation schemes to be supported under the project is included in Annex 2. Activities under the sub-component will include:

(i) **Modernization and pressurization of Divjaka Irrigation Scheme.** The objective of this activity is to further enhance the competitiveness of irrigated agriculture through reducing water consumption and utilizing cheaper and cleaner energy sources. The project will support: (i) update of the detailed design and bill of quantities to reflect the current situation, and (ii) modernization of secondary and tertiary networks (up to 500 ha) by converting the open channel (or pumping from drains and wells) irrigation system to a new closed and pressurized network. The works will be complemented by installation of 468 pre-paid smart meters and distribution of cards to about 2,000 farmers. The command area of Divjaka has high agricultural production potential due to fertile land and favorable micro-climate. It has potential for year-round cultivation of vegetables such as broccoli, carrots, cabbage, and cauliflower provided there is access to reliable irrigation services. Since the water available for irrigation is scarce in quantity and quality, the farmers cultivate limited areas with vegetables and cereals (especially maize) and use low levels of inputs (i.e., improved seed, fertilizers, etc.) and harvest products of low quality. Through these activities the project will facilitate farmers access to efficient on-farm water application technologies such as drips and sprinklers and conversion of area-based tariffs to volume-based tariffs. These interventions will allow the adoption of volumetric irrigation water pricing, which will lead to significant water savings, increase in farmers' contribution to the operations and maintenance (O&M) expenses and amelioration of the fiscal burden on municipalities and/or the State. The project will also support the installation of Solar Photovoltaics (SPV) of 500 kWp

near the Divjaka pumping stations to decrease the irrigation costs. The estimated annual electricity production is estimated at 650 MWh while the current annual electricity consumption for the scheme is estimated at 917 MWh. If the electrify netting and reconciliation is made yearly, both stations will save ALL 15 million every year.

(ii) **Modernization of Mursi Irrigation Scheme** downstream of the reservoir. The objective of this activity is to upgrade the scheme from open channel to pressurized irrigation. The project will support: (i) update of the detailed design and bill of quantities to reflect the current situation; (ii) construction of a new pumping station and pressurization of secondary networks at Mursi, Vrina, and Xares fields (up to 2,300 ha); and (iii) installation of 500 kW SPV on the Mursi downstream dam wall[4]. The scheme is generally suitable for growing mandarins, oranges, olives, vineyards, lemon and fruit trees including peach, apricot, plum, quince, and figs. The domestic and export demand for citrus crops of high value varieties has increased thanks to the high quality of citrus production in this area. Some of the citrus growers have already applied an advanced cultivation package, where the irrigation is carried out with drips. The farmers also produce vegetables such as tomatoes, eggplants, peppers, cucumbers, onions, cabbage, leeks, onions, potatoes, and green salads. Entrepreneurial farmers have small and old irrigation systems, often a single sprinkler, and pump water from drains or private wells. This allows them the flexibility needed for the irrigation process.

(iii) **Revitalization of Lushnja Irrigation Scheme**. The objective of this activity is to develop new alternative irrigation water sources for farmers and re-initiate irrigation services to farmers previously served by the Lushnja branch. The project will support first an analysis of alternative options for supplying irrigation water to the 4,000 ha agriculture area of Lushnja, followed by a prioritization, and complemented by feasibility and detailed design to be developed for the entire arable area of about 4,000 ha analysis. Second, the identified irrigation option could be piloted under the project in an area of up to 800 ha.

(iv) **Modernization of drainage systems**. The objective of this activity is to enhance energy efficiency, reduce operations and maintenance costs, enhance agricultural productivity and farm income. The project will support three major tasks: (i) upgrade and modernization, including the installation of more efficient and flexible modern pumps, of the two drainage pumping stations, namely drainage pumping station no. 2 (in Seman), and drainage pumping station no. 3 (in Darëzez). The two drainage pumping stations together drain about 9,600 ha of the Hoxhara plain in the municipality of Fier, where about 10,000 farmers practice agricultural activity with an average of about 0.8-1 ha per farmer. This activity will serve as a pilot for future investments in the modernization of drainage systems given the importance of drainage in the coastal area of Albania which serves not only for agricultural purposes but also for residential areas and economic activities that take place in this area; (ii) design and installation of SCADA system in the modernized drainage pumping stations with the options to be expanded in the future to other stations, and installation of monitoring sensors in the remaining 25 drainage pumping stations located along the country coastal area to remotely measure water level, energy use from each pump, working hours, etc.; (iii) installation of SPV in all the 27 drainage pumping stations. A detailed estimation shows that for the 27 drainage pumping stations, the potential SPV capacity to be installed is 2,000 kWp and the annual electricity production is estimated to be 2,740 thousand kWh. In 2021, the electricity consumed by 27 drainage pumping stations was 9,750

[4] As in the case of Divjaka scheme, if the electrify netting and reconciliation is made yearly will translate into saving of up to ALL 15 million every year.

thousand kWh and the cost was ALL 174 million. The electricity produced by SPV is estimated to be ALL 40 million without VAT and to cover 28 percent of total consumption.

1. **Component 2: Enhancing Compliance with Food Safety and Quality Standards.** Activities under this component aim at addressing weak compliance and control mechanisms related to food safety, veterinary and phytosanitary standards which currently impede competitiveness and create market access inequalities both in the local and export markets. The project will provide support to increase institutional capacity to implement the food safety, veterinary and phytosanitary requirements. Activities under the component will include:

(i) **Establishment and upgrading of Border Inspection Posts (BIPs).** The objective of this activity is to increase the Competent Authority's capacity to perform official controls (documentary, identity and physical checks) for live animals, products of animal and non-animal origin, plants and plant products as well as agricultural inputs. The project will support the rehabilitation and equipping of six BIPs (in Bllatë, Kakavija, Kapshticë, Qafe Bota, Qafe Thana, and Vlorë) of the 12 currently being in operation, as modernization of other BIPs which are considered important (i.e. with high volumes of produces traded) will be supported through other projects. Support for the establishment and upgrading of the BIPs is required even if in March 2022 Albania has received the greenlight to start the EU accession process. The BIPs in fact will continue to serve as EU external borders until the accession process has been completed and for which a timeline has not been set. Further, taking into account the constantly increasing trade, their role in protecting the country from introduction of animal diseases, organism harmful for plants, as well as food and feed that could pose threat for humans, animals and the environments is extremely relevant. Finally, one of the BIP supported by the project (i.e. Vlorë seaport) will continue to serve as on the EU's external borders even after the accession process will have been completed. Rehabilitation of the BIPs will be guided by the Commission Implementing Regulation (EU) 2019/1014 of 12 June 2019 which lays down detailed rules on minimum requirements for border control posts, including inspection centers, and for the format, categories and abbreviations to use for listing border control posts and control points. This concerns veterinary, food safety and plant health border controls, and in particular means an adequate office space with necessary devices (computers, copiers, scanners, printers, etc., as well as internet and telephone connections), separate area for servicing importers or their agents, adequate space for carrying out physical checks (e.g. a lit roofed ramp where goods can be unloaded, a forklift, etc.), diagnostic support (e.g. microscopes), premises for storage of samples (with refrigerators), premises for storage of seized goods (including cooling chambers), devices and tools for inspections, elements of security to avoid escapes of harmful organisms and pests, etc. Typically, for convenient operation the facilities have only one floor, and the required surface is about 500 m^2. Specifically, the project will support: (i) technical assistance for the preparation of detailed designs following climate-resilient design standards and construction supervision for the facilities as well as any necessary site-specific environmental and social instruments; (ii) civil works for the construction of the facilities and provision of associated equipment; and (iii) training and/or support for updating inspection procedures in the BIPs. The design and construction works will be tailored to individual BIPs (i.e. will take into consideration specific circumstances which are present in a specific BIP location). In order to make the facilities more energy efficient and more environmentally friendly, it is planned to install solar panels on each of the planned constructions. As BIPs are principally managed by Customs, any investments will be consulted with all relevant stakeholders to identify solutions which would satisfy all the relevant border administrations.

(ii) **Improvement of inspection capacities and diagnostic support in the areas of food safety, veterinary and plant health analyses.** The objective of this activity is to enhance the capacity to more effectively

and efficiently carry out physical checks, sampling and sample delivery to laboratories, and laboratory testing of food safety, veterinary and plant health laboratories to enable them to implement the necessary monitoring systems and methodologies for testing according to relevant standards in line with EU pre-accession requirements. Specifically, the project will support: (i) technical assistance for the preparation of detailed designs and supervision for the rehabilitation of the laboratories as needed, as well as any necessary site-specific environmental and social instrument; (ii) civil works for the rehabilitation of the facilities; (iii) provision of equipment for inspections, sampling and sample delivery and testing in the laboratories; and (iv) training and/or support for performing accreditation of the laboratories/testing methods, so that methods which will be used are considered allowing for reliable analyses of food, feed and plants in the areas of food safety, veterinary and plant health, as specified by relevant international standards and EU legislation. The project will also provide technical and financial support to facilitate operational compliance with the EU General Food Law (GFL) Regulation (i.e. EC 178/2002), and a set of EU regulations (i.e. the Smarter Rules for Safer Food – SRSF)[5] for the risk-based protection from diseases and pests which relate to Animal Health (EU 2016/429), Plant Health (EU 2016/2031), and the EU Official Controls Regulation (EU 2017/625) on monitoring and enforcing inspection controls across the agri-food chain. These and other corresponding regulations constitute the backbone of the EU Chapter 12: Food Safety, Veterinary and Phytosanitary Policy. Significant enhancement of all those elements will also greatly contribute to the entire process of harmonization of the Albania standards and requirements with relevant EU legislation related to animal health, food safety and plant health. These will also be in line with the relevant international organization agreements and standards, namely: World Trade Organization Sanitary and Phytosanitary (WTO-SPS) Agreement, World Health Organization and Food and Agriculture Organization (WHO/FAO) Codex Alimentarius, World Organization for Animal Health (OIE), Terrestrial Animals and Aquatic Codes, and International Plant Protection Convention (IPPC). This would greatly contribute to supporting the "One Health" approach which is particularly relevant for food and water safety, nutrition, control of zoonotic diseases, pollution management and combatting antimicrobial resistance. This will also support Albania with meeting internationally recognized food certification requirements, such as GlobalGAP, EurepGAP, Hazard Analysis and Critical Control Point (HACCP), etc. The MARD and NFA have divided analytical and diagnostics activities between the ISUV and 7 NFA laboratories. In principle, ISUV will play the reference role and will also support NFA in doing certain routine analyzes and those which require high expertise. All seven NFA laboratories will be involved in mass-scale routine analyzes. However, three of them (Fier, Korçë, and Tirana) will be equipped and prepared for more specific and specialized analyzes which require more sophisticated equipment, better facilities and higher competence. This will allow for better use of existing resources and for more efficient operation. An overview of the laboratories network and a detailed description of tasks attributed to each laboratory is presented in Annex 3.

(iii) **Development of storage capacity** for detained goods which do not comply with food safety, veterinary or plant health standards (such as meat, milk, eggs, food of plant origin, etc.). The project

[5] Smarter Rules for Safer Food – SRSF:
- Animal Health Regulation (EU) 2016/429: a framework for the principles of European animal health – applies from 21 April 2021
- Plant Health Regulation (EU) 2016/2031: controls for protecting plants from disease and pests – applies from 14 December 2019
- Official Controls Regulation (EU) 2017/625: how controls across the agri-food chain will be monitored and enforced – applies from 14 December 2019

will support the construction of 4 highly energy efficient, and meeting specified safety and environmental requirements, storage facilities to be placed at fenced premises belonging to AKU at its following Regional Directorates: Korçë, Shkoder, Tirana and Vlorë. This will allow for detention and storage of questioned commodities, be it at frozen stage or in cooling conditions, and would fulfil the NFA needs in the easiest, cheapest, and most effective way forward. In the same time it will allow for recognition and application of ways of utilization alternative to incineration. In order to make the facilities more energy efficient and more environmentally friendly, it is planned to install solar panels on each of the planned facilities.

2. **Component 3: Strengthening Evidence-based Analysis Capacity of MARD and Municipalities.** This component aims at establishing a sustainable and effective monitoring and evaluation (M&E) system for agricultural and rural development policy in Albania. Support will be provided to build the monitoring capacity of the MARD and municipalities to increase their ability to measure and analyze agricultural policy impacts to support evidence-based policymaking. Activities under the component would include:

(i) **Development of a consistent and comprehensive data collection system and enhancement of the MARD policy effectiveness and efficiency capacity.** The project will support the establishment of a Business Intelligence (BI) system which will collect and process data from different systems and databases into a single platform that will be used for pursuing evidence-based policy analysis and formulation. The system to be established would be coherent with the M&E frameworks of the Albania Agriculture, Rural Development and Fishery Strategy 2021-2027 and prepare for the Common Agricultural Policy (CAP) 2023–2027 strategic policy framework requirements as described in the recent legislative proposals of the European Commission. Technical support will aim to establish the recording of all relevant indicators (context, output, result and impact) as envisaged in the CAP Performance Monitoring and Evaluation Framework to guide evidence-based decision making in both agriculture and rural development policy in Albania, including associated data collection, surveys, and evaluations. Within this context, the project will bring together and store into one integrated data platform for decision making at central level, all the necessary data associated with agriculture and rural development, compiled by various MARD Departments and Institutions as well as by other bodies. A mapping of data currently collected (in terms of both variables and software/hardware environment) will lead to an assessment of needs and the identification of data variables to be stored in the platform and the necessary software and hardware infrastructure. These actions will be followed by the installation of the necessary software and hardware and the migration of existing historical data into both the integrated platform and the satellite databases specific to MARD Departments and Institutions. In this manner, all databases will be compatible between them and at the same time, able to transmit data variables to the integrated platform, in accordance with future policy analysis needs. Finally, data update and quality control procedures will be specified in detail. Specifically, the project would provide the necessary hardware and software as well as technical assistance and training as necessary. As for the CSA Platform, activities will be procured by MARD in close cooperation with AKSHI.

(ii) **Strengthen of irrigation and drainage performance monitoring and management** at central and municipal levels, through scaling up the use of the Irrigation and Drainage Management Information System (IDMIS) and Geographic Information System (GIS) mapping, already installed in 35 municipalities, to the remaining municipalities. This activity will support the efficient utilization of IDMIS which was developed under the previous WRIP and installed in 35 municipalities, where the

system is already set-up and expanding the system in the remaining 26 municipalities of Albania. This would entail digital mapping of all irrigation schemes and their respective intakes and associated assets that would be georeferenced and digitized. The same map digitalization would be done also for drainage. Finally, the project will provide for training of trainers to ensure the system is utilized by the additional municipalities. As indicated by AKSHI, the system will need to be upgraded and incorporated in the national information system structure. The integration of IDMIS into the national system will not only facilitate data sharing among institutions but also enable technical support from AKSHI and the Ministry of Interior in charge of local government.

(iii) **Project management**, including for, procurement, financial management, safeguards, monitoring and evaluation and reporting. Support will be provided to carry-out project implementation including compliance with fiduciary (financial management, procurement), environmental and social framework, M&E requirements according to the agreed implementation arrangements, i.e. through the establishment of a Project Management Team which will be composed by both appointed civil servants and local consultants. Support for the project implementation will include provision of technical assistance for the day-to-day coordination, additional technical support as needed, as well as for fiduciary (procurement and financial management) and safeguards (environmental and social) requirements; training, equipment, and incremental operating costs to support project management and monitoring, implementation of the grievance redress mechanism and citizen engagement activities. The component will also support surveys as required for monitoring and evaluation of project results and impacts.

2.2 PROJECT BENEFICIARIES

Project beneficiaries, of which 30 percent are targeted to be women, include direct beneficiaries (i.e. farmers, private enterprises, MARD, municipalities, and institutions such as NFA, ISUV, NAVPP) and indirect beneficiaries (i.e. HoReCa and tourism sector in the project areas). The value chain activities will provide technical and financial support to develop five MFH for local products producers in the peri-urban areas of main cities to meet HoReCa and consumers demand and support the development of two typical food product clusters by bringing together companies, researchers, trainers, and other partners within the same sector. The project will improve the water management in the selected project areas and main beneficiaries would be private farmers using the irrigation/drainage schemes. In the public sector, the project will support institutional strengthening of the MARD, municipalities, as well as institutions such as the NFA, ISUV, NAVPP etc., aiming at reaching 50 percent of female extension and food safety staff trained. The nationwide farmers and enterprises will benefit from the support provided to the public institutions.

The MoARD and the municipality will benefit from the development of monitoring capacities to increase their capacity to measure and analyze the impacts of agricultural policies to support policymaking based on evidence. Albania will have a long-term and effective monitoring and evaluation system for agricultural and rural development policies. This project will improve productivity and market access through investments to shorten the value chain, strengthen the resilience of the food supply and develop a modern and reliable irrigation delivery service and drainage network for agricultural production worth up. Through the use of IDMIS and the GIS map, installed in the municipality, the monitoring, and management of irrigation and drainage systems will be strengthened at the central and municipal levels.

The expected benefits from the project include:

(i) increased agriculture productivity and production through upgraded and reliable irrigation infrastructure and services delivery, adoption of improved irrigation and other CSA/climate-resilient technologies and expanded cultivated area under improved irrigation and drainage;

(ii) water savings and increased water productivity (both in physical and monetary terms);

(iii) better farming practices (GAP and IPM), enhanced quality of agricultural produce;

(iv) reduced post-harvest losses at field level and along the targeted value chains due to facilitated market access;

(v) increased average producer prices and greater share of benefits accruing to them thanks to strengthened producers' organizations, market promotion activities, linkage of smallholders with traders/aggregators, value chain platforms, and enhanced technical and managerial capacity of producers/ value chain actors and their organizations;

(vi) expanded market opportunities (notably for export to EU and beyond) offering higher and more stable prices and increased volumes, due to legislation adaptation, compliance with international standards and processes and capacity building of producers and value chain actors;

(vii) improved food safety benefiting both producers and consumers and associated reduced occurrence and severity of illness caused by food poisoning, zoonotic diseases, residual content in food products (toxins, heavy metals, etc.);

(viii) improved plant and animal health and soil health;

(ix) additional employment generated at both farm and off-farm level and downstream of the targeted value chains;

(x) increased incomes of direct and indirect beneficiaries;

(xi) increased fiscal revenues resulting from higher turnover of targeted smallholders and other value chain actors;

(xii) net Greenhouse Gas (GHG) emissions as a result of adoption of improved irrigation and farming practices and CSA/climate-resilient technologies; and

(xiii) improved agricultural water management in the medium and long run resulted in strengthening technical and institutional capacity of irrigation managing agencies, municipalities etc. including through adoption of digital tools to increase efficiency of public service delivery.

3 POLICY, LEGAL AND REGULATORY FRAMEWORK.

In Albania, many legal instruments regulate activities related to environment, agriculture, land use, land protection, forestry etc. These laws have been generally developed in compliance with European standards and requirements since Albania is working towards EU accession.

This ESMF was conducted in accordance with the following relevant Standards and Guidelines:

- Albanian laws and regulations;
- World Bank Environmental and Social Standards.

3.1 NATIONAL ENVIRONMENTAL LEGAL FRAMEWORK

In general terms, the Albanian Constitution that was adopted by Albanian Parliament in 1998 requires institutions to maintain a healthy environment, ecologically suitable for present and future generations. In the last decade and especially since 2001, number of laws and other legal acts on the environment have been drafted and approved. The Albanian legal framework regarding environmental and socioeconomic issues is based on the Constitution of the Republic of Albania and consists of laws and regulatory acts, such as Decisions of the Council of Ministers (DCM), ministerial acts, regulations, guidelines and standards.

3.2 LAW ON ENVIRONMENTAL PROTECTION

Almost all construction and operation activities in Albania require an Environmental Permit. Environmental legislation is governed by the Law on Environmental Protection No. 10431, dated June 9, 2011. This Law sets out principles, requirements, responsibilities, rules and procedures to ensure a higher level of environmental protection and includes dispositions for environmental impact assessment as a tool for environmental protection, aiming to identify and define the possible direct and indirect effects on the environment mainly to prevent these effects.

Article 5 defines the principle of sustainable development:" Public authorities, through the development, adoption and implementation of normative acts, strategies, plans, programs and projects within their competence, promote sustainable economic and social development, using natural resources in order to meet current needs and preserve the environment, without prejudice the possibility of future generations to meet their own needs".

The Law on Environmental Protection establishes national and local policies on environmental protection, requirements for the preparation of environmental impact assessments and strategic environmental assessments, requirements for permitting activities that affect the environment, prevention and reduction of environmental pollution, environmental norms and standards, environmental monitoring and control, duties of the state bodies in relation to environmental issues, role of the public and sanctions imposed for violation of the Law.

3.3 LAW ON PROTECTED AREAS AND BIODIVERSITY PROTECTION

Two of the project investments, specifically Dijaka and Murrsi irrigation system, will be developed in the vicinity of national protected area. Evenmore, several of the 25 drainage pumping stations might directly or indirectly impact protected areas. The law No. 8906, dated 06.06.2002 "on the Protected Areas" laid down the framework for the proclamation, administration, management and sustainable use of protected zones and natural biological resources. The law also provides the basis for the development and mitigation of environmental tourism" and other economic benefits and for the provision of information and education to the general public. The primary goal of the law is to provide special protection of the most important components of natural reserves, biodiversity and in general nature, through the implementation of a protected areas network based on the International Union for Conservation of Nature (IUCN)4 categories system. Furthermore, the law defines the priorities and strategic objectives for the management of each category of protected areas.

Protected Areas in Albania have been for the most part considered as forest areas and they have historically been administered by the Directorate General of Forestry and Pastures (GDFP) within the Ministry of Agriculture and Forestry. Within the law no 8906 /2002 "For the Protected Areas", the Ministry of Environment has been given the primary supervisory role for protected areas in Albania and is responsible for:

- Proposing areas to be protected.
- Preparing the legal and managerial procedures to propose and declare a protected area.
- Compile management plans for protected areas.
- On-going monitoring / regulation of management.

The law "For the Protected Areas" states that whilst the primary administrative role lies with the Ministry of Tourism and Environment and GDFP, the interests of other ministries should be considered. The protected areas of Albania include 15 National Parks, 5 Protected Landscape Areas, 4 Strict Nature Reserves, 26 Managed Nature Reserves, and other protected areas. Main protected areas are being equipped with trail markings, while reforms in administration such as the building of information centers are being gradually implemented5. National Agency of Protected Areas (NAPA) is created by the Council of Ministers decision. No. 102, dated 04.02.2015, aimed management, protection, development, expansion and operation of the surfaces of protected areas, which today account about 16% of the territory of Albania. NAPA manages the network of protected areas and other natural networks as Natura 2000.

The Ministry of Environment, through the Directorate of Biodiversity and Protected Areas within the General Directorate of Environmental Policy and Delivery of Priorities, covers issues related to the drafting of policies on nature protection as well as strategic documents development in this field. Cooperation is extended with other departments of the Ministry and with the following implementing institutions:

- National Agency of Protected Areas (NAPA);
- National Environmental Agency (NEA);
- The Regional Forestry Service Directorates;
- State Inspectorate of the Environment and Forestry.

Albanian legislation for the protection of biodiversity relevant to the Project is summarized in Table 1 below.

Table 2 Albanian Legislation on Biodiversity Relevant to the Project

Legislation	Overview	Relevance to the project
Law No. 9587 **(20.07.2006)**	**"On the Protection of Biodiversity" (as amended)** This law establishes requirements for the preservation and protection of biological diversity, including protected areas, sensitive habitats, and species. The law requires a biological assessment as part of the environmental assessment and collection of all relevant data for the decision-making process.	Murrsi irrigation near Butrin lagoon Divjaka irrigation near Karavasta lagoon Some of the drainage pumping stations might directly or indirectly affect protected areas.
Law No. 81/2017, dated 04.07.2017	**"On Protected Areas"** This law governs all matters related to Protected Areas in Albania. It determines the categories of the protected areas in Albania, management rules and roles on the decision-making process. It requires compliance with the specific rules when accessing, working, and performing any other related activities nearby and/or within the protected areas.	The Project construction activities must not be within protected areas and must not directly or indirectly impact protected areas.
Ordinance No. 1280, **dated 20.11.2013**	**"On the approval of the Red List of Wild Flora and Fauna"** (as amended) This ordinance lists the status of the conservation of flora and fauna species in Albania.	Because some of the construction activities are located in the vicinity of protected areas, the project must exercise careful attention not to directly or indirectly affect such species being those aquatic, avifauna, terrestrial fauna and flora, etc.

Law No. 81/2017 "On Protected Areas" defines the different categories of the PA's in Albania, and their management prescriptions. Albanian Law No. 81/2017 on PA's defines 7 categories of PA, each with varying degrees of protection that have been found to be present in the study area:

- Strict Nature Reserve (Category I)
- National Park (Category II)
- Natural Monument (Category III)
- Municipal Natural Park (Category IV)
- Protected Landscape (Category V)
- Protected Area of Managed Resource (Category VI)
- Protected areas of international interest (no specific protection category).

Key laws related to the protection of the environment and protected areas include:

- Law No. 5/2016 dated 4.2.2016 On the announcement of the moratorium on forests in the Republic of Albania.

- Law No. 11/2015 dated 19.2.2015 On the accession of the Republic of Albania in the multilateral agreement among Eastern Europe countries for the implementation of the Convention "On Environmental Impact Assessment in a Transboundary Context".
- Law No 68/2014 for some amendments to the Law 9587, dated 20.07.2006 "On the protection of the biodiversity"
- Law No 7/2014 "On the announcement of the moratorium on hunting in the Republic of Albania"
- Law No.10234, dated 18.2.2010 on the accession of the Republic of Albania in the Protocol "On integrated management of coastal zone in the Mediterranean", the Barcelona Convention "On the Protection of the Mediterranean Sea Against Pollution".
- Law No. 9867 dated 31.01.2008 "On establishing the rules and procedures for the international trading of endangered wildlife species"
- Law No. 10 006 dated 23.10.2008 "On the protection of the wildlife"
- Law No. 9587 dated 20.07.2006 "On the protection of the biodiversity"
- Law No 8905 dated 06.06.2002 "On the protection of marine environment from pollution and damage" • Law No. 8906 dated 06.06.2002 "On protected Areas"
- Law No. 8294 dated 02.03.1998 On the ratification of Bern Convention "On the conservation of European wildlife and Natural Habitats"
- DCM No. 31, dated 20.1.2016 "On the approval of the Strategic Policy Document for Biodiversity Protection".
- DCM No. 102, dated 4.2 2015 "On the establishment and the organization and functioning of the National Agency of Protected Areas".

3.4 PROTECTION OF PHYSICAL ENVIRONMENT FRAMEWORK

Albania has developed legislation for the protection of the physical environment, including guidelines, thresholds, and limits for emissions. Legislation related to water, air, noise, vehicle and equipment emissions, fuel quality, waste and wastewater is summarized in the Table below.

Table 3 Legislation related to protection of the physical environment

Legislation	Overview	Relevance to the Project
Water		
Law No. 111/2012	**"On the integrated management of the water resources"** based on Directive 2000/60/EC Water Framework. The aim of the law focuses on: (i) environmental protection and improvement of water, surface water, either temporary or permanent, internal sea waters, territorial waters, exclusive economic zones, continental shelf, trans-boundary waters, groundwater, and their status; (ii) security, protection, development and rational utilization of water resources, protection of water resources from pollution etc. This law provides the definition of water bodies and sets some protection and use restrictions and requires others to be approved by several by-laws. The law	Where for purposes of developing projects that use existing water bodies, protected areas shall be determined, based on this Law and other specific laws. Protected areas may include the following: a) sanitary protected zones for potable water; b) areas for fish and shellfish farming, according to the fishing legislation; c) areas for bathing and recreation; d) areas prone to eutrophication and areas vulnerable to nitrates; and e) areas intended for protection of humans, plants or animals or habitats where maintaining or improving water status is a significant element for their protection. The Minister, acting on a proposal of the

Legislation	Overview	Relevance to the Project
	defines the banks of the water resources, restriction of certain harmful construction activities in the banks[1]/shores and water protection areas.	River Basin Councils, shall designate protected areas.
DCM No. 177 **(31.3.2005)**	2005 "**On Polluted Water Discharge Norms**" provides for the protection water resources.	The project foresees civil works near water bodies, such as irrigation and drainage system. Nevertheless, all the project supported activities either construction or support for human or other farmer activities should consider the legal requirements for polluted water. All liquid effluents must comply with Albanian standards and regulations for quality, temperature and odor before being discharged to the environment. It shall be noted that there are no norms for small wastewater discharge facilities and current norms consider only community discharge norms after treatment in a specific plant. Currently, there are no specific norms for discharges of small agglomerates (as might be the camps with less than 200 workers). In the absence of such emission norms for the project, an international norm or regulation can be applied but this shall be agreed with authorities through a clarification procedure for (potential) field camps installations and management.
DCM No. 379 **(25.5.2016)**	"**The regulation of drinking waters**". Its objective is to protect human health from adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean. Regulates several issues related with testing of drinking waters and protection zones around water well or community ground water deposit. The regulation sets three protection zones (buffer zones) from ground water well or water deposit places on the ground. The immediate zone of protection ranges from 15 to 100 m from the axe of the well or the deposit. The precise distance is set based on the evaluation of the geological formations by the hydrogeological expert. The second and third buffer zone are circling the first one, for those zones the regulation do not set any distance criteria but restricts the activities that can impact the water quality such as disposal or burial of waste, mining etc.	The project activities should identify priory if any potential source of drinking water might be affected by its supported activities.

Legislation	Overview	Relevance to the Project
Air		
Law No. 162 (04.12.2014 enforced by the January 2018)	"**On protection of ambient air quality**", fully transposes Directive 2008/50/EC on ambient air quality and cleaner air for Europe, as well as Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air. This Law entered in force in 1 January 2018 and provides the institutional framework, regulations, roles, penalties to ensure compliance. The law stipulates that natural and legal persons, public or private, native or foreign, have a duty to keep the air clean and protect it from pollution caused by the activities they conduct in the territory of the Republic of Albania	During construction activities dust and other emitters might affect air quality. In addition, other project related activities supporting farm products and processes might cause release of effluents, smell, dust, etc. that might impact ambient air quality. Mitigation measures to limit the impact of project activities.
Vehicle Emissions		
Guideline No. 6527 (24.12.2004)	**"Over the permissible values of the elements of air pollutants from the environment and noise emissions caused through road vehicles and methods to control them"** amended by Guideline No. 12, dated 15.6.2010 "On amendments and addenda to Guidelines No 6527 of 24.12.2004 accompanied by the Manual of Vehicles Control.	Most of the project supported activities will directly or indirectly pass through resident areas. Impact of noise can directly affect the residents quality of life in addition to a potential impact on productivity of farm animals. Certificate of technical compliance is issued by SGS Albania and it is mandatory for all vehicle registered in Albania (with Albanian license plate).
Transport, Vehicle and Equipment Emissions		
Instruction No.6527 (24.12.2004)	**"On allowed vehicle air emission, noise generation levels, and control methods**" amended. This instruction includes requirements for annual vehicle inspections and allowed air emissions. All vehicles must comply with these norms.	Most of the project supported activities will directly or indirectly pass through resident areas. Impact of noise can directly affect the residents quality of life in addition to a potential impact on productivity of farm animals. Certificate of technical compliance is issued by SGS Albania and it is mandatory for all vehicle registered in Albania (with Albanian license plate).
DCM No.613 (7.9.2011)	**"Approval of the technical rules for the assessment of the noise conformity for the equipment installed in open spaces or environment".** Sets noise release norms for certain equipment generating noise such as electricity generators, tractors, compressors etc. The regulation lists set thresholds.	Most of the project supported activities will directly or indirectly pass through resident areas. Impact of noise can directly affect the residents quality of life in addition to a potential impact on productivity of farm animals. Self-monitoring procedure has to be set in place in order to keep good track of disturbances and legal compliance.

Legislation	Overview	Relevance to the Project
Guidance No.10 (30.5.2015)	"**Relating to the type-approval of agricultural or forestry tractors, their trailers and interchangeable towed machinery, together with their systems, components and separate technical units**" based on EU Directive 2003/37/EC dated 26.5.2003.	Compliance with this guidance has to be considered, if applicable due to project supported activities.
Noise		
DCM No. 1063 **(23.12.2015)**	"**On the Approval of the technical rules for the assessment of the noise conformity for the equipment installed in open spaces or environment**" sets the noise release norms for certain equipment's generation noise such as electricity generators, tractors, compressors etc. The regulation lists set thresholds (mainly power capacity - kW).	Most of the project supported activities will directly or indirectly pass through resident areas. Impact of noise can directly affect the residents quality of life in addition to a potential impact on productivity of farm animals. Application of these rules needs to be ensured from main and sub-contractor based on list of equipment and vehicles that will be employed for operations.
Guideline No. 6527/2004	The guideline regulates vehicle noise generation levels and control methods. This includes requirements for the annual vehicle inspections and to comply with predetermined norms. The compliance of these norms shall be verified with certification of control issued from SGS Albania.	Compliance with this guideline has to be considered in the development of mitigation measures of the ESIA. Application of these rules needs to be ensured from main and sub-contractor based on list of equipment and vehicles that will be employed for operations.
Law No. 9774 **(12.07.2007)** **Amended by Law No. 39/2013**	"**On the assessment and management of environmental noise**", which defines the requirements for environmental protection from noise, how to avoid and to prevent, reduce and eliminate the harmful effects of exposure to them including inconvenience from noise. This Law aims to protect human health and the environment from adverse effects caused by noise emissions and sets general rules, authorities, inspection etc.	Heavy machinery and trucks if used during the construction or operation activity. ESIA shall put an importance focus in the daytime classification[4] for the operation of noise generating machinery.
Instruction No.8 (27.11.2007)	Ministry of Environment and Ministry of Health on **"Noise levels in different media",** sets the numerical values of noise in specific zones and aims to ensure adequate noise exposure protection for human health.	Compliance with this instruction must be considered in the development of mitigation measures of the ESIA.
Instruction No.6527 (24.12.2004)	"**On allowed vehicle air emission, noise generation levels, and control methods"** amended - This includes requirements for annual vehicle inspections and allowed air emissions. All vehicles must comply with these norms.	Compliance with this instruction has to be considered in the development of mitigation measures of the ESIA.
Fuel Quality		
DCM No. 147	**"On the quality of petrol and diesel fuels".**	Fuel quality has a direct impact on air quality.

Legislation	Overview	Relevance to the Project
(21.03.2007)		Only fuel that is in compliance with this decision must be used.
DCM No.781 (14.11.2012)	"**On the quality of certain liquid fuels for thermal, civil, industrial and water transport use (sea, river and lake)".**	Only fuel that is in compliance with this decision must be used.
Waste		
Law No.10463 (22.09.2011)	**"On the integrated waste management**" aims to protect human health and the environment and to ensure environmentally sound management of waste through integrated management.	Waste is generated not only during construction activities but also from other human activities related to project. Waste management has to be considered in the development of mitigation measures and to be addressed in the Environmental Management and Monitoring Plan (EMMP)
DMC No.99 (18.02.2005)	"**Albanian waste catalogue**" which makes the classification of the waste based on industry types, and the criteria to assess the hazardousness of the waste. The regulation codifies the waste types based on the European Waste Catalogue.	Waste generated through project supported activities has to be considered in the classification of the wastes to be generated during construction and operation activities.
DCM No. 229 **(23.04.2014)**	"**The rules for transferring the nonhazardous waste and the data to register in the transferring document**". The newly enforced regulation requires transferring the waste at licensed companies and ensuring final disposal in approved facilities. The act requires documenting the waste transfers and providing the final disposal certificate to the National Environmental Agency (NEA). The regulation requires for all waste generating companies to be registered at NEA and obtain a personal waste generation number.	Non-hazardous wastes generated during the construction and operation must be transferred and disposed of in accordance with this directive.
DCM No. 371 **(11.06.2014)**	"**The rules for transferring the hazardous waste and the data to register in the transferring document**". The newly enforced regulation requires transferring the waste at licensed company and ensuring final disposal in approved facilities. The act requires documenting the waste transferring and delivering the final disposal certificate at the NEA. The regulation requires for all waste generating companies to be registered at NEA and obtain a personal waste generation number.	Hazardous waste during construction activities such as used oils, construction additives, sealants, etc. might be created. Hazardous wastes generated during the construction and operation must be transferred and disposed of in accordance with this directive.
Wastewater		
Law No. 9115/2003 (24/07/2003)	"**On the Treatment of polluted water**" provides regulations that state the need for treatment of polluted water before it is discharged. Article 6 sets the	This is related to contruction activities, e.x. in the case of discharging concrete, wastewater from workers potable toilets, etc.

Legislation	Overview	Relevance to the Project
	obligations of physical and legal entities that discharge polluted waters. Physical and legal entities, the activity of which discharges polluted waters, are obligated to take measures to: a) continuously reduce the amount of used waters they discharge in the receiving environment; b) reduce the degree of pollution in discharged waters, especially such pollution as caused by hazardous substances and waste; c) manage and treat polluted waters. To comply with these obligations, the physical and legal entities whose activities discharge polluted waters must design a program of technical, technological and organizational measures. This program is subject to control by the Environmental Inspectorate, the licensing authority and the local government structures	Compliance with this law has to be considered in the development of mitigation measures of the ESIA.

3.5 LAW ON ENVIRONMENTAL IMPACT ASSESSMENT AND EIA PROCEDURE

Albania has specific legislation requiring the need for an Environmental Impact Assessment. The 2002 Law on Environmental Protection established environmental protection requirements, including the requirement to conduct an Environmental Impact Assessment (EIA) and to obtain an environmental permit before initiating a project. This law established for the first time the monitoring requirements for identifying project impacts on the environment during construction, operation, and rehabilitation phases, as well as requirements during the project closure phase (decommissioning). The law was appealed by Law No.10431, dated 09.06.2011 "On Environmental Protection" amended, which aims to mirror European Union Directives (including the EU Directive 2011/92/EU) and best practice towards environment management. The 2011 Law on Environmental Protection (as amended) establishes the environmental protection framework, institutional framework and competencies, environmental impact assessment principles and environmental permitting. It defines activities affecting the environment as "any economic and social activity that uses the environment or part of it, or that discharges materials and energy by changing its characteristics".

The Albanian framework and procedural legislation relevant for the undertaking of an EIA is provided in table below.

Table 4 Albanian Legislation for an EIA

Legislation	Overview	Relevance to the Program and/or Project at different location
Law No. 10431 (09.06.2011) amended	"On Environmental Protection" (as amended) – This law establishes the environmental protection framework, institutional framework and competencies, environmental impact assessment principles and environmental permitting.	It is required that an Environmental Impact Assessment (EIA) is conducted, and an environmental permit obtained before initiating the Project. It establishes monitoring requirements to identify project impacts during construction, operation, and rehabilitation phases, as well

	The law is based on European Union principles and best practice toward environment management.	as requirements during the project closure phase.
Law No. 10440 (07.07.2011) amended	"On Environmental Impact Assessment" (as amended) - This law sets the principles of an EIA, determines the project categories as per associated environmental impacts, and establishes the responsibilities and rights of institutions and public in the EIA procedure. The law determines the competencies of National Environmental Agency (NEA) and Ministry of Tourism and Environment (MTE) in the procedure, review of EIA report and final approval.	The EIA for the Projects must be submitted to MTE and NEA for control, review, and approval.
Law No. 10448 (14.07.2011) amended	"On Environmental Permits" (as amended) - defines the terms and conditions for granting environmental permits to industrial operators and determines measures for the prevention and control of pollution emissions and the safe management of chemicals. Generally, the objective of the regulatory regime is to: prevent environmental damage; comply with health and environmental standards; and protect against any residual liability.	Environmental Declaration applies (regulated under law 10440/2011)
Decision of Council of Ministers (DCM) No.686 (29.07.2015) amended	"On the rules, responsibilities, timelines for the EIA procedure and the transfer procedure of the decision for the environmental declaration" amended - The act sets specific and detailed rules for the procedure, framework and structure of EIA report, related documents and appendices, timeframe of the procedure, application for approval, final decision and impact monitoring and reporting during the project execution.	The EIA report has to be prepared in accordance with the requirements of this DCM.
Decision of Council of Ministers (DMC) No. 247 (30.04.2014)	"On the determination of rules, requirements and procedures for public information and involvement in the environment decision making process" – The act sets specific requirements for consultation with stakeholders, focusing on consultation with local communities. It also gives details on the procedure	Stakeholders shall be engaged/consulted throughout the EIA process; a Stakeholder Engagement Plan (SEP) must be developed and implemented.

	to be followed, timeline and media publishing.	

All projects with potential impact on the environment shall undertake an Environmental Impact Assessment (EIA) prior to starting the implementation. The EIA report and other necessary documents will be submitted to the Ministry of Tourism and Environment (MTE) who will transfer the project files to National Environmental Agency (NEA) for review. The project shall be approved with an Environmental Decision/Declaration of the National Environmental Agency (NEA) and MTE (when needed). The procedure of EIA is detailed in DCM No.686 dated 29.07.2015 "On the rules, responsibilities, timelines for the EIA procedure and the transfer procedure of the decision for the environmental declaration" amended.

3.5.1.1 EIA procedure flowchart

The EIA procedure flowchart is illustrated in Figure 1. According to Law No.10440/2011 as amended (Article 11), at the conclusion of the EIA process, NEA will decide if an Environmental Declaration will be issued or if further studies are required (i.e. an 'in depth/full' EIA is required). It is anticipated that at the end of the EIA process, an Environmental Declaration will be issued by the Ministry; hence an application to Ministry of Environment and Tourism (MTE) will be made for an Environmental Declaration. The documents required to be submitted to MTE along with the application for the Environmental Declaration include:

- Full/In-Depth EIA report;
- Non-Technical Summary;
- Technical Report summarizing the project;
- Summary of consultation process with the public and other stakeholders, conducted during the EIA process; and
- Copy of the payment of the service fee, as defined in the relevant legislation national.

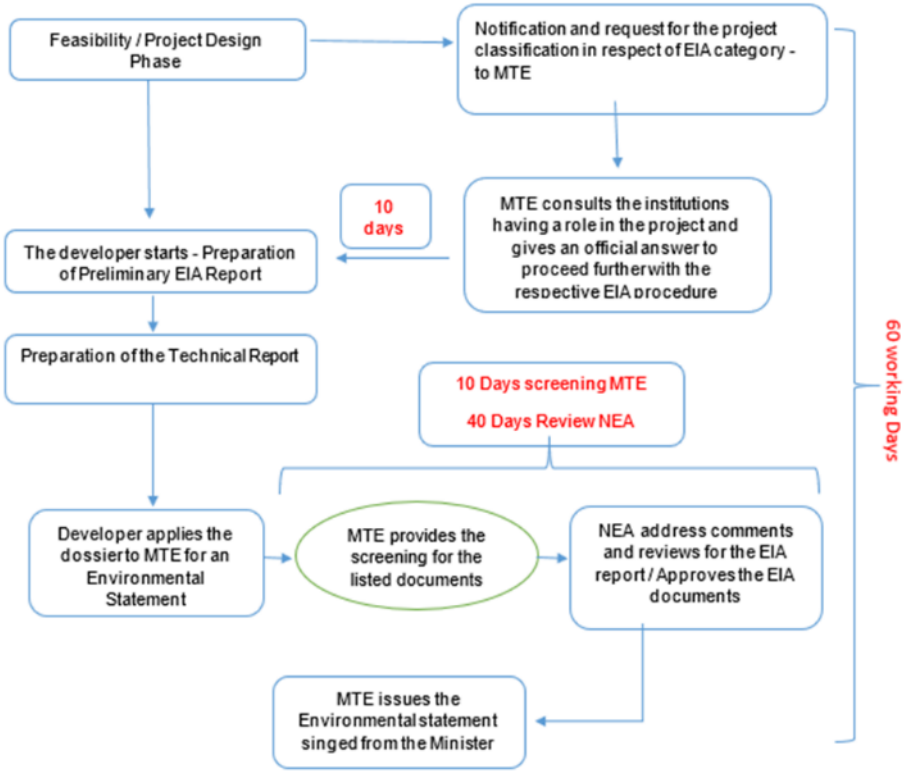


Table 5: EIA Procedure and Timeline according to Albanian Legislation

3.5.1.2 Environmental and Social Risk Screening and Categorization Process

The Law No. 10440 "On Environmental Impact Assessment" amended, requires that Projects that are likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to an assessment of their environmental effects. These Projects are defined and listed in Annex I and Annex II of the law.

The basic document on which the EIA process is based is the type of the environmental impact assessment report, depending on the potential impacts of the project. Overall, the categorization process and procedure for assessing the risks and/or potential impacts on the environment includes as follows:

i) Preliminary EIA report for the projects listed in Annex II;

ii) Full/ In-Depth EIA report for the projects listed in Annex I.

The first step of the EIA process is Screening Assessment in order to determine whether the Project is listed either in Annex I or in Annex II. The Proponent/Applicant shall perform a screening analysis of the intended project based on Law No. 10440 dated 07.07.2011 "On Environmental Impact Assessment (amended)" to preliminary categorize the project. If the proposed activity is listed in the category of projects which belong to Annex II, the applicant shall provide a preliminary EIA report. If the proposed activity is listed in the category of projects which belong to Annex I, the applicant shall first provide an Environmental Interaction Report prior to the Full/In-depth EIA Report.

In both cases these reports are submitted to the Ministry of Tourism and Environment (MTE), which further delivers it to the National Environmental Agency (NEA). NEA gives final decision on the EIA process. NEA through an official letter communicates with the Proponent/Applicant on the issues that have to be taken in consideration during implementation (in case the project requires a preliminary EIA) or further detailed analyses (if the project is subject to a full/in-depth EIA).

When referring to the projects related to Water Supply and Sewerage Infrastructure, the classification criteria for EIA categorization is based on the following topics of the Law No. 10440/2011 (as amended):

Annex I

- ***Point 11:*** Groundwater abstraction activities or artificial groundwater recharge schemes in cases where the annual volume of water to be abstracted or recharged amounts to 10 million cubic meters or more;
- ***Point 13:*** Municipal wastewater treatment plants with a capacity exceeding 30,000 population equivalents, as defined in the legislation for water resources.

Annex II

- ***Point 10 - Infrastructural Products, letter h***: Abstraction of groundwater and other schemes for the artificial replenishment of groundwater, which are not included in Annex I;
- ***Point 11 - Other Projects, letter c:*** Wastewater treatment plants (projects which are not included in Annex I).

Apart from the preliminary assessment based on the above-mentioned law, Screening Assessment is also based on the Ministerial Instruction No.6, dated 27.12.2006 "On the approval of the preliminary assessment methodology of impacts on environment of an activity". This Ministerial Instruction defines a methodology for a screening assessment through a checklist and a series of general questions in order to determine potential impacts and/or effects on the environment. At the Screening stage, a useful simple check is to ask whether the impact is one that ought to be considered prior to consent and, thus, is deemed to have an influence on the Development Consent decision. At the beginning of Screening, there is likely to be little information upon which to base this decision, but the list of questions may be helpful.

These questions can be asked for each 'Yes' answer in the Screening Checklist and the conclusion and the reasons for it noted in the checklist. The questions are designed so that a 'Yes' answer will generally point towards the need for an EIA process and a 'No' answer points to an EIA process not being required. The answer that the impact is uncertain would, most likely, point to the need for an EIA Process.

After completion of the Screening Checklist, this document is submitted through an official letter to the National Environmental Agency (NEA) for review and opinion. NEA delivers an official response to the Proponent/Applicant on the classification of the proposed project and the type of EIA needed (preliminary EIA or full EIA).

3.6 LAWS AND REGULATIONS IN THE FIELD OF CULTURAL HERITAGE AND CHANCE FINDS

Albania has a reach history and many new archaeological discoveries are ongoing. Especially for the Murrsi project area but also related to every other area, the project should be in line with legal requirements related to cultural heritage. It is recommended that a cultural heritage investigation is done prior to any construction activities and all contractors have a sub-contract agreement with a licensed archeolgist for periodic inspections and to address in proper manner potential findings.

Projects for all types of building above ground and underground and engineering infrastructure projects across the entire country are based on standards and technical requirements of legal acts in force. Law No. 10119/09 "On Territory Planning," amended by Law No. 10258, dated 21.04.2010 and Law No. 10315 dated 16.09.2010, is the main legislative tool in Albania relating to urban planning, and aims to integrate the urban planning legislative framework into a single law.

Law No. 10119/09 entered into force on 30 September 2011. The main purpose of this law is to provide a sustainable development of the territory through the rational use of land and natural resources. This law includes the concepts of natural and cultural heritage protection and of the community's health and safety protection. Additionally, the law mentions integrated planning instruments to be designed for Coastal areas, for cultural, natural and environmental heritage and landscapes, as well as for other areas of common importance or interest.

The protection of cultural heritage in Albania is addressed by the Ministry of Tourism, Culture, Youth and Sports and several specialized institutions within the Ministry of Education and Science. Within the Ministry, the Department of Cultural Heritage oversees the Institute of Monuments, the nine National Museums, and the Centre of Registration of Cultural Property. Cultural heritage includes archaeological sites, historic buildings (isolated and in districts), graveyards and places invested with traditional meaning of a historical, cultural or religious nature.

Law 9048 ("Cultural Heritage Act") approved on April 7th, 2003 (as amended by Law No. 9592, dated 27.07.2006; Law No. 9882, dated 28.02.2008) is the primary legal framework governing the management of tangible and intangible cultural heritage in Albania. Law 9048 represents the first effort to extend legal protection to material within the field of intangible cultural heritage. Its contents include: Categories of Albanian cultural heritage to be protected (i.e. tangible, intangible, movable, immovable); definitions and examples of tangible and intangible heritage; responsibilities of relevant institutions and government bodies; penalties for those who damage cultural heritage; and mitigation procedures.

Article 4 lists the tangible, immovable values that are to be protected, which include, but are not limited to: Archaeological sites; Historic structures (including places of worship); Historic towns and

neighborhoods; Cemeteries and graves; and Historic landscapes. Law 9048 was amended by Law 9592 dated 27.07.2006. Amendments included 1) the introduction of the National Committee of National Heritage as an advisory body and 2) the creation of the National Committee for Intangible Heritage (NCIH). Law 9048 was amended again by Law No. 9882, dated 28.02.2008. The 2008 amendments incorporated articles reconstructing the network of specialized cultural heritage institutions and articles dealing with the creation of the National Council of Archaeology and specialized institutions such as the Albanian Archaeological Service.

According to the law, if anything unusual will be found during the digging and excavation process the contractor must stop works immediately, urgently inform the local authorities, the Culture Monuments Institute and, also the Ministry of Culture. They will send archaeologists and field specialists in order to check and evaluate the supposed archaeological objects and the works will restart only after the official permit given by the Culture Monuments Institute. Also, Albanian respects the international obligations provided under international conventions and agreements ratified by Albania in the framework of cultural heritage.

Table 6 Legislation for the protection of cultural heritage

Legislation	Overview	Relevance to the Project
Cultural Heritage		
Law 27/2018 (17.05.2018)	"On Cultural Heritage and Museums" - All matters relating to cultural heritage in Albania are governed by this law". The law defines the preservation and chance finds procedures (archaeological objects or items of cultural heritage value which are discovered by chance) to be used during Project implementation.	Cultural monuments have to be identified on nearby of the project area.
Article 146	Requires and obliges any person who discovers or excavates objects of cultural heritage value, by chance during construction works, to suspend work immediately and inform the relevant local authorities within three days. The relevant local authorities consist of the local government office (municipality), the Police Department and the Regional Directory of Cultural Heritage (RDCH). The RDCH verifies the situation/findings and reports to the Institute of Cultural Monuments (IoCM). These institutions are responsible for assessing the archaeological value of the objects found, and determining whether work may continue or whether it must remain suspended until further ground investigations have been undertaken.	A chance finds procedure must be developed and implemented during the course of construction and in the event of a chance of finding, the authorities must be notified as required. The local authorities responsible for the preservation, restoration, and management of cultural monuments are the RDCH under the authority of Ministry of Culture.
Article 5, paragraph 64 and article 31	Defines the conservation of non-material cultural heritage by measures that aim of long-lasting preservation of such cultural assets.	

Table 7 Laws adopted after the ratification of international conventions by the Republic of Albania

Convention name	Ratified by Albania

Law no. 9490, dated 13.03.2006 "On the Ratification of the Convention for the Safeguarding of the Intangible Cultural Heritage", Paris 2003	2006
Law nr.9806, dated 17.09.2007 On the Ratification of the European Convention "On Protection of the Archaeological Heritage"	2007
Law No. 10 027, dated 11.12.2008 "On accession of the Republic of Albania to the Convention on the Protection of Underwater Cultural Heritage", Paris 2001	2008

Source: https://www.kultura.gov.al/trashegimia-kulturore/

3.7 HEALTH AND SAFETY FRAMEWORK

Law No. 10237/2010 "On safety and health at work" ensures the security and protection of health through prevention of professional risks, eliminating the factors that constitute risk and accidents, inform, advice, balanced participation, in accordance with the law. The present law applies the following:

- The Directive of the European Council 89/391/EEC, dated 12 July 1989 "On the introduction of measures to encourage improvements in the safety and health of workers at work";
- The Directive of the European Council 94/33 EEC, dated 22 July 1994 "On the protection of young people at work," article 6; and
- The Directive of the European Council 92/85 EEC "On the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding".

Albanian legislation on health and safety and the relevance to the project are highlighted in the table below.

Table 8 Legislation on health and safety

Legislation	Overview	Relevance to the Project
Health and Safety		
Law No. 10237/2010 (18/02/2010)	"On Safety and Health at Work". This law regulates the framework of health and safety in the work place and determines the roles of each party subject to the law.	The project must comply with this law to protect the health and safety of its workers. Specific measures to be included in the mitigation plan.
Law No. 9863/2008	The State Sanitary Inspectorate aims to protect workers from the impacts of adverse working conditions, such as exposure to toxic substances, radiation, unworkable noise, vibrations, unfavorable microclimate, and controls the level of occupational diseases and accidents as a result of adverse conditions.	The project must comply with this law to protect the health and safety of its workers. Specific measures to be included in the mitigation plan.
Law No. 9863/2008 (28/01/2008)	"On food" specifies the rules of food safety in Albania	The project needs to ensure the safety of food consumed by its workers (in case of a contractor workers camp). Specific measures to be included in the mitigation plan.
Law No. 10433/2011 (16/06/2011)	"On Inspection in the Republic of Albania"	The project are subject to inspections for adherence to health and safety regulations.

Legislation	Overview	Relevance to the Project
DCM No. 562/2013 (3/07/2013)	Decision of Council of Ministers concerning the approval of the regulation on minimum safety and health requirements for the workplace.	The project/employer needs to ensure the safety of its workers in the work place. A specific set of rules are to be drafted in the Safety Regulation of the Employer. Specific measures to be included in the mitigation plan.
DCM No. 312/2010 (5/5/2010)	"On safety in site construction" sets the rules of safety for construction activities.	The installation of worker camps needs to comply with the rules of this decision. Specific measures will be included in the mitigation plan.
DCM No. 410/2015 (13/05/2015)	"On the establishment, organization and operation of technical and industrial state inspectorate". This act regulates the inspection of the installations related with industrial processes in Albania	The project may be the subject of several inspections as regulated in Albanian legislation and standards. Compliance with these rules is to be ensured by the Sub Contractor for water treatment plant operations. An initial screening of equipment that will be used and communication with the appropriate inspectorate is required in order to determine any obligation before starting the field operations of importing the equipment.
Decision No. 692/2001 (13/12/2001)	"On special measures on safety and health protection at work"	The project should comply with this law to protect the health safety of its workers. Specific measures to be included in the mitigation plan.
DCM No. 842/2014 (3/12/2014)	"For the health safety and protection of the employee from noise risks in the working places" requires the employer to assess the noise levels at the working place and ensure the protection of its workers	Specific measures to be included in the mitigation plan.

3.8 OTHER RELEVANT LEGISLATION

Other national regulations relevant to the CRAD project are presented below.

3.8.1 Relevant National Legislation on Stakeholder Engagement and Participation

The preparation of the Environmental and Social Impact Assessment Study for each project under the WPIP/MIP Program, expects the full national environmental legal framework to be taken into consideration and the following legal acts will be used as a roadmap in terms of the stakeholder engagement and participation:

- DCM No 16, dated 14.01.2012 "On the public right for having environmental information";
- DCM No. 247 dated 30.04.2014 "On establishing the policy, requirements and procedures for public information and stakeholder participation in the decision – making environmental process";
- Law No. 119/2014, dated 18.09.2014 "On the Right of Information";
- Law No. 146/2014, dated 30.10.2014 "On Public Informing and Consultation";

- DCM No. 994, dated 02.07.2008 “On public involvement in environmental decision-making”; and
- Ministerial Guideline No.1 dated 03.03.2009 “On responsibilities of the environmental bodies to ensure the participation of the public and environmental NGO to the EIA process”.

3.8.2 Relevant National Legislation on Land Use and Territory Planning

Projects for all types of building above ground and underground and engineering infrastructure projects across the entire Country are based on standards and technical requirements of legal acts in force. Law No. 10119/09 "On Territory Planning," amended by Law No. 10258, dated 21.04.2010 and Law No. 10315 dated 16.09.2010, is the main legislative tool in Albania relating to urban planning, and aims to integrate the urban planning legislative framework into a single law.

Law No. 10119/09 which entered into force on 30/11/2011, aims to provide a sustainable development of the territory through the rational use of land and natural resources. This law includes the concepts of natural and cultural heritage protection and of the community’s health and safety protection.

Table 9: Relevant National Legislation on Land Use and Territory Planning

Legislation	Overview	Relevance to the Project
Land Use and Territory Planning		
Law No. 10119/2009	“On Territory Planning”, amended by Law No. 10258/2010 and Law No. 10315/2010. The law aims to integrate the urban planning legislative framework into a single law, and includes the concept of the protection of natural and cultural heritage, and community’s health and safety for territory planning.	The law and its by-laws require declaration for any construction. The project implementation schedule; protection of natural and cultural heritage, and community’s health and safety to be included in the ESIA mitigation measures.
DCM No. 408[4] (13.5.2015 amended by DCM 231/2017)	The regulation for territorial development.	This regulation specifies the type of installations requiring a construction permit. A preliminary clearance should be sought for the construction of field camps. Installations of mobile structures require a preliminary clearance (or declaration of works) issued by the municipality.
Law No. 9244/2004	“On Agricultural Land Protection” determines the protection status of given agricultural fields.	The project is obliged to inform the local authority of any damage to agricultural land from the construction or operations. The authority assesses the damage and requires that the land user to restore any damage in agricultural land. Mitigation measures have to be proposed.
Law No. 8752/2001 (26/03/2001) amended several times	"On the establishment and functioning of the structures for land administration and protection", amended by Law No. 10257/2010 regulates land uses issues, and their compatibility with Regional Planning.	The land administration department of each municipality is responsible for land management and leasing of state owned land. This authority will be responsible for the coordination of the implementing procedures and execution of the compensation during the project implementation.

3.8.3 Relevant National Legislation on Land Acquisition and Resettlement

The Table below lists key pieces of Albanian legislation that are relevant to land acquisition and resettlement.

Legislation	Overview	Relevance to the Project
Land Acquisition and Resettlement		
Changed with Law No.9675 of 13.01.2007, Law No.9904 of 21.04.2008, Law No.88/2012 of 18.09.2012, Law No.137/2015 of 17.12.2015 and Law No.76/2016 of 22.07.2016	"Constitution of the Republic of Albania"	Main constitutional principles, essential rights and freedoms, organization of the state and independence of the state bodies, elections, hierarchy of the laws etc.
Law No.7850 of 29.07.1994 changed with Law No.8536 of 18.10.1999 and No.8781 of 03.05.2001	"Civil Code of the Republic of Albania"	Legal rights related to immovable properties (such as ownership, easement-servitudes and usufruct rights, lease, etc.) Interacting and beneficiary parties, their contractual rights, modalities of acquisition of rights referred above, and the obligation to register them.
Law No.111 of 07.02.2019 "	"On Registration of Immovable Properties"	Organization and operation of the Albanian Cadastral Agency (ACA), terms and procedures for the registration of immovable properties and administration of immovable properties public register.
Law No.8561 of 22.12.1999	"On expropriation and temporary use of private property for public interest"	Sets the right of Public Authority to expropriate or take in temporary use for public interest, the properties of legal entities or individuals and the safeguard of the rights and interests of the expropriated owners.
DCM No.89 of 03.02.2016	"Reference Value of Immovable Property"	The value of land affected by expropriation procedures is defined (in ALL/m2) by the Decisions of the Council of Ministers (DCM) approving the value reference list established in accordance with the Restitution and Compensation Law

3.8.4 Laws and Regulations in the Field of Land and Agriculture

- Law no. 24/2017 on "Irrigation and Drainage Administration"
- Law No. 7662, of 1993 (amended by Law No 8529 in 1999 and further amended by law 9362 in 2005 and supplemented by law 9008 in 2008), on the Plant Protection Service is in accordance with EU regulation 91/414/EEC and deals with quality control of all imported pesticides and their registration procedure by a State Commission which includes ME membership. The law provides for the organization of the Plant Protection Service and for

parasite control, pesticides and plant quarantine. MARD is responsible for the application of this Law

- DCM no. 410 dt 27.6.2012 "On determining the rules and procedures for changing the categories of land resources"
- DCM no. 283 dt 1.4.2015 "on determining the types, rules, criteria and procedures for the construction of facilities for the production, protection and use of agricultural products, agricultural land"

3.8.5 Laws and Regulations in the Field of Waste Management

- Law No. 156/2013 on the amendment of the law no. 10463, dated 22.09.2011 "On integrated waste management";
- Law No. 8094, dated 21.03.1996 "On the public disposal of waste";
- Law 139/2015 "On self-government of local authorities";
- DCM no. 333, dated 26.01.2011 "On the administration of disposal sites for urban waste";
- DCM no. 418, dated 25.06.2014 "On the separate collection of waste at the source";
- DCM no. 608, dated 17.09.2014 "for determining the necessary measures for the collection and treatment of bio-waste, the criteria and deadlines for their reduction";

Law 9108 of 2003 on ***chemical substances and preparations*** regulates the use and management of chemical substances and preparations with a view to protecting animal and human health as well as the environment. Producers and importers of chemical substances shall apply for registration, according to articles 9 and 10. The Law consists of the following Chapters:

(I) General provisions;

(II) Classification of chemical substances and preparations;

(III) Registration of substances;

(IV) Management of hazardous substances and preparations;

(V) Introduction into the market of hazardous substances and preparations;

(VI) Authorization for management of hazardous substances and preparations;

(VII) Import and export of hazardous substances and preparations;

(VIII) Registration and notification of hazardous substances;

(IX) Administrative contraventions and fines;

Transitory and final provisions. Appendix No. 2 of the law contains the list of substances which may not be produced, imported, exported or distributed. Medical products, feeding stuffs, plant protection products and substances that deplete the ozone layer are excluded.

3.8.6 Laws and Regulations in the Field of Climate Change

- Low No. 155/2020 “On Climate Change”
- Kyoto Protocol of the United Nations Framework Convention on Climate Change;
- Law No. 9334, dated 16.12.2004 "On the Accession of the Republic of Albania to the Kyoto Protocol of the United Nations Framework Convention on Climate Change";

3.8.7 Laws and Regulations on Water Transboundary

- LAW No. 111/2012 "On the integrated management of water resources" updated (with Law No. 6/2018 "On some amendments and additions to the law no. 111/2012 ""On the integrated management of water resources").
- Law No. 11/2015 dated 19.2.2015 On the accession of the Republic of Albania in the multilateral agreement among Eastern Europe countries for the implementation of the Convention “On Environmental Impact Assessment in a Transboundary Context”.
- Law No.10234, dated 18.2.2010 on the accession of the Republic of Albania in the Protocol “On integrated management of coastal zone in the Mediterranean”, the Barcelona Convention “On the Protection of the Mediterranean Sea Against Pollution”.
- DCM no. 177, dated 26.3.2014, "On the creation and composition, functions, responsibilities and duties of the Special Commission for Transboundary Water Management";
- DCM no. 177, dated 31.3.2005, "On the permitted rates for liquid discharges and the criteria for the environmental separation of rivers or sea waters";
- DCM no. 342 dated 4.5.2016, "On the approval of the territorial and hydrographic boundaries of water basins in the Republic of Albania, the location of the central office and the composition of the council for each of them"

The decision of the Council of Ministers (DCM) no. 177, dt 31.03.2005 “On liquid discharges and the criteria for the receiving waters” contains the approved standards for various industries and the quality of urban water following treatment, based on the respective instructions of the EU. This act sets the criteria for the classification of the receptive water bodies, aiming at the compilation of the list of sensitive and less sensitive areas, which are reviewed every 4 years. The law requests the active participation of the Basin Water Councils and Basin Water Agencies for the prevention and clean-up of the water basins under their jurisdiction.

The Republic of Albania has ratified the UNECE Convention, "On the Protection and Use of Transboundary Waters and International Lakes", on January 5, 1994, the primary document for transboundary rivers and, with the exception of Kosovo, it has been ratified by all neighbouring countries.

Part I of the Convention applies to all parties. The first article is a summary of definitions for "Transboundary Waters".

The first paragraph of the general provisions, Article 2, states that "Parties shall take all appropriate measures to prevent, control and reduce any transboundary impact". It also contains a series of articles related to "Prevention, control and reduction", "Monitoring", "Research and development", "Information sharing, "Responsibility and obligation" and "Information protection".

Part II deals with "Provisions regarding cross-border countries". In this section, Article 9 covers “Bilateral and multilateral cooperation”, including the creation of joint bodies. It also covers areas of cooperation such as joint scientific research, information exchange and warning and alert systems. The third and last part deals with institutional issues.

The Convention deals with the quality of water and not with its quantity. One of the key concepts of the convention is that transboundary States in their territories use an international water course in an "equitable and reasonable manner". The Convention defines the criteria for judging whether the use is 'fair and reasonable'.

The Law on “The protection of transboundary Lakes”, No 9103, date 10.07.2003, consider protection and monitoring of transboundary lakes and their basins. The law is focused mostly at three main Lakes:

of Shkodra, Prespa and Ohrid. The law aims at the environmental protection of the transboundary lakes in their natural state, guaranteeing the appropriate conditions for the development of life and ecosystems in these lakes, through the promotion of useful activities in compliance with the requirements of the sustainable development principle and stopping of activities that threaten them. Further to this aim, unique ecosystems, with international value, such as the above-mentioned transboundary lakes, are specially protected by the state, and have been proclaimed as protected areas, according to laws no. 8906, dated 06.06.2002, on “Protected areas” and no. 8093, dated 21.03.1996 on “Water reserves”, as well as through international conventions ratified by Albania. (Now, all of them are proclaimed by the Decisions of Councils of Ministers as protected areas, while Skadar Lake is proclaimed as a Ramsar site). The scientific research activities in transboundary lakes are implemented with the approval of the REAs or by MEFWA.

Law No. 9115, dt 24.7.2003 “On the Environmental Treatment of Wastewater” is aimed at protecting the environment and the health of people from the negative impacts of wastewater, defining the rules for their environmental treatment and the obligations of wastewater discharge. The objects of this Law are the urban and industrial wastewaters, according to the special branches of the industry, waters from the irrigation of the agricultural lands and sewerage of any kind.

3.8.8 Laws and Regulations in the Field of Public service

- Law No. 45/2013 on the amendment of the law no. 10138 dated 11.05.2009 "On public health";
- Law No. 37/2016 on the amendment of the law no. 10081, dated 23.2.2009 "On the permission, authorization and licensing of the Republic of Albania";
- DCM no. 145 dated 26.02.1998 "On the approval of the hygiene and sanitation regulation for drinking water quality control, design, construction and supervision of water supply systems";
- Law No. 9860, dated 21.1.2008 amending Law No. 8518, dated 30.07.1999 "On irrigation and drainage";

3.8.9 Laws and Regulations in the Field of construction permit procedure

3.8.9.1 Permitting requirements for CRAD

The environmental legal aspects in Albania are summarized in the Law "On Environmental Protection" No. 10431, date 09.06.2011. This law regulates the local and national principles in the protection of the environment, defines the requirements for preparation of EIA, strategic environmental assessments, requests for permitting activities that have impacts on environment, pollution prevention and reduction, environmental norms and standards, control and monitoring environmental, the duties of the authorities, the role of the public and sanctions in cases of violation of the law.

The legal framework for Environmental Impact Assessment which is concluded with an Environmental Permit for each sub-project, consists of a series of laws and by-laws:

1. Law No. 10431, dated 09.06.2011 "On Environmental Protection"
2. Law No. 10448, dated 17.07.2011 "On Environmental Permits"
3. Law No. 10440, dated 07.07.2011 "On Environmental Impact Assessment".

4. VKM No. 249, dated 24.04.2003 "For the approval of documentation for environmental permits and elements of the environmental permit".
5. No. 1189, dated 18.11.2009 "On the rules and procedures for the design and implementation of the program national environmental monitoring"
6. AARHUS Convention "On the right of the public to environmental information, public participation in decision-making and to refer you to the court for environmental issues"
7. Law no. 10081, dated 23.02.2009 "On licenses, authorizations and permits in the Republic of Albania", which defines a "one-stop shop" for all licenses, authorizations and permits that are issued to natural or legal persons for carrying out an activity with public interest or use of a public facility.
8. Law no. 10137, dated 11.05.2009 "On some changes in the legislation in force for licenses, authorizations and permits in the Republic of Albania", which reflects the changes in the existing legislation of the specific areas affected by law no. 10081, dated 23.02.2009.
9. DCM no. 538, dated 26.05.2009 "On licenses and permits that are handled by or through the National Licensing Centre and some other common bylaws".

The procedure also includes: a) consultations with the relevant authorities, and b) public debates between representatives of the ministry that licenses the proposal, bodies for the regulation of the territory and tourism, local government bodies, interested persons, environmental NGOs, and proponents.

3.9 INTERNATIONAL CONVENTIONS AND AGREEMENTS

Albania is signatory to a number of international agreements.

Table 10: International Conventions and Agreements Signed/Ratified Albania

Convention/Agreement	Overview	Ratified	Relevance to the Project
General			
Aarhus Convention on Access to Information, Public Participation in Decision-making, and Access to Justice in Environmental Matters (1998)	The Convention establishes a number of rights of the public with regard to the environment; including access to environmental information; public participation in environmental decision making and access to justice[5].	26 October 2000	Arrangements are to be made by public authorities to enable the public potentially affected by the project and environmental non-governmental organizations to comment on proposals for projects affecting the environment or plans and programs relating to the environment. The comments received are to be taken into due consideration in decision-making, and information to be provided on the final decisions and the reasons for it.
Climate Change			
UN Framework Convention on Climate Change (UNFCCC) (1992) entered into force in 1994	The United Nations Framework Convention on Climate Change (UNFCCC) has been crucial in	01/12/1994	As Albania is signatory to the convention, every effort should be made to limit GHGs.

Convention/Agreement	Overview	Ratified	Relevance to the Project
	addressing climate change and the need for a reduction of emissions of greenhouse gases. The ultimate objective of the Convention, is to stabilize greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous human interference with the climate system		
Paris Agreement at the COP21 in Paris on 12 December 2015, entered into force on 4 November 2016	The Paris Agreement builds on the Climate Change Convention to combat climate change[6].	21/09/2016	The project should adopt mitigation measures to minimize greenhouse gas emissions.
Kyoto Protocol	The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change; signatories commit to setting internationally binding emission reduction targets[7].	01/04/2005	The project should adopt mitigation measures to minimize greenhouse gas emissions
Water			
Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992)	Avoid or minimize adverse effects on water resources and water quality	5 January 1994	In case the project has discharges in international or transboundary water courses.
Biodiversity			
Convention on Biological Diversity (CBD) (1992)	Avoid or minimize adverse effects on important habitats and species, internationally and naturally designated nature conservation sites; conservation, sustainable and equitable use of biodiversity	5 April 1994	The Convention requires, under Principle 17, that EIA shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.
Convention on the Protection of Wild Flora and Fauna and Natural Habitats in Europe (Bern Convention) (1976)	The Convention aims to ensure conservation of wild flora and fauna species and their habitats. Special attention is given to endangered and vulnerable species, including endangered and vulnerable migratory species[8]; to avoid or minimize adverse effects upon important habitats and species, internationally	2 March 1998	As Albania is signatory to the convention, every effort should be made to limit direct and indirect impacts on wild flora and fauna species and their habitats.

Convention/Agreement	Overview	Ratified	Relevance to the Project
	and naturally designated nature conservation sites.		
Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) (1979)	Avoid or minimize adverse effects upon migratory species	1 September 2001	There are specific resolutions and instruments such as species action plans under this convention that apply to Albania.
Agreement on the Conservation of African-Eurasian Migratory Waterbirds (1995)	African-Eurasian Migratory Waterbirds Agreement (AEWA) covers 254 species of birds ecologically dependent on wetlands for at least part of their annual cycle. All AEWA species cross international boundaries during their migrations and require good quality habitat for breeding as well as a network of suitable sites to support their annual journeys[9]. Avoid or minimize adverse effects upon migratory water bird species	1 September 2001	Species and habitats protected by this agreement may be present in the study area. Mitigation measures for the protection of flora and fauna have to be identified and addressed in the ESIA.
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1975)	CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival[10].	27 June 2003	In case threatened and endangered species and their habitats have been identified in the study area, mitigation measures for the protection of flora and fauna must be addressed in the ESIA.
Cultural Heritage			
Convention on the Protection of the World Cultural and Natural Heritage (1989)	Avoid adverse effects upon Albanian and World Cultural Heritage sites; minimize adverse effects on unknown and intangible cultural heritage sites, material assets and another infrastructure.	10 July 1989	Mitigation measures for the protection of cultural heritage have to be proposed.
Labor			
ILO Convention 29 Forced Labour Convention (1930) and ILO 105 Abolition of Forced Labour Convention (1957)	Its object and purpose is to suppress the use of forced labour in all its forms irrespective of the nature of the work or the sector of activity in which it may be performed.	25 June 1957 27 February 1997	Applicable in every project site, by main and sub-contractors.

Convention/Agreement	Overview	Ratified	Relevance to the Project
ILO Convention 87 Freedom of Association and Protection of the Right to Organize (1948)	Protects the rights of workers and employers to join organizations of their own choosing without previous authorization.	3 June 1957	Applicable in every project site, by main and sub-contractors.
ILO Convention 98 Right to Organize and Collective Bargaining	The convention provides for workers to be able to join unions and engage in collective bargaining.	3 June 1957	Applicable in every project site, by main and sub-contractors.
ILO Convention 100 Equal Remuneration Convention (1951)	Each Member shall, by means appropriate to the methods in operation for determining rates of remuneration, promote and, in so far as is consistent with such methods, ensure the application to all workers of the principle of equal remuneration for men and women workers for work of equal value.	3 June 1957	Applicable in every project site, by main and sub-contractors.

3.10 THE WORLD BANK'S REQUIREMENTS

3.10.1Environmental and Social Standards

The Bank is committed to supporting Borrowers in the design and implementation of environmentally and socially sustainable projects, as well as strengthening the capacity of the environmental and social frameworks applied by Borrowers in assessing and managing environmental and social risks and impacts. For these purposes, the Bank has established special ESSs designed to avoid, minimize, or mitigate the negative environmental and social risks and impacts of projects.

Desirable results are described in the objectives of each ESS, with specific requirements to assist Borrowers in achieving those objectives.

Below is an overview of the World Bank's environmental and social standards as well as a brief explanation of their significance.

Environmental and Social Framework: Environmental and Social Standards

ESS1 Assessment and Management of Environmental and Social Risks and Impacts sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing (IPF), in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).

ESS2 Labor and Working Conditions recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth.

ESS3 Resource Efficiency and Pollution Prevention and Management recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels.

ESS4: Community Health and Safety addresses the health, safety, and security risks and impacts on project-affected communities

ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement - involuntary resettlement should be avoided.

ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development and it recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support.

ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities ensures that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples.

ESS8: Cultural Heritage recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future.

ESS9: Financial Intermediaries (FIs) recognizes that strong domestic capital and financial markets and access to finance are important for economic development, growth and poverty reduction.

ESS10: Stakeholder Engagement and Information Disclosure recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice.

Based on the present evaluation, these are the ESF Standards which are considered relevant: ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, and ESS10

- ESS1 – Assessment and Management of Environmental and Social Risks and Impacts.
- ESS2 – Labor and Working Conditions.
- ESS3 – Resource Efficiency and Pollution Prevention and Management
- ESS4 – Community Health and Safety.
- ESS5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- ESS6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources.
- ESS10 – Stakeholder Engagement

Environmental and Social Standards		Relevance to CRAD
ESS1	Assessment and Management of Environmental and Social Risks and Impacts.	**Relevant.** This standard serves as a guideline for the development of E&S instruments, including those developed for the Project: (i) ESMF, (ii) SEP, (iii) RPF (iv) LMP, (v) ESCP and appropriate risk assessment for individual activities carried out within the project. The Borrower will prepare: 1. *Draft Environmental and Social Management Framework (ESMF),* which will define requirements for the preparation of the site-specific instruments for projects activities, namely Environmental and Social Impact Assessment (ESIA) or Environmental and Social Management Plan (ESMP), to be prepared during project implementation prior to the commencement of any projects activities related works. The ESMF will be used during implementation to screen out substantial and high-risk projects activities and assess the level and requirements of due diligence for each of the project activities.

Environmental and Social Standards		Relevance to CRAD
		The ESMF sections describe: ▪ the overall project, ▪ its baseline conditions, ▪ applicable policies and legislation, and ▪ overall key environmental and social considerations and potential impacts. It also identifies and outlines detailed management and mitigation measures and implementation arrangements related to all physical activities which will be defined during project implementation. 2. *Environmental and Social Impact Assessment (ESIA)* will be updated based on World Bank ESS standards requirements for the rehabilitation & modernization of I&D Schemes, establishment & upgrade works on Border Inspection Posts (BIPs). 3. *Environmental and Social Management Plan (ESMP)* study for rehabilitation, modernization of I&D schemes, construction of Pumping stations and BIPs upgrade works. 4. Environmental and Social Commitment Plan (ESCP), which will be part of the Loan Agreement. The ESCP lays out the E&S instruments that shall be adopted and implemented under the project, all of which shall be subject to prior consultation and disclosure. Once adopted, said E&S instruments may be revised from time to time with prior written agreement by the Bank. 5. *Stakeholder Engagement Plan (SEP*) needs to be developed and implemented as well as adequate disclosure needs to be done. This should aim to inform the community about project related adverse impacts or risks.
ESS2	Labour and Working Conditions	**Relevant.** The ESS 2 applies to workers (construction & operation) directly engaged by the borrower (direct workers), Environmental Health and Safety (EHS), workers engaged through third parties (contracted workers), as well as workers engaged by the client's primary suppliers & contractor (supply chain workers). The project will involve the employment of direct and contracted workers during the construction phase. This standard serves as a guideline for creating healthy relationships between employees and management. The main risk associated with labor is the risk of informal work. The risks of unpaid and underpaid work, work overload, poor employment conditions, lack of occupational health and safety measures, and denied access to a social, pension, or health insurance are related to informal work. In order to ensure compliance of third parties, i.e. different contractors with requirements referred to in ESS2, a checklist for checking the labour and compliance, and monitoring and evaluation procedures need to be developed. The LMP report will be prepared in accordance with this standard and will contain: - The implementing agency will need regular monitoring compliance with the ESS2 guidelines/requirements and ensure that these meet at the project sites as a part of oversight procedures. - Undertake internal audits and follow-ups on corrective actions to assess the efficacy of the oversight system at the project site. - The implementing agency needs to ensure adequate facilities and amenities, including health & sanitation, security, waste management, and disposal measures: adequate working space per person; potable water that meets national standards and world bank standards; toilets, washing and cleaning facilities; canteen/mess or fuel; locker/storage facilities; and facilities for management and disposal of garbage and other waste at the labor camp. - Summary of site-specific human resources policies that the borrower will develop in accordance with national Human Resources Policies (exc., informing employees by the contractor of their employment and labor rights under national laws). - Gender equality of employees wil be presented through lows and regulations. (Equal opportunity should be given to both men and

Environmental and Social Standards		Relevance to CRAD
		women depending on their skills and capacity wages, work hours and other benefits should be as per the national labour and employment Laws at the project sites.)
ESS3	Resource Efficiency and Pollution Prevention and Management	**Relevant.** This standard sets out requirements for addressing resource efficiency issues and pollution prevention and pollution management throughout the project life cycle. Since most activities involve construction works, the main risk is that contractors will not be aware of best practices for avoiding or minimising pollution from project activities or avoiding or minimising adverse impacts on human health and the environment. A site-specific ESMP will serve as a guideline for contractors to implement appropriate pollution prevention and management measures.
ESS4	Community Health and Safety	**Relevant**. The Project designs will include necessary measures for the adaptation of climate changes and natural hazards considering safety risks to the community. The community health and safety impacts will be addressed in site-specific ESIAs and ESMPs, in line with the guidelines provided in the ESMF. **Sub-Project ESIA/ESMPs to include** • **Construction design and safety standards**: Third party safety procedures in reconstruction of drainage pumping stations in Hoxhara including from potential exposure to operational accidents, natural hazards and weather events (flooding of canals) • **Risk disclosure and precautionary measures on the principle of universal access.** Project implementation will require the use of heavy vehicles, machinery, frequent transport of people and goods, which can create risks to road safety and pedestrian safety. • **Waste management, traffic and road safety assessment** and measures as part of ESA (ESS1); monitoring of incidents and accidents • Assessment of impact of the project on eco-system services (ESS1). • **Health safety guidelines**: Exposure to health issues from accidents or movement of heavy machinery/vehicles during the construction phase etc. Attention will be given to Occupational Health and Safety of workers and community in line with the requirements of this standard.
ESS5	Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	**Relevant**. In the project, there is no need for the purchase of land and relocation of the PAP, since the physical footprint of the project where constructions will have to be made has not been determined yet. However, once the track is set, a Resettlement Policy Framework (PRF) will have to be prepared to follow the preparations of site resettlement instruments.
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources.	**Relevant.** Mitigation measures with respect to biodiversity conservation or for screening out activities that may negatively impact habitats.
ESS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	**Not Relevant**
ESS8	Cultural Heritage	**Not Relevant.** The project includes rehabilitation and modernization of I&D schemes, and they are not on sites with Cultural Heritage.
ESS9	Financial Intermediaries	**Not Relevant.**
ESS10	Stakeholder Engagement	**Relevant.** Will guide the principles of public disclosure of the prepared site-specific documents.

3.10.2Gap Analysis Between EIA Local Regulation and World Bank ESS

ESS No	GAP	Measures for Bridging the Gaps
ESS 1 Assessment and Management of Environmental and Social Risks and Impacts;	EIA according to National Standards, needs some additional clarifications to bring data and analysis in line with international standards. ESMP and ESMS according to National Standards – Major Gap. National Legislation requires only Rehabilitation Plans at the end of the project but no ESMP or ESMS is required. Need to be created/developed to fulfil ESS requirements. Identification of Risks and Significance of Impacts according to National Standards – Major Gap. National Legislation has a list of parameters to be monitored but it requires upgrading, in documentation but also in baseline data analysis. Particularly important for the process waste areas, residues, tailing and spoil areas. Management processes and definitions for the ESMP need to be developed to meet ESS requirements.	Specific ESMP will be prepared for each Project under the Project in line with the requirements of the present ESMF
ESS 2 Labor and Working Conditions;	Existing legal framework and Labor Inspectorate of Albanian Authorities provide foundation of assurance for this ESS. It has ratified 53 International Labour Organization (ILO) Conventions, of which 48 are in force, including the eight fundamental Conventions.	Establish a worker GRM. Prepare Labor Management Plans for construction works.
ESS 3 Resource Efficiency and Pollution Prevention and Management	Current Permits and Approvals underpin the response to this ESS. Permits create a valid and robust base for anticipated development under future implementation of EU requirements. Some technical details and modelling and analysis will need to be in line with ESS requirements in line with what is appropriate for the Projects sites with particular reference to process emissions and waste residues, tailings and spoil areas.	Following the indications of the present ESMF, specific Project ESIA and ESMP will assess the impacts generated by the Project on the main environmental components and will identify measures for reducing or avoiding such impacts
ESS 4 Community Health and Safety	Existing legal framework, including Labor and Environment Inspectorate of Albanian Authorities, provides foundation for some basic consideration on this ESS. Need to define approach and integrate it within respective ESMP and ESIA. Elements need to be defined and documented in the Projects Social Management Plan.	The present ESMF defines the approach for Community health and safety which shall be integrated within respective ESMP and ESIA.
ESS 5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	National Legal Framework only recognizes affected persons who have formal legal rights. Major Gap. The key gap is that Albanian legislation does not recognize loss of livelihoods associated to land acquisition. Restrictions that result in people experiencing loss of access to physical assets or natural resources are not addressed explicitly by Albanian legislation.	The Present ESMF - along with the RPF -includes requirements for land acquisition and compensation process. Specific ESIA and ESMP shall be aligned with these documents.

ESS No	GAP	Measures for Bridging the Gaps
ESS 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources	Existing legal framework, provide foundation for some basic consideration on this ESS. Major Gap. Usually there is a lack of data to create a proper baseline and some extra investigation effort is required to meet ESS requirements. The needed data should support the proper assessment of impact and significance.	Although impacts generated by the Project on biodiversity may be considered as negligible in consideration that most of the works will be on rehabilitation of existing I&D schemes, reconstruction objects BIP, a small area of Hoxhare will have construction in plain area and based in the construction type of MFH, however a proper baseline study shall be prepared within each ESMP/ESIA indicating any protected areas in the vicinity, presence of sensitive habitats and terrestrial biodiversity, ecosystem, etc. This will allow to better assess the impacts and identify relevant mitigation measures.
ESS 7 Indigenous Peoples/Sub-Saharan African Historically Underserve and Traditional Local Communities	Not relevant to the project	There are no indigenous people in the country.
ESS 8 Cultural Heritage	Eexisting Approval and Permit from the Albanian Authorities provide foundation of assurance for this ESS.	This standard is not currently relevant. The project activities will not affect any known cultural heritage sites since they are mostly rehabilitation works of existing facilities.
ESS 10 Stakeholder Engagement and Information Disclosure	Existing legal framework provide foundation of assurance for this ESS. It has ratified Aarhus Convention Conventions, which is in force and there are several laws and institutions that monitor the right for information.	Not applicable

3.10.3Gap Analysis Between Albanian Framework on Easement and Acquisition and Wb Standards (ESS 5)

Topic / Issue	WB International Standards	Albanian Law Provisions	Gaps	Measures for CRAD gaps
Involuntary resettlement – Physical and economic displacement	"Involuntary resettlement" as per the ESS5 refers to resettlement, physical displacement (loss of shelter) and economic displacement (loss of livelihood). The ESS5 covers both: 1. Land acquisition, which includes: (a) resettlement of PAPs (b) purchases of property; (c) purchases of property rights (i.e. easements; rights of way) 2. Imposition of restrictions that result in people experiencing loss of access to physical assets or natural resources.	Albanian legislation, including the Expropriation Law, does not recognize "involuntary resettlement". Issues related to land acquisition in the public interest are regulated by Expropriation Law. The law regulates the right of the state to expropriate properties of natural or juridical persons in the public interest versus compensation. In addition, compensation is to be provided for the devaluation of properties which are not the object of expropriation. The law regulates temporary occupation of land (e.g. for construction works, setting up construction sites, etc.), for up to 2 years, against compensation.	The key gap is that Albanian legislation does not recognize resettlement or loss of livelihoods associated to land acquisition. The law recognizes affected persons who have formal legal rights only. Restrictions that result in people experiencing loss of access to physical assets or natural resources are not addressed explicitly by Albanian legislation.	Conducting, site specific RAP/ARAP which shall include measures and design adequate support and assistance commensurate to the impact. PAPs informal owners of lands shall receive cash compensation. PAP is entitled to cash compensation at replacement cost for land, structures or developments on land and any standing annual or perennial crops at replacement value.
Planning process	Standards requires to prepare a Resettlement Action Plan (or Livelihood Restoration Framework if no physical displacement is anticipated). The RAP includes a census and detailed socioeconomic baseline. Affected persons are to be informed and consulted during the planning process. Special provisions have to be made in respect of consultation with vulnerable groups.	The application for expropriation in the public interest should include a detailed list of properties to be expropriated, based on the Albanian Competition Authority (ACA) register. However, it does not deal with socioeconomic issues. Affected owners are to be notified of the application for expropriation.	No requirement for any participatory planning process as per Albanian legislation. Albanian legislation does not set out any requirements for the preparation of resettlement or livelihood restoration plans. In addition, there are no requirements in respect of consultation with persons affected or for special attention to vulnerable groups.	RAPs, Census Survey and Socio-economic impact assessments shall be prepared in addition to national requirements

Topic / Issue	WB International Standards	Albanian Law Provisions	Gaps	Measures for CRAD gaps
Public consultations	Meaningful consultations with affected persons and communities, local authorities, and, as appropriate, non-governmental organizations needs to be carried out	The PAPs are contacted in the very process of expropriation, but there is no public discussion.	Consultation and disclosure process is not defined and there are no specific requirements in the Albanian legislation; National legislation does not require public consultation with affected persons and communities.	The Project promoter shall consult publicly on this and every other individual resettlement instrument.
Cut-off date	in the absence of national government procedures, the date of completion of the census and assets inventory represents the cut-off date for eligibility. Individuals who move into the project affected area after the cut-off date are not eligible for compensation and other types of assistance. Information regarding the cut-off date should be well-documented and disseminated throughout the project area.	It is understood that the date of the Council of Ministers decision on expropriation is the cut-off date.	No gap	The Project promoter shall consult publicly on this topic and explain its importance.
Negotiated settlements	Negotiated settlements are encouraged to help avoid expropriation and eliminate the need to use governmental authority to remove people forcibly.	Negotiated settlements are encouraged by the Expropriation Law. Art. 6 of the Expropriation Law provides that when the owner agrees to transfer his/her property to the state, under conditions (compensation) offered by the competent ministry, expropriation is considered completed. The owner has to inform the competent ministry within 15 days from being notified (publication) whether accepts the offer (art.16). If an agreement is not	No gap	

Topic / Issue	WB International Standards	Albanian Law Provisions	Gaps	Measures for CRAD gaps
		reached, after a decision on expropriation is passed by the Council of Ministers, the affected owner has the right to appeal to the court regarding the amount of compensation (art.24)		
Compensation Value and Timing	Compensation for lost assets to be provided at replacement cost, usually calculated as the market value of the assets plus transaction costs related to restoring such assets (registration and transfer taxes). Depreciation of structures and assets should not be taken into account. Compensation (alternative housing and/or cash compensation) has to be provided prior to relocation.	Per Expropriation Law, compensation value to be based on assessment of affected properties by the Expropriation Committee and confirmed by COM Decision. This provision explicitly states that depreciation of structures and assets is to be taken into account. If agreement on compensation is reached, transfer of property and payment of compensation to take place within 15 days from notification by affected owner that he/she accepts the offer (art.16). If not, compensation is provided based on a decision on expropriation of the Council of Ministers, within a period of three months, or after the court decision (art.23).	Compensation value during expropriation is not defined according to a specific study on compensation values that takes into account the replacement cost at market value; Albanian legislation does not take account of transaction cost, and provides that depreciation is to be taken into account, which does not meet the Standards "replacement value" requirement	The Project promoter shall calculate the transaction cost in the total budget.
Provision of adequate housing / shelter with security of tenure	Adequate housing is measured by quality, safety, affordability, habitability, cultural appropriateness, accessibility and location characteristics, including access to infrastructure and services. Security of tenure means that resettled persons	Law on Social Programmes for the Housing of Inhabitants of Urban Zones sets out the criteria for housing requirements (minimum living areas in sqm/person)	The Expropriation Law does not foresee compensation in kind and therefore there are no provisions of adequate housing with security of tenure. The Expropriation Law	Physical displacement is not anticipated, and this requirement is therefore unlikely to apply. However, for each individual RAP, refereeing to the specific project, this shall be take in consideration if

Topic / Issue	WB International Standards	Albanian Law Provisions	Gaps	Measures for CRAD gaps
	are protected from forced evictions, to the greatest extent possible. New resettlement sites built for displaced persons should offer improved living conditions with security of tenure.		does not include any provisions about resettlement requirements.	there will be foreseen physical displacement.
Vulnerable groups	Specific assistance for vulnerable groups.	According to law no. 9355, dated 10.03.2005 "On social assistance and services", vulnerable persons are entitled to various forms of social welfare payments or a range of community-based services.	Specific assistance for vulnerable groups is not part of the expropriation process in Albania. However, legal tools exist outside of the expropriation process to provide assistance.	The Project promoter shall provide legal and resettlement assistance
Eligibility for compensation / resettlement and entitlements in case of physical displacement	ESS5 distinguishes three main categories of affected people: 1- those who have formal legal rights to affected assets are eligible to full compensation at replacement cost for land and structures as applicable; 2- those who have no formal rights to affected assets at the time of the census, but who have a claim to land that is recognized or recognizable under national laws, are eligible to similar compensation as those in Category 1; 3- those who have no recognizable legal right or claim to the land they occupy are not necessarily eligible to compensation for land but should receive: (i) compensation for structures that they own and occupy and for any other improvements to land at full replacement cost; and (ii) in case of physical displacement, a choice of options for adequate housing with	The Expropriation Law addresses people in Category 1. The Cadaster Law addresses people in Category 2. The law no. 9232, dated 13.05.2004 "On social programs for the housing of inhabitants of urban areas" establishes a legal framework for the development of social housing programs in Albanian municipalities, which may apply to people in Category 3. The law defines the administrative regulations and procedures that will ensure the planning, management and distribution of social housing to vulnerable people, in line with their income and the level of state support.	Informal or unregistered ownership and usufruct rights - legislation does not recognize the rights of informal possessors, owners/users therefore not eligible for resettlement and livelihood restoration support.	Specific measures to be devised in RAPs

Topic / Issue	WB International Standards	Albanian Law Provisions	Gaps	Measures for CRAD gaps
	security of tenure and resettlement assistance.			
Grievance mechanism	A grievance mechanism should be set up as early as possible in the process, to receive and address in a timely fashion specific concerns about compensation and relocation that are raised by displaced persons and/or members of host communities, including a recourse mechanism designed to resolve disputes in an impartial manner. The grievance mechanism, process, or procedure should address concerns promptly and effectively, using an understandable and transparent process that is culturally appropriate and readily accessible to all segments of the affected communities, at no cost and without retribution.	Expropriation Law provides for the right of the affected persons to bring actions before the courts for seeking higher compensation from that defined in the decision on expropriation enacted by the Council of Ministers, but affected people cannot challenge the expropriation process per se. Claims do not cause suspension of the expropriation process, though they may result in a higher compensation to be paid if so decided by the competent court.	Grievance management and resolution is applicable only during the two-week public notice of the expropriated file. While there is no requirement in Albanian law to establish an extra-judicial grievance mechanism, this does not contradict the process outlined in Albanian law as long as affected people can keep on enjoying their constitutional right to address any claim to the competent court as they see fit.	The Project promoter shall set up a grievance mechanism for two tiers, including internal one and external, before PAPs resort to Justice, the last resort of the grievance mechanism.
Additional assistance to PAPs	It is necessary to provide assistance during construction. Particular attention is to be paid to the needs of poor and vulnerable individuals and groups. Either for the expropriated PAPs the client should support technically the PAPs in order to take the compensation.	No particular legal provision	It is necessary to provide assistance during construction. Particular attention to vulnerable individuals and groups	Support during construction. Support after expropriation
Information disclosure and public information	The client should summarize the information contained in the Resettlement Action Plan or Livelihood Restoration Framework for public	The Expropriation Law obliges the Ministry to notify persons affected directly (either by registered mail or other means of notification having	Apart from notifications to affected people, there is no requirement in Albanian law to consult and to disclose documentation publicly.	Such consultation and disclosure are not prohibited and can/should be accommodated as a specific measure.

Topic / Issue	WB International Standards	Albanian Law Provisions	Gaps	Measures for CRAD gaps
	disclosure to ensure that affected people understand the compensation procedures and know what to expect at the various stages of the project (for example, when an offer will be made to them, how long they will have to respond, grievance procedures, legal procedures to be followed if negotiations fail). Consultations will continue during the implementation, monitoring and evaluation of compensation payment and resettlement	confirmation that notice is received by the addressee; in case the addressee resides abroad, the notification will be made through publication in the administrative unit/municipality where the land subject to expropriation is located) and to publish during an entire week the application for expropriation in the Official Journal as well as in national and local newspapers. Within fifteen days after the last date of the publication, the persons subject to expropriation should inform the ministry on their claims related to the properties affected by the expropriation.	However, such consultation and disclosure are not prohibited and can be accommodated as a specific measure.	

4 DESCRITPION OF EXISTING ENVIRONMENT

This chapter provides general information about the baseline E&S conditions and characteristics of the project's area of influence, such as water resources, air quality, solid waste management, climate, air temperature, solar radiation, rainfalls, physical environment – air quality; hydrology and surface water, lakes and lagunes, groundwater, flooding hazard, soil and groundwater land degradation and soil erosion, seismic hazard, climate change, waste management practices, biological environment – flora, fauna; protected area; socioeconomic and cultural heritage.

4.1 PROJECT LOCATION

Geographically the project is located in the central and southern parts of Albania, specifically in the municipalities of Divjake (Divjake, Terbuf Administrative Units (AU)), Lushnje (Dushke, Golem, Lushnje AU), Fier (Dërmenas AU), and Konispol Municipality (Xarre (AU)).

1. Municipality of Lushnje

The municipality of Lushnje is part of the Fier district and has as its center the city of Lushnje. It is bounded to the north by Rrogozhina Municipality, to the northeast by Peqin Municipality, to the east by Belsh Municipality, to the southeast by Ura Vajgurore Municipality, to the south by Roskovec Municipality, to the southwest by Fier Municipality, and to the west by Divjaka Municipality. The municipality has an area of 372.72 km² and is composed of 11 administrative units, which are: Lushnje, Allkaj, Bubullimë, Hysgjokaj, Golem, Dushk, Karbunarë, Ballakat, Fier-Shegan, Kolonje and Krutje.

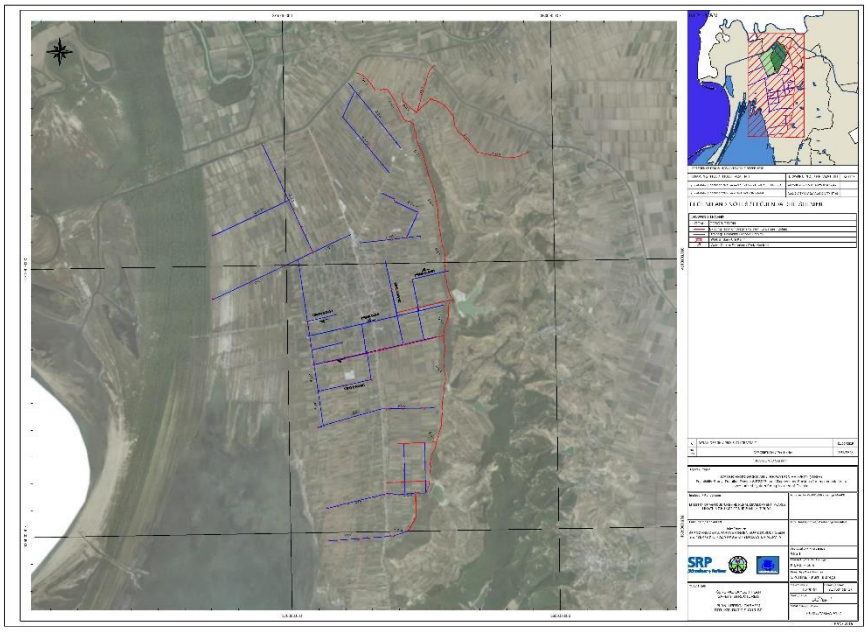


Figure 1Lushnje Irrigation Scheme

2. Municipality of Divjaka

Divjake Municipality lies in the central part of Albania and is bordered to the north by Kavaje Municipality, the east by Lushnje Municipality, the south by Fier Municipality, and the west by the Adriatic Sea. The municipality has an area of 309.58 km2, and its capital is the city of Divjaka. The entire territory consists mainly of rural areas with a north-south extension. The municipality consists of four administrative units: Divjake, Terbuf, Grabjan, Gradisht, and Remas.

Geographically the Project site is part of the Myzeqe e Madhe (agricultural fields), which lie on the shores of the Adriatic Sea, in the central part of the Western Lowland; it is bordered to the north by Shkumbin River, to the south by Seman River, to the east by the hills of Divjaka and to the west by the Adriatic Sea. This geographical position is evaluated for facilitation of services and activities of the human community living in the municipality and its villages.

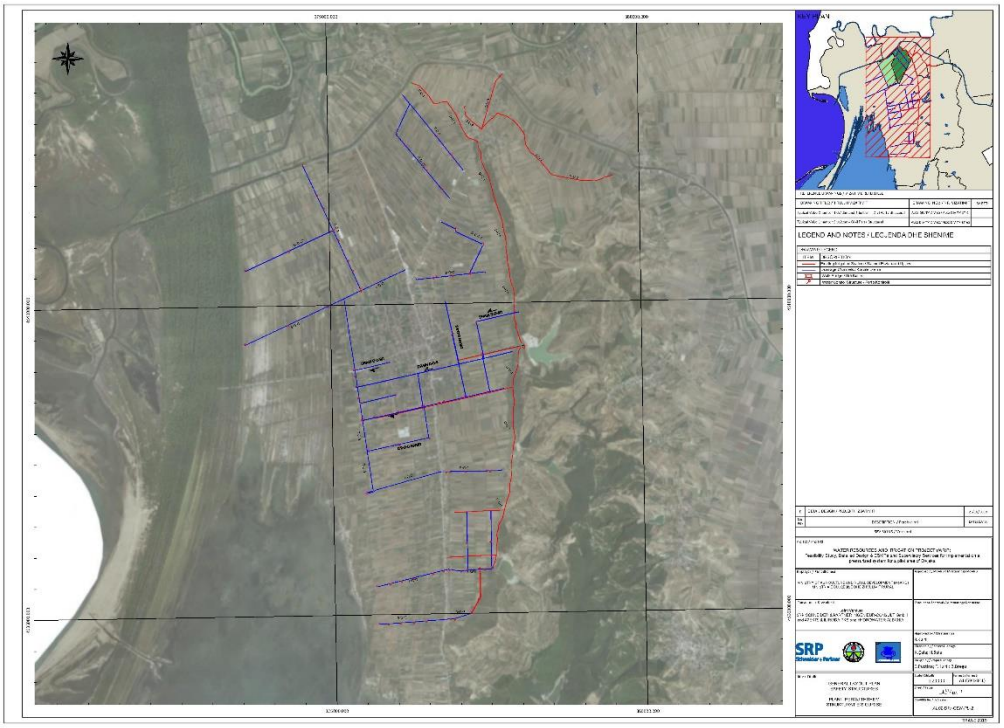
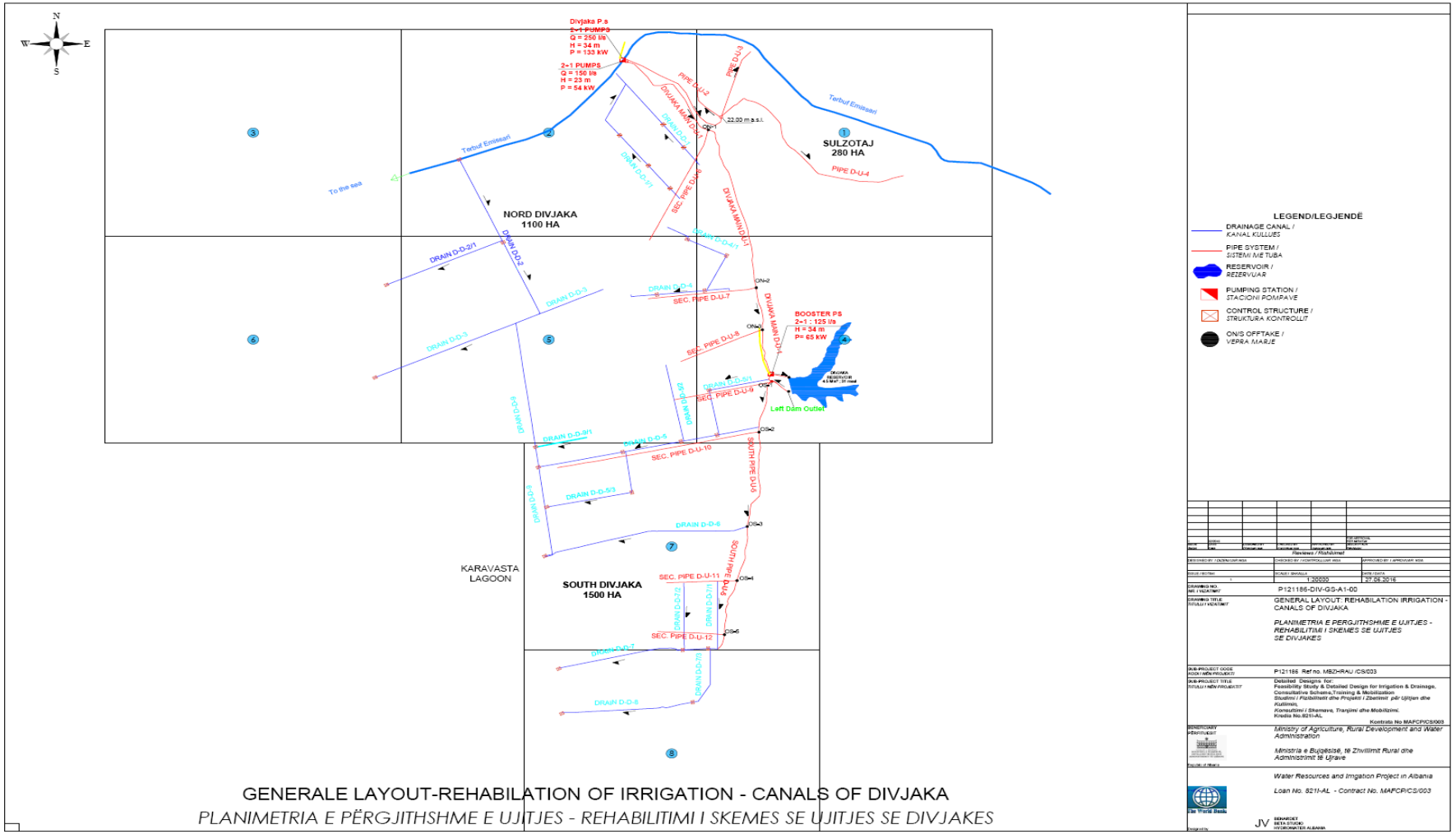


Figure 2Divjaka Irrigation Scheme



GENERALE LAYOUT-REHABILATION OF IRRIGATION - CANALS OF DIVJAKA

PLANIMETRIA E PËRGJITHSHME E UJITJES - REHABILITIMI I SKEMES SE UJITJES SE DIVJAKES

Figure 3 General Layout, Rehabilitation of irrigation – canals of Divjaka

3. Municipality of Konispol

The Konispol Municipality has an area of 221.88 km^2 with a density about 61.91 resident /km^2, is in the southern corner of Gjirokaster district, about 30 km from the Municipality of Saranda. It is bounded by Greece on the southern state border, on the east by Finiq municipality, and on the west by the Ionian Sea. The capital of the Municipality is the city of Konispol. The new municipality consists of three Administrative Units:

- Konispol, which includes the town of Konispol and a village,
- Xarre includes 8 villages (*project area*) and
- Brands that include 6 villages.

Xarra commune is situated in South of Albania in the Saranda region. The population is around 6,750 inhabitants and consists of five villages Shkalle, Mursi, Vrine, Xarra and Shendelli. The present irrigated area is around 2000 ha, with the main crop patterns being trees olives, vineyards and oranges and mandarins. The Xarra I&D scheme obtains its water principally by from two irrigation reservoirs Janjari and Mursi that are filled by the Pavlla River. The Xarra scheme original command area is 3000 ha (2,500 ha in Xarra and 500 ha in Bufi), but the bigger constraint on irrigation is the availability of water delivery through Pavlla river and Janjari Canal. Hence, additional flow is diverted from Pavlla River through a rudimentary existing diversion, with a concrete intake on the right bank facing downstream. The min and secondary canals and their structures are damage due to lack of maintenance and are destroyed. There is also the Janjari scheme that has a command area of 10.000 ha (not part of Xarra I&D) that should have been fed by the Janjari reservoir upstream with a capacity of 15 Mm^3 at an elevation of 145 m.a.s.l. The western side of the I&D scheme runs into Butrint Lake, part a National Park of international importance and a World Heritage Site.

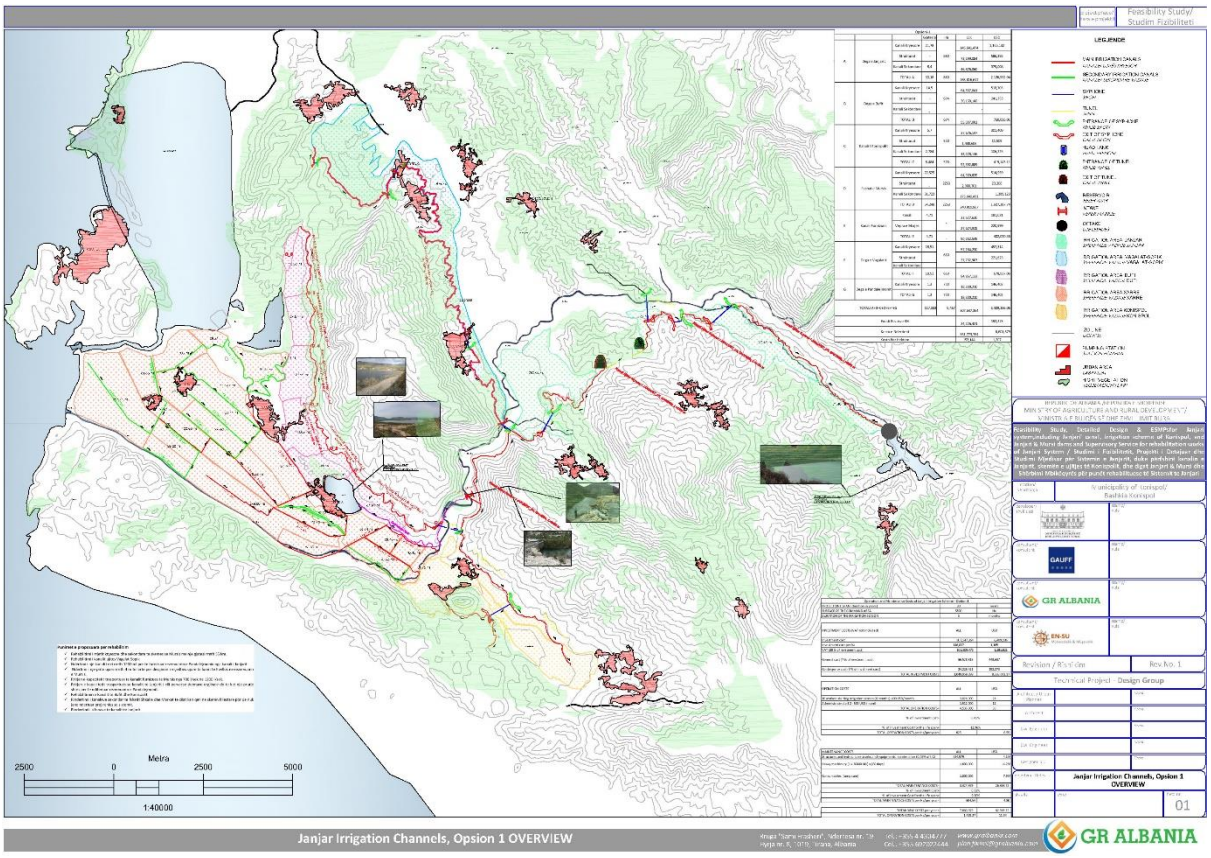


Figure 4 Irrigation Scheme of Mursi

4. Fier Municipality

Geographically, Fier Municipality is bordered to the north by Divjake Municipality, to the east by Roskovec and Patos Municipalities, and to the south by Vlore Municipality, with an area of 619.9 km2.

Fier Municipality consists of ten administrative units: Fier, Cakran, Mbrostar Ura, Libofshe, Qender, Dermenas, Topoje, Levan, Frrakul, and Portez. Fier is the capital city of Fier Municipality. It lies in the Western Lowlands, between the Seman and Vlore rivers. Fieri lies in the western part of Albania, south of the Myzeqe Field and is located 18 km from the coast of the Adriatic Sea. The vast part of the Fier Municipality lies in the low plain area, while Cakran and Frakull Municipalities have hilly territory.

From infrastructure point view the Municipality of Fier lies in a favourable geographical and strategic position, seeing that two of the most important corridors of the country pass through this municipality, which are Corridor VIII and Blue Corridor (Adriatic-Ionian Highway). The highway, which will connect Lushnja with Fier and Vlora, will be a powerful transport artery from and towards Fier. It will pass at a distance of approximately 2 km from the center of Fier.

According to Census 2011, 120,655 people live in Fier municipality territory, while for the civil registry, the number of people that lives in the municipality is 196,324. The municipality population density is 194.6 inhabitants/km2 based on Census 2011 and 316.70 inhabitants/km2 for the civil registry.

Fier Municipality includes the most important agricultural areas of the country, as well as a significant part of the industry related to oil processing. Almost half of the population of the Fier municipality lives in rural areas, which shows the importance of the agricultural sector in economic life. The agricultural production of this area differs from grain to vegetables, fruit trees, livestock, and its by-products. The municipality territory has very fertile lands which constantly become threatened by floods. The municipality has a significant coastline that stretches from the Vjose River estuaries to the Seman River estuaries on the borders of the Divjake-Karavasta National Park. 12 km from Fier city, there are the ruins of the Apollonia ancient city. Fieri has high unemployment caused by the closing of factories during the communist era, and these closed industries have left behind a lot of environmental pollution. Topoje and Dermenas administrative units have a sandy coastline of 30 kilometers, all very suitable for family tourism. The use of the coast for tourism is still in its infancy.

4.2 INTRODUCTION OF BASELINE DATA

Albania is situated in the south-western region of the Balkan Peninsula. The country has a total area of 28,748 km2 which makes it one of the smallest countries in Europe. The neighbouring countries are Montenegro to the northwest, Serbia to the north-east, the former Yugoslav Republic of Macedonia to the north and east, and Greece to the south and south-east. Albania has a 487 km-long coastline divided between the Adriatic and Ionian Seas.

4.2.1 Climate

Albania's climate follows the country's topography, with temperatures and precipitation varying by altitude and distance from the sea. Its topography is dominated by its mountains, hills, and coastline and the country's geologic and climatic characteristics result in an extensive network of rivers and lakes. As such, the country's mostly mountainous landscape is endowed with abundant water resources, diverse flora and fauna, and an extensive coastline on the Adriatic and Ionian Seas. Albania has a subtropical Mediterranean climate.

Average annual temperatures vary from 17.6˚C (in Saranda to the South) to 7˚C (in Vermosh in the North). Lowland areas are characterized by a stable mean temperature of 14˚C–16˚C. Maximum temperatures can reach up to 11.3˚C in mountain areas and 21.8˚C in lowland and coastal zones.

The north, west and southwest regions in Albania experience the highest amounts of rainfall. Annual average rainfall is 1,430 mm; however, the spatial and seasonal distribution varies, with the majority of rainfall occurring during the winter months. The most humid areas are the Albanian Alps in the north (Koder Shengjergj with 2,935 mm and Boga with 2,883 mm of annual precipitation) and

Kurveleshi in the south (Nivica with 2,204 mm of annual precipitation). The highest amount of precipitation is experienced in November and the lowest amounts during July to August. Snowfall occurs in the Albanian Alps, in the central and southern areas. Average snowfall depth in mountainous areas is 600–1,200 cm, with the highest snowfall reaching 2–3 m depth in Vermosh, Boga, Theth, Valbona, Curraj and Lure. In the West Plains lowlands to the southwestern coast, snow is rare.[6]

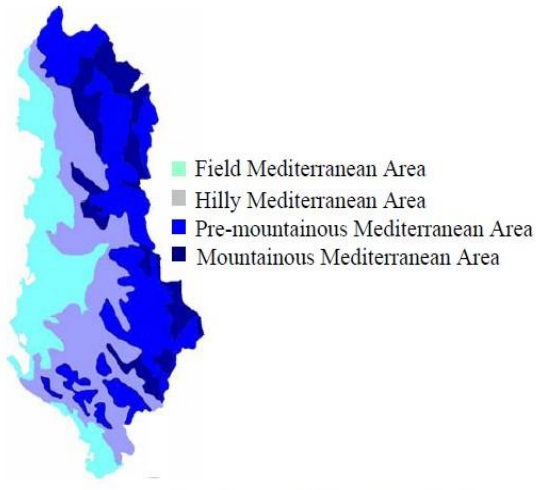


Figure 5 The climate division in Albania (source: AEA_12.jpg (580×505) (aea-al.org))

The project area. Based on their geographical position, the municipalities of Divjake, Lushnje, Fier and Konispol are characterized by a typical Mediterranean climate (plain, hilly, and pre-mountainous), with hot and dry summers and wet and mild winters.

In general, the Mediterranean climate prevails, with all its special features, such as the typical Mediterranean lowland, hilly, paramount, and mountainous climate. In the colder part of the year, weather activity is more pronounced and is associated with cloudy and precipitation weather, which in the winter season in the eastern area take the snow form. The winter season is characterized by intense rainfall, often in the form of rainstorms. In the warm part of the year, especially in summer, there is prevalence of high-temperature anticyclonic weather of high temperature and little precipitation up to drought, which causes the reduction of water resources.

4.2.2 Air temperature

The distribution of the temperatures in Albania presents a considerable variability. Average annual temperatures vary from 17.6°C (in Saranda to the South) to 7°C (in Vermosh in the North). Lowland areas are characterized by a stable mean temperature of 14°C–16°C. Maximum temperatures can reach up to 11.3°C in mountain areas and 21.8°C in lowland and coastal zones. The lowest recorded temperatures were observed in Sheqeras (−25.8°C), Voskopojë (−25.6°C), and Bize (−34.7°C). The highest recorded temperatures were observed in Kuçovë (43.9°C), Roskovec (42.8°C), and Çiflig (42.4°C). During the year, the curb of the temperatures in the whole country is quite regular with a maximum in the summer months and the minimum in the winter months. Mean annual temperature for Albania is 11.6°C and average monthly temperatures ranging between 21°C (July–August) and 1°C (December–January) and mean annual precipitation is 1,019.8 mm, with steady rainfall occurring throughout the year6; the latest climatology (1991–2020) is shown in the figure below.

[6] WBG Climate Change Knowledge Portal (CCKP, 2020). Albania Historical Data.
URL: https://climateknowledgeportal.worldbank.org/country/albania/climate-data-historical

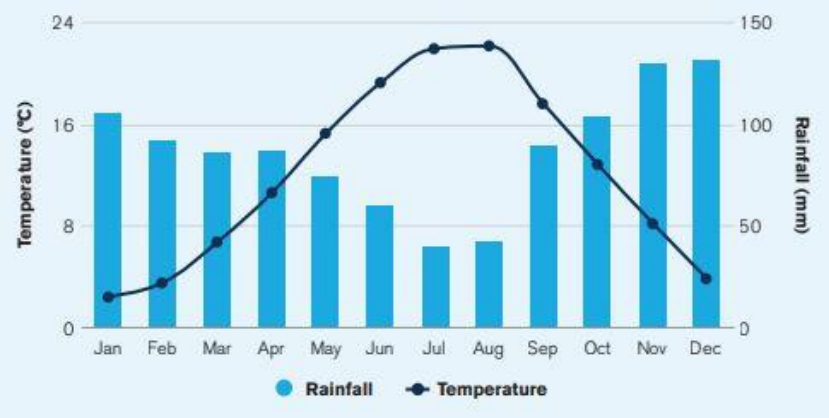


Figure 6 Mean average air temperature in Albania for the period 1991 – 2020.

The map presents the spatial variation of observed average annual precipitation and temperature for 1991–2020.

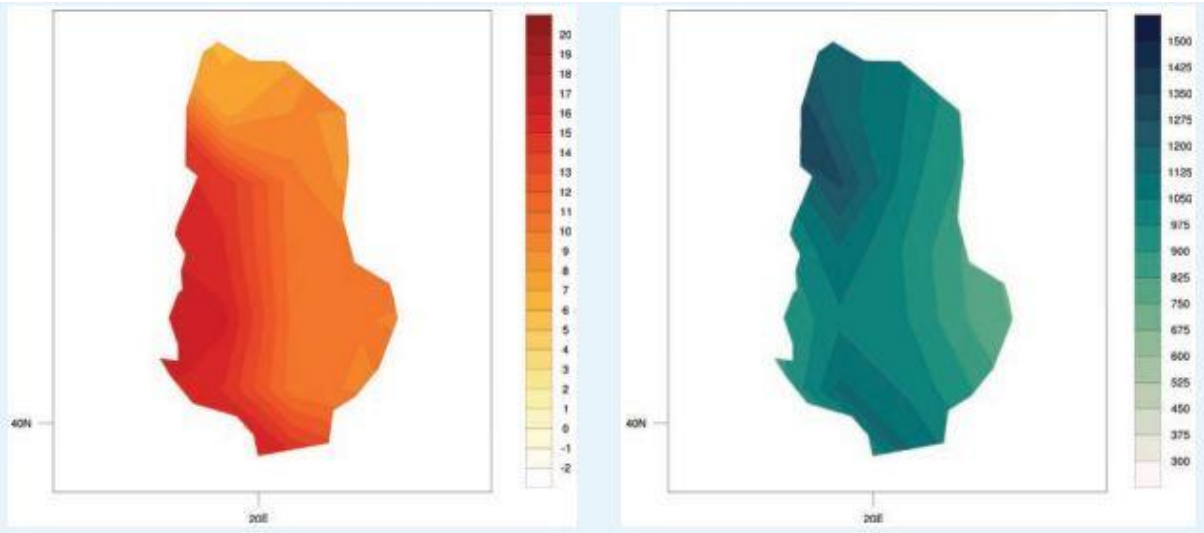


Figure 7 Map of average annual temperature (°C) (left); annual precipitation (mm) (right) of Albania, 1991–2020[6]

The table below provides historical climate information from 1901–2020 in Albania from data analysis of the World Bank Group's Climate Change Knowledge Portal (CCKP).

Table 11 Average temperature in Albania

Climate Variables	1991-2020
Mean Annual Temperature (°C)	11.6˚C
Mean Annual Precipitation (mm)	1,019.8 mm
Mean Maximum Annual Temperature (°C)	16.7°C
Mean Minimum Annual Temperature (°C)	6.5°C

Municipality of Divjake. In Divjakë, the summers are hot, muggy, dry, and mostly clear and the winters are long, cold, wet, and partly cloudy. Over the course of the year, the temperature typically varies from 4°C to 31°C and is rarely below -1°C or above 34°C.

The hot season lasts for 3.0 months, from June 13 to September 12, with an average daily high temperature above 27°C. The hottest month of the year in Divjakë is July, with an average high of 31°C and low of 19°C.

The cool season lasts for 3.9 months, from November 24 to March 21, with an average daily high temperature below 16°C. The coldest month of the year in Divjakë is January, with an average low of 4°C and high of 13°C.

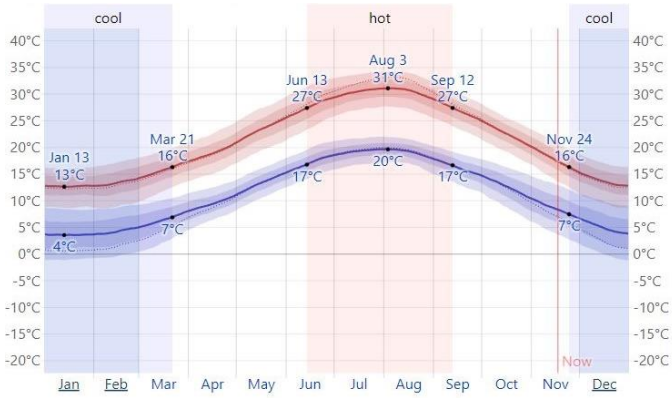


Figure 8 The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures. (January 2022 till 17 November 2022 measurement)[7]

Lushnje Municipality. In Lushnjë, the summers are hot, humid, dry, and mostly clear and the winters are long, cold, wet, and partly cloudy. Over the course of the year, the temperature typically varies from 3°C to 32°C and is rarely below -2°C or above 35°C.

The hot season lasts for 3.0 months, from June 13 to September 11, with an average daily high temperature above 28°C. The hottest month of the year in Lushnjë is July, with an average high of 31°C and low of 19°C.

The cool season lasts for 3.9 months, from November 23 to March 19, with an average daily high temperature below 16°C. The coldest month of the year in Lushnjë is January, with an average low of 3°C and high of 12°C.

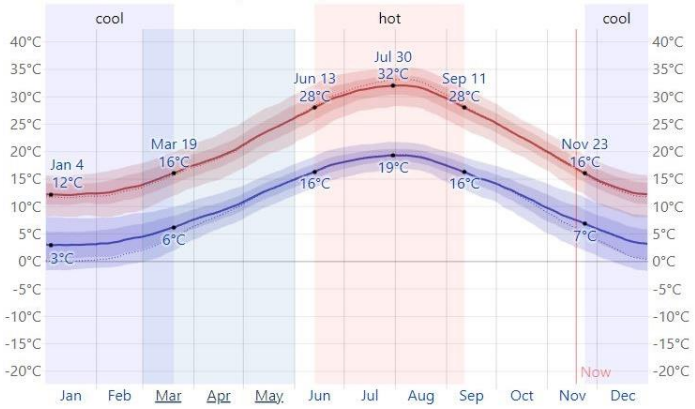


Figure 9 The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures (observed data January 2022 till 17 November 2022)[7]

Fier Municipality. In Fier, the summers are hot, humid, dry, and mostly clear and the winters are long, cold, wet, and partly cloudy. Over the course of the year, the temperature typically varies from 4°C to 31°C and is rarely below -0°C or above 34°C.

[7]Weather Spark portal. URL: https://weatherspark.com/y/84304/Average-Weather-in-Divjak%C3%AB-Albania-Year-Round#Sections-SolarEnergy

The hot season lasts for 3.0 months, from June 13 to September 12, with an average daily high temperature above 27°C. The hottest month of the year in Fier is July, with an average high of 31°C and low of 19°C.

The cool season lasts for 4.0 months, from November 24 to March 22, with an average daily high temperature below 16°C. The coldest month of the year in Fier is January, with an average low of 4°C and high of 12°C.

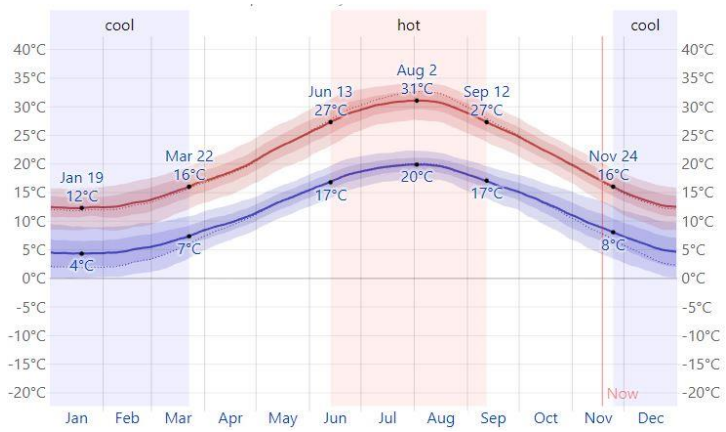


Figure 10 The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures (observed data January 2022 till 17 November 2022)[7]

Konispol Municiaplity. In Konispol, the summers are short, warm, dry, and clear and the winters are long, cold, wet, and partly cloudy. Over the course of the year, the temperature typically varies from 2°C to 30°C and is rarely below -2°C or above 34°C.

The hot season lasts for 2.9 months, from June 15 to September 10, with an average daily high temperature above 26°C. The hottest month of the year in Konispol is August, with an average high of 30°C and low of 17°C.

The cool season lasts for 4.0 months, from November 23 to March 23, with an average daily high temperature below 15°C. The coldest month of the year in Konispol is January, with an average low of 2°C and high of 11°C.

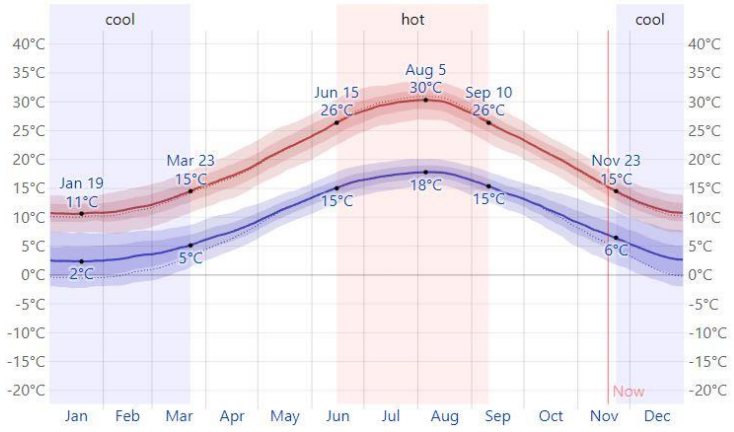


Figure 11 The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures (observed data January 2022 till 17 November 2022[7]

4.2.3 Solar Energy

The figure above presents the daily mean average solar radiation according to the months for 3 main meteorological stations in Albania. It shows, as well, the existence of huge differences between the different seasons and stations in the country. According to these data, Peshkopia station, located in North-East shows a difference from a minimum of 1,5 kWh/m^2 in December to a maximum of 6.25 kWh/m^2 in July. The same phenomenon happens in the other stations as well.

The ratio between the month of the highest solar radiation and the one of the minimal solar radiation varies from the smallest values of 4 for the stations of Erseka and Saranda to the values of 5 kWh/m^2 for Fier and Peshkopi.

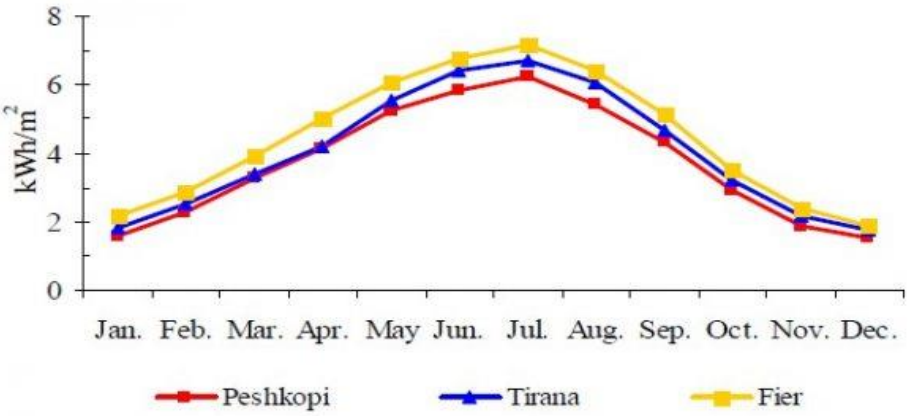


Figure 12 Daily mean average solar radiation for the 3 meteorological stations in Albania (source: AEA_12.jpg (580×505) (aea-al.org))

Solar Energy presents the total daily incident shortwave solar energy reaching the surface of the ground over a wide area, taking full account of seasonal variations in the length of the day, the elevation of the Sun above the horizon, and absorption by clouds and other atmospheric constituents. Shortwave radiation includes visible light and ultraviolet radiation.

The average daily incident shortwave solar energy experiences extreme seasonal variation over the course of the year.

Municipality of Divjake. The brighter period of the year lasts for 3.1 months, from May 13 to August 18, with an average daily incident shortwave energy per square meter above 6.6 kWh. The brightest month of the year in Divjakë is July, with an average of 7.7 kWh.

The darker period of the year lasts for 3.6 months, from October 30 to February 16, with an average daily incident shortwave energy per square meter below 3.0 kWh. The darkest month of the year in Divjakë is December, with an average of 1.8 kWh.

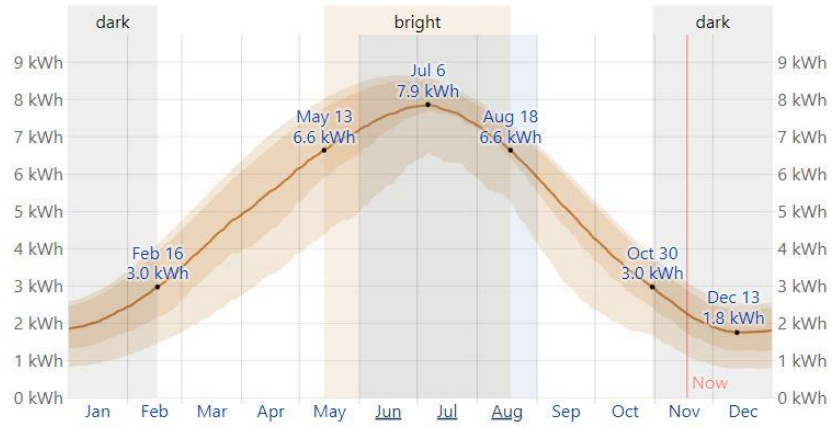


Figure 13The average daily shortwave solar energy reaching the ground per square meter (orange line), with 25th to 75th and 10th to 90th percentile bands (observed data January 2022 till 17 November 2022)[7]

Lushnje Municipality. The plain part of Konispoli municipality, is one of the warmest areas in Albania and has almost 300 sunny days. These solar radiation values are quite suitable for use through industrial or individual photovoltaic panels as a clean and renewable energy.

The brighter period of the year lasts for 3.1 months, from May 15 to August 18, with an average daily incident shortwave energy per square meter above 6.6 kWh. The brightest month of the year in Lushnjë is July, with an average of 7.7 kWh.

The darker period of the year lasts for 3.6 months, from October 30 to February 16, with an average daily incident shortwave energy per square meter below 3.0 kWh. The darkest month of the year in Lushnjë is December, with an average of 1.8 kWh.

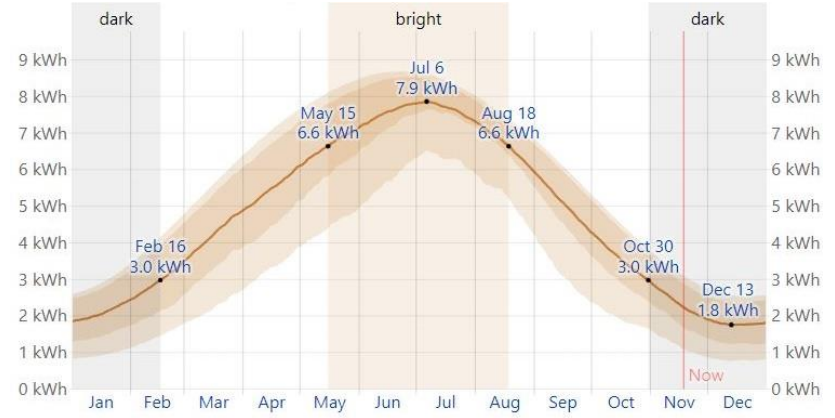


Figure 14The average daily shortwave solar energy reaching the ground per square meter (orange line), with 25th to 75th and 10th to 90th percentile bands (observed data January 2022 till 17 November 2022)[7]

Fier Municiaplity. The brighter period of the year lasts for 3.2 months, from May 13 to August 18, with an average daily incident shortwave energy per square meter above 6.7 kWh. The brightest month of the year in Fier is July, with an average of 7.7 kWh.

The darker period of the year lasts for 3.6 months, from October 30 to February 16, with an average daily incident shortwave energy per square meter below 3.0 kWh. The darkest month of the year in Fier is December, with an average of 1.8 kWh.

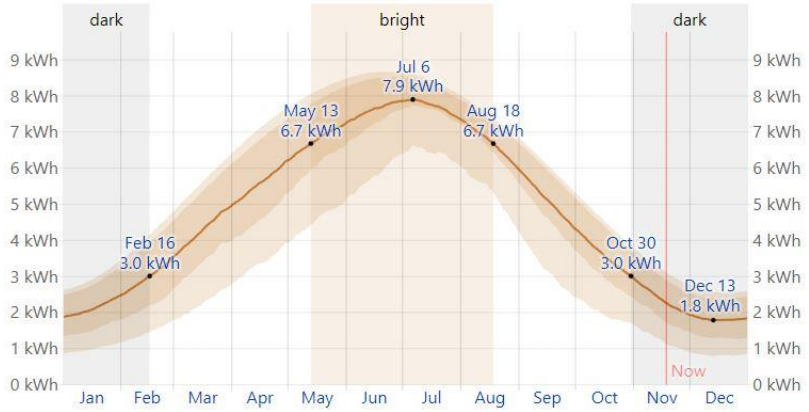


Figure 15The average daily shortwave solar energy reaching the ground per square meter (orange line), with 25th to 75th and 10th to 90th percentile bands (observed data January 2022 till 17 November 2022)[7]

Konispol Municipality. The brighter period of the year lasts for 3.2 months, from May 13 to August 18, with an average daily incident shortwave energy per square meter above 6.7 kWh. The brightest month of the year in Konispol is July, with an average of 7.7 kWh.

The darker period of the year lasts for 3.6 months, from October 30 to February 16, with an average daily incident shortwave energy per square meter below 3.0 kWh. The darkest month of the year in Konispol is December, with an average of 1.9 kWh.

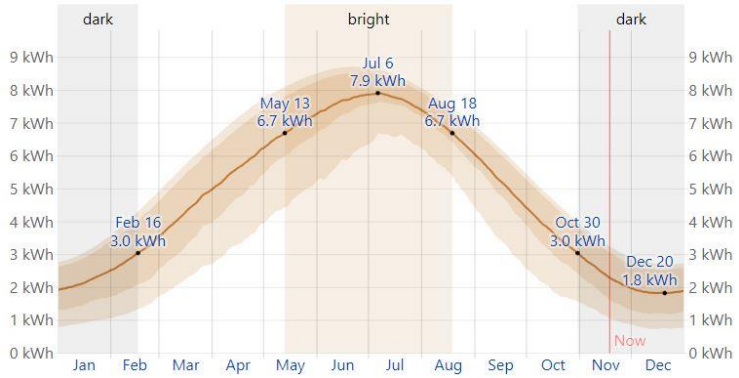


Figure 16 The average daily shortwave solar energy reaching the ground per square meter (orange line), with 25th to 75th and 10th to 90th percentile bands (observed data January 2022 till 17 November 2022)[7]

4.2.4 Rainfalls

The rainfalls in Albania have a Mediterranean regime. They are mainly active during winter months (65-75 % of the annual quantity) and less during the summer ones. Albania is characterized from a huge variation as far as the territorial distribution is concerned. The annual amount varies from 650 mm in the South-East to 2800 mm in the Alps of Albania. The average amount of falls for the whole territory is approximately 1400 mm annually. Below there is a graphic of the average amount of falls for the period of 40 years: 1961 – 2000. Compared to the temperatures, the falls' regime in the last 10 years can be easily distinguished from previous one.

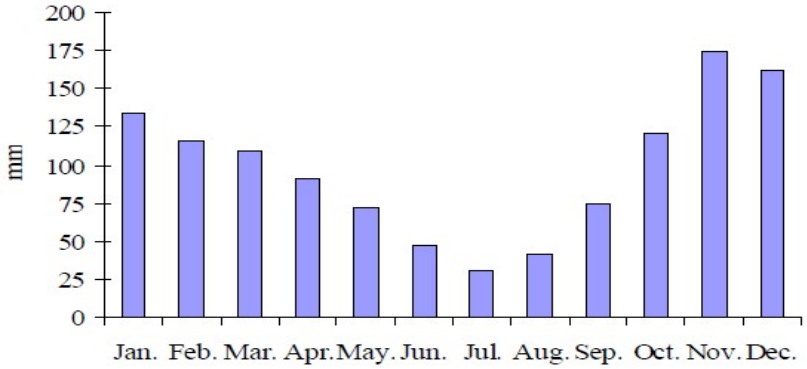


Figure 17 Average quantity of the monthly falls in the main cities of Albania during period of 1961 – 2000)

Divjake Municipality. To show variation within the months and not just the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Divjake experiences significant seasonal variation in monthly rainfall. Rain falls throughout the year in Divjake. The month with the most rain in Divjake is November, with an average rainfall of 96 millimeters. The month with the least rain in Divjakë is July, with an average rainfall of 15 millimeters.

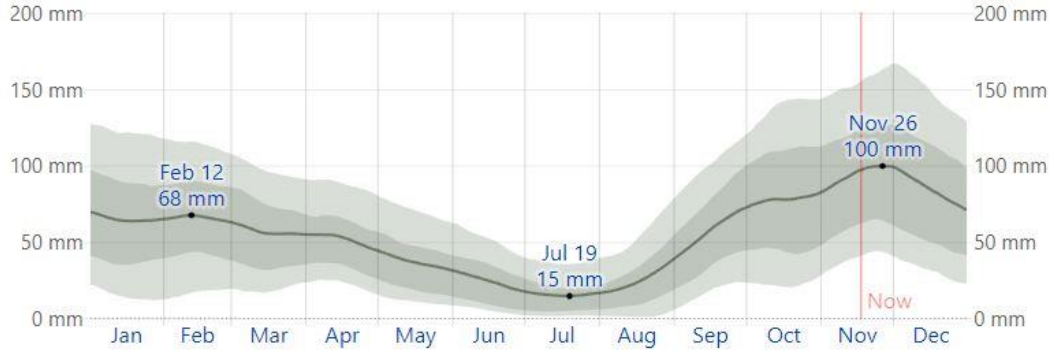


Figure 18The average rainfall (solid line) accumulated over the course of a sliding 31-day period cantered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average snowfall. (Observed data January 2022 till 17 November 2022)[7]

Lushnje Municipality. Rain falls throughout the year in Lushnjë. The month with the most rain in Lushnjë is November, with an average rainfall of 96 millimeters. The month with the least rain in Lushnjë is July, with an average rainfall of 15 millimeters.

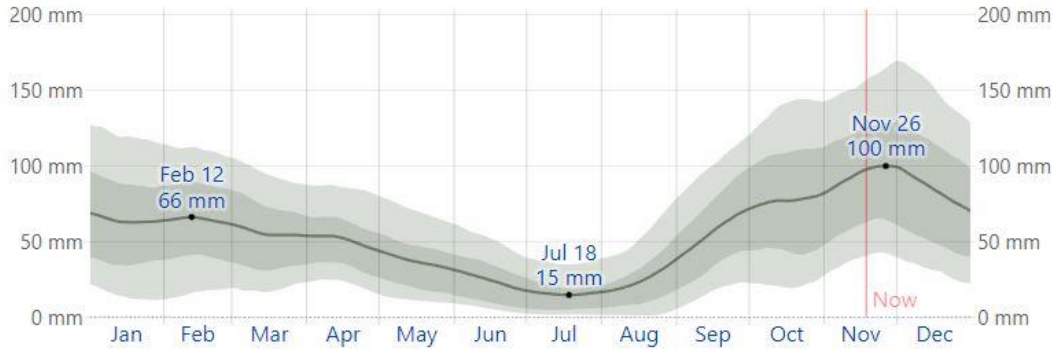


Figure 19The average rainfall (solid line) accumulated over the course of a sliding 31-day period cantered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average snowfall. (Observed data January 2022 till 17 November 2022)[7]

Fier Municiaplity. Rain falls throughout the year in Fier. The month with the most rain in Fier is November, with an average rainfall of 103 millimeters. The month with the least rain in Fier is July, with an average rainfall of 13 millimeters

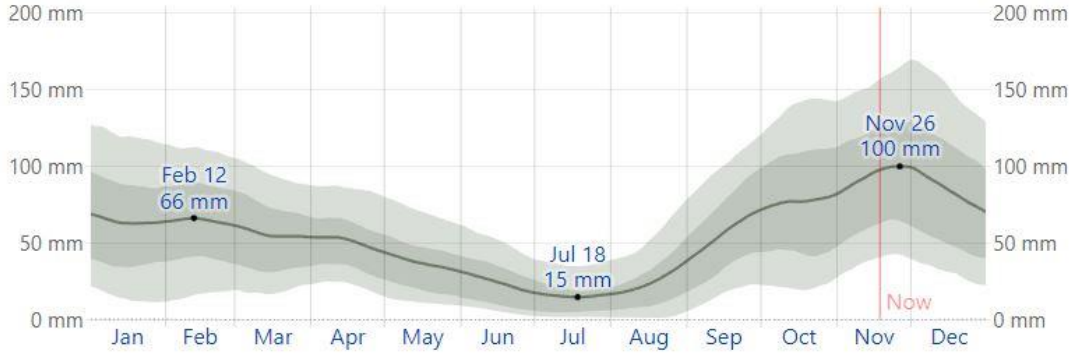


Figure 20 The average rainfall (solid line) accumulated over the course of a sliding 31-day period cantered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average snowfall. (Observed data January 2022 till 17 November 2022)[7]

Konispol Municiaplity. The rainy period of the year lasts for 11 months, from August 3 to June 19, with a sliding 31-day rainfall of at least 13 millimetres. The month with the most rain in Konispol is November, with an average rainfall of 131 millimetres.

The rainless period of the year lasts for 1.5 months, from June 19 to August 3. The month with the least rain in Konispol is July, with an average rainfall of 8 millimetres.

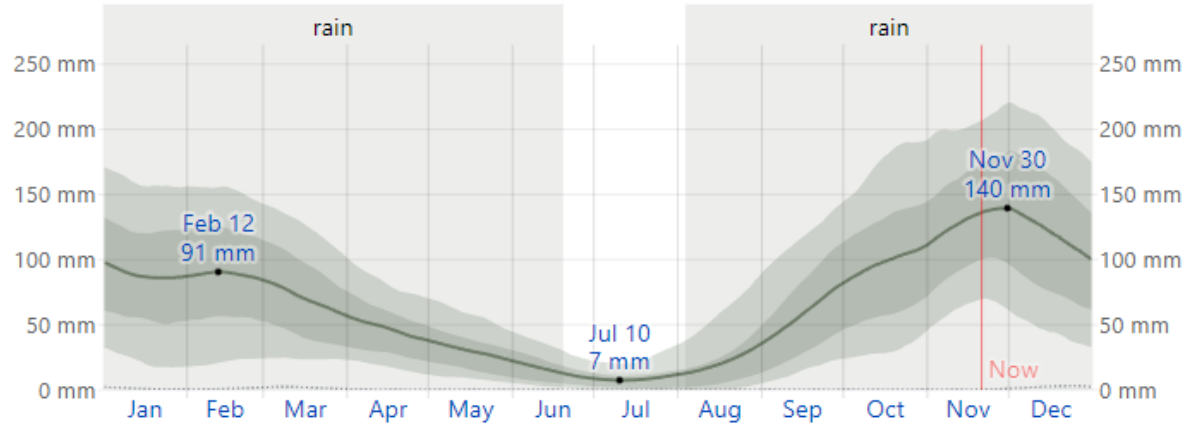


Figure 21 The average rainfall (solid line) accumulated over the course of a sliding 31-day period cantered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average snowfall. (Observed data January 2022 till 17 November 2022)[7]

4.3 PHYSICAL ENVIRONMENT

4.3.1 Climate Change

Albania's topography is dominated by its mountains, hills, and coastline and the country's geologic and climatic characteristics result in an extensive network of rivers and lakes. As such, the country's mostly mountainous landscape is endowed with abundant water resources, diverse flora and fauna, and an extensive coastline on the Adriatic and Ionian Seas.

Albania's climate follows the country's topography, with temperatures and precipitation varying by altitude and distance from the sea. The majority of the country's rainfall occurs between November and March, with lower amounts during the June to September growing season. The mean annual temperature for Albania is 11.6°C and average monthly temperatures range between 21°C (July–August) and 1°C (December–January) and mean annual precipitation is 1,019.8 mm, with steady rainfall occurring throughout the year. Albania has experienced an increase in mean annual temperature of 1°C.[8]

Climate change is a term used in climatology to indicate changes in the earth's climate on a global scale during different periods of time, which can be caused by internal earth processes, by external factors (e.g. changes in increased solar radiation) or, in recent times, by human activity.

Today the term "climate change" in environmental politics is often associated with current climate change, including the rise in average earth surface temperature known as global warming.

Climate changes in Albania have started to be felt in the last decade where the winters in Albania have become shorter and warmer, while the summers have become longer and hotter.

Droughts in summer, accompanied by floods in autumn, have become annual phenomena. The impacts of climate change have already become visible to the naked eye. Coasts along the Adriatic are eroding along the entire length of the coast due to rising sea levels – in some areas.

Climate change has also increased the number and intensity of fires in Albania. The causes of frequent fires can be excessively high temperatures in summer, prolonged droughts, and early melting of snow in the mountains.

Climate changes brought mild winters, which favoured the growth of tropical plants in Albania as well. The seasons have also changed, now the trees don't drop their leaves in October and don't flower in March, they drop their leaves late in November and flower in late January.

The World Bank Group is working with Albania to help the country's agriculture sector better adapt to the potential impacts of climate change. With increases in precipitation and more natural disasters expected in the country over the next five decades, the country is working with farmers to help better understand the consequences of these changes and helping to mitigate many of the most serious consequences resulting from shifts in climate.

In project areas climate change will affect water availability, water quality, and has destructive potential. Combining climate change impacts with other water resources pressures such as land-use change, and environmental pollution can also lead to serious challenges for farming and irrigation in the project areas. Albania's First and Second National Communications to the United Nations Framework Convention on Climate Change (UNFCC) used climate change scenarios that indicate that the average annual increase in temperature is expected to be 1°C, 1.8°C and 3.6°C by the years 2025, 2050 and 2100 respectively. These projected ranges of temperature increase apply to all seasons, but there is likely to be some variability throughout the regions in Albania. The important point here however is that there is every likelihood that more irrigation will be required in the future to cater for these increasing temperatures.

Albania has signed the Paris Agreement (NY, April 22, 2016) and currently holds the official status of a candidate country for EU membership (since June 2014), both of these national commitments require the reporting of data and actions on climate change.[9]

[8] WB Climate Change Knowledge Portal (CCKP, 2020).
Albania URL:https://climateknowledgeportal.worldbank.org/country/albania/climate-data-historical

[9] URL: https://www.worldbank.org/en/country/albania/brief/climate-change-in-albania

4.3.2 Air Quality

In the main urban centres of Albania, the air quality is poor. Major sources of air pollution include road transport, industry (including the construction industry), and energy production (oil and gas extraction and refining). All activities produce gases that are released into the atmosphere and affect the quality of the air we breathe (air environment). Releases to the atmosphere also arise from agricultural activities, dumping of waste, and other human activities. Smoke from slash-and-burn agriculture, and the production of silt, ash, and soil dust from activities like tillage, transporting, and harvest, contaminate the air with particulate matter. Agricultural pollution has many different sources. Nitrogen-based fertilizers produce potent greenhouse gases and can overload waterways with dangerous pollutants; chemical pesticides with varying toxicological effects can contaminate our air and water or reside directly on our food.

Intensive urbanization that is not followed by adequate development of infrastructure (e.g., district heating systems and sustainable public transport) poses a major threat to air quality. In urban areas, the main reason for the high levels of pollution is vehicle pollution from the widespread use of diesel vehicles, mainly caused by the age of the vehicle fleet. The number of vehicles continues to grow from year to year and emissions of gases from vehicles (including PM10) contribute to a large extent to air pollution causing respiratory problems, especially in the young and the elderly. It is considered that the most important urban air pollutants are fine particles PM10 and PM2.5, nitrogen dioxide NO_2 and ozone O_3. Fine PM2.5 particles are considered the most dangerous for human health.

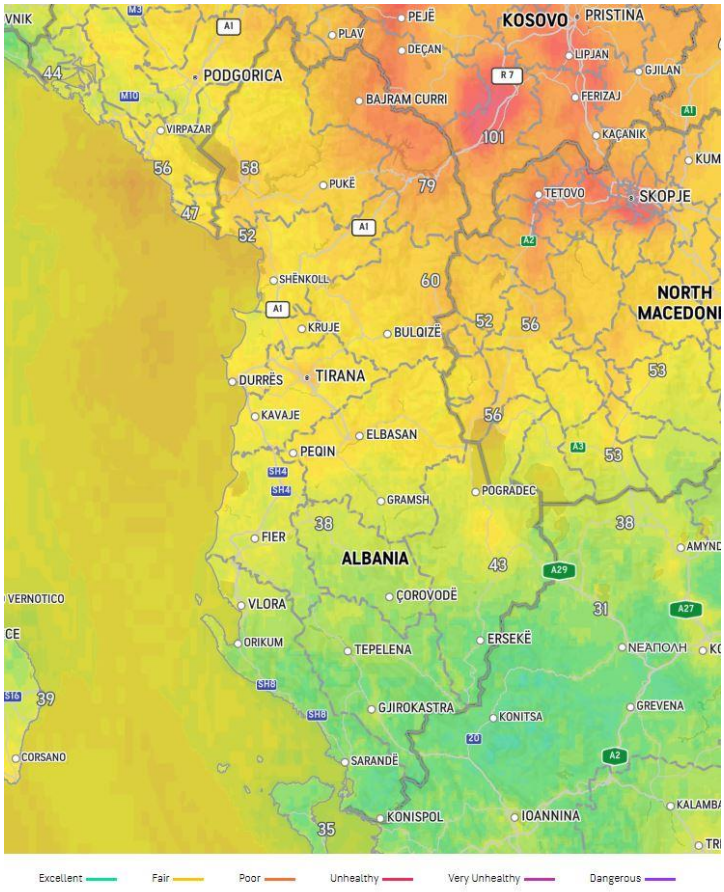


Figure 22 Air quality in Albania

On project areas the ambient air conditions are generally good under natural circumstances and are not contaminated by pollutants, as the sites are quite away from the cities or industrial areas. There

are no major development activities close to the schemes that can affect the air quality, such as quarries, industrial plants, intensive transport etc.

4.3.3 Hydrology

Albania is rich in water resources like lakes, rivers, springs, and lagoons, with a high quantity of available water. The Albanian territory covers about 57% of a total watershed (basin) area of 44.000 km^2 [10]. Water by Transboundary Rivers, Lakes and Groundwater constitutes an important resource for Albania, and in comparison, to other European countries is indeed considered to be one of the richest, as far as this resource is concerned. Albania is crossed by several rivers, which flow from mountainous regions to plains, generally from east to west. The most important and the largest rivers of Albania are Drin-Buna, Mat, Ishëm, Erzeni, Shkumbini and Vjosa. The catchments of the Drin and Vjosa are transboundary and are shared with four other countries Montenegro, Kosovo, Republic of North Macedonia (RONM) and Greece for Drin; and Greece only for Vjosa.

Table 12 The main river basins in Albania

River	Maximum Length km	Catchments area, km^2	Average flow m^3/s
Drin	285	14,173	352.0
Buna	41	5,187	320.0
Mat	115	2,441	103.0
Ishëm	74	673	20.9
Erzeni	109	760	18.1
Shkumbini	181	2,441	61.5
Seman	281	5,649	95.7
Vjosa	272	6,706	195.0

Shkumbini Basin - The Shkumbini is 181 km long and has a drainage area of 2,444 km². Its average discharge is 61.5 m³/s. The river originates in the eastern Valamara Mountains between Maja e Valamarës and Gur i Topit in South-eastern Albania. After descending from the Valamaras, it flows northwards through Proptisht and Qukës with many deep gorges and canyons and passes the Gora Mountains. A significant inflow comes from Gur i Kamjës southwest of Pogradec. Close to Librazhd the river turns some 50 km westwards of its origin and joins the Rapun stream before crossing the Myzeqe Plain forming a small delta at the Karavasta Lagoon adjacent to the Adriatic Sea.

Seman Basin – The Seman River is formed by the confluence of the rivers Devoll and Osum, a few km west of Kuçove. The river reach of the Seman is 85 km long, but when combined with the longest source river (Devoll) it is 281 km long with a total drainage basin is 5,649 km². Its average discharge is 95.7 m3/s. It meanders generally westwards through a flat lowland. The river Gjanica also flows into the Seman River near to Fier. The Seman then flows into the Adriatic Sea at the southern margin of the Divjake-Karavasta National Park.

Vjosa Basin – The Vjosa (called River Aoös in north-western Greece) has a total length of about 272 kilometres, of which the first 80 kilometres are in Greece, and the remaining 192 kilometres are in Albania. Its drainage basin is 6,706 km² and its average discharge is 195 m³/s. The river's mouth is

[10] URL: http://www.akbn.gov.al/pershkrim-i-pegjithshem-ener/

within the boundaries of the Vjosa-Narta Protected Landscape. In December 2020, the Albanian portion of the river was designated a "Managed Nature Reserve" by the Albanian government.

In the map below are shown the I&D scheme project location inside the river basins.

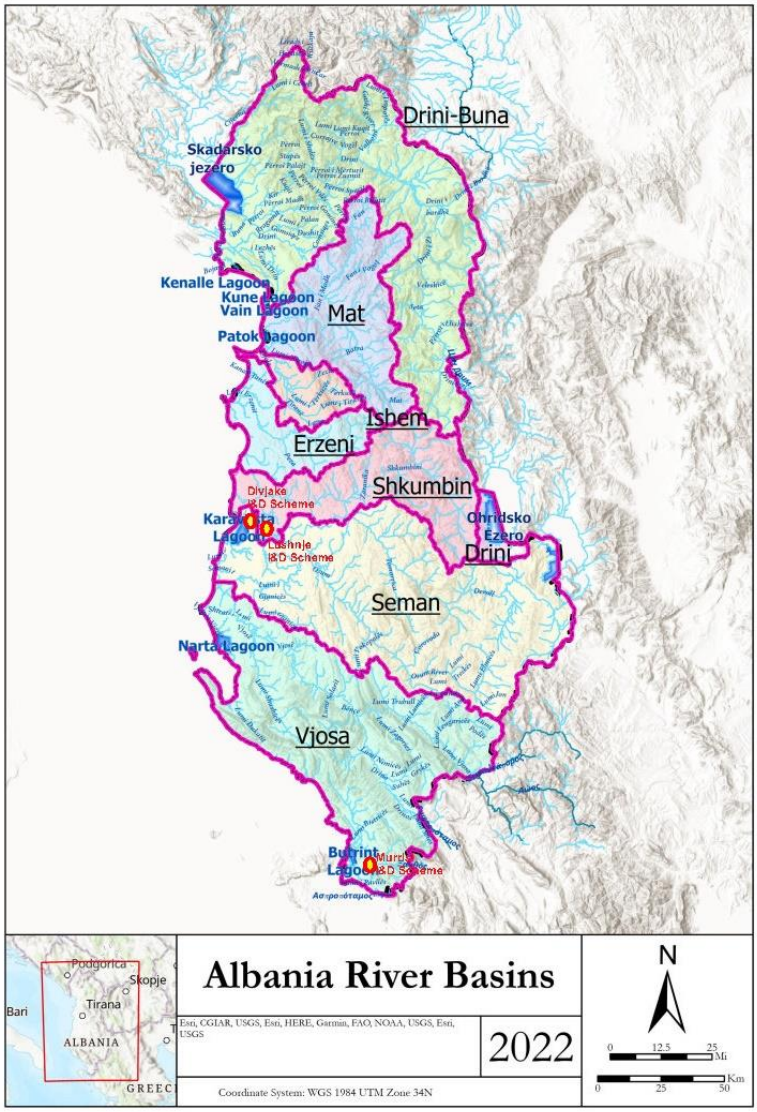


Figure 23 Albania River Basin Map[11]

The I&D schemes of Divjake and Lushnje are within the Seman and Shkumbin rivers. The Mursi scheme is located within the Vjose River Basin and transboundary issues are very important as the site lies close to the international border with Greece. This is south of the Bistrica Basin. The main sources of water for the irrigation network in Xarra area are the Janjari and Mursi reservoirs with 15,000,000 m^3 and 4,500,000 m^3 capacity respectively. Mursi reservoir through one of the main outlet channels is irrigating Xarra AU in about 1.500 ha.

[11] AMBU source for river basin data. Link: http://kadastraujore.gov.al/

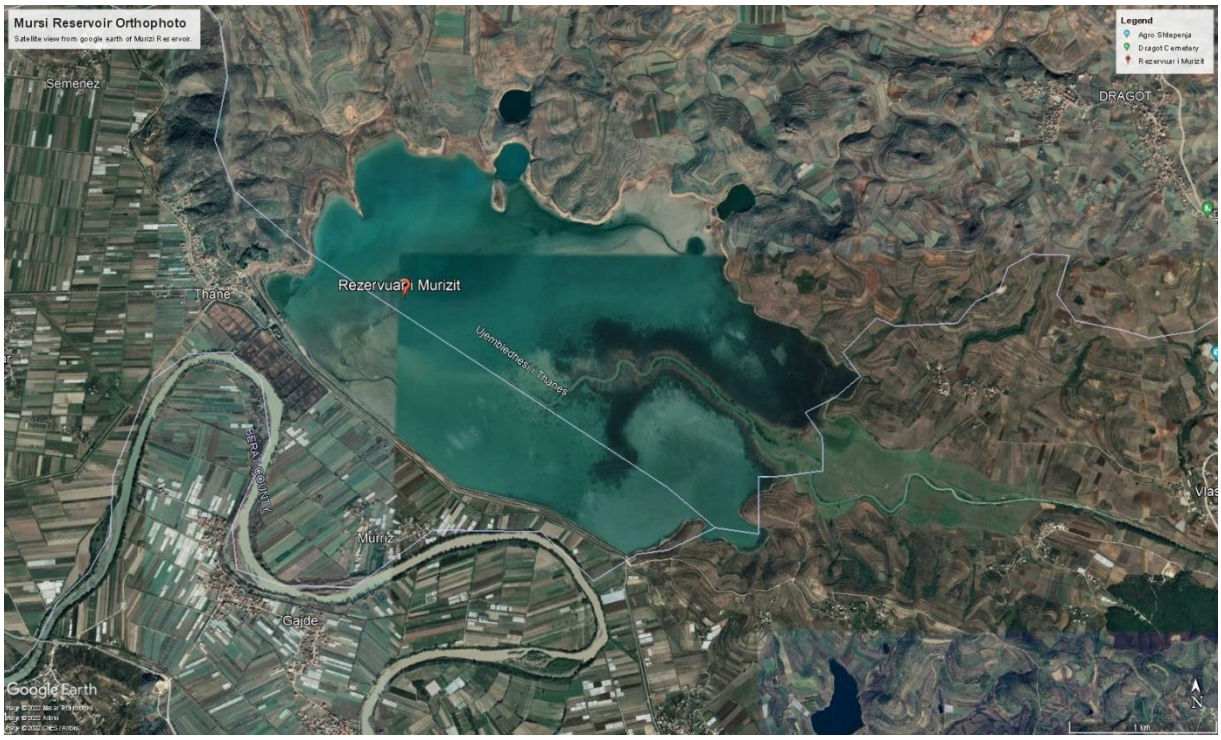


Figure 24 Aerial View of Murriz Thana Reservoir (Source: Google Earth)

The Pavlla River is crucial for the functioning and optimal conditions for Xarra irrigaiton and drainage system. The Pavlla River has a catchment area of 374 km² (295 km² lies within Albania, while the rest is in Greece) and is located in the southern part of hydrographic network of the country. The Pavlla River lies in the southern part of the Kalas e Pavlla Bistrica basin, and its springs are located in west Greece at Fatirion village. Near Ciflik village the Pavlla changes its direction of flow from the northwest to the field of Mursi. The watershed receives precipitation between 1553 mm to 2200 mm per annum. The river water flow is Q=6.51(m^3 /s) in Bogaz hydrometric location with mean level Hm (m) =556 m.

The Mursi reservoir is connected and fed mainly by Pavlla River by an open channel with a length around 4.7 km. The outlet channel that irrigates Xarra and Bufi area is about 12.8 km. It is important to highlight that during the summer the reservoir has a deficiency of water due to the characteristic low flows of the Pavlla River, which is the main source of water for this reservoir. The old pumping station that is planned for rehabilitation is located near to the Pavlla River and had a previous capacity was about 160 l/s. There is no hydrological monitoring available for the Pavlla River.[12]

The quality of Pavlla River is considered as appropriate for irrigation purposes. Its basin is characterized from karst activity. The level of ammonia in Mursi is 0.03 ml/l (maximum permitted according to EU norms is 0.03 mg/l, and those from Albanian norms 0.1 mg/l. Cl level is considered as appropriate. The same for NO2 and NO3. Very limited data on water quality is available for Xarra scheme, but there are some results for the Butrint Lagoon adjacent to the west of the Xarra scheme. The following section provides details.

The biodiversity and endemic species of the Butrint Lagoon are also under threat without improved and coordinated ecosystem management.

OP 7.50 on International Waterways is triggered, since the rivers where some of the dams and I&D schemes are located are international. Out of the 13 I&D scheme rehabilitation sub-projects, three sites lie within the Drin catchment, namely Tregtan 2, Tregtan 3 and Vranisht 2. The Drin River has two tributaries - the Black Drin and the White Drin. The Black Drin originates in Macedonia and flows into

[12]URL: https://bujqesia.gov.al/wp-content/uploads/2017/12/ESMP_Xarra_ID_-_Ver_E_after_PC.pdf

Albania, while the White Drin originates in Montenegro and flows into Albania, before joining the Buna River, which flows from Shkodra Lake (an international lake shared between Albania and Montenegro) to the Adriatic Sea.

Of specific relevance to this ESMP nine sites lie within the Semani Basin which flows entirely within Albania and exits to the Adriatic. One scheme (Xarra) is located in an area that falls under the mandate of the Vjose RBA, but that draws its water from the Janjari reservoir that is not hydrologically part of the Vjose basin. Part of the upper catchment area of Janjari reservoir is located in Greece. Other than the investments in the sites located on international waterways under component 1, no other project activities will use water from international waterways. The said investments under component 1 of the project:

(i) involve rehabilitation of already existing I&D schemes and

(ii) do not involve works and activities that would increase the original command area or change the original scheme's nature.

Consequently, the project falls under the exception set forth in paragraph 7 (a) of OP 7.50 a:

(i) it will not adversely affect the quality or quantity of water flows to the other riparian's; and

(ii) it will not be adversely affected by other riparian's water use. The application of the exception was endorsed by management in a memorandum dated August 10, 2012.

The quality of Pavlla River is considered as appropriate for irrigation purposes. Its basin is characterized from karst activity. The level of ammonia in Mursi is 0.03 ml/l (maximum permitted according to EU norms is 0.03 mg/l, and those from Albanian norms 0.1 mg/l. Cl level is considered as appropriate. The same for NO2 and NO3. Very limited data on water quality is available for Xarra scheme, but there are some results for the Butrint Lagoon adjacent to the west of the Xarra scheme. The following section provides details.

4.3.4 Lakes and Lagoons

Albania is home to three major natural lakes (Ohrid, Prespa and Shkodra) as well as around 250 smaller natural lakes and 630 artificial reservoirs. The country has access to the Adriatic and Ionian Seas in the west, with a coastline of 427 km.

There are several lagoons/wetland areas along the coast, with the main ones being Kune Vain Tale Wetland, Patok Lagoon, Karavasta Lagoon, Narta Lagoon and Butrint Lagoon. Territory approaching 20% of the land area is presently designated as "protected" under six categories (as per International Union for the Conservation of Nature – (IUCN) criteria). Many of these protected areas occupy all of part of the above-mentioned lakes, lagoons and coastline.

Nearby the project areas there are several lakes and lagoons such as: Karavasta, Butrint etc.

Karavasta lagoon[13]

The Karavasta Lagoon is the largest lagoon in Albania. It is located on the eastern shore of the Adriatic Sea and covers an area of 4,300 ha of the National Park Divjake -Karavasta. The park has a surface of 22,230 ha and contains forests with typical flowers, lagoons, agricultural land, and sand dunes, as well as unproductive land. The Karavasta Lagoon is declared an Emerald Site under the Bern Convention in

[13] ESIA for Divjake Municiaplity, 2.16.1 Karavasta Lagoon,72pg. URL: https://planifikimi.gov.al/index.php?eID=dumpFile&t=f&f=1862&token=8997ef86395e9789f606ffde4c39659c82b34f8a
URL: https://medwet.org/2019/02/meet-a-wetland-karavasta-lagoon-albania/

2008, an Important Bird Area (IBA), and a Wetland of International Importance (Ramsar Site) since 1994.

The lagoon is the most important wetland system in Albania for migratory birds, providing them with suitable habitats for food, wintering, breeding, and shelter. It is also the only habitat in Albania for the nesting and breeding of the Dalmatian Pelican (*Pelecanus crispus*). The natural islands in the lagoon are among of the most important features of the area for bird conservation.

According to migratory CENSUS, wintering birds' studies carried out in this ecosystem, have been encountered 240 species of birds throughout the year. The dominated specie was the Passeriformes (e.g., sparrows). In addition to birds, the park is home to many types of species of insects, amphibians, reptiles, mammals, and mollusks, some of which are at risk of extinction.

In the Karavasta Lagoon, can encounter some natural monuments as well, such as the famous four-century-old pine tree, the pelican island that is the only breeding site of Dalmatian Pelican in Albania, the Littoral Cordon, and the Divjaka Oasis Dunes.

Butrint lagoon

Butrint Lagoon/lake is located in the south of Albania. Buthrotum (Albanian: Butrint; Latin: Buthrōtum. In modern times is an archaeological site in Sarandë District, Albania, some of 14 kilometres south of Sarandë and close to the Greek border. It is located on a hill overlooking the Vivari Channel and part of the Butrint National Park. The cultural values of archaeological site are combined with the richness of the lagoon creating a unique heritage.

The wetland core of the area is Butrint Lagoon, a tectonic lagoon surrounded by forested hills, mountains, freshwaters and brackish marshes. It is sometimes called Butrint "Lake", due to its large surface and high depth (max 22 m; average 14 m). The lagoon has access to the sea through the natural channel of Vivari, which is up to 100 metres wide.

The National Park comprises a high diversity of natural, semi-natural and artificial habitats, such as freshwater marshes, reed beds, Mediterranean forests and maquis, arable lands and fruit tree terraces, as well as coastal waters with rocky and sandy coast, open halophytic lands, etc. These habitats shelter a high diversity of animals and plants, including species of global and regional concern, which make the Butrint area one of the most important areas for biodiversity in Albania.

Benthic fauna of Butrint lagoon is poorly known. Butrint has long been famous and continues to be a suitable habitat for the growth of the blue mussel (Mytilus galloprovincialis). Mussels have been exploited since 1968, but their commercial cultivation started in 1970, with production reaching up to 5000 tons per year in 1990.

The aquatic vegetation of the lagoon is very limited, with the bottom below 6 to 8 metres of depth being anaerobic and characterized by strong sedimentation of organisms in decomposition. In marine coastal waters, especially in the Stillo Cape area, there are well-developed seagrass meadows of Posidonia oceanic, and the northern part of the Butrint lagoon features reed beds, dominated by Phragmites communis and Typha angustifolia. Plants that are adapted to high salt concentrations are typical for the wetland area.

4.3.5 Groundwater

Groundwater resources are widespread throughout the country and estimated at between 9 billion m^3/y and 13 billion m^3/y. There are three main types of aquifers in Albania:

1. *Porous aquifers* that are highly productive and developed mainly on alluvial and gravel deposits, principally confined to the plains and broad rivers that flow to the Adriatic Sea on the west of Albania;

2. *Karst and fissured rock aquifers* comprising mainly of carbonates. They exhibit classic karst characteristics such as sinkholes, poljes, plateau and caves and can be highly productive (e.g. The Blue Eye); and

3. *Aquifers in fissured magmatic rocks* which are less productive and originate from fractured intrusive rocks.

The following map provides an overview of the main aquifers. There are also three important transboundary aquifers that Albania shares with its neighbors). Karst aquifer of Shkodra lake shared between Albania and Montenegro, Karst aquifer of Prespa-Ohrid lakes shared between Albania, RONM and Greece; and Karst aquifer of Vjosa River shared between Albania and Greece.

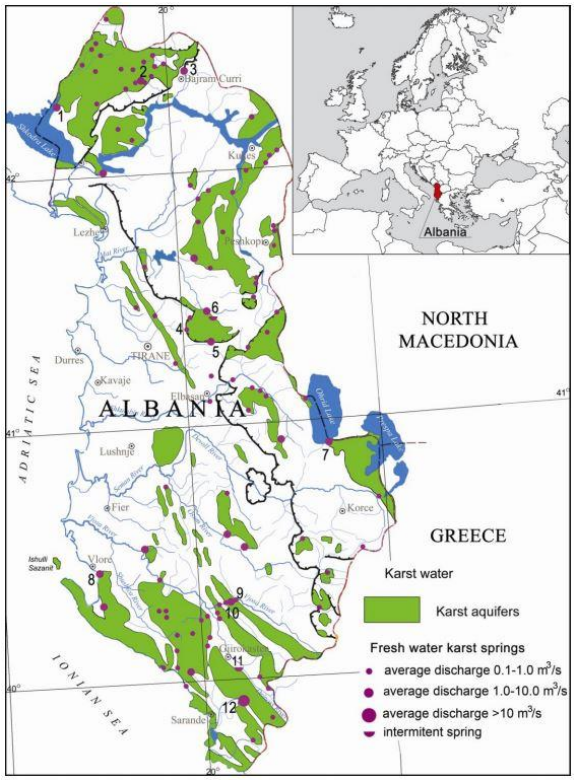


Figure 25 Map of Karst aquifers of Albania[14]

4.3.6 Flooding hazard

During the past years, Albania has been exposed to a considerable number of natural disasters that have been caused by climate change but also by human activities. These natural disasters include wildfires, earthquakes, droughts, and floods. On the other hand, human activities including the malfunctioning of the urban infrastructure, construction activities, and excessive land use are some of the main reasons why often Albania has difficulties in recovering from natural disasters.

Albania is home to numerous reservoirs and rivers, which due to the lack of management from respective authorities, can sometimes lead not only to national problems but even to regional ones. This is the case of the hydrological system Shkodra Lake – Buna river – Drini River.

Flooding can cause direct or indirect and tangible or intangible damages. Direct damages are the

[14] Romeo Eftimi, Viacheslav Andreychouk, Tadeusz Szczypek, Wojciech Puchejda , 04 April 2019, "Karst springs of Albania and their management".
URL: https://www.ags.wnoz.us.edu.pl/download/wydawnictwa/ags/ags_34_5.pdf

results of direct physical contact with the flooding event itself while indirect damages are other damages caused by flooding, but mostly after the event or outside the flood-prone area. Tangible damages refer to loss in economic terms while intangible damages mean loss of lives or other social problems such as trauma, diseases, etc.

According to historical events, the most endangered cities from the flooding phenomenon are the ones that lay in the western part of Albania due to three important factors: proximity with the Adriatic and Ionian Seas, presence of major water bodies, and massive urbanization. Major cities such as Shkodra, Lezha, Durrës, and Tirana are always under pressure during wet periods (often November – February) because intensive rainfalls bring out problems related to the urban environment. These issues include urban drainage systems, water supply, wastewater systems, lack of green and open spaces, etc.

There are three types of floods: Fluvial, Pluvial, and Coastal flooding.

Fluvial flooding. A fluvial, or river flood, occurs when the water level in a river, lake, or stream rises and overflows onto the neighboring land. The water level rise of the river could be due to excessive rain or snowmelt. The severity of a river flood is determined by the terrain profile and the duration and intensity (volume) of rainfall in the river's catchment area. Other factors include soil water saturation and climate change effects on rainfall duration and intensity.

The peak flow depends on the rainfall intensity and duration, the size of the catchment area and its characteristics, and the conditions (already wet or dry) of the catchment at the start of the event.

At locations where the peak flow is larger than the capacity of the bridge or culvert, problems are likely to occur. Albania has been threatened by river floods over the years. The rivers that cause more floods are: Drin and Buna rivers, which cause flooding on the fields of Shkodra and Zadrima, Mat and Drin rivers flood the Lezha field, Ishem river floods the Thumana field, while Shkumbin and Seman rivers have flooded the fields around them. The River Vjosa contributes almost yearly in flooding its lower part.

Pluivial Flooding. A pluvial flood occurs when an extreme rainfall event creates a flood independent of an overflowing water body. It can happen in any location, urban or rural, even in areas with no nearby bodies of water.

Coastal flooding. Coastal flooding is the inundation of land areas along the coast by seawater. The rise of the sea level causes changes of the coastline position and will have a very big impact on the lowlands near the sea and the deltas of the rivers.

The coastal flooding does not pose a major risk to the primary road network. However, the areas in the North of Albania (Shkoder area) could be vulnerable to flooding from the rivers in times of high rainfalls. Moreover, the Durres harbour is also prone to coastal flooding. The floods will partially affect the beaches situated in the territories undergoing elevation (those of Durres, Golem, Divjake, Himare, Borsh etc.), in addition to the tourism infrastructure. Flooding it is expected to happen also in the agricultural land (in the former swamps of Durres, Myzeqe, Narta, Vrug etc.) as well as dwelling centres and rural infrastructure. Flooding in Albanian coastal areas can be considered as highly hazardous.

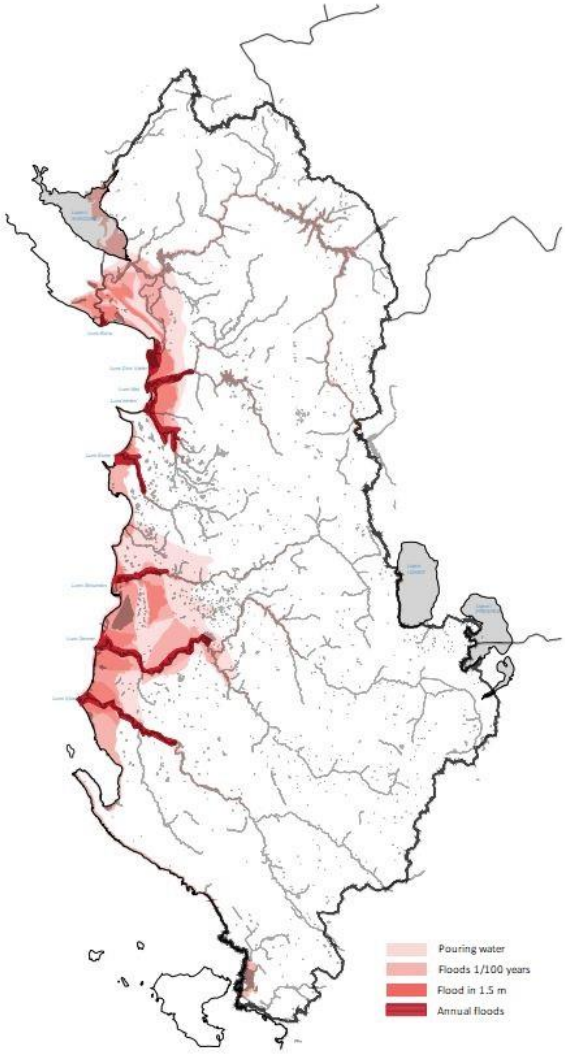


Figure 26 Pouring water and floods map[15]

4.3.7 Soil

Soil and Groundwater Land degradation and soil erosion is one of the main environmental issues in the country. High pollution load in surface water is leading to a deterioration of groundwater quality and especially concerns low-lying areas, where most of the population lives and most industrial and agricultural activities take place. Uncontrolled grazing on pasture lands and wood cutting for heating are some of the main factors that lead to land degradation and to soil erosion.

The soils of Albania are varied and create special zones according to the climate, flora, relief etc. According to the National Soil Classification System the soils of Albania are divided into four belts, which constitute the zonal soil. The main criteria in their subdivision are elevation and natural vegetation.

Distribution of soils:[16]

[15] URL: https://planifikimi.gov.al/index.php?eID=dumpFile&t=f&f=5154&token=da636af1a1a4ffe0d0973a5cfc7eedbca62f49cc

[16] Pandi Zdruli, Sherif Lushaj, The Status of Soil Survey in Albania and some of its Major Environmental Findings. URL: https://edepot.wur.nl/484595

I. *Subalpine pasture belt at 1600-2700 m high*.

Mountain meadow soils occur at altitudes of 1600 – 2600 m and make 10% of the country area.

II. *Beech and pine forest belt at 1000-1600 m high*.

Grey forest soils occur at altitudes from 1000 to 1600 m and make 15% of the total land area of which 10% is cultivated.

III. *Oak forest belt at 600-1000 m high*.

Brown mountainous soils occur in the interior of the country, at altitudes from 600 to 1000 m. They make up 38% of the total area and 40% of the arable land

IV. Mediterranean shrubs belt at 0-600 m high.

Grey - brown soils occur at altitudes up to 600 m. They include the zone of coastal lowland and hills, which make up about 15% of the country. Of these soils, 70% are under crops. In the lowland zone there are 84,000 hectares of alluvial soil and 15,000 hectares of saline soils.

Sandy soil shows land without structure or lacking horizons, have little (or no) ability to transport water from deeper layers through capillary transport. This type has the biggest particles, and the size of the particles does determine the degree of aeration and drainage that the soil allows. It is granular and consists of rock and mineral particles that are very small.

The soil characteristics are quite different throughout the different I&D schemes and are heavily dependent upon the underlying geology, flora and vegetation types, climate and exposure, water presence and effects etc.

In the area of Murriz Thana dam and I&D scheme in the Lushnje Fier Region hidrovores soils are characterized by sandstones and mudstones. Soil classifications of these reservoirs are characterized by Grey-brown soils. They have an accumulative origin, conditioned by river activity and through sediment transport and deposition. Such soil characteristics create very good condition for the development of agriculture and farming in Lushnje, Divjake, Fier and Konispol Municipalities.

Soil erosion is one of the major problems in Albania due to irreversible soil losses in great amounts. It affects almost all territory of Albania because of climatic conditions and topography. However, soil erosion has been exacerbated by human activities, leading to one of the major and most widespread forms of land degradation. Major causes are deforested, overgrazing, cultivation of sloping soils, poor water and irrigation management and unsustainable agricultural practices. All these factors have leaded to the increase of soil erosion and decrease of soil fertility. In the past years, the increase of deforest has had a significant impact on soil erosion. Furthermore, the use of solid materials around the rivers from building industry has leaded to the increase of the soil erosion around these areas

The Municipalities of Fier, Lushnja, Konispoli, and Divjaka, are within the coastal zone to the west along the Adriatic Sea, occupied by fertile alluvial soils, and the phenomenon of erosion is also present in their territory. Continuous deforestation over the last few years in the areas of Lushnje, Divjake, Fier, and Konispol municipalities, as well as the lack of good agricultural practices for land management, have played a primary role in increasing the phenomenon of erosion in the territory. Regarding erosion in Albania's agricultural lands , the potential risk of erosion is considered medium and high.

4.3.8 Waste management.

Waste management is one of Albania's biggest environmental challenges, along with water and air pollution, degradation and loss of biodiversity. In 2011, Albania launched its National Strategy for Waste Management, covering the period 2010-2025, in which the government had hoped Albania

would succeed in becoming an EU member state. This strategy aimed to harmonize the Albanian waste management legislation with the EU Framework Directive on Waste and the EU acquis. The need for legislation to protect public health, the environment, and the economy made waste management a "priority issue". As with the EU's own waste management policy, Albania's strategy emphasized waste reduction, resource recovery, recycling, and reusing. Nowadays Albania has new national waste management plan (NWMP) for 2020-2035, which has key targets on waste management.

The Strategic Policy Document is Albania's principal planning document regarding municipal, non-municipal, and hazardous waste management that covers the period 2020 and 2035. This strategic document includes the planning and infrastructural developments in the waste sector since 2011 at the central and local government levels, sustainable involvement of private businesses, and the many investments made at the collection level, transfer, and, especially, treatment of waste. The Strategic Policy Document Review of integrated waste management developed on the vision/perception of the "zero waste" concept. The waste is collected and treated as raw material and managed as a concept of circular economy system, in service of criterion use and conservation of raw material resources.

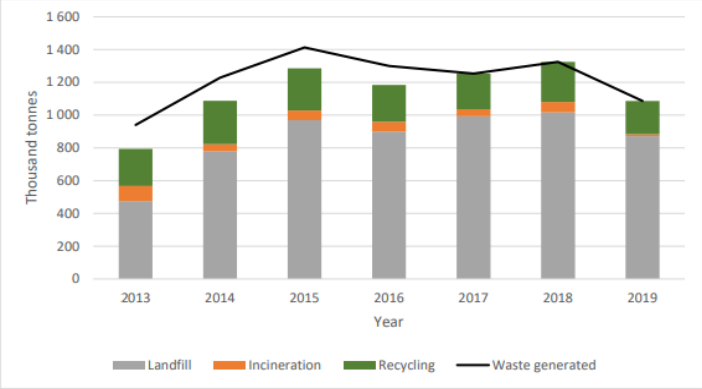
The main purpose of the strategic policy document is to provide strategic directions and define a series of measures that help the country to join the European Union, fulfilling the obligations arising from chapter 27 for the environment.

The specific objectives of the Strategic Policy document aim to provide practical solutions for:

1. Addressing the problems in the current management system;
2. Implementation of the legal framework in force;
3. The necessary preparations to fulfil the obligations from the changes in the EU directives, including the ambitious objectives of the Circular Economy Package.

Achieving these objectives improves the quality of the environment and the health of citizens, giving additional impetus to the country's economic and social development and opening the way to European integration. [17]

In Albania the responsibility for waste management goes to local government units involving the development of new landfills complying with EU standards. Albania has quite a low recycling rate, and a high reliance on landfilling. The main system for waste collection in Albania consists of bring points with containers for residual waste collection.



[17] DCM No. 418, date 27.5.2020 "FOR THE APPROVAL OF THE STRATEGIC POLICY DOCUMENT AND THE NATIONAL PLAN FOR INTEGRATED WASTE MANAGEMENT, 2020-2035"
URL: https://planifikimi.gov.al/index.php?eID=dumpFile&t=f&f=5132&token=5b95ae66ffb4dd69fe7f144db8cafa45e7945f07

Figure 27 Municipal waste generation and treatment in thousand tonnes in Albania, 2013-2019[18]

The graph illustrates the development of municipal waste generation and management between 2013 and 2019 in Albania. It shows that municipal waste generation in Albania has somewhat decreased since the peak in 2015, with a clear drop in 2019. The generated waste was 1 413 thousand tonnes in 2015 (corresponding to 491 kg per capita), which dropped to 1 087 thousand tonnes in 2019 (corresponding to 381 kg per capita) (Eurostat, 2021). The decreasing trend is a result of an improvement in the quality of data and a better understanding of the municipal waste data reporting; it can thus not be interpreted as a reducing trend per se. Although there has been a reported improvement in data quality, the data are still not considered of high quality (Albanian Environment Agency, 2021). [19]

The main method of managing waste is disposal to landfill and illegal dumping. There is also one incinerator and an estimated 10-18.5 % of municipal waste is collected for recycling, mainly by informal waste pickers, who collect waste from dumpsites and bins.

4.4 BIOLOGICAL ENVIRONMENT

Albania is a Mediterranean country on the Balkan Peninsula in the south of Europe, and amongst most biodiverse countries in Europe. Albania lies at the interface between the mountainous Balkans, a continental European climate, and the Mediterranean region. Although Albania is a small country, it is very rich in landscape and biological diversity.

Although a small country, Albania is distinguished for its rich biological and landscape diversity. This diversity is attributable to the country's geographic position as well as geological, hydrological, climatic, and soil and relief factors. The mountainous terrain combined with steep cliffs creates ideal conditions for maintaining and protecting many ancient species, which are both endemic and subendemic. The high diversity of ecosystems and habitats (marine and coastal ecosystems, wetlands, river deltas, sand dunes, lakes, rivers, Mediterranean shrubs, broadleaf, conifers and mixed forests, alpine and subalpine pastures and meadows, and high mountain ecosystems) offers a rich species variety of plants and animals.

4.4.1 Biodiversity[20]

Albania is home to a large number of designated protected areas, and includes national parks, Marine Park, Ramsar sites, World Heritage Sites, important plant areas & bird areas, and protected areas of various categories. Albania is divided into three main ecological zones (plain coastal zone, transitional sub-mountainous hilly zone, and mountainous zone) and 13 sub-zones, which contribute to the rich country biodiversity.

Albania is known for the high diversity of its ecosystems and habitats. In Albanian territory, there are marine ecosystems, coastal areas, lakes, rivers, evergreen, broad-leaved shrubs, broad-leaved forests, pine forests, alpine and sub-alpine pastures and meadows, as well as high mountain ecosystems. The variation of geomorphology, climate and terrain create favourable conditions for a number of endemic and sub-endemic species. It is host to 30% of the entire flora and 42% of fauna of Europe. [21]

[18] Source graph: Eurostat 2021

[19] European Environment Agency, November 2021, Albania, Municipality Waste Management.
URL: https://www.eea.europa.eu

[20] ESIA reports of Divjake, Lushnje, Fier, and Konispol Municipalities.
URL: https://planifikimi.gov.al/index.php?id=732

[21] Andrian Vaso, November 2021, ESIA "NATIONAL ENERGY AND CLIMATE PLAN OF THE REPUBLIC OF ALBANIA"

There are 32 plant species with 150 subspecies that are endemic to Albania and another 160 plant species that are sub-endemic to the Balkan region.

Albania has 91 species of globally endangered ornithofauna, and others are of critical importance (e.g., Pelecanus crispus, Phalacrocorax pygmeus, and Acipenser sturio). Coastal lagoons and large lakes are important areas, especially for migrating birds in winter. They are 70 species of waterfowl, with a total population of 180,000 individuals encountered during the winter in Albania. Albania has several indigenous breeds of cattle and crops. About 30 types of legumes are indigenous to Albania. There are nine autochthonous breeds of goats and five sheep, and it has heritage importance for protecting and improving the production and quality of agriculture and livestock.

Municipality of Divjake. Climate, geographical position, presence of water, and specific topography are prime factors that influence the abundant green land, diversity, and unique vegetation within the Divjake area.

There are three ecosystems in Divjake: Karavatsa lagoon, Wetland area, and Divjake Forest.

Biodiversity is a variable that depends on various natural factors and components. In the Divjaka municipal in different areas, there are different scales of biodiversity (some low and some high levels).

Divjake-Karavasta National Park consists of three protected units according to the status described below:

I. Protected nature and reserve of Karavasta (Lagoon with about 4200 ha)

II. National Park of Divjake (1250 ha)

III. Kulari (850 ha). It has the same vegetation characteristics as the Divjake National Park. Error! Bookmark not defined.

In terms of biodiversity, Divjake-Karavasta NP is the most dominant and complex area in Albania. This area hosts the highest aquatic bird concentration, large number of individuals and nesting pairs in Albania. In the Park area, a number of species types represent groups of mollusks, insects, amphibians, reptiles, birds, and mammals, which are also considered threatened species in Albania. There are species that belong to the most endangered categories, and are classified into species in critical danger, endangered, and vulnerable.

In its interior, there are also small islands where the birds nest. Characteristics in this area are the colony of the Curly Pelican, and a rare pelican type called "Dalmatian Pelican".

Karavasta is part of the Divjaka National Park. The park is the largest in our country and on the entire southern Adriatic coast. It is separated from the sea by a wide strip of sand, covered by dense forest, next to which there is a large beach. It is connected to the sea by three channels, one of which is artificial and open for fishing needs.

In general, the *terrestrial fauna* is poor, especially in large mammals, in the absence of high forests, the dense population of the space, and the dominance of the relief of the plain with lands cultivated with arable plants. Hunting without criteria of target species has also impacted the decrease of wild animals. We emphasize that animals such as rabbits, badgers, and birds such as field partridge, quail, feral pigeon, etc., have become rare. The most widespread types of mammals we can mention are hedgehogs, moles, bats, brown rabbits, mice, dormouse, skunks, etc. Among the predatory mammals are the fox, the shrew, and the weasel.

The **Divjake Forest** is one of the most critical habitats in the country, both from an ecological and a tourist point of view. The forest area is 1,200 ha out of 22,230 ha[22], which is the park's total area, in which animal and plant life develop daily in every season of the year. Flora is diverse, with the presence of soft pine and wild pine (Pinus Pinea) being distinguished. There are two rare endemic plants in the forest such as Archis Albaniaca (orchid type), and Orchisxpoparistoi (a hybrid between two types of orchids found in the forest of Divjaka in Albania). The mosaic composed of pine, elm, myrcene, ash, oak, and many other types of plants creates a unique landscape.

Municipality of Lushnje is located in the Western Lowlands of Albania and has a total area of 372.72 km2. In the northeast of the municipal, at an altitude of 200-240 above sea level, the relief is mainly flat with limited hilly areas. The natural system in Lushnje Municipality that serves as a habitat for biodiversity occupies 1/10 of the total municipality area. The natural systems lie mainly in the east, in its hilly part. The municipality owns a forest area of approximately 822.62 ha, which serves as the most important habitat for biodiversity. In Lushnje Municipality, the number of floristic and faunal species that grow in the territory is unknown. However, the number of endangered species is roughly known. According to the red book of Albanian fauna, there are 55 endangered species in the municipal territory. Among them, the Albanian Aster (Aster Albanicus) and the Albanian Salep (Orchis Albania) stand out and are rare individuals. Mainly, the risk of species loss comes as a result of anthropogenic activities, which have led to the loss of habitats.

Fier Municipality is surrounded by two rivers, Vjosa and Semani, with coastal exits. The natural areas with forests, pasture, and water resources constitute main habitat of flora and fauna of Municipal territory. In the Fier, Municipality is founded natural areas with a variety of rare species of particular importance. Generally, these areas are near protected natural areas along rivers and coastlines.

The habitat in the Pishe-Poros area, the Levan Park, the Seman Dunes, the old Crown of the Seman River in Fier, and the Cakran forest area is diverse in terms of flora and fauna. These areas have psammophyte, halophyte, hygrophyte vegetation, and Mediterranean pine forests. This area gas also has animal presence, such as urith, jackal, lala bride, fox, quail, crow, and variety of reptiles.

The number of floristic and faunal species found in the Municipality and their habitats is unknown. However, the approximate number of species at risk of extinction is known (Red Book of Albanian Flora and Fauna, 2007), which amounts to 79 species (about 10% of the endangered species in the country). These mainly belong to birds, flora, and insects.

Konispol Municipality. The biodiversity, flora, and fauna of Konispol Municipality are divided based on height above sea level into four ecological zones: coastal, plain, hilly, and mountainous.

At 50-100 m height, the vegetation is characterized by communities such as Euphorbia dendroides, Pistacia lentiscus, Allianca Oleo, etc. Also, it encounters the Italian oak characteristic of the sub-continental European and south-eastern European climate Quercetum frainetto. The area where the village of Xarre is included (over 65m above sea level) is mainly plain and hilly.

Medicinal plants are the dominant vegetation in areas up to 420 m heights. The Vrine field is partly in a coastal area, including in the sheltered area of Butrint. Mediterranean shrubs and cultivated olive and citrus trees are characteristic vegetation of this area. The plain area, including the Vrine field, represents the lowland near the sea, which presents good conditions for agricultural development (cereals and vegetables). Conifers such as black pine (Pinus Nigra) are also present.

[22] ESIA report of Divjake Municipality.
URL: https://planifikimi.gov.al/index.php?eID=dumpFile&t=f&f=1862&token=8997ef86395e9789f606ffde4c39659c82b34f8a

Around 600-700 m above sea level, the environment is barren, and steep, with aromatic plants (sage, etc.). The rest of the zone is with forest wood such as maple, boxwood, mulberry, oak, oak, ash, and here lies a forest of Cotinus Coggygria (or Smoke Bush).

At an altitude of 820 m and above, there is an environment rich in medicinal plants, which even today constitute one of the possibilities to ensure the income of families living in the villages of this altitude. Aside from forests and meadows, the area is home to many cultivated trees, including figs, walnuts, pear trees, and vineyards.

Fauna is rich in animals and birds that are characteristic of terrain almost bare of vegetation, such as foxes (Vulpes sp.), hares (Lepus sp.), etc., and birds like sparrows (Passeridae), field grouse, ravens, etc. Fauna in the Ionian Sea part also is characterized by rich diversity, characteristic of the Mediterranean environment.

Additionally, Butrint has a unique flora and fauna listed in the annexes of the Biodiversity Strategy 2015-2020, including Tenuirostris Numenius, Caretta caretta, Dermochelys Coriacea, and Monachus Monachus. The park houses globally endangered species classified as critically endangered, endangered and vulnerable. Butrint Bay and Vrine Wheatland are an important place for feeding and nesting of different bird types, and in 2003, is registered as a Ramsar Linkage Area of International Importance.

4.4.2 Protected Areas

National Agency of Protected Areas (NAPA) id responsible since February 4, 2015 for the management of protected areas in Albania. The protected areas in Albania are found in various forms and sizes ((terrestrial, aquatic, marine, local and transboundary); under public, municipal and private ownership; in six administration categories; Ramsar wetlands of international importance; Biosphere Reserves (BR) and UNESCO (United Nations Educational, Scientific and Cultural Organization) World Heritage Sites.

Although a small country, Albania is very rich in biological diversity. The extraordinary ecosystems diversity and habitats includes 3,200 host plants, 2,350 non-host plants and 15,600 species of conifers and non-conifers, most of which threatened at the global or European level[23]. Albania has recently made significant progress in expanding the network of protected areas from 5.2% of the country's territory in 2005, to 16% in 2014. Today, 799 protected areas make about 18% (5,263 km²) of territory area. Most of them are defined in the Natural Monument category (747), and most are small in size.

[23] URL: https://turizmi.gov.al/zonat-e-mbrojtura/

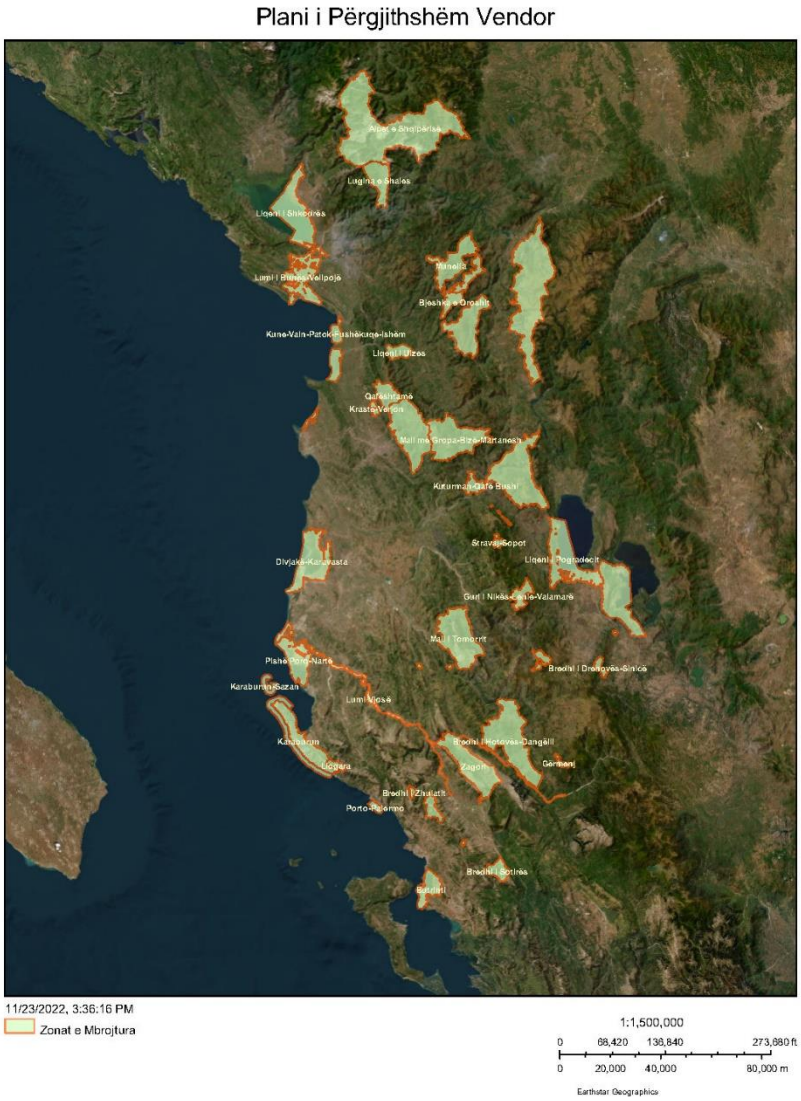


Figure 28 Albania Protected Areas Map[24]

Municipality of Divjake. Divjakë - Karavasta National Park is located on the western border of Project site and is considered one of the most important National Park in Albania. Divjakë-Karavasta National Park is part of the Natural National Heritage and the wetland system of Divjaka and is listed in the international list of Ramsar sites under the Convention of International Wetlands from 1995. The Divjaka National Park complex has been officially nominated candidate Emerald Network sites, with the code AL000000218 and as such will be included in the Natura 2000 network as an area of European importance for biodiversity.

The National Park has great value and unique scientific, ecological, didactic, cultural, touristic and economic value. Preservation of biodiversity and natural landscape remains a primary goal in the management of this park.
In 2003 in the Divjakë – Karavasta area the following protected areas were present: Strict Protected Reserve of Karavasta Lagoon, Pine of Divjaka National Park, Kulari Management Zone. In the DCM No. 687, dated 19.10.2007, only one protected area of the second category was determined, namely the National Park Divjakë - Karavasta. According to this decision (DCM No. 687, dated 19.10.2007) the park area is 22,230.2 Ha and is divided into:

[24] URL: https://akpt.maps.arcgis.com/apps/webappviewer/index.html?id=ff270e99f5be45f19c7b7a1e3e618b27#

- Forest area (forests, rare forests, alluvial forests and shrubs, reforestation, forest and aquatic vegetation land) 5,310.00 Ha;
- Agricultural area (agricultural land, orchards, olive groves and vineyards) 9,078.42 Ha;
- Aquatic area (lagoons, rivers and watersheds) 6,408.90 Ha;
- Non-productive area (sandy and bare) 1,120.71 Ha;
- Urban area of mixed farmland, orchards and woodland 312.21 Ha.

Lushnje Munipality. The territory of the Lushnje Municipality lies in a mostly plain relief with plain hills up to 250 meters above sea level with a typical Mediterranean climate, with hot, dry summers and mild, rainy winters. In Lushnje municipality, in addition to cultivated plants, which occupy a high percentage, there is a wide variety of fauna and flora. Within the territory, there are five protected natural monuments (Protected Zone, category III), announced by CMD no. 676, dated 20.12.2002. Regarding the management of natural monuments (NA) in the territory of the Lushnje Municipality, there is currently no management plan for them, even though the NA state is monitored constantly, and measures are taken to improve and protect their quality.

Table 13 Natural Monuments in the Municipality of Lushnje [25]

Designation of the PA	Category	Short Description	Importance
Selvitë e Manastirit	III	Height: 10-15m Trunk diameter: 60-80cm Age: disa dhjetra-vjecare	Biological, aesthetic and religious of local importance
Dushkajat e Manastirit	III	Height: 10m Trunk diameter: 35-60cm Age: several decades	Biological, aesthetic with local importance
Rrapi i Zonjës	III	Height: 4m Diameter: 2m State; damaged	Biological and aesthetic
Lisi i Konjatit	III	is located in Nja-n Dushk, in the village of Konjat	Aesthetic
Thermal mineral springs of Karbunara	III	Height above sea level: 50m Number of sources: 4-5 Length: 5m Width: 3m Depth: 30-35cm They are used by residents for curative baths	Scientific (geological and hydrological), cultural, touristic and didactic.

Fier Municipality. Bashkia e Fierit, falë shtrirjes së saj gjeografike, është e pasur me zona të mbrojtura të shumëllojshme të cilat janë paraqitur më poshtë.

Table 14 Natural Monuments in the Municipality of Fier[26]

Designation of the PA	Category	Short Description	Importance
Category III – Natural Monument			
Dunat e Semanit,	III	Length: 1km, Width: 15m Height: 6m,	Scientific (geological and hydrological), cultural, touristic and didactic.
Kurora e lumit të vjetër të Semanit,	III	Area: 43.5ha, 1m mnd The flora is represented by: poplar i white, root, vine, maple, juniper e black. Indigenous plants.	Biological, ecologic and scientific

[25] https://planifikimi.gov.al/index.php?eID=dumpFile&t=f&f=2330&token=a560559e006b50fdfff6dfe6e878883f4f605501

[26] ESIA of Fier Municipality, 210 pg. URL: https://planifikimi.gov.al/index.php?eID=dumpFile&t=f&f=2701&token=6aabb8a39def8963e54a79be9b26df94ad2e9483

Rrapet e rrugës Fier-Vlorë,	III	Height: 20-25m Diameter: 80-100cm Serious damage as a result of infrastructural development	Biological, ecologic and scientific
Rrapi i pazarit të Cakranit,	III	Age: over 300 years old Due to his age, he entered the drying stage	Aesthetic Biological, ecologic and scientific
Category IV – Managed nature reserve/Nature Park			
Parku i Levanit	IV	Area: 200ha, Flora ka main representatives: oak, oak, Mediterranean pine	Landscape protection, biological and developmental tourism
Pishë-Poro	IV	Area: 1500ha, Flora represented by the Mediterranean pine, psammophytes, halophytes. Fauna represented by otter, trout, the abductor	Landscape protection, biological and developmental tourism

The municipality of Fier is also located in the vicinity of the National Park of Divjakë-Karavastë.

Municipality of Konispol is rich in natural monuments, and archaeological, cultural, and historical objects of the National Cultural Heritage, but most of them are ruined. In this Basque Country, the Vivar Channel is located, together with the salty springs of Mullir, Vrine swamp , and Mali i Milese, which are also flooded areas.

Based on the Law No. 81/2017 “On protected Areas”, as well as the official site of the National Agency of Protected Areas (NAPA) and the relevant maps, nearby the project is Buntrint National Park (the Butrint wetland complex) promulgated by DCM no.134 dated 20.02.2013 *“For some amendments and additions to Decision No.693 dated 10.11.2005 of the Council of Ministers "On the announcement of the Butrint wetland complex "National Park", category II.*

The ancient city of Butrint was recognized and confirmed as such 1992, when it was included in the UNESCO World Heritage List. This was decided by the World Heritage Committee, referring to the 1972 Convention, "On the Protection of the World Cultural and Natural Heritage". The natural values of the Butrint Wetlands were also recognized by the Ramsar Convention in 2002.

Based on the map (and the coordinates in the DCM) the western part of the project is located near the village of Vrina and Shendelli, flowing directly to ‘Vivari channel’, which is part of protected area (Please refer the map as below). However, it can be concluded that the Xarra I&D scheme does not have a direct impact on the Butrint PA despite it being in close proximity It should be emphasized that the rehabilitation works will be carried out in the previous existing route, except for some additional structures such as pump station, forebay/headtank and access road.

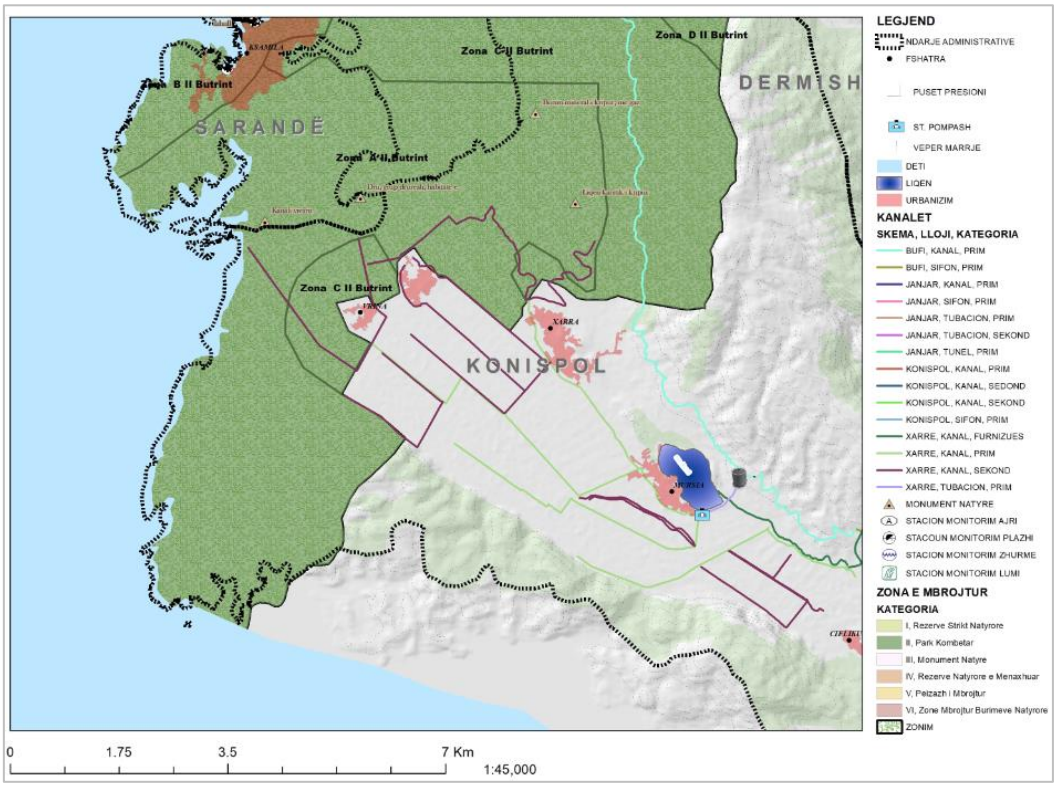


Figure 29: Protected area in Saranda region

According to the map published in DCM No.693 where are presented detailed zoning and their respective subzones of National Park, 2 canals to be rehabilitated near the Vrina plain are part of C2 Zone- Livestock and Traditional Agriculture, also Bufi canal is part of C2 zone, the secondary channels in the xarra are part of the A2 / C2 subzone.

It will also be taken into consideration in this study and DCM 531 dated 31.10.2002'On the proclamation of the wetland complex of Butrint and its surrounding natural area, specially protected and included in the list of internationally important wetlands, particularly as waterfowl habitats', named as Ramsar area (No.Site 1290, dt.28.3.2003) with the following boundaries:

North – Cuka Kanal, motorway connecting the village of Cuke with Dritas and Pllaka;

In the East – Connecting part'Pllakë-Murrsi', which crosses the Mile Mountain

South – Murrsi – the southern border with Greece;

West – From Bistrica Estuary (Cuka Canal) up to the state border with Greece, including the islands of Ksamil and Stillo, reaching 1 km deep in the Ionian Sea

Based on 'Natura 2000' the south-eastern catchment basin of Janjar reservoir within Greek territory is highly sensitive because it is a protected area classified as SPA Birds Directive Sites "ORI TSAMANTA, FILIATON, FARMAKOVOUNI, MEGALI RACHI (Site Code: GR2120009), Area: 19.861.85 ha. The map below shows the location of the Janjar related to the protected area.

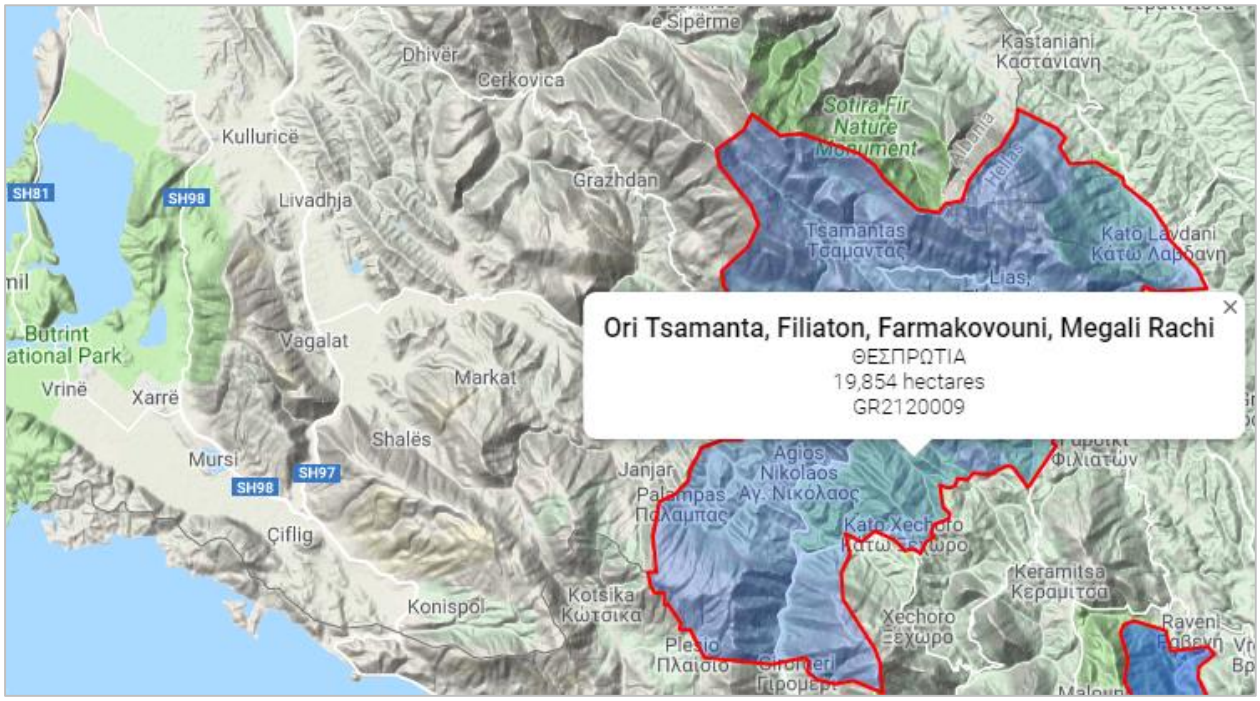


Figure 30: Protected area GR120009 near Janjari reservoir

Protected area GR120009, which is the dividing boundary the reservoir (Albanian part),is a protected habitat for birds. During field visits, birds of different species were identified and their main habitats were the reservoir.

The data for Nature and cultural monuments, protected areas, were obtained from the official website of the National Agency of Protected Areas and ASIG and were processed by the expert of the G.I.S. of Albania.

4.5 SOCIOECONOMIC

Socio-economic indicators shed light on the context in which the Gender Equality Index is analyzed.

Demographic trends show that the Albanian population is projected to decrease, mainly due to low fertility rates and continuous migration abroad. The Albanian population as of January 1, 2019 is estimated at 2.9 million, and it is projected to reach 2.7 million by 2031. Continuously falling fertility since 2013 has also contributed to population decline.

The population of Albania has changed during last 30 years. This comes especially because of the changes in economic system, passing from centralized economy to an open market system, which has given its effect in births, deaths, migration, and definitely has an impact in the future of Albanian population. According to data published by the Albanian Statistical Institute (*Instituti i Statistikave*, INSTAT), Albania's population on 1st January 2022 is **2,793,592** inhabitants, experiencing a decrease by **1.3** % compared to 1st January 2021[27].

[27] URL: http://www.instat.gov.al/media/9829/population-on-1-january-2022_final-15-04-2022.pdf

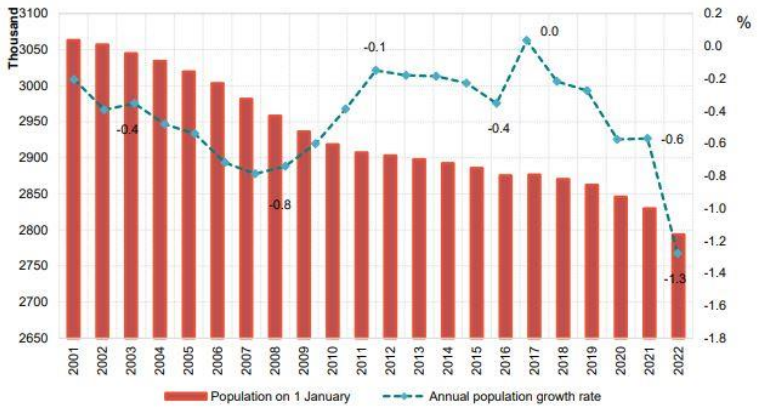


Figure 31 Population on 1st January and annual growth rate (Source: INSTAT)

During 2021 the natural population increase (births-deaths) was -3,296 inhabitants, marking for the first time negative natural increase. The number of immigrants in the year 2021 was 9,195 persons and the number of emigrants was 42,048 persons. Net migration (the difference between immigrants and emigrants) experienced an increase in absolute value, compared to the previous year: from -16,684 to -32,853 inhabitants in 2021. Emigration has remained a significant problem in Albania since the beginning of transformational changes.

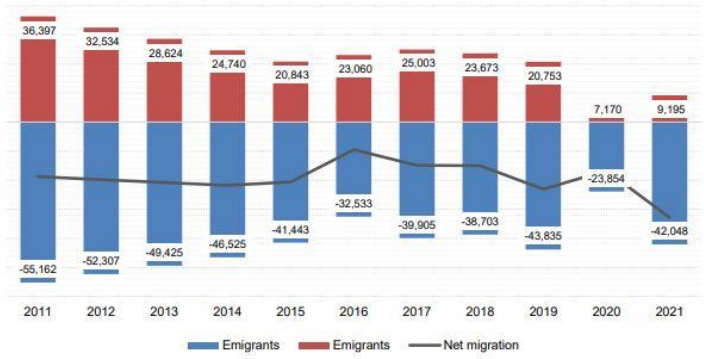
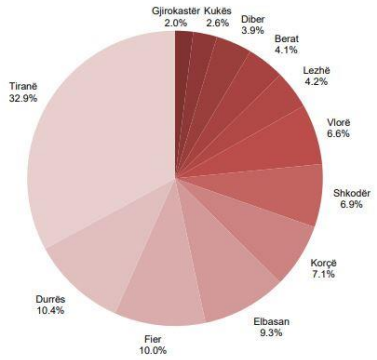


Figure 32 Emigrant, immigrant and net migration (Source: INSTAT)

Based on prefectures level the highest weight in the total population is Tirana, followed by Durres and Fier. On 1st January 2022 Tiranë prefecture occupies around 32.9 % of total population, continuing to be the most populated prefecture in the country, followed by Durrës and Fier with 10.4 % and 10.0 % respectively. Regarding the other prefectures, five of them occupies respectively from 2 % to 5 % of total population. The data shows that only one prefecture of the country experienced a population growth compared to the previous year, while eleven of them experienced a decrease. The increase was observed in Tirana (+0.8 %). On the other hand, the largest decreases of population were observed in Gjirokastër (-4.7 %), Berat (-3.7 %) and Dibër (-3.6 %).



Population by prefecture on 1st January 2022

Prefecture	1st January 2021			1st January 2022		
	M	F	MF	M	F	MF
Berat	59,715	59,735	**119,450**	57,192	57,858	**115,050**
Dibër	59,372	54,311	**113,683**	57,145	52,440	**109,585**
Durrës	147,648	144,381	**292,029**	147,096	144,229	**291,325**
Elbasan	132,501	133,744	**266,245**	128,208	130,904	**259,112**
Fier	144,281	141,721	**286,002**	139,603	138,810	**278,413**
Gjirokastër	28,112	29,919	**58,031**	26,567	28,711	**55,278**
Korçë	100,228	101,965	**202,193**	97,235	100,068	**197,303**
Kukës	38,213	36,175	**74,388**	37,361	35,407	**72,768**
Lezhë	59,826	60,852	**120,678**	57,775	59,508	**117,283**
Shkodër	96,097	101,080	**197,177**	93,707	99,302	**193,009**
Tiranë	449,929	462,261	**912,190**	452,793	466,718	**919,511**
Vlorë	94,060	93,615	**187,675**	92,378	92,577	**184,955**
TOTAL	**1,409,982**	**1,419,759**	**2,829,741**	**1,387,060**	**1,406,532**	**2,793,592**

Population on 1stJanuary by prefecture and sex

Figure 33 Population by prefecture (Source: INSTAT)

In recent years, emigration is driven by jobs and education opportunities abroad. In 2018, 38,703 people emigrated.[28] The high emigration along with declining fertility rates may further contribute to the population decline, as well as changes to the labour supply. Furthermore, as a result of high emigration rates, Albania received in the past large amounts of remittances, which accounted for about 28 % of GDP in 1993. However, as family ties to the home country start to weaken so do remittances, which have gradually declined since 2000. From 2018-2020, they accounted for about 9.7 percent of GDP[29].

Gender Equality. The latest statistics for gender equality for Albania are published from INSTAT in 2021. During this year the number of women in Albania was decreased by 0.4 %, while the population of men was decreased by 0.7 %. The women population accounts for 50.2 %. Natural increase of population during 2020 has been lower for men than for women, respectively with -1,018 and 1,488 units. Net women's migration is -7,069 more emigrated women than returned, in 2020. Net migration of men is also negative with -9,615 more emigrated men than returned. The negative net migration of women and men has affected to the total decrease of population.

The sex ratio by age group indicates a prevalence of the men population up to the age group 35-39 years. The median age for men, in the end of year 2020 is 36.8 while for women is 38.6 years old. The higher median age of women is due to their higher life expectancy. In 2020 life expectancy at birth was estimated at 75.2 years for men and 79.6 for women. This means that women live about 4 years longer than men.

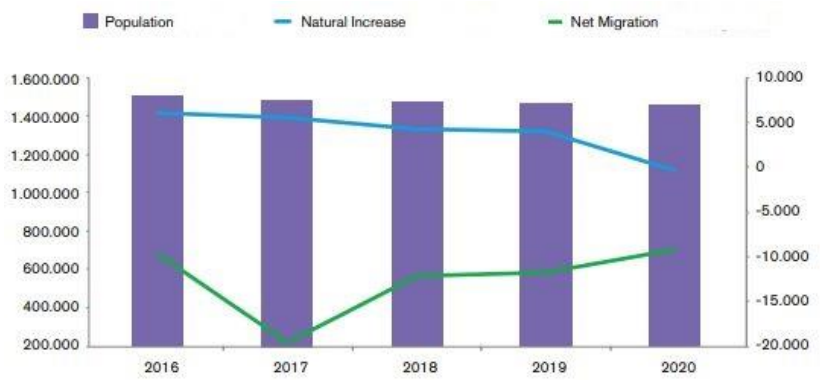


Figure 34 Population dynamics (Source: INSTAT)

[28] URL: http://www.instat.gov.al/media/5154/population-of-albania-first-january-2019.pdf

[29] URL: https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?locations=AL

Participation by gender in the **education cycles**[27] indicates the existence of gender differences at various education levels. The ratio of boys attending pre-university education is higher compared to girls, whereas 60.4 % of students in higher education are girls. During the academic year 2019-2020, in the compulsory education were successfully graduated around 33,000 students in upper level, of which 52.3 % were boys and 47.7 % girls. Students graduated upon completion of upper secondary education by gender were 51.1 % boys and 48.9 % girls. The number of graduates from higher education in the academic year 2019-20 amounted to 33 thousand students, of whom 65.3 % were girls. The number of graduate girls decreased by 1.1 % compared to the previous year.

Table 15 Pupil and students enrolled by programme and sex.

Programme	2016-2017		2017-2018		2018-2019		2019-2020		2020-2021	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Pre-Primary	42.295	38.899	42.314	38.712	41.221	37.721	40.466	37.392	37.016	34.316
Primary	92.38	82.456	89.835	81.026	87.762	79.342	84.734	77.436	82.707	75.821
Lower secondary	80.842	72.422	78.348	70.462	73.705	65.721	70.21	62.499	67.56	60.398
Upper secondary	67.528	59.586	63.901	56.161	62.177	54.469	58.29	51.243	57.27	50.719
University	57.99	83.42	53.11	78.723	56.1	82.943	52.283	77.981	48.976	74.821

(Source: INSTAT)

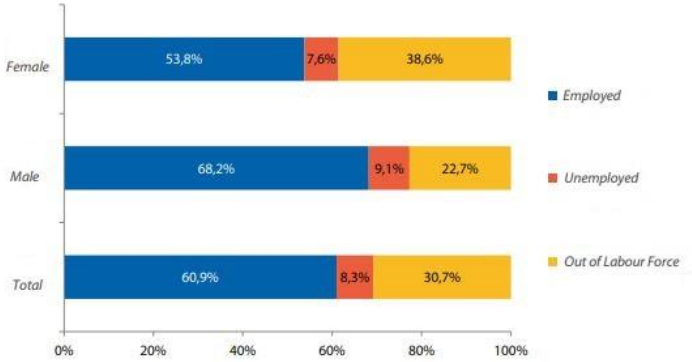
According to the **labour force**[27], during 2021, the labour force is estimated to be 1,411,308 persons, where males account for 55.4 % of the labour force and females 44.6 %. Employment is estimated at **1,248,749** persons, from which males account for 55.5 % and females 44.5 %. A total of 162,560 people is estimated to be unemployed, of which 54.5% are men and 45.5% are women. The official unemployment rate for the age-group 15-74 years old is 11.5 %. The unemployment rate is 0.5 percentage points lower for males than females. Compared to 2020, employment increased by 0.4 % while the official unemployment rate (for 15-74 years old) decreased by 0.2 percentage points.

Employed **population** (male, female) aged 15-64 years old[30] is 60.9 %, 8.3 % is unemployed and 30.7 % is economically inactive (outside the labour force).

Employed **male** population of age 15-64 years old are 68.2 %, 9.1 % are unemployed and 22.7 % are outside the labour force.

Employed **female** population of age 15-64 years old are 53.8 %, 7.6 % are unemployed and 38.6 % are outside the labour force.

Compared to 2020, the average monthly gross wage for an employee in Albania increased by 6.6 %. The gender pay gap is 4.5 %. Men have a gross monthly average wage of 4.5 % higher than women. Compared to 2020, there is a decrease of the gender pay gap by 2.0 percentage points.



[30] The labour force participation and employment rates are calculated based on the population aged 15 to 64 years while the unemployment rate is calculated based on the economically active population (labor force) aged 15 and over.

Figure 35 Distribution of population aged 15-64 years old by economic activity status and sex, 2021 (Source: INSTAT)

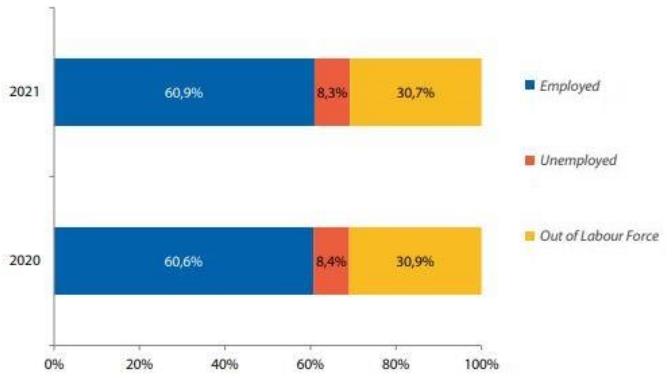


Figure 36 Distribution of population aged 15-64 years old by economic activity status, 2020-2021 (Source: INSTAT)

Analysis of employment by main occupation groups reflects the employment structure by sectors. In 2021, skilled agricultural and trades workers account for 43.9 % of total employment. Then follow the groups of 'Managers, professionals and technicians' and Clerical, service, and sales workers' that account respectively for 18.9 % and 18.7 % of the total employed.

The service and agricultural sectors have the highest share of employed with respectively 44.3 % and 33.8 % of the total employment.

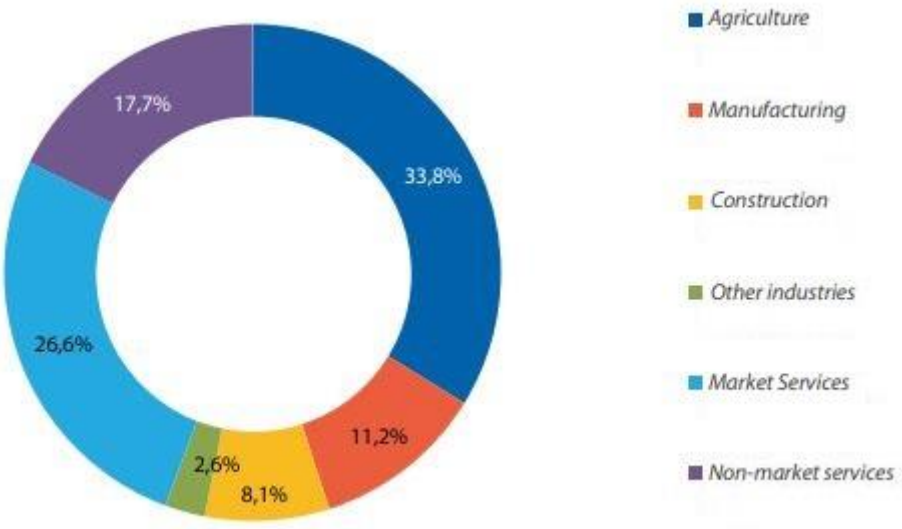


Figure 37 Employment (15+) by economic activities, 2021 (Source: INSTAT)

Despite the differences in the labor market women also face a double burden, since they are primarily responsible for the unpaid labor within the household, which is mainly focused in household chores and child-care.

Economy. Albania is implementing important structural reforms that will support equitable growth, raise productivity and competitiveness in the economy, create more jobs, and improve governance and public service delivery. The Government's focus has been on recovery from the pandemic and the devastating earthquake of November 2019. A robust recovery took place in Albania in 2021 thanks to policy stimulus and resurgence of travel, construction, and extractive activity. Private investment, consumption, and public spending drove growth, while public debt remained high. Despite the strong post-pandemic recovery, however, Albania has been impacted by global developments such as the war in Ukraine and growing inflation in 2022. Uncertainty with regard to the war in Ukraine is affecting

price stability and growth (indirectly), which is expected to slow to 3.2 %[31] in 2022. Private consumption is projected to return as the main driver of GDP growth. Private investment could provide further support to growth if business climate reforms are implemented.

Gross Domestic Product (GDP) is an economic indicator that shows the value of the material goods and services produced within a country during one year at market prices. According to INSTAT[32] Gross Domestic Product (GDP) in the first quarter of 2022 in volume terms has increased by 5.97 % compared with the first quarter of 2021. The branches that gave a positive contribution are: Construction by +1.95 percentage point, Trade, Transport, Accommodation and Food Services by +1.55 percentage point, Real estate activity by +0.91 percentage point, Professional services and Administrative services by +0.66 percentage point, Financial and insurance services by +0.26 percentage point, Industry, Electricity and Water by +0.24 percentage point, Information and Communication +0.03 percentage point, Agriculture, Forestry and Fishing by +0.01 percentage point. Negatively contributed the branches of the economy such as Arts, entertainment and recreation services, other services by -0.35 percentage point, public administration, Education and Health by -0.18 percentage point. Net taxes on products contributed positively by +0.89 percentage point.

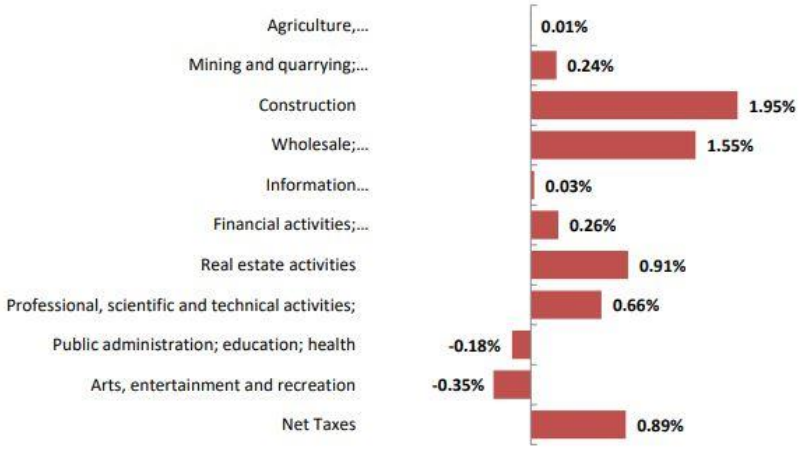


Figure 38Contribution of the main branches of the economy to real growth rate of GDP (Q1_2022/ Q1_2021) (Source: INSTAT)

4.6 CULTURAL HERITAGE

The United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Sites are places of importance to cultural or natural heritage as described in the UNESCO World Heritage Convention, established in 1972. Cultural heritage consists of monuments (such as architectural works, monumental sculptures, or inscriptions), groups of buildings, and sites (including archaeological sites). Natural features (consisting of physical and biological formations), geological and physiographical formations (including habitats of threatened species of animals and plants), and natural sites which are important from the point of view of science, conservation or natural beauty, are defined as natural heritage. Albania ratified the Convention Concerning the Protection of the World Cultural and Natural Heritage on 10 July 1989, making its historical sites eligible for inclusion on the list.

[31] URL: https://www.worldbank.org/en/news/press-release/2022/05/04/albania-faces-new-economic-challenges-despite-strong-post-pandemic-recovery

[32] URL: http://www.instat.gov.al/media/10256/gdp-q1-2022.pdf

As of 2021, there are four sites in Albania inscribed on the list and further four sites on the tentative list. The first site in Albania to be added to the list was the ancient city of **Butrint** which was inscribed at the 16th UNESCO session in 1992. The historic centre of Gjirokastër was inscribed in 2005 as Museum-City of Gjirokastra. In 2008, the historic centre of Berat was added to the site, to form the **Historic Centres of Berat and Gjirokastër**. In 2017, the Gashi River and Rrajcë regions were listed as part of the **Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe** that is shared with 17 other countries. In 2019, the site **Natural and Cultural Heritage of the Ohrid region**, a World Heritage Site in North Macedonia since 1979, was expanded to include the Albanian part of the coast.

Divjake Municipality. Among the cultural monuments in this municipality, we mention the Town of Babunje, the Ancient Settlement in Bishcuke, and the Church of Saint Thanasi in Karavasta.

Lushnje Municipality has nine cultural monuments of the first category administered according to law no. 9048, dated 7.4.2003 "For cultural heritage". Among the most important cultural monuments in the territory there are: Çezmja e Kongresit, Museum House "Congress of Lushnja", the Bridge in Kasharaj (Ura e Sefe - is a medieval stone bridge), the Lunges Bridge, Karbunare (is also known as the Begeve Bridge), Saint Mary's Church, (in Bishqethem), Church of Saint Kolli, (Upper Krutje, Saint Mary's Monastery, (Ardenice), the Church of Saint Todhri, (Kapidashaj – Arrez), the Church of Saint Kolli, (Toshkez).

Fier Municipality. In the territory of the Fier Municipality, there are several churches, such as the Church of Saint Kolli, Vanaj, Church of Saint George, Libofshë, Church of Saint Kozmai, Church of Saint Premtes, Hoxhare, Villa Romane, Plyk - Monastery of Saint Mary, Pojan - The ancient city of Apolonia, Pojan - The ancient temple, Shtyllas. These churches are the main territorial elements because of the impact these objects have on the territorial, economic and social development of the territory they lie. These cultural objects constitute a significant historical and cultural potential for the area.

Konispol Municipality occupies most of the southern territory of Albania and is on the border with Greece. It remains from areas with high residential intensity starting from the period of antiquity until our days. Some many archaeological centres and points include the periods of prehistory, antiquity, and the Middle Ages. From the ancient-medieval period, Cuka e Ajtoi stands out as a civic center in this territory. In Konispol territory, there are traces of very early habitation, like the Cave of Kreshmoi on its northern side and the ruins of an XI-XII century castle with an area of about 2000 m^2.

Ancient Cities: The Vine Field is one of the main economic resources of the Konispol area and continues to be so. In the Konispol territory, there are three ancient urban centers: Butrint, Kalivoja, and Cuka e Ajtoi.

Residence of Kalivose. It is a fortified settlement and developed parallel to Butrint until the beginnings of proto-urban life. After the 6th century BC, strong surrounding walls still remains with several round gates and a quadrangular tower on the northern side where the fortification approaches Lake Butrint.

Numerous archaeological excavations in the area have revealed traces of the prehistoric period (Bronze and Iron Age) and the period of Roman antiquity. Various ceramic vessels are founded in Kalibo and Stillo habitation and in Himare Cave in the early iron layer and date the 8th century BC.

In the ancient city of Konispol, there are fortified systems in castles. There are four medieval castles, three of which were built inside the city, while one is located at the height of Narte Mountain. Konispol unit, has various monuments of special importance for our country's heritage.

4.7 AGRICULTURE SECTOR IN ALBANIA

4.7.1 General view of agriculture sector

Albania is a small and very mountainous country with a total area of 28,750 km^2, of which 24% is agricultural land, 36% forest and 15% pasture and meadow. The remaining 25% is classified as other, which includes urban areas, about 135,000 hectares of lakes and waterways and unused rocky and mountain land. The average agricultural land per capita at 0.2 hectares is the smallest in Europe, even though agricultural land more than doubled from 1950 to 1990 due to drainage of marshland, terracing and cultivation of forest and pastures, and establishment of new irrigation schemes.[33] Agriculture still provides the income base for most of the population and serves as an employment safety net. Agriculture remains one of the main components of Albania's economy. According to INSTAT the agriculture sector has the highest share of employment compared to other sectors, about 33.8%[34] of the total employment, and currently contributes to more than 17,7%[35] to national GDP.
Albania has been, is, and will remain for years a country where agriculture will play a very important role. Despite the importance of agriculture for the national economy, Albania is a net importer of agricultural products.

Income from agriculture and forestry activities has a predominant role in rural dwellers' livelihood; however, the official figures show that about 130,000 farm households (or 36% of total) receive income from non-agricultural activities and approximately the same number from emigrants' remittances. Before the transition to the market economy there had been 550 large state farms and cooperatives. Land privatization, initiated in 1991, created a structure of private farms characterized by very small units, mostly fragmented in three or more plots. The majority of farms in Albania are family farms with the average size in hectares reported to be 1.2ha/farm. Indications suggest that the average farm size is slightly decreasing. For example, in 2014 the average farm size decreased by 0.6% from 1.17ha/farm to 1.16ha/farm[36]. Despite a shrinking average farm size, the number of farms nationally has increased by 0.4% from 350,416 in 2013 to 352,315 in 2014.

The average farm size is 1.26 ha but is divided into 4.7 parcels, which means that the average family farm size is only 0.27 ha. The main crops are vegetables, fruit trees and vineyards, grains and olive groves.

4.7.1.1 Crop pattern

This section provides statistical data from INSTAT of the products on crops and vegetables, fruit trees, etc., for Albania and its prefectures. In general, the production of agricultural lands will increase over the next few years, but there are factors which will hinder this development. The low-income levels and poverty of the rural population reduces the use of fertilizers and pesticides. This on the one hand is good for the environment as it prevents excessive water pollution, but on the other hand, production quality and quantity are reduced.
The malfunction or immobility of irrigation reservoirs and canals is also influencing a reduction of agricultural products. Furthermore, problems of climatic change and malfunction of draining channels

[33] URL: https://www.academia.edu/2438518/Agro_environmental_Resources_and_Soil_Use

[34] URL: http://www.instat.gov.al/media/10066/tregu-i-punes-2021.pdf

[35] INSTAT publication – "Albania in numbers 2021", Albanian GDP, pg. 55.
URL: http://www.instat.gov.al/media/10320/shqiperia-ne-shifra-2021.pdf

[36] INSTAT - http://www.instat.gov.al/media/304623/press_release_agriculture_statistics__2014.pdf

has created problems of flooding of agricultural lands during extreme rainfall events. The Albanian government is trying to restore all irrigation and draining system, to save farm assets and crop production and to improve the standard of living in the communities, using the agriculture activity as a powerful development instrument.

According to INSTAT statistics of Agriculture 2021 the Vegetables production is 1,338,218 tonnes, increasing by 3.28%, compared with the year 2020. The highest level of vegetables production was achieved in the prefectures of Fier with 541,792 tonnes, Tirana with 133,579 tonnes and Berat with 131,830 tonnes.
Cereals production in 2021 is 691,353 tonnes, increased by 1.04 % compared with the previous year. The highest level of cereals production was achieved in the prefectures of Fier with 168,385 tonnes, following by Elbasan with 98,249 tonnes and Korça with 85,094 tonnes. In 2021, the potatoes production is 258,862 tonnes, increased by 1.56 % compared with the year 2020. The highest level of potatoes production was achieved in the prefectures of Korça with 63,418 tonnes, following by Fier with 44,636 tonnes and Elbasan with 29,986 tonnes. Compared with previous year, white beans production is decreased by 12.98%

Table 16 Agriculture production (thousand tonnes) (Source: INSTAT)

Agriculture production	2020	2021
Field Crops		
Cereals	684.0	691.4
Vegetables	1,295.7	1,338.2
Potatos	254.8	258.9
White beans	25.8	22.4
Industrial crops	30.1	27.3
Medical crops	14.4	16.0
Forade	7,170.5	7,054.0
Permanent crops		
Fruit trees	273.7	287.2
Olives	131.9	110.2
Citrus	49.2	50.5
Grapes	199.1	212.2

Vegetable production in greenhouses represents 21.67% of total vegetable production, where the prefectures of Fier represents 52.00% of the production. Greenhouse vegetable production in 2021 increased by 2.64% compared to the previous year where tomatoes production represents 51.9% of total production. The highest level of greenhouse vegetable production from the total vegetable production was archieved in Berat prefecture with 64.62% and Fier with 27.79%, and the lowest level was archieved in Korça and Gjirokastër prefectures with 0.16% and 0.42%.[37]

Table 17 Vegetables production in open field and in greenhouse, by prefectures, 2021 (in %) (Source: INSTAT)

Prefecture	Open Field	Greenhouse
Berat	35.4	64.62
Fier	72.2	27.79
Elbasan	75.6	24.42
Shkoder	79.7	20.25
Durres	93.7	6.34
Vlore	96.3	3.66
Tirane	96.7	3.25
Lezhe	96.9	3.08
Kukes	99.4	0.64
Diber	99.6	0.43
Gjirokaster	99.6	0.42
Korce	99.8	0.16

[37] URL: httLezhep://www.instat.gov.al/media/10184/a96.9griculture-statistics-2021.pdf0.

Most vegetables grown require at least some irrigation. Entrepreneurial farmers have small and old irrigation systems – often a single sprinkler – and pump water from drains or private wells. This allows them much needed irrigation scheduling flexibility. Sub-tropical types such as tomatoes, eggplants, peppers, cucumbers, onions, dominate summer cropping whilst spring and summer cropping is dominated by temperate types such as cabbage, leeks, onions, potatoes, and green salads. Presently the dominant crop in greenhouses is tomatoes, followed by cucumber. The main part of the vegetables is consumed by the farmers themselves. While a portion of cultivated vegetables in the area goes to supply hotels (tourism in the area), or in a sense, goes to the market.

The production of permanent crops is represented by the production of fruit trees, olives, citrus and grapes. Fruit trees production in 2021 is 287,210 tonnes increased by 4.92% compared with 2020. The highest level of production was reached in the prefecture of Korça with 89,753 tonnes, followed by the prefectures of Elbasan with 39,118 tonnes and Fier with 33,774 tonnes

Pome fruits group occupy 45.43% of the total production represented by apples with 85.25 %. Korça prefecture occupies 66.02 % of total apples production in country. In the stone fruits group, the largest category is represented by plums with 46.33%, followed by cherries with 24.80% and peaches with 23.18 %. In the subtropical fruits, the major group is represented by figs with 51.40 %, followed by pomegranates with 17.76%. The highest level in the group of nuts is archieved in Kukës prefecture and the main category is occupied by nuts with 46.37 %, followed by chestnuts with 33.96%. In 2021, were produced 110,164 tonnes of olives, increasing with 16.52 % compared to the previous year. The highest level of olive production was reached in the prefecture of Fier with 34,241 tonnes, followed by the prefectures of Elbasan with 21,102 tonnes and Vlora with 20,298 tonnes. Olives variety for oil represent 87.60% of total olive production and olives variety for table 12.40 %. The highest level of citrus production was achieved in the prefecture of Vlora with 64.41% (32,518 tonnes). The citrus production in year 2021 was 50,485 tonnes, increasing with 2.61 % compared with the previous year, where 65.04% of total citrus production is occupied by Clementine production. In 2021, grape production is 212,011 tonnes, increasing with 6.50%, compared with the previous year, where 60.51 % is represented by grape from vineyards and 39.49 % from pergolas.

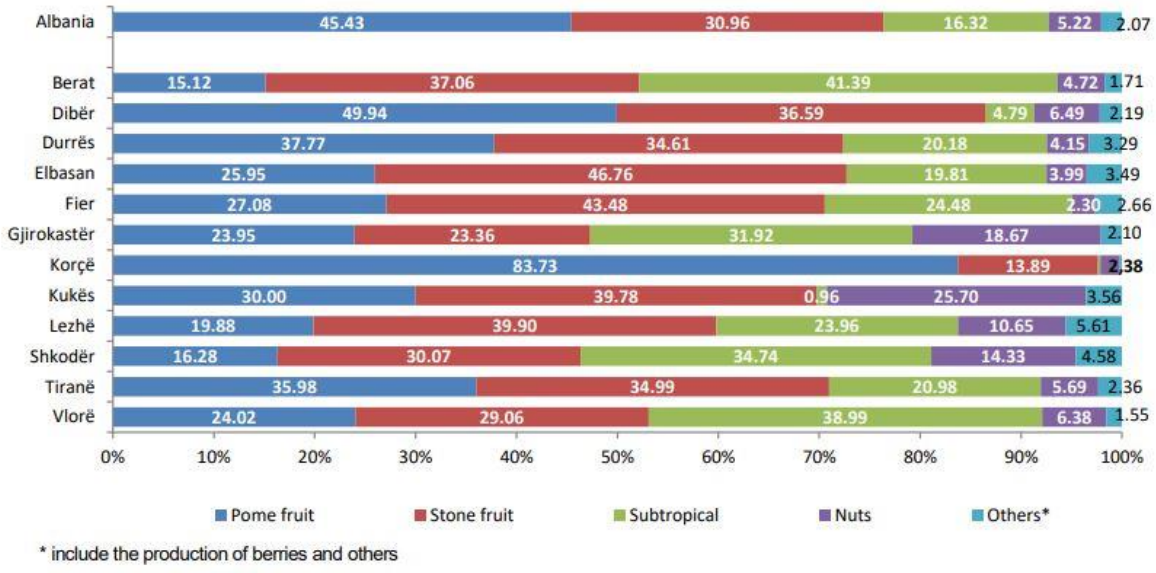


Figure 39 Structure of fruit trees production by kinds and prefectures, 2021 (in %) (Source: INSTAT)

4.8 IRRIGATION SECTOR IN ALBANIA

In Albania, approximately 360,000 ha have been equipped for irrigation. In 2014 only about 120,000 ha was actually irrigated (30 % of the equipped area). Systems are generally designed with a hydro module 0.8 – 1.2 litre/second/ha, with irrigation norm 2,000 - 7,000 m^3/ha. Although gravity systems are designed with efficiency of 70 % (30 % loss), the current efficiency between 30 and 60%. The total length of irrigation canals is 25,000 km, of which there are 2,000 km of main canals, 6,200 km of secondary canals, and 16,800 km of tertiary channels.

The need for rehabilitation and modernization is widespread. Part of irrigation canals and water control structures are deteriorated due to non – periodical maintenance and have become non-functional. From 360,000 ha equipped irrigation area, 140,000 ha of irrigated area needs to have its irrigation infrastructure rehabilitated, where the irrigation does not occur (including irrigation with mechanical lifting with pumping stations that covers 60 %), while at the other area about 225,000 ha, to ensure a sustainable irrigation, there is needed partially rehabilitation and annual maintenance.

Almost all 640 pumping stations have been used for irrigation of 110,000 ha, but these actually are almost out of order, due to high electricity costs, poor maintenance, damage and theft. It has been assessed that 300 pumping stations (with average elevation 50 m) for 75,000 ha are still worth restoring to functionality and need rehabilitation.

The operation of pumping stations is only possible with the subsidizing of energy costs by the state budget, at least on the early stages. This will bring equality between all farmers that need water for irrigation regardless the irrigation scheme with gravity or pumping station.

Numerous problems currently face irrigation system management. These include:

- Difficulty of farmers working together,
- Poor quality of irrigation service provision,
- Deferred maintenance,
- Irrigation infrastructure dysfunctional,
- Poor levels of payment of irrigation service fees (less than .5 percent of the gross value of output, according to a World Bank estimate),
- Poor or non-transparent financial management,
- Inactivity of WUO, poor monitoring of management performance,
- Low amount of consultations or capacity building for WUO, and
- Inadequate level of O&M done by WUOs and their federations.

In addition, frequent changes in the economy, urbanization, and aging of the farm population have all caused the management performance of irrigation and drainage systems to become poor and the area irrigated to shrink. [44]

There is a need for Albania to modernize the country's degraded irrigation and drainage infrastructure. Regular maintenance is equally important.

In Albania, as in other countries in the Western Balkan region, a vibrant private or farmer-led irrigation sector has developed. Private irrigation focuses on growing high-value crops for both local and international markets. If adequately supported, this sector can significantly contribute to the government's plan of doubling agricultural exports.

Interventions are required in several areas in order to enhance water security, climate resilience, and agricultural competitiveness, and to ensure revival of the rural economy.

5 ANTICIPATED ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

This chapter will address the environmental and social impacts of the project, describe general mitigation measures to minimize, if not eliminate, potential negative impacts and ensure that interventions under the proposed project do not cause environmental and social impact beyond the acceptable level.

5.1 ENVIRONMENTAL AND SOCIAL RISKS

5.1.1 ENVIRONMENTAL RISK RATING

The environmental risk is rated as moderate given the civil works in the project. Although long-term effects will probably be positive, project activities can generate some risks, mostly those of components 1.2 and 2. Project activities may have environmental risks generated mainly by civil works that are assessed to be of a small to medium scale and are likely to have a number of predictable and easily mitigated environmental impacts. Irrigation rehabilitation and civil works may generate site-specific risks such as disposal of excavated material during construction or rehabilitation activities, occupational health and safety of workers during construction phases, increased dust levels and noise that may have health-related effects on the community, and the risk of contamination of surface and groundwater resources during construction. The anticipated environmental impacts of the project will largely be mitigated and managed through an appropriate study that will be prepared based on the initial review and in accordance with the project's Environmental and Social Management Framework (ESMF). There will be no impact on protected areas, habitats, or cultural heritage as they are located far away from the project area. The entire project is subject to an ESMF, in which potential environmental and social impacts are determined and general mitigation measures are provided.

5.1.2 SOCIAL RISK RATING

The social risk rating for the project is considered moderate to low. It can be considered that the project will not be associated with possible effects on human health project will not be associated with possible effects on human health if, during the construction phase of civil works, some health and safety issues for workers occur. The chances of physical or economic displacement due to land acquisition are very small. Most probably, there will be no need for land acquisition or displacement of dwellings or any facility because the site is not known yet. It is anticipated that these risks will be mitigated and managed primarily through appropriate due diligence documents that will be prepared prior to the assessment and by reviewing the associated high-risk activities.

SEA/SH (Sexual Exploitation and Abuse and Sexual Harassment) risk is low, given that there will be no labor influx or labor camps. All the labor will come from the local municipality or neighboring municipalities, and thus the workers are well established in the project area. This, in combination with the country's risk level, makes the SEA/SH risk low. However, the project will establish a robust GRM that will be able to respond also to SEA/SH-related complaints. In addition, extra measures will be taken with the contractors to ensure that employees sign the Code of Conduct related to SEA/SH.

5.1.3 NATURAL HAZARDS

Albania has high natural & economic risk from multiple hazards such as:

- earthquakes,
- floods,
- landslides,

- droughts,
- rock falls, snowfalls & avalanches,
- forest fires & high temperatures,
- environmental hot spots;

Albania ranks as one of the countries with the greatest economic consequences worldwide, caused by a variety of natural disasters. In addition to exposure to natural hazards, there are a number of other additional risk factors (uncontrolled urbanization, environmental degradation) which, becoming part of the Albanian transition towards an open market economy, are also contributing to strengthening the effects of natural disasters .

Albania is a country with a relatively high probability of being hit by natural disasters. It is ranked among the countries with high economic risk for a variety of reasons. About 86% of its territory, where over 88.5% of its GDP is generated, is exposed to two or more natural disasters. The economic losses caused by these disasters between 1974 and 2006 were estimated at an average of 68.7 million USD per year, or about 2.5% of GDP. 5 Between 1989 and 2006, earthquakes and floods accounted for 17% and 31% of the disasters that occurred. In Albania. On a global scale, Albania ranks 41st for the risk of landslides, 43rd for earthquakes, and 58th for droughts.[38]

In the last two decades, Albania has attempted to apply a more modern approach to dealing with disasters of natural or human origin, giving importance to both "Disaster Risk Reduction" (DRR) and "Civil Protection" (CP). It has improved the legal framework related to these disasters, operational plans, relevant institutional structures, and capacities, as well as cooperation with countries in the region and other international actors. The support provided so far by a number of supranational actors (UN, EU, World Bank) has produced some positive results in the field of natural disaster protection, but regional and international cooperation has been lacking. At the bilateral level, Albania has good cooperation with Italy, Greece, Macedonia, and Kosovo, but this cooperation is still missing with a number of other countries.The risks from natural disasters for Albania are: geological (earthquakes, landslides, rockslides); hydrometeorological (floods, torrential rains, droughts, snowstorms, avalanches or snow jams, windstorms); bio-physical (forest fires, epidemics) while those caused by man consist of: dam explosions, floods and technological disasters. Albania also faces a number of environmental problems, to which is added the existence of high-risk areas due to pollution (hot-spots).

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Albania is characterized by a high degree of seismicity. Together with several other countries of the Eastern and Southeastern Balkans, it has suffered an earthquake of magnitude ≥ 6.5 almost every year. The seven largest cities of Albania are included in the zone with a probability of 75% of this risk. About 10% of the Albanian territory is considered "unstable", subject to landslides.[39]

Ìn January 2010, in the regions of Shkodër and Lezhë, rural areas and building of Shkoder city were flooded and people had been evacuated from their homes.The area affected by the floods is mainly rural territory, except for the city of Shkodra. The assets most affected by flooding are housing, animal stables, and roads. During the December 2010 floods, the total documented number of affected and evacuated residents in this area was about 12,145, and the number of affected dwellings was about 7,120 (4,540 flooded houses and 2,580 houses surrounded by water), while the number of assets at

[38] UN (CADRI) Capacity Assessment of Disaster Risk Reduction (DRF),2011, pg5

[39] IGJEUM. URL: https://www.geo.edu.al/newweb/?fq=sizmobuletinet&gj=gj1&kid=36

risk in this area was more than 400 assets of different types. The damage to assets and the population at risk here are not that important, and the population has learned from the past how to build to protect themselves. However, agriculture and livestock are vital to humans. According to the data published by the Department of Agriculture in the region, during the floods, cultivated land and crops were greatly affected (about 10,280 hectares, of which about 4,887 hectares are cultivated land), and the economic damage was very great. [40]

In Albania, one of the Mediterranean countries most affected by fires, forests occupy about 29% of the surface. In 2007, the total burnt area (due to natural or human causes) reached 127 thousand hectares, but it was significantly smaller in 2008, with about 19,254 ha.[41]

Albania's Civil Emergency Management System (CEMS) consists of permanent and temporary structures at the central, district, and local levels. Through these structures, each ministry, directorate, or institution currently has specific roles and responsibilities for all phases of the emergency management cycle. These roles and responsibilities are often divided between two or more institutions, which deal, for example, with issues such as water supply, the opening of canals, the construction of retaining walls, dams, or bunkers, and other issues. These roles and responsibilities are already included in the existing specific plans for civil emergencies drawn up by these institutions. In most cases, when these institutions have a specific role in the response phase, they will also have a corresponding role in other phases of the emergency management cycle, including prevention and relief.[42]

At the national level, the Council of Ministers (CoM) approves strategies, policies, plans, and programs related to the DRR&CP. He also directs and coordinates the activities of all institutions involved in a civil emergency. The Home Offic breaks down policies into plans and executes them during an emergency situation. The General Directorate of Civil Emergencies (GDCE) is the key institution for disaster management. It cooperates with the central institutions and agencies involved in civil emergencies and monitors the state of emergency throughout the territory of Albania. The National Operations Center for Civil Emergencies, under DPEC, plays an irreplaceable role in all phases of civil emergency management. It is staffed with service personnel 24 hours a day, 7 days a week, and monitors the situation throughout the Albanian territory.

Ministries (in line with civil emergencies) are responsible for civil emergency planning and management in accordance with their areas of responsibility. Their activity is incorporated into all phases of the civil emergency management cycle, and, as the case may be, they play a leading or supporting role, depending on the nature and phase of the emergency. Prefects, mayors of municipalities, and communes are responsible for planning and managing civil emergencies in their units.

In Albania, the main operational capacities related to the DRR&CP consist of the force and tools from:

- Armed Forces (FASH)
- State police
- Directorate of Fire Protection and Rescue Service
- Emergency Medical Services (Health).
- Directorate of State Reserves
- Specialized units (mines and emergency response).

[40] URL: https://www.bashkiashkoder.gov.al/web/plani_rajonal_i_menaxhimit_te_permbytjeve_shkoder_4295.pdf

[41] UN (CADRI) DRR Capacity Assessment, 2011, p8

[42] URL: https://idmalbania.org/wp-content/uploads/2021/11/Menaxhimi-i-Emergjencave-Civile-ne-Shqiperi.pdf

- Other monitoring and operational structures.[43]

Albania has established a Commission on Health Emergency Preparedness and Response and Civil Emergency Related Health Aspects that will form the basis of the development of emergency response systems, from preparedness through to recovery. Albania is in the process of finalizing its health sector Emergency Response Plan, which will form the basis of its emergency response operations.

5.2 POSITIVE IMPACTS OF THE PROJECT

Overall, the CRAD project is expected to have mainly positive long-term socio-economic impacts.

The advantages of the proposed project may be direct consequences of the project or indirect consequences that arise in project implementation.

On the other hand, although the avoidance of Physical Displacement will be one of the main associated criteria used for the choice of locations during construction activities, the project may have potential impacts on both publicly owned and privately owned assets and land.

Advantages can be identified in the following areas:

- economic;
- health;
- convenience/ environment; and
- ecological.

5.2.1.1 Economic benefits

Economic benefits are increasing the added value of cash flow in local and national economy for the duration of the investment through increased agricultural production, improved services for communities and citizens, creation of new jobs, etc. These uses do not include increases in the value of funds, subsidies or taxes.

In the short term, the improvement/modernization of irrigation network and improvement in the system of management will provide enhanced services related to irrigation and more cost effective agriculture products, bringing more income for the farmers and more market competition.

5.2.1.2 Health benefits

Health benefits include improvement of human health such as reduced mortality, reduced number of chronic diseases, and reduced bad reproductive or developmental effects.

The largest advantage of ensuring clean irrigation water is also a positive impact on reducing the number of diseases, especially if it is introduced together with improved hygiene habits, which is the case for a longer period of time. Reduced number of diseases and improved health community has economic benefits in the form of improved operational efficiency, reduced number of absences from work or school because of illness, and reduced household expenses for medication and treatment.

5.2.1.3 Convenience Benefits

Benefits that improve convenience include better access to recreational activities (landscape, nature walks, etc.) and better living conditions (noise, air quality, water quality, etc.), which does not always

[43] URL: https://idmalbania.org/wp-content/uploads/2021/11/Menaxhimi-i-Emergjencave-Civile-ne-Shqiperi.pdf

bring direct economic benefits, but in any case, they are present. For example, improved standards of living and comfort will indirectly lead to increased productivity in the work of household members.

5.2.1.4 Ecological benefits

Ecological benefits such as protection of natural ecosystems and biodiversity are mostly indirect ones. Human knowledge about natural ecosystems is still limited, but the methods for economic evaluation of ecosystem services are developed and implemented nowadays, so also these benefits can be economically evaluated. These values are the benefits associated with the inherited values of resources in an unmodified state for future generations and altruistic values to enjoy a resource by others. That is why ecological benefits are usually not related to direct use by individuals and humankind. They rather exist due to the fact that individuals can appreciate the ecological resource that they are not using or are only planning to do so.

5.3 ANTICIPATED IMPACTS OF THE PROJECT CONSTRUCTION STAGE

Overall, the CRAD project is expected to have significant positive long-term social and environmental impacts such as a more efficient use of water, conservation and recovery of aquatic ecosystems to their original condition, or to meet any specific targets.

When the project will be put into operation, the quality of surface and ground water in the Project area will be improved significantly, ensuring quality of the water source in comparison with the scenario of without project.

On the other side, there are a number of short-term negative impacts mainly associated to construction activities, which need the implementation of mitigating measures. The following table reports the preliminary identification of potential impacts, and affected components, associated to the planned Project activities, during both the construction and operation phases of the MIP V Program development Project.

Table 18: Preliminary Identification of Potential Impacts

	Activities	Component	Related Potential Impacts
CONSTRUCTION PHASE	• Construction activities: • Civil works and the construction of the facilities and associated equipment • Installation of modern pumps in the station. • Installation of solar panels in drainage pumping stations	Air	Emission of pollutants from engines of construction machinery and equipment (CO, VOC, NO_2, SO_2, Particulate)
			Dust "lifting" due to earthworks and vehicle movements
		Noise	Noise, vibration by vehicle movements, transport of materials etc.
		Water	Temporarily reduction of irrigation capacity during rehabilitation works of the existing canals. During site clearance, runoff and drainage from the works area would be the main sources of potential water quality impact. Site runoff and drainage may contain increased loads of suspended solids and contaminants. Potential sources of pollution from site drainage

	Activities	Component	Related Potential Impacts
			include the release of cement materials with rain wash; wash water from dust suppression sprays; and fuel and lubricants from maintenance of construction vehicles and mechanical equipment etc.
		Waste	Production of debris waste from demolition of existing infrastructures and construction activities waste; Waste generation by workers during food consumption, Soil from excavation activities
		Land	Land occupation due to the installation of the working areas; Soil contamination due to potential accidental leakage of oily product; Impacts on livelihood activities directly dependent upon projected affected land.
		Biological Environment	Disturbance or depletion of natural habitats in the surrounding natural areas
		Socio-Economic	Disturbance of public health and quietness due to construction activities; Employment and working conditions at the construction site Negative socio-economic impact associated with land acquisition and disturbance to socio-economic activities One of the prominent impacts will be the traffic and road safety risks to workers, affected communities, and agricultural interface users throughout the construction period. Disproportionate socio-economic impact on vulnerable people
OPERATION PHASE	Irrigation and drainage of agricultural lands Transport of agriculture products to the markets for sale	Air	Vehicle movements for transport agricultural product in the markets
		Noise	Noise generated during transporting and selling the products in the markets.
		Water	Increasing contamination risk and/or damage in lowland areas in case of non-appropriate quality of irrigation waters, potential pollution by misuse of pesticides by farmers.
		Land	The direct impact on residents in the project area who use the

	Activities	Component	Related Potential Impacts
			land for production and housing will be affected during the rehabilitation works on the irrigation and drainage system. These activities will require temporary land use where farmers will not have access to their land. Disordering socio-economic activities in the area.
		Waste	Misuse of Pesticides from farmers, Organic waste produced in the markets during packing and unpacking of the products, Low quality products
		Socio-Economic	Better linkage and access for farmers in the markets to sell their products. Monitoring and control of the products in the laboratory for food safety for consumers. Improved energy supply and efficiency for irrigation

In the following Table a preliminary comparison between the impacts with and without the Project is presented.

Table 19: Impacts with and without the project

Impacts	Without the project	With the project
Positive impacts	No impact such as dust, noise, air pollution	Better linkage and access for farmers in the markets to sell their products. Monitoring and control of the products in the laboratory for food safety for consumers. Improved energy supply and efficiency for irrigation
Negative impacts	Increasing contamination risk and/or damage in lowland areas in case of non-appropriate quality of irrigation waters, potential pollution by misuse of pesticides by farmers.	The municipalities of the project area will be affected by the project activities such as dust, noise, pollution.

The following section illustrate the potential environmental, social, health and safety for both workers and community, benefits, impacts and risks associated with the Project during construction and operation phases.

5.3.1 Environmental Impact Assessment and mitigation measures

In the present Section the environmental impacts potentially generated by the Project during construction and operation phase were assessed with respect to:

- air;

- noise;
- landscape;
- soil;
- solid waste;
- water; and
- biodiversity

5.3.1.1 Air Quality

Construction phase activities will generate two types of air pollutants:

- combustion emissions generated from the construction equipment and vehicles; and
- fugitive dust generated by earthworks including excavation, backfilling, grading and equipment movement.

Construction works that will be implemented on all the project's schemes, the reconstruction and modernization of Hoxhare's drainage pump stations (no.2 & 3) and installation of solar panels will cause dust particles spreading into the air. The sources of dust generation are excavation activities, transportation of materials and removal of inert waste. Another reason is the access roads to agricultural parcels that will be used during the project's development. Dusting is temporary and only present during the development of construction activities. In addition to the dust that will be caused, the emissions of vehicles will also be present.

For what concerns traffic-related dust emissions due to vehicle transit on unpaved roads, the most critical phase is the excavation activities at construction sites for subproject that includes construction of MFH, clusters and the rehabilitation of BIP.

With the purpose to reduce the impacts related to emissions of gaseous pollutants from construction equipment, the following mitigation measures and good practice standards are recommended:

- engines of vehicles and other machinery will be kept turned on only if necessary, avoiding any unnecessary emission;
- machines and equipment will be periodically checked and maintained to ensure their good working condition;

  all equipment and machines must be maintained and tested for compliance with standards and technical regulations for the protection of the environment and have appropriate certifications.

Concerning dust control methods and measures, the following actions are recommended to reduce the generation of dust:

- watering or increase of the moisture level of the open materials storage piles to reduce dust levels;
- enclosure or covering of inactive piles to reduce wind erosion;
- loads in all trucks transporting dust-generating materials will be sprayed with water to suppress dust, as well as wheels of means moving inside and outside of the construction-site;
- speed reduction for the means travelling inside the construction site; and

- stabilization and re-vegetation of cleared areas that are no longer needed as soon as practicable during construction.

For the operation process, no negative impacts are expected from project. Estimated by the levels of works and their duration, the level of gases will not be of concern and consequently their release will not affect the air quality in the project's areas.

5.3.1.2 Ambient Noise

The project site development activities might cause a potential noise impact to the surrounding environment and receptors due to:

- noise emissions from the equipment engines used during the construction activities (earth works; wall construction, construction of buildings, etc.) and heavy traffic induced as a consequence of the construction activities (movements of construction vehicles, etc.); and
- minor noise emission generated by operating machines along the storm water and wastewater routes and equipment in the water treatment technological line.

Similarly to the air emissions, the maximum levels of noise impacts are expected during the construction phase where a high level of heavy equipment will be involved in the demolition, earth moving and construction activities.

Since the major part of water pipelines construction works will be performed in rural areas, this impact will be not significant, and for a relatively short time period. Construction works will mostly be executed during the day, but depending on both, type of work and deadline for termination of the construction works, execution of some activities might be necessary during the night hours. Thus, mitigation measures, which help to maintain noise level on acceptable level, should be performed.

The noise caused by construction work is mainly generated by trucks used for transporting materials to the site of the project and carry disposal from the site and from other construction plants. Mitigation measures foreseen to minimize the impact related to the noise emission during the Project construction phase are:

- maintenance of the machinery in good condition;
- speed of vehicles and machinery operating in the project area to not to exceed 5 - 10 km/h;
- equipment running only when necessary; and
- positioning of the noise sources in a concealed area with respect to acoustic receptors, consistent with the needs of the construction site.

5.3.1.3 Landscape

The activities related to the construction of the Project would be phased, temporary and restricted to the construction period, and therefore the resulting landscape impacts will also be temporary. The possible impacts on landscape resulting from the construction phase include those resulting from:

- impacts arising from the installation of all site compound;
- temporary works and installations, and temporary storage;
- the installation and movement of heavy and light construction machinery;
- construction lighting; and
- special load movement and storage.

Construction phases will be carried out in each period as scheduled. Completion will be accompanied with waste collection. Therefore, construction phases only affect landscape in a short period of time.

During construction works, in order to minimize potential visual impacts due to the physically presence of the working site, a site hoarding will be installed to screen the whole construction areas.

Moreover, the following mitigation measures shall be taken into account during the construction activities in order to reduce or prevent potential impacts on landscape:

- machinery and materials will be stored tidily during the works. Tall machinery including cranes will not be left in place for longer than required for construction purposes, in order to minimize its visual intrusion;
- temporary roads providing access to site compounds and work areas will be maintained free of dust; and
- security and work lighting shall be shielded and directed downwards, and the use of tall mast lights shall be carefully assessed.

The structures of the proposed interventions consist mainly of pipes, which will be located below ground level. Moreover, during the Project operation phase, when water system will be put into operation, roads will be restored as original conditions after construction completion. Post-construction areas will be restored and can be furnished with green coat for the Project's area. Therefore, impacts on landscape and ecosystem are regarded as positive.

After completing works of the rainwater and wastewater drainage systems, the landscape will be restored as original conditions in the roads by re-planting original green trees. Some roads can be enhanced by green tree belts to ensure aesthetics for the town.

5.3.1.4 Soil

The construction of irrigation and drainage systems, affects firstly on surface soil layer's vegetable matter but it is regarded as insignificant.

For area of the project, soil is expected to be severely affected by earthworks, pile driving, grading, etc, changing the soil layers' current structure as well as properties, geology and terrain of the Site. Therefore, impacts on soil are mainly expected during the construction phase.

Impacts. In particular, potential impacts on soil during the construction activities for Micro Food Hubs, and the rehabilitation works for I&D systems, may include:

- soil damage
- modification of the geomorphologic condition;
- pollution of soil, etc.

Contamination of surrounding soil is possible from transportation vehicles exhaust and load /construction machines. Contamination caused by temporary construction sites e.g. spills of fuel, chemicals, temporary roads or from disposing of waste dust, and other activities. Contamination from discharging used/waste waters from the construction site into soil can also take place if mitigation measures are not adhered to.

In the course of works, soil can also be contaminated: by opening new borrowings that will be used during works, certain building materials, including concrete, greases and motor oils, oil leaks that are often observed in different types of construction activities. Even in cases when oil leaks within the construction areas are not significant, it is a risk; and can contribute to contamination of the sites. Depending on the substrate, these oil leaks could both wash off into the river environment, and/or be leaking through the substrate that could then impact groundwater and surface water.

Discharging diverse waste products from construction site process and construction site complex (liquids, particles and solid waste) on banks or directly into riverbeds leads to spread of pollution along the watercourse. The potential risks are associated with:

- Discharge of used waters from the construction site (technological and hygienic) into watercourses.
- Excavations in the field can cause the cutting – opening of aquifers, i.e. disruption of groundwater (water cycle).
- Fine fractions can be washed away during the execution of construction works under influence of material falls from temporary landfills. This will make surface courses turbid.
- Waste material, mechanical oil, fuel etc. can be disseminated by malfunctioning construction machines and vehicles or negligent personnel.
- Location of machines, temporary construction material depots near rivers or surface watercourses.
- Erosion during earthworks.
- Accidental spills of chemicals, fuel and similar.

During the works on construction of MFH, or rehabilitation works on I&D systems or upgrade of BIP, hazardous products such as hydrocarbons, lubricants and waste oils may be accidentally or deliberately discharged into the water.

Measures. Contaminated lands may involve surficial soils or subsurface soils that, through leaching and transport, may affect groundwater, surface water, and adjacent sites. Where subsurface contaminant sources include volatile substances, soil vapor may also become a transport and exposure medium and create potential for contaminant infiltration of indoor air spaces of buildings.

Contamination of land should be avoided by preventing or controlling the release of hazardous materials, hazardous wastes, or oil to the environment. When contamination of land is suspected or confirmed during any project phase, the cause of the uncontrolled release should be identified and corrected to avoid further releases and associated adverse impacts.

To determine whether risk management actions are warranted, the following assessment approach should be applied to establish whether the three risk factors of 'Contaminants', 'Receptors', and 'Exposure Pathways' co-exist, or are likely to co-exist, at the project site under current or possible future land use:

- Contaminant(s): Presence of hazardous materials, waste, or oil in any environmental media at potentially hazardous concentrations
- Receptor(s): Actual or likely contact of humans, wildlife, plants, and other living organisms with the contaminants of concern
- Exposure pathway(s): A combination of the route of migration of the contaminant from its point of release (e.g., leaching into potable groundwater) and exposure routes Applicability and Approach (e.g., ingestion, transdermal absorption), which would allow receptor(s) to come into actual contact with contaminants

Where there is potential evidence of contamination at a site, the following steps are recommended:

- Identification of the location of suspected contamination,
- Sampling and testing of the contaminated media (soils or water),
- Evaluation of the analytical results against the local and national contaminated sites regulations
- Verification of the potential human and/or ecological receptors and exposure pathways relevant to the site in question.

Other soil protection measures include:

- Prevention of landslides and erosion by geotechnical inspections and measures (concrete injecting, gabions, fences, geomembranes, etc.).
- Prevention of illegal dumping and littering.
- Adequate management of materials.

5.3.1.5 Water

The potential impacts on the water environment derived from the rehabilitation or construction activities are presented in this section with particular reference to:

- water consumption; and
- water discharge.

Water consumption during the construction phase is mainly related to:

- use from workers;
- soil watering for dust suppression during excavation works and construction vehicles transits;
- washing down and cleaning equipment at localized work sites; and
- fire water for use during emergencies.
- Interruption of surface drainage patterns during construction, creation of unsightly areas of standing water
- Contamination/pollution by construc tion, human and animal waste, include ing fuel and oil spills, hazardous waste, wastewater etc

The overall impact related to these levels of consumption is temporary and reversible and is considered negligible because the quantities of water involved are relatively small, and they will be required over a short period of time.

Mitigation measures will be applied, to adverse impacts on the environment.

In order to minimize impacts and ensure mitigation of the large negative impacts on water resources, the following actions are recommended:

- refueling of vehicles and equipment on the site shall be strictly controlled;
- undertake careful design, maintain natural drainage where pos sible, and provide suitable wastewater drainage,
- safe and sanitary disposal of any hazardous wastes.
- wash construction vehicles and machinery only in designated areas where runoff will not create pollution
- adequate protection from / control of livestock, agriculture, casual human contact, hazardous materials – fuel oil etc (include ing suitable storage)
- all oily waste to be collected separately

5.3.1.6 Biodiversity and Sensitive Habitats

ESS6 recognizes that protecting and conserving biodiversity, maintaining ecosystem services and sustainably managing living natural resources are fundamental to sustainable development. The requirements set out in the PS were guided by the Convention on Biological Diversity, which defines

biodiversity as “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems”.

There are no rare or endangered species of plants and wildlife on site, and there are no areas in the Zone of Influence with high biodiversity value. Therefore, any potential impacts related to construction and operation phases will likely be localized with no predicted significant negative effects.

With particular reference to the construction activities, excavation works could lead to potential impacts on physical parameters, removal of and/or disturbance to terrestrial habitats. Impacts on vegetation during construction phase may be mostly associated with:

- cutting and replanting of trees and shrubs;
- potential littering of the territory with wastes; and
- disturbance of soil cover.

Impacts on wildlife during the construction phase may be mostly associated with:

- deterrence of birds by the noise from the construction site;
- transformation and disturbance of habitats;
- potential site contamination due to leakages from construction vehicles; and
- air pollution with exhaust gases of vehicles used during construction, dusting.

In consideration of:

- the limited Project area;
- the absence of significant sensitive habitats and terrestrial biodiversity; and
- the absence of protected areas around the sites;

impacts related to the project construction activities on biodiversity and sensitive areas are considered as negligible.

5.3.1.7 Occupational Health and Safety

Potential impacts on workers generated by the Project during the construction and operation phases are presented in the following along with the mitigation measures to be adopted to reduce or avoid the identified impacts.

Physical hazards represent potential for accident or injury or illness due to repetitive exposure to mechanical action or work activity and may occur from:

- Rotating and moving equipment on site and shop floors. Protective measures include: Turning off, disconnecting, isolating, and de-energizing (Locked Out and Tagged Out) machinery with exposed or guarded moving parts, or in which energy can be stored (e.g. compressed air, electrical components) during servicing or maintenance, Designing and installing equipment, where feasible, to enable routine service, such as lubrication, without removal of the guarding devices or mechanisms.
- Noise limits for different working environment need to be observed and the use of hearing protection should be enforced actively, and periodic medical hearing checks should be performed on workers exposed to high noise level.
- Exposure levels should be checked based on daily exposure time and data provided by equipment manufacturers.

- Exposed or faulty electrical devices, such as circuit breakers, panels, cables, cords and hand tools, can pose a serious risk to workers. Overhead wires can be struck by metal devices, such as poles or ladders, and by vehicles with metal booms.
- Safe driving practices are to be implemented and include Training and licensing industrial vehicle operators, medical surveillance of drivers, establishing site speed limits, vehicle inspections, operating rules and procedures (e.g. prohibited operation of trucks with elevated platform after unloading)
- Measures to prevent slope instability on structures include: Providing effective short term measures for slope stabilization, sediment control and subsidence control until long term measures for the operational phase can be implemented, Providing adequate drainage systems to minimize and control infiltration, application of locally regulated or internationally recognized building codes to ensure structures are designed and constructed in accordance with sound architectural and engineering practice, including aspects of fire prevention and response.

Measures apply equally to the construction, installation and repair (e.g. rolling stock) works. In accordance with the Law on Health and Safety at Work), measures of /protection at work need to be envisaged to prevent hazards that may occur during the construction of a building. The prevention of hazards during the execution of works requires engaging an organization to implement the works registered for the type of activity subject to the technical documentation hereof. The organization must have a person at the construction site authorized to manage works, having passed the professional examination and in compliance with other conditions as per the Law on Planning and Construction. The authorized person and all other persons involved in the execution of works shall adhere to the regulations, standards and norms for the type of activity they engage in, as well as the Law on Health and Safety at Work. Prior to the commencement of works the precise position of all installations must be determined and all measures undertaken to avoid damages, as well as injury to workers and other persons located at the construction site. The contractor shall produce a Report on the Organization of the Construction Site, a site-specific operation and plan, produced as separate documentation based on the Construction or Design for Execution. The Report on the Organization of the Construction Site must be dully executed. Such report shall be provided by the contractor (manager of works) and certified by the representative of the supervision service, and thereafter the works may commence.

The Report on the Organization of the Construction Site contains three sections:

- Schematic view of the construction site, i.e. situation plan
- Description of works
- Measures for health and safety at work

The employer, or employer's representative, must ensure that, prior to commencement of work, a Plan of preventive health and safety measures is prepared.

The Plan of preventive health and safety measures and technical documentation required for construction in accordance with the regulations on planning and construction provide the basis for risk assessment regarding the likelihood of injuries and health hazards for specific jobs and working environment on the site.

The employer ensures that employees should work at workplace and in the working environment where health and safety measures have been implemented, while taking into account the instructions and guidelines provided by the design coordinator and coordinator for execution of works, guidelines under this ESMF and cooperating with other employers and persons in implementation of health and safety measures.

All the employers on the construction sites must be familiar with the Plan of preventive health and safety measures, and possible amendments to the Plan, and inform the Investor about it in writing

The contents of the report on the organization of the construction site should be available at the construction site, correspond to the factual situation, and encompass required and updated appendices, namely:

- List of workplaces with increased risk.
- List of employees appointed to workplaces with increased risk and medical examinations of employees appointed to such places.
- List of employees trained for healthy and safe work, including singed list of employees introduced to the health and safety at work measures established in the relevant report.

OHS management plan will be developed by all contractors prior to starting work. Provisions should be made to provide OHS orientation training to all new employees to ensure they are apprised of the basic site rules of work at / on the site and of personal protection and preventing injury to fellow employees. Training should consist of basic hazard awareness, site-specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

If visitors to the site can gain access to areas where hazardous conditions or substances may be present, a visitor orientation and control program should be established to ensure visitors do not enter hazard areas unescorted.

Copies of the hazard coding system should be posted outside the facility at emergency entrance doors and fire emergency connection systems where they are likely to come to the attention of emergency services personnel. Representatives of local emergency and security services should be invited to participate in periodic (annual) orientation tours and site inspections to ensure familiarity with potential hazards present.

5.3.2 Land Acquisition and Compensation Provisions

Project activities are not expected to have any potential impacts on both Publicly Owned and Privately Owned assets and land. However, among the main social and economic impacts of land acquisition are:

- *Loss of land.* In cases where a part of the agricultural land, or the whole agricultural land of a person loses, the latter will lose income and often an important part of their food supplies (such as vegetables, milk, and poultry).
- *Loss of residence.* Apart from losing the physical structure of the home, people also lose the services and associated facilities, such as water supply, sewage, road access, and electricity. Also, during the resettlement process, they will face certain transitory costs, including transport costs for them and their personal belongings, legal charges, taxes, etc.
- *Loss of business*. Apart from losing physical premises, small businesses may be affected by losing certain locations and losing customers, in particular by losing their regular customers.
- *Loss of job*. If an affected business closes, then the workers will lose their jobs. Some may lose their job because they are forced to travel long from their new settlements.
- *Loss of services and cultural heritage.* This includes losing access to facilities such as schools, clinics, religious buildings, tombs, war memorials or other facilities.

A list of potential impacts to assets, as an indication, is given in the below Table.

Table 20: List of Potential Impacts to Assets

Main impact	Description of impact and the likelihood of its occurrence
Permanent loss of residential land, agricultural land, forest land and/or pastures	The occurrence of this impact might be expected mainly in connection to the purchase of land for the construction of above-ground installations and structures where public land is not available. In this case negotiated settlements cannot be reached with owners of affected properties, their land will be acquired through a compulsory procedure, as defined by the law. They will lose ownership of the land, and will in fact have an impact permanent (a lifetime of permanent loss). Categories of population that may be more vulnerable to this impact include: • People/entities who have no other land available for use; and • Elderly, single headed households for whom it may be difficult to find replacement land on their own and may need assistance. It should be noted that some of these people may have family members or friends who are not living with them, however, will be able to support them in finding replacement land if necessary. In order to fully mitigate impacts which will arise from the construction activities, the project will compensate owners for their land by providing full Replacement Value, to enable them to purchase an alternative similar plot of land. Through the monitoring procedures, the project will determine any subsequent relative impacts on this group and will formulate any additional mitigation measures that are needed. The exact scope of the impact will be determined and reported after the completion of the census and socio-economic survey.
Temporary loss of residential, agricultural, forest land and/or pastures	This impact will occur in connection to the acquisition of temporary rights over land, more specifically the establishment of the Construction corridor. A certain % of the land will be temporarily affected by the Project during construction. It should, however, be noted that depending on their size and where and how much of the construction activities passes through them not all plots of land will be affected to the same extent. As stated earlier, residential areas were avoided during the definition of the pipeline routes. Compensation will be paid for these affected lands based on their discounted net income. In addition, all land will be reinstated. Proper topsoil conservations and full restoration are key for minimizing this impact, however the fact that productivity will also be lost will be taken into account when calculating compensation. All of this land will be available for use after construction ends, however a part of the land will be under certain land use restrictions. The exact scope of the impact will be determined and reported after completion of the census and socio-economic survey.
Loss of annual/perennial crops and trees	This impact has a very low potential of occurrence. However, affected annual and perennial crops and trees require a separate inventory and valuation in addition to that which will be done for the affected land. The age, type and size of each affected tree / perennial crop will be taken into account during valuation, which will be done based on the capitalization of net income methodology. Similarly, affected annual crops will be valued by agricultural specialists, also using the capitalization of net income methodology. The exact scope of the impact will be determined and reported after completion of the census and socio-economic survey.
Loss of non-residential structures (fences, barns, sheds, etc.) and infrastructure	The Project's impact on fences, barns, sheds, etc., is expected to be extremely modest. The owners of the affected nonresidential structures will be compensated based on the full Replacement Value of their assets. The exact scope of the impact will be determined and reported after completion of the census and socio-economic survey.
Damage / temporary disruptions to services, infrastructure and / or irrigation systems	Increased construction-related traffic on local roads could cause disruptions to services, however, with proper planning and provision of information as well as road repairs, impacts can be successfully mitigated. Construction activities could also cause temporary disruption to infrastructure i.e. electricity or telephone lines and therefore

Main impact	Description of impact and the likelihood of its occurrence
	mitigation measures similar to those used for disruptions to irrigation measures, as described below will be used to minimize impacts. In order to minimize impacts on irrigation systems, special care will be taken by the contractors. The contractors will cooperate with local authorities to ensure that alternative water sources are used where necessary, during the time when irrigation channels are out of order and promptly restoring water flows.
Damage / temporary disruptions of access to public properties and resources (pastures, rivers, canals, forests)	During construction access to public properties could temporarily be disrupted or damaged. This impact could be easily avoided/mitigated with proper planning and provision of information. Some disruption to livestock activity may arise. However, these impacts will be mitigated with the creation of passageways to allow passage from one side of the pasture to the other, where necessary. Users of pastures would not be entitled to compensation under national legislation, however in cases when they suffer income losses, the Project will make provision for these losses to be compensated.
Severance impacts (fragmentation of land plots, obstruction of access to land plots or severance of communities)	This impact has a very low potential of occurrence. Those that believe their land would no longer be usable will be able to request that the full plot is acquired by the Project and their requests will be taken into consideration and fulfilled where reasonable. The exact scope of the impact will be determined and reported after the completion of the census and socio-economic survey.
Temporary loss of business income	This impact has a very low potential of occurrence. This impact is possible for a number of different groups of affected people/entities, however having in mind the overall amount of land that will be impacted significant losses of business income are not expected. Loss of business income could occur for individuals/companies as a result of increased traffic on local roads, preventing them to reach their destinations or reaching them on time (e.g. companies that depend on the transport of goods). It is impossible to assess the level of impact at present, however it has been determined that in some areas roads are in poor condition and there are no alternative roads that could be used. Preventative measures have to be undertaken by the project to ensure that traffic flows are well managed to prevent these impacts. The project may also cause some injury to livestock, i.e. as a result of falling into trenches, being injured by vehicles or eating dangerous wastes. This could further impact the owners' livelihoods, particularly those dependent on livestock. Primarily prevention measures will be utilized to avoid such impacts, but if they occur, owners will be compensated at full Replacement Value. All of these impacts will be mitigated mostly through provision of compensation at full Replacement Value. The exact scope of the impact will be determined and reported after completion of the census and socio-economic survey.

Key principles of land and easement acquisition and access strategy are the following:

- Land and easement acquisition and access for each project will be carried out in compliance with Albanian law, EU acquis and International Standards, especially the WB ESS5;
- Project company will seek to avoid physical displacement and to minimize economic displacement;
- Impacts on land ownership, land use and livelihoods shall be compensated;
- Land required on a permanent basis will be purchased from its current owners;
- Land required on a temporary basis will be used during construction. It will not be acquired but will be leased from land owners and handed back after end of construction and reinstatement;

- For land that is subject to reuse restrictions during operations, these restrictions will be compensated to affected landowners;
- Any affected standing crops will be compensated at current market value; and
- Orphan land, i.e. land that is severed or bisected such that a non-acquired portion of the land plot is made uneconomic and/or unviable, will be compensated;

Replacement value is used for the calculation of all compensation, including land and crops. On this basis, it has to be developed a set of compensation rates with experienced Albanian valuation experts, as follows:

- Project Land Acquisition Rates, for permanently acquired land of the different categories, i.e. agricultural, forest and pasture, and urban;
- Project Land Rental Rates, for temporarily occupied land of these same categories;
- Project Easement Rates, for long term easement and related restrictions on land of the same categories as above;
- Project Perennial Crop Rates, for perennial crops;
- Project Annual Crop Rates, for annual rates.

Permanently Acquired Land includes acquired land required for construction of ground installations, like buildings, pumping stations, block valves, disposals etc. In these cases, project company will seek to enter in negotiated sale-purchase agreements with current landowners. Only in case a reasonable agreement cannot be reached expropriation will be used as a last resort. Compensation for permanently acquired land will include the following three elements, as applicable:

- compensation for land at the Project Land Acquisition Rate;
- compensation for any standing annual or perennial crops at the Project Crop Rate.
- compensation at replacement value for any structures or developments on land that the land owner or land user can demonstrate ownership of.

Temporarily occupied land includes land required to carry out all construction work on the project (construction corridor), as well as construction camps, storage yards, access roads and other likely facilities. In these cases, project company will not purchase the land from its current owners but will enter into negotiated rental agreements with them for all the construction period.

The construction company will reinstate the occupied land at the end of construction to its previous condition, such that pre-construction agricultural productivity will be restored after the end of construction and reinstatement. Reinstatement will include the re-establishment to a condition and functionality better or similar to the pre-construction condition of any irrigation and/or drainage structure that may need to be demolished, modified or interrupted during construction.

Compensation for temporarily occupied land will include the following elements, as applicable:

- Land rental in accordance and calculated as a percentage of Land Acquisition Rate;
- Compensation for any standing annual or perennial crops at the Project Crop Rate; and
- Compensation for long term restrictions (easements, in case of pipeline facilities).

Where a plot that is wider than the Construction Corridor is acquired, the temporary occupation of the part of this plot located in the Construction Corridor may leave sections of land on either side that will not be required for the Project and would normally not be compensated. Agricultural activities on these sections of land could normally be continued. There will be cases, however, where the

remaining part will be too small to make cultivation economically worthwhile. Such a situation is known as “Orphan Land”.

Also, might be the case that the same could occur as a result of land purchase associated to a ground permanently facility, in which case the remaining piece of land would be “orphaned” permanently.

Whether a parcel qualifies as “orphan land” should be reviewed case-by-case, based on a request lodged by the landowner and/or land user. The following criteria will be considered in this review:

- size, dimensions and shape of the orphaned part of the plot;
- access restrictions and whether these will only last for the duration of the construction period or may be permanent (which is not anticipated to occur);
- size and nature of mechanical equipment typically used for cultivation on this plot and whether such equipment reasonably can be used given the size, shape and dimensions of the orphaned part of the plot;
- Potential restrictions to irrigation or drainage during the construction period.

Compensation for Orphan Land, once recognized as such, will based on the same entitlements as the main affected piece of land, that is to say:

- Same entitlements as permanently acquired land if the piece of land is orphaned permanently; and
- Same entitlements as temporarily occupied land if the piece of land is orphaned temporarily for the construction phase only.

5.3.3 Community Health and Safety

There is a number of HS impacts on people, mainly associated to construction activities, which need the implementation of mitigating measures. Potential impacts of the project on the people include following features:

- disturbances caused by the presence of noise, odor, dust and the like;
- traffic and location access disorders; and
- sanitary-hygienic and protection aspects.

Local population will withstand certain disturbances which will occur due to the presence of noise, odor, dust and other phenomena which will arise during the construction of facilities. These impacts have been described in the previous sections of this ESMF.

Construction in inhabited areas will result in some traffic disorder, which will thereby present moderate negative impact. Mentioned impact might be moderated by means of adequate organization and traffic control in the areas where the construction works will be performed.

During the execution of construction works, traffic intensity in the local roads will be enhanced as a result of movement of mechanization units used for construction of facilities and vehicles, which will present negative impact of smaller magnitude. However, this impact is of temporary nature, i.e. will be present until the end of the construction works.

Major number of the factors related to the sanitary-hygienic and protection aspects on the project area will occur during the execution of the construction works. Hence, risks related to the same are mostly connected with the emissions of pollutants in air, water and on the land. Likewise, there is a potential risk regarding the presence of excavation sites in the inhabited area, which might be mitigated with the proper signalization and reservation.

The following mitigation measures shall be adopted during the Project construction phase in order to avoid or reduce any potential impact on people:

- adequate traffic control measures should be performed by the Contractor in accordance with the Law in force during the duration period of the contract, and mentioned measures should be agreed previously in accordance with supervision engineer. Furthermore, traffic control measures should also comprise temporary lighting and proper signalization while performing system rehabilitation procedures;
- permanently employed personnel pertaining to the Contractor, which would be responsible for traffic security and implementation of measures related to the same, should be nominated. Aforesaid measures should include the following: (i) review regarding condition and location of traffic control devices which are in function; (ii) project revision – part which is related to the devices for traffic control, i.e. needed for secure and effective traffic flow; (iii) correction of all drawbacks of the traffic, where it is applicable, (iv) Inspection of the working surfaces, storage and maintenance of the equipment, manipulation and storage of the materials, and all the procedures related to the traffic security;
- implementation of the good working practice reported in the previous sections to minimize the disturbances caused by the presence of noise, odor, dust and the like; and
- particular attention should be finally given to public safety by installing safety fences and warning signs at all critical work areas (e.g. open trenches, excavations, material and equipment staging areas, etc.).

Potential community HS impacts associated with the operation of wastewater treatment facilities may include:

- liquid effluents;
- air emissions and odors; and
- physical hazards.

Adequate wastewater treatment to remove contaminants and, especially, microorganisms and pathogens is important not only to prevent adverse environmental impacts, but to protect public health as well.

The following measures are recommended to prevent, minimize, and control community exposure to dust from construction activities:

- provide adequate buffer area, such as trees, or fences, between processing areas and potential receptors;
- avoid facilities near densely populated neighborhoods and installations with potentially sensitive receptors, such as hospitals and schools; and
- Visitors and trespassers at pumping facilities facilities may be subject to many of the hazards for site workers.

Recommended measures to prevent, minimize, and control physical hazards to the community include:

- restrict access to construction activities and pumping facilities by implementing security procedures, such as: (i) perimeter fencing of adequate height and suitable material, with lockable site access gate; (ii) security cameras at key access points, and security alarms fitted to buildings and storage areas; and (iii) use of a site visitor register; and

- light the site where necessary. As this may cause light nuisance to neighbors, the lighting installations should be selected to minimize ambient light pollution.

5.3.4 Cultural Heritage

As defined by WB ESS8, cultural heritage refers to tangible forms of cultural heritage, such as tangible property and sites having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values, as well as unique natural environmental features that embody cultural values, such as sacred groves. Intangible forms of culture, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles, are also included.

The basic requirements of PS8 are as follows:

- include cultural heritage concerns in Project assessment process and management systems;
- integrate cultural heritage impacts into the Social and Environmental Assessment;
- include direct and indirect impacts and opportunities for enhancement to cultural heritage in the assessment;
- consult with experts, government authorities, local communities, and Indigenous Peoples to identify cultural heritage resources;
- comply with National laws and any applicable treaties and conventions;
- design and site Projects to avoid cultural heritage;
- use internationally recognized practices for the protection, field-based study, and documentation of cultural heritage;
- develop and implement Chance Finds Procedures for construction and operation;
- preserve sites in place unless there are no technically or financially feasible alternatives; and/or benefits from Project outweigh any heritage losses; and
- remove cultural heritage that cannot be avoided using the best available techniques.

During the construction phase, potential impacts on cultural heritage may occur during the excavation works.

There are no structures which might be considered a part of the cultural heritage, i.e. which might have archeological significance. However, some civil works are planned very closely to archeological sites of world importance.

Even though direct material proofs for the existence of structures which might be considered a part of a cultural heritage have not been detected, the same might be found during execution of the construction works. Therefore, care should be taken to avoid any undue disruption to them during construction.

It is recommended that the contractors hire a permanent archeologist to be present during all excavations in the Murrsi scheme area.

Also, protection measures for the found structures ought to be undertaken and competent authorities should be informed about the same in aforesaid cases.

Material goods which are in possession of the third entities should be protected from the construction works. Adequate protection should be provided throughout both, presence of appropriate technical solutions, which should be depicted in documentation regarding investment and technical supports, and implementation of the protection measures during execution of works.

In addition, it is recommended to develop a "Chance Find Procedure" relevant to the excavation phase.

The purpose of this procedure is to provide for a set of instructions, and to assign responsibilities to identify, manage and communicate in the event of a chance find of cultural/ archaeological significance, including restrictions/ modifications to the execution of the site construction activities.

During the operational phase, there may be some Project activities (e.g. maintenance) that require excavation works. Such activities may pose potential risks to cultural heritage and archaeological sites. Therefore, chance find procedures and cultural heritage management plans will need to apply to the relevant operational activities.

5.4 GENDER ANALYSES

Gender issues are common all over Albania, although the situation is gradually, albeit slowly, improving. Women are the main income contributor only when they are widowed or divorced. In those cases, parents or parents-in-law living with them are pensioners, which places them in the position of being head of the family.

Women usually take care of the children and the home. Due to cultural and religious reasons, women were usually considered as ''those who have to take care of the family" but this is gradually changing. Women have now more freedom, attend school and university, as much as men. However, in rural areas, there remains some tendency to not allow women to attend university.

Usually, women state that they feel as equal partners to their husbands. Although during the community discussions, usually men are the ones that still represent the respective family, when it comes to family matters in the house, women have an equal role in decision-making. Further, school attendance is fairly equal. In some areas women usually attend tertiary education to a greater extent than men, who usually choose to start working instead.

Even if some forms of female discrimination (such as marriage without their consent) are not occurring theoretically anymore, much has to be achieved in order to reach gender parity. Only in very rare occasions do women own a piece of land or house. Only when their husband has passed away or due to inheritance law, do they become the first beneficiary and will then pass ownership onto their children, usually male. There have been a lot of improvements made in this direction, but some of the cultural and traditional beliefs still persist, especially in remote rural areas.

Regarding the gender issue in irrigated agriculture, the Law on Gender Equality in the Society (N 9970/24.07.2008) established the legal and institutional framework for protection against all kinds of gender discrimination and the promotion of equal opportunities. As per the national strategy and action plan for achieving gender equality in Albania, which means that women who experience any discrimination against women regarding participation in the leadership of a Water Users' Organizations (WUO) or in other roles in irrigated agriculture have recourse to petition the Government to redress such issues. However, local social pressures will discourage women from making such petitions. Therefore, it is important to have regional rules and by-laws that require a minimum level of members who represents women in the steering structures of these organizations.[44]

Even though gender inequalities are identified as a priority issue by the Government of Albania and members of MARD, as agreed in the FAO – Republic of Albania Country Programming Framework 2015-2017, gender inequalities are not considered important by many farmers or by many extension services professionals.

[44] MARD, "NATIONAL STRATEGY FOR IRRIGATION, AND DRAINAGE 2019 – 2031 AND ACTION PLAN", Pg.19

Women living in rural areas in Albania make a crucial contribution to agriculture and the broader socio-economic life of the country. From statistical data at INSTAT website, the percentage of women's working in agriculture sector compared to men is higher. Despite rural women's high participation rate in agriculture and their significant contribution to rural development, gender disparities in land ownership still persist. Land is perceived as being owned by families, but it is registered in the name of only one person, usually a man, who is identified as the "head of the household" and who consequently enjoys de fact of all rights and decision-making power over that land. The significant gap between the perception and reality of gender inequalities poses a challenge to effectively targeting gender inequalities and supporting rural women's empowerment, and requires more targeted implementation of the commitments made by the government to Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and specifically Article 5, which establishes the fight against sex role stereotyping and prejudice. Combatting gender stereotypes is a necessary step for achieving rural women's economic empowerment and unlocking the full potential of rural development in Albania.[45]

6 ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

This section of the ESMF provides guidance to the Project on procedures to be followed and standards to be met in implementing the projects in agreement with the national and World Bank ESF provisions. It covers sub-projects environmental and social screening, monitoring and institutional strengthening for implementation of the subprojects.

6.1 ENVIRONMENTAL AND SOCIAL SCREENING PROCESS

All the project activities of CRAD will be subject to an environmental screening in order to prevent execution of projects with significant negative environmental impacts. An environmental impact is an estimate or judgment of the significance and value of environmental effects on physical, biological, social or economic environment. Low, medium and high representing impact or level of importance associated with a factor. The impact level depends on duration, reversibility, magnitude, benefit, significance etc. The project will have the following proposed approach for addressing environmental and social issues and will include the following safeguard instruments:

- This Environmental and Social Management Framework (ESMF) is prepared prior the approval of the CRAD Project, to inform the overall environmental and social performance of the Project.
- ESIA for activities: (i) Modernization and pressurization of Divjaka Irrigation Scheme, Municipality of Divjake; and (ii) Revitalization of Lushnja Irrigation Scheme, Municipality of Lushnje; (iii) Modernization of Mursi Irrigation Scheme in Konispol Municipality; (iv) Modernization of drainage systems. Drainage pumping stations in Hoxhara plain, Fier Municipality, (iv) construction of Micro Food Hubs, (v) rehabilitation of BIP.
- An initial screening of identified sub-projects (for first year and subsequent years of project implementation) selected in line with specific set of criteria will identify issues to be included in the Terms of reference of Feasibility Studies and detailed designs. The ToR's for the Feasibility Studies will include provisions for environmental and social

[45] URL: https://albania.un.org/sites/default/files/2020-05/no.52-%20Gender%2C%20agriculture%20and%20rural%20development%20in%20Albania.pdf

standards, including long-term impacts, so that the products (FS, design) will be prepared taking in consideration possible impacts on environment.

- During or after the Feasibility Studies (FS) are completed, additional screening of proposed sub-projects will be carried out by MARD / PMT to determine if Site Specific Environmental and social Management Plans or ESIAs are needed.
- Specific Environmental and Social Impact Assessments (ESIAs) and/or Environmental and Social Management Plans (ESMPs), and other instruments as required (e.g. environmental checklists, Resettlement Action Plans (RAPs) etc.) will be prepared by consultants hired by the AARD, for all investments once the Feasibility Studies are completed and technical details will be available during project implementation following the guidance established in this ESMF.
- The basic instrument will be ESMP to manage all construction related impacts. Additional screening of the project will determine whether additional instruments are needed.

Based on screening form, MARD / PMT environmental specialist will assign the category to the sub projects (Category A, B, or C) to identify the type of environmental due diligence document for each sub – project. More precisely, during determining the risk, it should be considered:

- the type, location, sensitivity and scale of the Project including the physical considerations of the Project; type of infrastructure, volume of hazardous waste management and disposal.
- the capacity and commitment of the Borrower to manage such risks and impacts in a manner consistent with the WB ESF, including the country's policy, legal and institutional framework; laws, regulations, rules and procedures applicable to the Project sector, including regional and local requirements; the technical and institutional capacity of the Borrower; the Borrower's track record of past Project implementation; and the financial and human resources available for management of the Project;
- other areas of risk that may be relevant to the delivery of environmental and social mitigation measures and outcomes, depending on the specific Project and the context in which it is being developed, including the nature of the mitigation and technology being proposed, considerations relating to domestic and/or regional stability, conflict or security.

6.2 ENVIRONMENTAL REVIEW PROCESS

The following steps indicate how the process preparation of environmental due diligence documents will flow

Step 1: **Screening**: The beneficiary (MARD) prepares sub-project concept (this might include preliminary design). Following informal discussion with the MARD / PMT environmental specialist, in which the PMT alerts the beneficiary of its environmental assessment requirements, MARD will assists the designer in finalizing the environmental screening form based on which the MARD (PMT) environmental specialist concludes if project is eligible for financing according to ESMF.

Step 2: **Scoping**: Following the approved environmental screening form, MARD PMT environmental specialists assigns environmental category to sub project (B1, B2, B3 which are considered parallel to the WB category A, B, and C) and fills the Screening Report and informs beneficiary on the required due diligence. However, the beneficiary does not prepare the environmental due diligence document, rather, it is a part of design contract with the MARD, but the preparation is coordinated with the beneficiary.

Within this contract, MARD may need to prepare the following: ESIA. It will be the responsibility of the beneficiary to obtain the appropriate permits and licenses as required by national law in order to facilitate the clearance process with the MoET or other relevant authorities.

Step 3: Preparation of Environmental and Social Impact Assessment Reports/Environmental and Social Management Plans: Drafting Environmental and Social Impact Assessment Reports will be a part of each MARD design contract and will be prepared in line with national legislative requirements for receiving an environmental permit/authorization. ESIA will be prepared by a licensed expert on Environmental Impact Assessment. The preliminary ESIAs will also comply with World Bank ESS, and Health and Safety guidelines.

Step 3: Clearances: The World Bank Environmental Specialist will priory review until it is assured that quality of review is adequate in MARD. The ESIA will be incorporated as part of the contract between the Borrower and the contractor, together with appropriate monitoring and enforcement provisions.

Step 4: Public disclosure and consultation: MARD will carry out public disclosure and consultation (meeting) for ESIA, prior to bidding of works (and after the approval from the MoET for ESIAs). The documents will be disclosed on the website of MARD as well on the municipality website. Upon finalization, the designer will send finalized documents to ARA, for re-disclosure, with the minutes of consultation. Finalized ESIA will be re-disclosed at both sites.

Step 5: Application for the Environmental Permit/Authorization: Upon clearance from WB and public consultation, yet prior to publication of the Bid Notification, an Investment Agreement will be signed with the beneficiary of the subproject. ESIA is an integral part of sub-project bidding and contracting documentation. Depending on the type of ESIA required (or none at all), the beneficiary will pay the tariff for environmental statement/authorization to the Ministry of Environment and Tourism/National Environmental Agency, as well as apply for receiving the environmental statement. The environmental statement must be issued before the works contract signing. Any required modifications/improvements required by the permitting authority, will be the responsibility of the design contractor to reflect.

7 INSTITUTIONAL FRAMEWORK AND ARRANGEMENTS

This chapter explains the overall project management and institutional arrangements required for the effective implementation of the project. Thus, the Section highlights the roles and responsibilities of Ministry of Agriculture and Rural Development (MARD) and Agency of Agriculture and Rural Development (AARD) which is also the principal implementing agency of the project. The Section also analyzes the ESMF implementation capacity of the MARD and recommends several measures, including capacity enhancement activities and management of additional experts to ensure effective arrangements on Land Acquisition and Resettlement Process and implementation of the ESMF

7.1 INSTITUTIONAL ARRANGEMENT

Project implementation will be mainstreamed within the existing institutional structures. The MARD will continue to be the primary Project Management Team (PMT) of the Project with responsibilities including fiduciary aspects, with financial management (FM) of loan proceeds and procurement of goods, works, and services for the project; compliance with social and environmental ESF; and ensuring citizen communication and consultation, as well as routine communication with the World Bank.

Other important stakeholders will remain the Ministry of Tourism and Environment (MoTE), the Ministry of Culture (MoC) as well as selected municipalities in Albania. The MoTE will review the environmental assessments of infrastructure activities which require an environmental permit. The MoC will be responsible for supporting the MARD in reviewing activity concepts and approving designs that may intersect with cultural heritage sites.

The selected municipalities will continue to be responsible for holding periodic citizen engagement meetings together with providing information for citizens' campaigns which explain, to all stakeholders, the project goals, benefits, and implementation progress and disseminating and addressing feedback from community as well as grievance redress mechanisms. The selected municipalities should also ensure participation of women in all community engagement processes.

PMT will engage two part-time Consultants/Specialists: 1) Part time Environmental Specialist staff in PIU for a period of fiver years during project implementation; 2) 1) Part time Social Specialist staff in PIU for a period of fiver years during project implementation. With an estimated cost of about 900 USD/month including all taxes, the project management cost is expected to be 108,000 USD.

PMT should design and implement a capacity building program focused on World Bank ESF and Albanian national standards, focused for PMT staff and cosnultants, MARD engaged civil servants, key Municipality staff. As minimum an "ESF Fundamentals" course to understand each of the ESF Environmental and Social Standards (ESS). Some of the topics to becovered could be:

(i) Overview

(ii) ESF Policy and Directives

(iii) Assessment and Management of Environmental and Social Risks and Impacts ESS1

(iv) Stakeholder Engagement and Information Disclosure ESS10

(v) Case study : 2 or more case studies relevant to the project activities.

(vi) Culture Heritage ESS8

(vii) Summary

7.1.1 Environmental Specialist Tasks

Responsibilities:

- Oversee field examinations and report.
- Maintain management information systems and a complaint register and investigations.
- Develop and recommend solutions to eliminate pollution and environmental impacts.
- Recommend and monitor effective contractor employee training programs.
- Review reports on collect and analyzed test samples of food, soil, water, and air and provide feedback to the PMT and contractor.
- Perform inspections and report findings on the current environmental conditions at project sites.
- Prepare clear and detailed written reports about field inspections.

Requirements:

- Bachelor's degree in environmental science or relevant field.
- A minimum of 5 years experience in a similar role.
- In-depth knowledge of regulatory requirements, interpretations, and health and safety programs.
- Aptitude to solve problems quickly with advanced conflict resolution skills.
- Excellent written and verbal communication skills in Albanian and English.
- Outstanding analytical abilities.

7.1.2 Social Specialist Tasks

Responsibilities:

- Incorporate social development dimensions in the implementation of projects activities.
- Administer selected project activities with significant social dimensions.
- Liaise with and coordinate with national, regional and local agencies on program activities and investment.
- Provide operational support in incorporating key social development concerns and projects/programs.
- Ensure key technical, economic, financial and crosscutting issues are incorporated into projects.

- **Requirements:**
- Bachelor's degree in social science or relevant field.
- A minimum of 5 years experience in a similar role.
- In-depth knowledge of regulatory requirements, interpretations, and EHS programs.
- Aptitude to solve problems quickly with advanced conflict resolution skills.
- Excellent written and verbal communication skills in Albanian and English.
- Outstanding analytical abilities.

7.2 MARD IMPLEMENTATION CAPACITY

MARD is an experienced client of the World Bank and has successfully implemented a number of World Bank projects. The Project Management Team (PMT) currently implementing the CRAD is well experienced with the World Bank procedures, including the fiduciary, ESF, and monitoring and Evaluation (M&E), but they do not have experience in E&S risk management under the ESF. The focus of the CRAD is to establish a Climate Smart Agriculture Platform to foster and enable the implementation of climate-smart agriculture practices throughout the country as well as to connect smallholders with markets, strengthen resilient food distribution systems, promote the increased value of agricultural production and traditional foods, and support the overall resilience of the agricultural sector.

It is envisaged that the Project Management Team (PMT) of the CRAD will provide the day-to-day project management activities for the CRAD project including the fiduciary activities of procurement, supervision of civil works and equipment contracts, financial management, as well as the collection and analysis of M&E data.

The current project is very low risk/no risk in terms of land acquisition due to the fact that the footprint the sub-projects is not known yet still a RPF is needed. Most impacts will be temporary, as well as the land-related impacts will be temporary and with unlikely impact on livelihood. To environmental impacts the risk will be low to moderate, as the project is financing mostly on rehabilitation and modernisation of Irrigation and drainage schemes, implementationof IT Platforms, Solar Panels and on creation of Small Food Hubs. It is therefore proposed that for the purpose of the project, at least one environmental expert will be hired by the PMT.

MARD will need to establish a PMT and strengthen its internal capacity on E&S risk management under the ESF implementation through engagement of part time Specialists for Environmental and Social and monitor the performance of the ESMF and its provisions and build the capacity of the dedicated environment and social specialists assigned to specific tasks such as: (i) Coordinating preparation of environmental due diligence documents with the beneficiary; (ii) Reviewing the environmental due diligence documents, (iii) Monitoring project progress as it relates to compliance with the ESMF guidelines and ensuring that overall project implementation proceeds smoothly; (iv) Conducting construction site supervision, (v) Collecting and managing information relevant to the project and accounts (i.e., environmental and social monitoring and reports, environmental and social screening); and (vi) Organizing and providing training sessions.

7.3 INSTITUTIONAL ARRANGEMENTS LAND ACQUISITION AND RESETTLEMENT PROCESS

The Ministry of Agriculture and Rural development has ultimate responsibility for the implementation of all project components. A committee composed of PAP-Project Authorities will be constituted to be responsible for overseeing the implementation of the Resettlement Procedure. The MARD will cooperate will all local institutions to provide a successful implementation of the Resettlement Procedure if needed (the footprint is not known yet). The LGUs (Municipalities, Administrative Units) are the final beneficiaries of the project implementation. From the institution, it is required continuous assistance and presence during project progress. Immovable Property Registration Office for each District in the Project area, under the authority of the Central Registration Office, which are responsible for identifying and verifying property boundaries and ownership. Land Administration and Protection Offices (formerly Cadaster Offices) under the Region, which will clarify land allotment certificates for agricultural land that has not been formally registered and transferred to the Immovable Property Registration Offices. The Regions and the Municipalities will be responsible for the coordination of the implementing procedures and execution of the compensation.

The specifications of a RPF that will be undertaken for the project are subject to further updates, by the MARD/PMT, in accordance with the project activities developments and approvals by the World Bank.

8 ENVIRONMENTAL AND SOCIAL MONITORING AND EVALUATION

This chapter provides information about procedures for compliance monitoring and reporting. The responsibility for onsite environmental monitoring of contractor activities will rest on MARD/PMT with the support from the LGU. Independent consultants hired by the MARD, will be responsible for Environmental and social monitoring with oversight and guidance from the World Bank.

Monitoring is the continuous and systematic collection of data in order to assess whether the environmental objectives of the project have been achieved. Good practice demands that procedures for monitoring the environmental performance of proposed projects are incorporated in all relevant environmental management instruments. Monitoring provides information on the occurrence of impacts. It helps identify how well mitigation measures are working, and where better mitigation may be needed. Each respective EA instrument prepared will require a monitoring program to be included for the respective activities. The monitoring plan should identify what information will be collected, how, where and how often. It should also indicate at what level of effect there will be a need for further mitigation. How environmental impacts are monitored is discussed below.

- Responsibilities in terms of the people, groups, or organizations that will carry out the monitoring activities be defined, as well as to whom they report amongst others. In some instances, there may be a need to train people to carry out these responsibilities, and to provide them with equipment and supplies;
- Implementation Schedule, covers the timing, frequency and duration of monitoring are specified in an implementation schedule, and linked to the overall sub project schedule;
- Cost Estimates and source of resources for monitoring need to be specified in the monitoring plan;
- Monitoring methods need to be as simple as possible, consistent with collecting useful information, so that the sub project implementer can apply them.
- The data collected during monitoring is analyzed with the aim of:
- Assessing any changes in baseline conditions;
- Assessing whether recommended mitigation measures have been successfully implemented;
- Determining reasons for unsuccessful mitigation.
- Developing and recommending alternative mitigation measures or plans to replace unsatisfactory ones; and
- Identifying and explaining trends in environment improvement or degradation.

Monitoring plans will be developed to track E&S progress at both the ESMF and subproject activity level. The monitoring issues at the ESMF level include confirmation of the dissemination of the ESMF document as well as capacity building and training activities.

MARD is responsible for record-keeping, management and internal monitoring of the GRM as the committee will report directly to the Head of MARD or to an assigned specialist.

8.1 INTERNAL MONITORING

Environmental monitoring. The physical environmental monitoring should be carried out at different stages of project to ensure compliance with physical environmental standards and to avoid any damage to the physical environment due to project activities. The monitoring will identify any discrepancies with the environmental standards and will urge the responsible institutions/authorities to take necessary actions to control/avoid environmental damage. The results of analysis should be compared with the national and WB guidelines and standards.

The responsibility for onsite environmental monitoring of contractor activities will be the beneficiary (LGUs) and the MARD. The LGUs and MARD PMT designated responsible person will conduct regular monthly on- site monitoring of civil works to verify contractors' adherence to the requirements set out in ESMF and specific documents, ESIA, to identify any outstanding environmental issues or risks, and to ensure proper application of the prescribed remedial actions. In case of recorded non-compliance with ESIA, the MARD will instruct contractors on the corrective measures and closely monitor their further progress.

Where in addition, there will be a supervision consultancy firm appointed for overall supervision of project construction activities on ground, the recruitment of environment and social experts will be a requirement under the contract of the supervision consultant. The supervision consultants will be responsible for all aspects of the project including environment and social compliance and reporting to the MARD PMT, while the overarching monitoring responsibility and reporting to the World Bank will remain with the MARD PMT.

The MARD PMT team will confirm the performance of the supervision consultants by regularly visiting the project site during the implementation stage and providing guidance on corrective measures on any lapses as required.

The municipalities/ regional environmental agencies, will also monitor that the environmental conditionality during implementation are met, based on the legislative requirements arising from the environmental statement. They will need to report to the Ministry of Environment and Tourism/National Environmental Agency as requested in the statement as well to MARD.

The World Bank teams will oversee the implementation of the environmental and social standards for the overall project and each subproject. They will perform periodic monitoring missions as well as ad-hoc site visit as necessary. The World Bank teams will approve ESIA and follow up on its implementation as per ESMF.

MARD will monitor the implementation of the environmental statement for each subproject when it is needed. In cases when the project is located with a protected area, the National Agency of Protected Areas (NAPA) within the Ministry of Tourism and Environment, will monitor the implementation of the works that will maintain upon completion.

Social Monitoring. MARD will be charged with the task of monitoring and evaluation of the PAPs, procedures related to their needs and grievance. As mentioned above MARD/PMT will be final responsible for two procedures:

- Monitoring the Grievance Committee
- Overall Internal Monitoring of RAP for project activities.

The internal monitoring procedures are related to:

- Public consultation meetings.
- Census, assets inventories, assessments and socio-economic studies completed.

- Grievances filed and their status.
- Compensation payments disbursed; and
- Monitoring report submitted.

Internal Monitoring Actions are not limited, and they can include participation in the processes etc. Reports of internal monitoring will be prepared and submitted to MARD representative and shared with other specialists and partners.

8.2 EXTERNAL MONITORING AND EVALUATION

An Independent Monitoring Consultant (IMC) shall be appointed to monitor the expropriation and compensation process and implementation of requirements to verify that compensation, resettlement and rehabilitation will be implemented in accordance with the agreed RAP. The IMC will also be involved in the complaints and grievance procedures to ensure concerns raised by PAPs are addressed. More specifically, the IMC will carry out the following:

- Review the results of the RAP internal monitoring and review overall compliance.
- Random field checks to ensure payment of compensation and timing of payments.
- Interviews with random samples of affected people from different sites to assess their knowledge and concerns regarding the expropriation process and their entitlements.
- Check on the type of grievance issues and the effective functioning of the grievance redress mechanisms by interviewing aggrieved affected people and reviewing grievance and the flow of the process.
- Assess general efficiency of expropriation and formulate lessons for future guidance.
- Determine overall adequacy of entitlements to meet the objectives.

Progress and performance monitoring of RAP will cover all phases from preparation, through implementation, to closure. Using the information compiled through RAP monitoring, the MARD will be able to note changes that may have occurred before and after expropriation.

9 STAKEHOLDER ENGAGEMENT

9.1 INFORMATION DISCLOSURE (PUBLISHING)

Public Hearing for the Project “CRAD project” will be conducted as the consultant officially will inform by letter all stakeholders involved at the project.

The public consultation process will go through several different steps:

- Stakeholder engagement
- Organising and conducting public consultation through public information and project presentation
- Establishment of grievance mechanism

Table below summarizes what information will be disclosed and in what formats, and the types of methods that will be used to communicate this information in order to target a wide range of stakeholder groups.

Detection channel	Information / documents to be disclosed	Target stakeholders	Frequency	Responsibilities
Website of the Ministry of Agriculture and Rural Development, Ministry of Finances and Infrastructure, municipalities /cities, as well as water management companies involved in projects (dedicated part of the project)	Project documentation (including SEP) and reports Regular updates on the project development Quarterly project progress reports Details of the grievance mechanism, together with an electronic grievance form Contact details of MoARD and municipalities/cities involved in the project Leaflet containing information on the Project Complaints Resolution Mechanism (GRM) Results of customer satisfaction surveys Summaries of stakeholder involvement activities	All stakeholders	Quarterly, except for cumulative results customer satisfaction survey (annually) and summary of stakeholder engagement activities (semi-annually)	The project covers municipalities / cities and water companies
Media, including traditional and social media – dedicated project Facebook, Twitter pages)	Project announcements and engagement activities Calls for public consultations Information on scheduled meetings or availability of project information Brief progress reports on the project	All stakeholders	Regularly in line with project dynamics	The project covers municipalities / cities and water companies
Email	Invitations to consultative meetings Project documentation	Government actors; water agencies, local communities, CSOs	As needed	The project covers municipalities / cities and water companies
Billboards municipalities/cities and water companies and /or internal IT network	Leaflet containing information about the GRM project	Water company workers, people living in the area affected by the project	Start of project activities	The project covers municipalities / cities and water companies
Meetings, training and writing on-site instructions	Meetings, trainings and writing on-site instructions	Workers engaged in the construction phase, Workers of water management companies engaged in project implementation activities Local communities	Before the start of construction, upgrade and modernization of water infrastructure and continuously as needed	The project covers municipalities/cities and water companies Association of Municipalities and Utilities

9.2 PROPOSED STRATEGY TO INCLUDE THE VIEWS OF VULNERABLE GROUPS

The project will take special measures to ensure that vulnerable and vulnerable groups have equal opportunity to access information, provide feedback or file complaints. To the extent possible, project indicators will be monitored and broken down by gender and vulnerable groups. Consulting activities will be based on the principle of inclusiveness, i.e. involving all segments of local society, including vulnerable individuals. Some of the strategies that will be adopted to effectively connect with vulnerable groups and individuals will be:

- The introduction of social consultants will help ensure proactive approach to all population groups.
- Meetings, trainings and awareness raising will be conducted in villages rather than municipal canters to ensure greater participation of the target population.
- Focus groups dedicated to particularly vulnerable groups will be conducted with vulnerable groups, including groups will be conducted to assess their views and concerns, including for Roma communities, households, and individuals to identify cumulative vulnerabilities arising from their non-integrated status in the community and the impact of the project attributable
- where appropriate, the use of appropriate local language or visual aids in case of poor literacy, especially for women who would be the primary target group
- providing information to people with special communication needs in accessible formats, such as large print; text printing or sign-up videos (including news and press conferences) for the hearing impaired, online materials for people using assistive technology; sharing messages in understandable ways for people with intellectual, cognitive and psychosocial disabilities; for the Roma population, sharing information in the Romani language;
- use of appropriate communication channels adapted to the needs of vulnerable groups (e.g. TV /radio for the elderly and rural / communities)

In addition, focus groups or individual consultative meetings dedicated to particularly vulnerable groups will be held to assess their attitudes and concerns, including Roma communities, households and individuals, in order to identify any cumulative vulnerabilities arising from their alienation from society and insufficient integration and impact. can be attributed to the project.

9.3 CONSULTATION ON THE STAKEHOLDER ENGAGEMENT PLAN

The initial version of the Stakeholder Involvement Plan will be published on the official website of the Ministry of Agriculture and Rural Development, and on the official website of the municipalities of the project areas and those on whose territory the subproject is accepted and will be sent directly relevant stakeholders with an invitation to comment online. The public will be informed about the consultation process through available online tools and public announcements in the entity newspapers. The consultations will be organized by the MARD using various online channels (e-mail, ministry websites, Facebook, etc.), and records of these virtual discussions will be reflected in the final draft of the Stakeholder Involvement Plan.
The stakeholder engagement plan will be updated as necessary during project preparation, development and implementation.

10 CONSULTATION PROCESS ON THE ESMF, CRAD PROJECT

This chapter details the principles and procedures that will be adopted by the MARD as implementing institution to carry out stakeholder consultations and public disclosure of information related to the subproject among the project-affected communities and stakeholders. The ESMF adopts strategic approaches to ensure the full and effective participation of vulnerable groups in the E&S assessment and implementation of the mitigation measures in the subprojects. Similarly, the ESMF proposes functional GRM systems, capable of addressing concerns of local communities through a transparent process that is culturally appropriate and readily accessible to all segments of the affected communities.

10.1CONSULTATION PROCESS ON THE ESMF

For all activities affected communities will be consulted within a structured and culturally appropriate manner according to the Stakeholder Engagement Plan (SEP). If project activities or subproject activities are assessed to have significant adverse impacts on communities, all PAPs will be consulted as a means to establish whether those activities have adequately incorporated affected communities' concerns. In order to accomplish this, this framework as well as all other E&S instruments will be made available to the public for a reasonable minimum period, with active efforts made to reach out to and engage the stakeholders in sub-projects' preparation and implementation process. The Borrower will engage with stakeholders as an integral part of the project's environmental and social assessment and project design and implementation, as outlined in ESS1.

The Public Consultation is required to take place for the documents related to the due diligence of the overall project. Regarding the CRAD project, the ESMF, as well as site specific ESIAs that will be prepared for each activity (sub-project) during project implementation will be disclosed.

The Borrower will maintain, and disclose as part of the environmental and social assessment, a documented record of stakeholder engagement, including a description of the stakeholders consulted, a summary of the feedback received and a brief explanation of how the feedback was taken into account, or the reasons why it was not.

The public consultation meeting minutes will be published on MARD website, but also other electronic and printed media are used to ensure wide participation of stakeholders, including local newspapers, MARD official email, etc. The objectives of the public consultations were:

- To inform the public and stakeholders about the objectives and project developments and the expected of environmental and social effects.
- To collect information and data from the public and/or the communities that will be affected by the project
- To ensure participation of the public and local communities in process and support for the project

10.2CONSULTATION WITH AFFECTED POPULATIONS

Consultation is the process by which information is gathered to make decisions that impact the community. Community members are informed, connected and participated in services and activities relevant to them, and feel they have a role to play. For effective consultation to occur, communities

need to be informed and engaged. This occurs when there is equal access to information, good ongoing information flow, consultation and participation among the stakeholders.

Inform: The project will provide information to the community with balanced and objective information to assist them in their understanding of the CRAD project, alternatives and opportunities.

Consult: The project implementation unit will obtain feedback from the community on analysis, alternatives and decisions. Usually involves developing a preliminary or preferred position before releasing it for community input.

Involve: This may involve the community in various stages of the project in seeking specific answers to issues as opposed to broad general feedback sessions. Methods may include focus groups, workshops, advisory committees and online consultations.

Collaborate: Community collaboration may be fostered through steering committees, negotiation tables, online consultations, policy roundtables, citizen panels, search conferences and formal and informal partnerships.

Communication with the affected persons, as well as with other community members who will express interest in the project, will be maintained throughout the process from project design, implementation to closure. The community will be informed of grievance management arrangements and given contacts of persons assigned to manage issues and grievances. Also, an up-to-date information needed to ensure public awareness and engagement on project activities will be provided through the MARD website and social media.

10.3GRIEVANCE REDRESS MECHANISMS

A crucial objective of the grievance mechanism is to ensure an efficient way to resolve grievances. The World Bank expects every project to establish such a mechanism in accordance with ESS10, in an early project development phase in order to address certain problems in an adequate and timely manner. A grievance includes complaints and proposals relating to project implementation.

CRAD shall establish a grievance mechanism to resolve issues relating to the acquisition of land and other property, as well as losses and damages caused by construction works, pursuant to ESS5. For this reason, the grievance mechanism will be established at a time when CRAD starts negotiations with PAPs in cooperation with municipal administrations and direct beneficiaries; it will work on this issue until the completion of construction works.

CRAD and the municipalities respectively are responsible for establishing functioning GRM and informing stakeholders about the GRM role and function, the contact persons and the procedures to submit a complaint in the affected areas. Information on the GRM will be available: on the websites of the CRAD and involved municipalities, on the notice boards of municipalities, through social media campaigns. A leaflet containing grievance mechanism procedure should be made and disseminated to the PAPs in public meetings during each phase of the project, as well as placed in local communities' offices.

The GRM is available free of charge, and it is important that it is easily accessible.

At the project level, the CRAD a Central Feedback Desk (CFD) shall be formed that will be under its control; within subproject activities shall be formed Local Grievance Offices (LGOs) established and administered by the municipalities. The CFD shall be effective immediately after appraisal of the Project, in order to manage and appropriately answer complaints during its different phases while the LGOs shall be effective upon decision on each new sub-project has been taken. In addition to the GRM,

legal remedies available under the Albanian legislation are also available (courts, inspections, administrative authorities, etc.).

CRAD will ensure that the involved municipalities dedicate one officer to the task of admission of grievances (Local grievance officer - LGO). This officer shall ensure that the receipt of a grievance is acknowledged within 3 calendar days, and that grievances are assigned to the proper person for review and proposal of a solution and that a decision/letter of closure is sent timely to the person who lodged the grievance and to confirm the receipt. The local municipal grievance officer will have to regularly provide CRAD with updates on grievances received and on any extraordinary or urgent developments.

Any remarks or concerns can be communicated to CRAD or LGOs orally or in writing (mail or e-mail), or by filling in a grievance registration form, free of charge for grievances. Grievances can also be submitted anonymously.

All grievances shall be listed in the Register and given a number; their receipt will be acknowledged within 7 calendar days. Every grievance shall be registered with the following information: a description of grievance, date of receipt acknowledgement sent back to the complainant, a description of taken actions (investigation, corrective measures), and date of solution and closing / submission of feedback to the complainant.

CRAD or Local Grievance Officer shall make all reasonable efforts to resolve a grievance after the acknowledgement of its receipt. If CRAD or municipal officer are not able to address the issues with a direct corrective measure, long-term corrective measures shall be identified. The complainant shall be notified of the proposed corrective action and following up the corrective action for 25 calendar days as of the grievance acknowledgement.

If a certain issue raised through the grievance mechanism cannot be resolved or if no action is necessary, the complainant shall be given a detailed explanation/justification why the problem was not resolved. A response shall also incorporate an explanation on how the person/organisation that lodged the grievance can pursue the grievance if the result is not satisfactory.

If the complainant is not satisfied with the implemented corrective measure and/or statement of reasons for which a corrective measure is not necessary, the grievance shall be forwarded to the CFD.

The CFD shall comprise at least:

- one member of CRAD,
- one member of the relevant municipality/city,
- two representatives of project-affected persons.

The CFD will reassess the previously implemented corrective action and/or explain the reasons why the corrective action is not needed and will reconsider alternatives to address the grievance satisfactorily. The complainant will be notified of the proposed alternative corrective measure and control of the implementation of the alternative corrective measure within 3 months after the confirmation of receipt of the complaint

ANNEX 1. Screening Checklist

Screening Criteria	Yes / No/? Briefly describe	Is this likely to result in a significant effect? Yes / No /? – Why?
Brief Project Description:		
1. Will construction, operation or decommissioning of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)?	**Yes/No**	**Yes/No**
2. Will construction or operation of the Project use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or in short supply?	**Yes/No**	**Yes/No**
3. Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?	**Yes/No**	**Yes/No**
4. Will the Project produce solid wastes during construction or operation or decommissioning?	**Yes/No**	**Yes/No**
5. Will the Project release pollutants or any hazardous, toxic or noxious substances to air?	**Yes/No**	**Yes/No**
6. Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?	**Yes/No**	**Yes/No**
7. Will the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater, coastal wasters or the sea?	**Yes/No**	**Yes/No**
8. Will there be any risk of accidents during construction or operation of the Project which could affect human health or the environment?	**Yes/No**	**Yes/No**
9. Will the Project result in social changes, for example, in demography, traditional lifestyles, employment?	**Yes/No**	**Yes/No**
10. Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?	**Yes/No**	**Yes/No**
11. Are there any areas on or around the location which are protected under international or national or local legislation for their ecological, landscape, cultural or other value, which could be affected by the project?	**Yes/No**	**Yes/No**
12. Are there any other areas on or around the location which are important or sensitive for reasons of their ecology e.g. wetlands,	**Yes/No**	**Yes/No**

watercourses or other water bodies, the coastal zone, mountains, forests or woodlands, which could be affected by the project?		
13. Are there any areas on or around the location which are used by protected, important or sensitive species of fauna or flora e.g. for breeding, nesting, foraging, resting, overwintering, migration, which could be affected by the project?	**Yes/No**	**Yes/No**
14. Are there any inland, coastal, marine or underground waters on or around the location which could be affected by the project?	**Yes/No**	**Yes/No**
15. Are there any areas or features of high landscape or scenic value on or around the location which could be affected by the project?	**Yes/No**	**Yes/No**
16. Are there any routes or facilities on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the project?	**Yes/No**	**Yes/No**
17. Are there any transport routes on or around the location which are susceptible to congestion or which cause environmental problems, which could be affected by the project?	**Yes/No**	**Yes/No**
18. Is the project in a location where it is likely to be highly visible to many people?	**Yes/No**	**Yes/No**
19. Are there any areas or features of historic or cultural importance on or around the location which could be affected by the project?	**Yes/No**	**Yes/No**
20. Is the project located in a previously undeveloped area where there will be loss of greenfield land?	**Yes/No**	**Yes/No**
21. Are there existing land uses on or around the location e.g. homes, gardens, other private property, industry, commerce, recreation, public open space, community facilities, agriculture, forestry, tourism, mining or quarrying which could be affected by the project?	**Yes/No**	**Yes/No**
22. Are there any plans for future land uses on or around the location which could be affected by the project?	**Yes/No**	**Yes/No**
23. Are there any areas on or around the location which are densely populated or built-up, which could be affected by the project?	**Yes/No**	**Yes/No**
24. Are there any areas on or around the location which is occupied by sensitive land uses e.g. hospitals, schools, places of worship, community facilities, which could be affected by the project?	**Yes/No**	**Yes/No**

25. Are there any areas on or around the location which contain important, high quality or scarce resources e.g. groundwater, surface waters, forestry, agriculture, fisheries, tourism, minerals, which could be affected by the project?	**Yes/No**	**Yes/No**
26. Are there any areas on or around the location which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the project?	**Yes/No**	**Yes/No**
27. Is the project location susceptible to earthquakes, subsidence, landslides, and erosion, flooding or extreme or adverse climatic conditions e.g. temperature inversions, fogs, severe winds, which could cause the project to present environmental problems?	**Yes/No**	**Yes/No**

Summary of features of project and of its location indicating the need for EIA

1. **World Bank ESF and Guideline Manual**
2. **Albanian Law**

Screening Checklist environmental and social aspects to be studied within the scope of the ESIA related to project area, but not limited to:

- **Air quality;**
- **Soil quality;**
- **Surface water bodies into and near the lake to be created, including streams, freshwater swamps, creeks, irrigation and drainage channels;**
- **Groundwater within the zone of hydrological influence;**
- **Ambient noise, vibration and lighting;**
- **Flora and Fauna, (including avifauna and aquatic ecology);**
- **Protected Areas;**
- **Cultural Heritage;**
- **Village Assessment and Land Use/Cover;**
- **Socio-Economic aspects;**
- **Road Infrastructure & Road Pavement;**
- **Waste Generation;**
- **Electro-Magnetic Field (EMF).**

ANNEX 2. Scoping Checklist

No.	Questions to be considered in Scoping	Yes / No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?

1. Will construction, operation or decommissioning of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)?				
1.1	Permanent or temporary change in land use, land cover or topography including increases in intensity of land use?			
1.2	Clearance of existing land, vegetation and buildings?			
1.3	Creation of new land uses?			
1.4	Pre-construction investigations e.g. boreholes, soil testing?			
1.5	Construction works?			
1.6	Demolition works?			
1.7	Temporary sites used for construction works or housing of construction workers?			
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations?			
1.9	Underground works including mining or tunnelling?			
1.10	Reclamation works?			
1.11	Dredging?			
1.12	Coastal structures e.g. seawalls, piers?			
1.13	Offshore structures?			
1.14	Production and manufacturing processes?			
1.15	Facilities for storage of goods or materials?			
1.16	Facilities for treatment or disposal of solid wastes or liquid effluents?			
1.17	Facilities for long term housing of operational workers?			
1.18	New road, rail or sea traffic during construction or operation?			
1.19	New road, rail, air, waterborne or other transport infrastructure including new or altered routes and stations, ports, airports, etc.?			
1.20	Closure or deviation of existing transport routes or infrastructure leading to changes in traffic movements?			
1.21	New or diverted transmission lines or pipelines?			

1.22	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?			
1.23	Stream crossings?			
1.24	Abstraction or transfers of water from ground or surface waters?			
1.25	Changes in water bodies or the land surface affecting drainage or run-off?			
1.26	Transport of personnel or materials for construction, operation or decommissioning?			
1.27	Long term dismantling or decommissioning or restoration works?			
1.28	On-going activity during decommissioning which could have an impact on the environment?			
1.29	Influx of people to an area in either temporarily or permanently?			
1.30	Introduction of alien species?			
1.31	Loss of native species or genetic diversity?			
1.32	Any other actions?			
2. Will construction or operation of the Project use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or in short supply?				
2.1	Land especially undeveloped or agricultural land?			
2.2	Water?			
2.3	Minerals?			
2.4	Aggregates?			
2.5	Forests and timber?			
2.6	Energy including electricity and fuels?			
2.7	Any other resources?			
3. Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?				
3.1	Will the project involve use of substances or materials which are hazardous or toxic to human health or the environment (flora, fauna, and water supplies)?			
3.2	Will the project result in changes in occurrence of disease or affect disease			

	vectors (e.g. insect or water borne diseases)?			
3.3	Will the project affect the welfare of people e.g. by changing living conditions?			
3.4	Are there especially vulnerable groups of people who could be affected by the project e.g. hospital patients, the elderly?			
3.5	Any other causes?			
4. Will the Project produce solid wastes during construction or operation or decommissioning?				
4.1	Spoil, overburden or mine wastes?			
4.2	Municipal waste (household and or commercial wastes)?			
4.3	Hazardous or toxic wastes (including radioactive wastes)?			
4.4	Other industrial process wastes?			
4.5	Surplus product?			
4.6	Sewage sludge or other sludge's from effluent treatment?			
4.7	Construction or demolition wastes?			
4.8	Redundant machinery or equipment?			
4.9	Contaminated soils or other material?			
4.10	Agricultural wastes?			
4.11	Any other solid wastes?			
5. Will the Project release pollutants or any hazardous, toxic or noxious substances to air?				
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources?			
5.2	Emissions from production processes?			
5.3	Emissions from materials handling including storage or transport?			
5.4	Emissions from construction activities including plant and equipment?			
5.5	Dust or odours from handling of materials including construction materials, sewage and waste?			
5.6	Emissions from incineration of waste?			
5.7	Emissions from burning of waste in open air (e.g. slash material, construction debris)?			
5.8	Emissions from any other sources?			
6. Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?				

6.1	From operation of equipment e.g. engines, ventilation plant, crushers?			
6.2	From industrial or similar processes?			
6.3	From construction or demolition?			
6.4	From blasting or piling?			
6.5	From construction or operational traffic?			
6.6	From lighting or cooling systems?			
6.7	From sources of electromagnetic radiation (consider effects on nearby sensitive equipment as well as people)?			
6.8	From any other sources?			
7. Will the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into sewers, surface waters, groundwater, coastal waters or the sea?				
7.1	From handling, storage, use or spillage of hazardous or toxic materials?			
7.2	From discharge of sewage or other effluents (whether treated or untreated) to water or the land?			
7.3	By deposition of pollutants emitted to air, onto the land or into water?			
7.4	From any other sources?			
7.5	Is there a risk of long term build-up of pollutants in the environment from these sources?			
8. Will there be any risk of accidents during construction or operation of the Project which could affect human health or the environment?				
8.1	From explosions, spillages, fires etc., from storage, handling, use or production of hazardous or toxic substances?			
8.2	From events beyond the limits of normal environmental protection e.g. failure of pollution controls systems?			
8.3	From any other causes?			
8.4	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslip, etc.)?			
9. Will the Project result in social changes, for example, in demography, traditional lifestyles, employment?				
9.1	Changes in population size, age, structure, social groups etc.?			
9.2	By resettlement of people or demolition of homes or communities or community			

	facilities e.g. schools, hospitals, social facilities?			
9.3	Through in-migration of new residents or creation of new communities?			
9.4	By placing increased demands on local facilities or services e.g. housing, education, health?			
9.5	By creating jobs during construction or operation or causing the loss of jobs with effects on unemployment and the economy?			
9.6	Any other causes?			
10. Question - Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?				
10.1	Will the project lead to pressure for consequential development which could have significant impact on the environment e.g. more housing, new roads, new supporting industries or utilities, etc.?			
10.2	Will the project lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.); • Housing development; • Extractive industries; • Supply industries • Other?			
10.3	Will the project lead to after-use of the site which could have an impact on the environment?			
10.4	Will the project set a precedent for later developments?			
10.5	Will the project have cumulative effects due to proximity to other existing or planned projects with similar effects?			

ANNEX 3. DRAFT STRUCTURE OF THE ESIA REPORT

An outline of the proposed contents of the main volume of the ESIA report is provided in Table 36. The proposed structure follows the guidance provided by World Bank ESF Standard integrated with the Albanian law requirements (DCM No. 686, dated 29.07.2015 "On the rules, responsibilities, timelines for the EIA procedure and the transfer procedure of the decision for the environmental declaration" as amended). The content may be altered during the evolution of the Project or based on the findings of on-going consultation. However, it is anticipated that the contents of the ESIA report will accord broadly within the suggested framework.

Table 21 Structure of the ESIA Report

Chapter Number	Content Reading	Explanatory Note
Front Piece		Title page, acknowledgements, authors and contributors, table of contents (including lists of figures, tables, and maps)
1	Non-Technical Executive Summary	Summary of the entire ESIA report in a simplified language in order to be easily understood by the broad public.
2	Legal, Regulatory and Policy Framework	Discusses the policy, legal, and administrative framework within which the ESIA is carried out. Identifies relevant international environmental and social agreements to which the country is a party.
3	Description of the Project and Project Components	Concisely describes the proposed project and its geographic, ecological, social, and temporal context, including any offsite investments that may be required (e.g. access roads, water supply, and raw material and product storage facilities). Includes a map showing the project site and the project's area of influence.
4	Baseline Environmental Information and Data	Assesses the existing conditions and dimensions of the study area and describes relevant physical, biological, and socio-economic conditions, including any changes anticipated before the project commences. Also takes into account current and proposed development activities within the project area but not directly connected to the project. Data should be relevant to decisions about project location, design, operation, or mitigation measures. The section indicates the accuracy, reliability, and sources of the data.
5	Socioeconomic Assessment	
6	Environmental and Social Impacts	Predicts and assesses the project's likely positive and negative impacts, in quantitative terms to the extent possible. Identifies mitigation measures and any residual negative impacts that cannot be

Chapter Number	Content Reading	Explanatory Note
		mitigated. Explores opportunities for environmental and social enhancement. Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions, and specifies topics that do not require further attention.
7	Analysis of alternatives as identified and agreed in the ESSS	Systematically compares feasible alternatives to the proposed project site, technology, design, and operation--including the "without project" situation--in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. For each of the alternatives, quantifies the environmental impacts to the extent possible, and attaches economic values where feasible. States the basis for selecting the particular project design proposed and justifies recommended emission levels and approaches to pollution prevention and abatement.
8	Environmental and Social Management Plan, including decommissioning	Covers mitigation measures, monitoring, and institutional strengthening.
9	Public Consultation and Communication Plan and Records	Covers the results of meetings and consultations undertaken as part of the ESIA, plus communication plan and records, and also plans for possible future consultation. It will identify key project stakeholders and present their feedback on the CRAD related Project.
Conclusion		Summarises the conclusions that are made based on the assessment as well as outline any further recommendations.
Annexes	• List of ESIA report preparers--individuals and organizations. • References--written materials both published and unpublished, used in study preparation. • Record of consultation meetings, including consultations for obtaining the informed views of the affected people and local nongovernmental organizations (NGOs).	

Chapter Number	Content Reading	Explanatory Note
	The record specifies any means other than consultations (e.g., surveys) that were used to obtain the views of affected groups and local NGOs. • Tables presenting the relevant data referred to or summarized in the main text. • List of associated reports.	