



ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT INFORMATION

Title of Project: Ecosystem-based Adaptation for livelihood resilience in Albanian lagoons and river basins – *Lumi*

Country: Albania

Thematic focal area: Ecosystem-Based Adaptation

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: International Fund for Agricultural Development

Executing Entity: Ministry of Tourism and Environment

Amount of Financing Requested: 10 million USD

Letter of Endorsement (LOE) signed: Yes No

Stage of Submission:

- This concept has been submitted before
- This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: [Click or tap to enter a date.](#)

Please note that concept note documents should not exceed 50 pages, including annexes.

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Part I: PROJECT INFORMATION

A. Project Background and Context

Introduction

1. Albania is a small mountainous country on the western side of the Balkan peninsula in Southeastern Europe, with a land area of 28,748 km². Albania shares borders with Montenegro to the northwest, Kosovo to the northeast, North Macedonia to the east, and Greece to the south. The country has a long coastline along the Adriatic and Ionian Seas which form the majority of its western border. 70% of Albania's territory is mountainous with an average altitude of 700 meters (m) above sea level; in the east, Mount Korab is the maximum altitude at 2,753m. Mountainous and hilly areas are located in three regions: Northern, Central, and Southern, while the plains occur to the West along the Adriatic coast, between Hani Hoti in the North, and Vlora in the south. Albania enjoys a Mediterranean climate, with mild and humid winters followed by hot and dry summers. The country experiences rainfall primarily during the second half of the year, however, climate conditions differ considerably between agro-ecological zones. The coastal plains experience a strong maritime influence, causing a gradient of lower temperatures and reduced precipitation eastwards from the coast.¹ Projections for the climate in 2050 include further increases in temperature and heat waves, decreases in total precipitation, increases in frequency and duration of extreme events like floods and droughts, and rising sea levels.²

2. Albania has relatively large amounts of freshwater resources, however, these are vulnerable due to seasonal variations and water use inefficiencies that projected climate trends can magnify. The eight main rivers of Albania (Drini, Buna, Mati, Ishmi, Erzeni, Shkumbini, Vjosa and Semani) are grouped into 6 watersheds that cross the country from east to west.³ The country's major river systems can be highly erosive, and seasonal flooding is common, with the highest risk in the western and southern plains.⁴ Albania's seven primary rivers and their tributaries drain towards the Adriatic Sea. Rivers are an important source of hydropower. Artificial lakes are also used for irrigation of agricultural lands. Along the Adriatic-Ionian coastal zone there is a series of lagoons, including: Viluni, Kune-Vain Patoku, Bishtaraka, Karavasta, Narta, Orikumi, which are important for tourism, ecosystem protection, and fish production.⁵ As outlined by the Fourth National Communication, river basins sectors and systems (such as water resources, agriculture, biodiversity and forests, soils, health, disaster risk, tourism, population and settlements, and gender) are particularly vulnerable to climate change and their adaptation requires a range of integrated measures. As such, recognizing both the vulnerability of river basins, and the benefits of their integrated management⁶, Albania's Fourth national communication focuses on solutions for the management of the entire Vjosa River basin.

3. The present project replicates this approach, looking at the climate vulnerability of two major Albanian watersheds: the Shkumbini and the Semani river basins, together with their shared delta constituted by the Karavasta lagoon, to propose integrated resilience solutions relying on the principles of Ecosystem-Based Adaptation (EbA). This innovative approach will look at both the extreme vulnerability of mountain ecosystems at the most upstream part of river basins, and connect it to the extreme vulnerability of coastal and lagoon ecosystems, using participatory approaches to engage local communities and support their ownership of the landscapes they live in and depend on.

¹ Republic of Albania (2016). [Third National Communication of the Republic of Albania under the United Nations Framework Convention on Climate Change](#).

² Republic of Albania (2022). [Fourth National Communication of the Republic of Albania under the United Nations Framework Convention on Climate Change](#).

³ Uruci, R. (2018). [Flooding Intervals in Albania](#). *Natural Sciences Knowledge in Practice*. 28(40).

⁴ USAID (2016). [Climate Change Risk Profile – Albania](#).

⁵ Republic of Albania (2016). [Third National Communication of the Republic of Albania under the UNFCCC](#).

⁶ Integrated watershed management is the process of managing human activities and natural resources on a watershed basis, taking into account social, economic and environmental issues, local community interests and issues such as the impacts of development and climate change.

Geography of the targeted area

4. The area of focus for the Lumi project encompasses the entire Shkumbini and Semani river basins, as well as their shared delta, the Karavasta lagoon, covering three agro-ecological zones:

- (i) **The highland and mountain zones**, where summer is warm and winter is cold, with more than 100 days per year with frost. Annual rainfall ranges from 900 to 1,500 mm with considerable snow. Cereals, especially wheat, barley and rye are grown in the valley, as well as fruits (apples, plums, pears, etc.). In this zone, forests and pastures dominate.
- (ii) **The intermediate or mid-range zone**, between the lowland and mountain zones, at altitudes from 100 to 900 m and average rainfall of about 800mm/year. Field crops and fruit trees are grown (including olives) and this type of area also includes forests and shrubs.
- (iii) **The lowland zone**, starting at the mouth of the two rivers and including the Divjaka-Karavasta National Park (DKNP). This area is characterized by low lying plains ranging from 1 to 200m above sea level. Alluvial soils dominate and various spots of saline soils can be found. About 80% of annual rainfall (900-1,200 mm/year) is concentrated during the October-March period. These pedoclimatic conditions are optimal for most crops, but irrigation is needed during the summer.



Figure 1 - Albanian river basins & project area (in green and blue)

5. **The Shkumbin River basin** has a surface of 2,728.3 km², a total length of 181.4 km, and mean altitude of 753m above sea level. Most of the river basin consists of mountainous relief, around 50% ultrabasic formations and 50% calcareous and terrigenous formations. In this watershed, the heights ranging from 0-200m occupy 15,7% of the total surface area, those ranging from 400-1000m occupy 25,3%, and those ranging from 1800-2200m occupy 2,6% of the total surface area. The river originates in the eastern Valmara Mountains at 2,120m of altitude in Korçë County Southeastern Albania, then enters in a deep valley, at the Llëngë village, in the form of a canyon. Following the flow, Shkumbin takes waters of Dushne and Radicine streams. After receiving the waters of a number of torrents down from the highlands of Qukës and Bërzhitë as the streams of Bushtrica, Hotolisht, etc., the Shkumbini River goes towards Librazhd (inside a syncline between the Mokra and Shebenik Mountains and the Polis Mountains), where the river gets the waters of Rapun stream, which descends from the mountains of Çermenika, and those of some important streams, like Gostima, Zaranika, Kushe, Papri etc. Finally the river turns westwards of its origin and at the end the river cross the Myzeqe Plain and forms a small delta in Karavasta Lagoon, the direct proximity of the Adriatic Sea. Figure 1 shows the localization of the Shkumbini and Semani river basins.

6. The **Semani river** is a major river in western Albania. It is formed by the confluence of the rivers Devoll and Osum, a few kilometers west of Kuçovë, a municipality in Berat County. The Semani 281 km with its longest source, river Devoll. The Semani River Basin contains four rivers (Semani, Osumi, Devoll and Gjanica) and has a watershed of 5,649 km² and an average height above sea level of 863 metres. Rainfall in the River Basin averages 1,084 mm/year, resulting in a perennial average flow is 95.7 m³/s. Approximately 60% of water is provided by the Devoll catchment area. On average, the waters have a relatively high mineralization of 440 mg/l. Average water temperatures range from 6.8°C in January to 25.5°C in August. In relation to land cover, the Semani River Basin consists of agricultural areas with scarce coverage, which are subject to erosion. Erosion is also noticeable along the entire banks of the Seman River, where the protective plant belt is almost completely absent throughout its entire extension in the territory of the Municipality of Fier.⁷ The Devolli River's source is in the southwestern corner of the Devolli municipality in Korçë County, close to the Greek border. The

⁷ Fier Municipality Development Plan.

Osum River's source is in the southwestern part of the Korçë County at an altitude of 1,050 metres. It joins the Devoll near Kuçovë, to form the Seman. Then the Seman meanders generally westwards through a flat lowland. Its estuary, located in the southern part of DKNP, is considerably swampy and characterized by the presence of water basins and ponds.

7. The **Karavasta lagoon** was formed by the shared delta of rivers Shkumbini in the North, and Semani in the South. Both rivers cross the Myzeqe alluvial plain, which is the largest plain of Albania (1,350 km²), playing a key role in the country's agricultural production. Among the largest lagoons in the Mediterranean, Karavasta was proclaimed a Ramsar site in 1995⁸. Together with the Divjaka Forest, in 2007 they are proclaimed at National Park by the Albanian Government. As the first Ramsar area in Albania, Karavasta is a symbol of the country's engagement for the preservation of environment and biodiversity.

Environment and Natural Resources Management

8. Albania possesses vast natural resources: about one-quarter of its total land area is arable and suited to a wide range of crops; its mountains and rivers provide inexpensive, low-carbon hydroelectric power; and its rich variety of coastal ecosystems have supported the development of fishing and tourism. Albania's subsoil assets include commercially viable deposits of petroleum, natural gas, chrome, and copper, and the country hosts a portion of the Trans-Adriatic Gas Pipeline.

9. **Albania is a highly biodiverse country.** Albania's flora constitutes 29% of flora in Europe and 47% of flora in the Balkans. Its fauna includes a variety of mammals, birds, and reptiles and sea, lake, and river species. Wetland ecosystems are important migration routes for migratory species of wild fauna (3 Ramsar sites of international importance have been designated- Karavasta Lagoon, Butrinti Lake and Shkodra Lake). Albanian lakes and rivers are also important in terms of their contribution to the biological and landscape diversity of the country. About 247 natural lakes of different types and dimensions, and a considerable number of artificial lakes, are located inside the country. The alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands is recognized as a major factor contributing to the loss of biological diversity and ecological function in aquatic ecosystems, including floodplains⁹.

10. **Albania is a rich country in water resources.** Albania has relatively large amounts of freshwater resources, however, these are vulnerable due to seasonal variations and water use inefficiencies that projected trends can magnify. Albania's hydrographic basin includes an area of 43,305 km². The eight main rivers of Albania are grouped into 6 watersheds that cross the country from east to west.¹⁰ The country's major river systems can be highly erosive, and seasonal flooding is common, with the highest risk in the western and southern plains.¹¹ Albania's seven primary rivers and their tributaries drain towards the Adriatic Sea. Water resources are an important source of hydropower, producing around 90% of the country's energy and providing irrigation for agriculture. Along the Adriatic-Ionian coastal zone there is a series of lagoons which are important for tourism, ecosystem protection, and fish production.¹²

11. Albania has improved its water sector both in terms of legal and regulatory frameworks. The Government approved a National Strategy on Water Resources in Integrated Management (2018–2027) in February of 2018.¹³ The challenges the country is forced to contend with regarding water quality are exacerbated by a growing demand for water in areas where resources are the most scarce. The Agency on Management of River Basins is in charge of the planning and usage of water resources (rivers & lakes). Management plans for Drin-Buna and Semani River Basins were approved

⁸ On 22 August 1994, with Decision N° 413, the Council of Ministers declared the natural ecosystem of Karavasta Lagoon and Divjaka Park as a site to be included in the "List of Wetlands of International Importance" established by the Ramsar Convention.

⁹ <https://www.cbd.int/countries/profile/?country=al#>

¹⁰ Uruci, R. (2018). [Flooding Intervals in Albania](#). Natural Sciences Knowledge in Practice. 28(40).

¹¹ USAID (2016). [Climate Change Risk Profile – Albania](#).

¹² Republic of Albania (2016). [Third National Communication of the Republic of Albania under the UNFCCC](#).

¹³ Albania (2018). [National Strategy of Water Resources Integrated Management 2018–2027](#).

in February 2020.¹⁴ A lack of investment in flood protection, irrigation and drainage infrastructure has exacerbated the damage and losses from heavy rainfall; this was especially pronounced in 2014, 2015, and 2016 floods, and 2017, 2018, 2021, 2022 and 2023 floods.¹⁵

12. **Soil erosion** in Albania remains a permanent problem for land use and is a persistent environmental problem in agriculture. For more than two decades, conditions that enhance and exacerbate erosion have occurred. Some of these factors include climate conditions, such as rainfall, temperature, physical characteristics of soil; relief and land use; vegetation cover degradation (deforestation, fires, overgrazing, etc.); topography modifications; water management policy. Land erosion is estimated to be at high levels in all river basins and especially along the Seman and Shkumbini rivers. Measures to prevent erosion are often missing or not appropriate to the local situation. Sporadic investments have been undertaken only along some streams in the vicinity of residential areas or next to road axes. Agronomic practices in these areas are orientated towards pasture plants (alfalfa), contributing to better protection of the soil from erosion. The agricultural land at risk of erosion is considered moderate to high. Official data show that for about 167,646 ha or 25% of agricultural land, the erosion risk is moderate, while for about 442,200 ha, or 75% of land, erosion risk is high. Cultivation of nuts and olives show a positive effect in protecting land from erosion. Management practices of community forests have improved the situation of low forest (oak), and had positive impacts on land resources. Erosion affects the natural balance of ecosystems. Coastal areas are more susceptible to weathering than highland areas of the Center and the East. Human activity that alters land-use causes increased levels of soil erosion (construction, tourism, etc.).¹⁶

13. **Forests** play a pivotal role in Albania's ecological and economic landscape, covering nearly 40% of the country's land area. These extensive woodlands, spanning 1,146,725 ha¹⁷, provide a wealth of benefits, ranging from habitat for diverse flora and fauna to protection against soil erosion and climate change mitigation. The majority of Albania's forests (approximately 78%) are classified as economic forests, primarily managed for timber production. The remaining 22% are designated as protected or special purpose forests, safeguarding biodiversity and providing ecosystem services.¹⁸ Within the project area, Korce and Elbasan hold 14% of the country's forest areas each, while Berat and Fier account respectively for 6% and 2% of total forest areas, accounting for a total of 36%. Climate change exacerbates risks, with warmer temperatures and reduced precipitation affecting forest productivity and increasing fire hazards. Forest fires pose a significant threat, causing extensive damage to forests, wildlife, and the economy. Forest ownership and management have undergone significant transformations over time. Prior to 1990, forests were exclusively state-owned. However, reforms have introduced a mixed system involving state, municipal, and private ownership. Since 2016, local government units manage forest resources. This shift has brought challenges, as many municipalities lack the necessary resources for effective forest administration.

14. **Protected areas** occupied a total area of 523,831 ha in 2020, and encompass 35.1% of forests and pastures and 21.2% of the total national territory (INSTAT). In 2022, national parks accounted for the largest share of protected areas, covering 49.5%; Habitat/Species Management Areas followed with 36.8%, while Protected Landscape/Seascapes held 13.45%, and Natural Monuments occupied the remaining 0.25%.¹⁹ The central government body responsible for Environmental and Natural Resource Management and Protection policy, including the designation and management of Protected Areas (PAs) is the Ministry of Tourism and Environment (MTE). Within the Ministry, since 2015, the National Agency for Protected Areas (NAPA) is directly responsible for the management of PAs, but also continues to fulfil several enforcement functions in forestry it inherited from its

¹⁴ Ministry of Agriculture and Rural Development (2018). Drini-Buna Final River Basin Management Plan – December 2018. [Contract Number MEFWA/CS/001]

¹⁵ USAID (2016). [Climate Change Risk Profile – Albania](#).

Floodlist (2023). <https://floodlist.com/tag/albania>

¹⁶ Republic of Albania (2016). [Third National Communication of the Republic of Albania under the UNFCCC](#).

¹⁷ INSTAT (2023). < <https://www.instat.gov.al/media/12490/forest-statistics-2022.pdf> > accessed on 17th November 2023

¹⁸ AGT & DSA, IPARD (May 2021). Forestry Sector Study Report.

¹⁹ Ibid

predecessor, the Forest Police. NAPA is organised regionally in the form of 12 Regional Administrations for Protected Areas (RAPAs).

15. According to the most recent data from the National Strategy for Protected Areas 2019-2023, in 2019 the counties targeted by the project hosted a significant portion of the national protected areas, with 66.681 ha in Korçe, 39.003 ha in Elbasan, 26.767 ha in Berat, and 23.003 ha in Fier.²⁰ Some of the relevant protected areas in the project's area of intervention include the Tomorri National Park and the Divjaka Karavasta National Park.

16. Tomorri Mountain and **Tomorri National Park** is located in Berat County, covering an area of around 26,106 ha.²¹ The Tomorri National Park was established in 1956 and expanded in 2019. The park is known for its diverse ecosystems and many endangered species are free to roam and live there. It has been recognized as an environmentally significant, intact, and relatively undisturbed ecosystem; it's a piece of the nation's natural heritage and a critical area for biodiversity and ecosystem integrity. The Osum Canyon, Osum River, and Tomorri Massif are the three prominent features of the park. Tomorri Mountain is one of Albania's biggest water-collecting areas. The National Park is situated between two main rivers of Albania, Osumi River and Tomorrica River, one of the biggest branches of Devolli River, which influence over the values of the climate elements, as well as over the flora and fauna of the protected area. The area is one of the richest in woods and in vegetation, presents a variety of medicinal and aromatic plants, and a varied fauna (big and small mammals together with important bird species).

17. **The Divjaka Karavasta National Park** is the largest non-coastal complex in Albania with an area of 22,230.2 hectares. It encompasses the largest bay in Albania and one of the largest in the Mediterranean Sea. The bay is separated from the Adriatic Sea by a long sandy barrier. DKNP is surrounded by Shkumbini River in the North, by Divjaka hills in the East, by the canal of Myzeqe and Semani River in the South and is facing to the Adriatic Sea in the West. The approximately 35 kilometres long coastline is relatively flat, running from the mouth of Shkumbin river to the mouth of Seman river. The Karavasta lagoon is the largest surface (4,100 ha) of this wetland complex. The lagoon is divided from the sea by Divjaka pine forest and Godulla lagoon. Agricultural land borders the lagoon. The coastal morphology of Karavasta lagoon was highly dynamic during the last 135 years because of the changes which occurred to the Shkumbini and Semani river deltas, due to sediment transport at the lowland areas (Munari et al., 2010). Karavasta used to be connected to the sea via three channels (Brew, 2003). The northern inlet, at present is completely blocked and disconnected from the sea. The central and southern inlets communicate with the Godulla lagoon, which is connected to the sea by two other shallow channels. The creation of the drainage canals of Tërbufi and Myzeqe in the 1980s, together with associated irrigation and drainage schemes, has isolated Karavasta from a significant part of its former drainage basin area. Around 1860 the Karavasta lagoon covered twice the area it now occupies. The bay is famous for the rare Dalmatian pelican that nests there, but also offers shelter to a wide variety of birds. The National Park was proclaimed in 2007 by the Albanian Government, while the lagoon was proclaimed a Ramsar site in 1995. DKNP's mandate includes the protection of the lagoon of Godulla and Karavasta and the estuaries of Shkumbin in the north and Seman in the south. The second management plan for the park ran from 2014 to 2024 and a new plan should be prepared in the near future.

Socio-Economic context

18. Despite a challenging transition period and a string of adverse shocks, in recent decades Albania has made major strides in raising per capita income and integrating into the world economy. Following the dissolution of the Socialist Republic in the early 1990s, free market reforms began to open Albania to foreign investment,²² and the country has achieved remarkable economic success. In the 2000s, strong and sustained gross domestic product (GDP) growth enabled Albania to surpass the World Bank's threshold for upper-middle-income status. Between 2000 and 2008, the economy expanded by 6.2 percent and the poverty rate halved from 25.2 percent to 12.5 percent. However,

²⁰ NAPA (2019). National Strategy for Protected Areas 2019-2023.

²¹ "Vlerësimi Strategjik Mjedisor për Planin e Integruar Ndersektorial të Bregdetit" (PDF).

²² USAID (2016). [Climate Change Risk Profile – Albania](#).

emerging vulnerabilities threatened the sustainability of growth. Between 2008 and 2014, the impact of the global financial crisis and a sharp deterioration in the external environment weighed on Albania's exports, remittance inflows, and external credit conditions. Supported by a fiscal adjustment and macroeconomic stabilization, the GDP growth rate gradually recovered to 4.1 percent in 2018, before a devastating earthquake (2019), the COVID-19 pandemic, and most recently the Russia's invasion of Ukraine, which hit the economy through supply side shocks. For the year 2022, the GDP is calculated at 18.9 billion USD and the GDP per capita is around 6,743 USD²³.

19. Albania is among the countries with a high Human Development Index (HDI 0.795)²⁴; its economy is dominated by the services sector, especially tourism – a driver of growth over the past three years. In the last two decades however, emigration and urbanisation have created a structural shift away from agriculture towards industry and services, leading to diversification of services within the Albanian economy—including banking, telecommunications and tourism—while the manufacturing sector contributed 5.9% to GDP in 2018 (UNCT, 2020). The country joined NATO in 2009, and in March 2020, the European Union Council opened negotiations with Albania for accession. The EU accession process has become a cornerstone of Albania's global integration and foreign policy agenda and a key driver of reforms. In 2021, Albania was elected for the first time in its history as non-permanent member of the UN Security Council.

20. Despite progress over the years, Albania's development trajectory continues to be severely hindered by high poverty rates, emigration of skilled workforce, persisting disparities, weak public administration services both at central and local level, and deep public mistrust toward public institutions and government authorities (UNCT, 2020). Corruption in Albania is a very serious problem. After 1990, Albania has passed from a centralized economy to a liberal one. Liberalization has brought a number of negative effects to the politics, economy and other social aspect. In 2022, Albania scored 36 on a scale of 0 to 100 on the Transparency International Corruption Index score, ranking the country 101st out of 180.²⁵ Albania also still faces considerable economic challenges, including low levels of participation in the formal labour market, limited linkages with external markets, and lack of access to capital for key drivers of growth.²⁶

21. **Population.** Albania has an estimated population of 2.8 million people (2023). The project area covers the Counties of Berat, Elbasan, Fier and Korçë. The population in 2023 is 111,431 in Berat, 252,719 in Elbasan, 271,672 in Fier, 192,925 in Korçë.²⁷ An estimated 69.5% of the country's population currently resides in urban areas, which is expected to increase to 78.2% by 2050.²⁸

22. **Migration.** Albania's population has experienced continuous negative growth since 1990, with almost 40% of the population currently living outside the country (World Bank, 2011). Persisting rural-urban disparities also led to internal migration: since 1990, the population has doubled in the capital of Tirana, where about a third of Albania's population lives today (INSTAT, 2021), while rural communities are increasingly at risk of being isolated (UNCT, 2020). Youth in particular seek both educational and employment opportunities in towns and cities or outside Albania. At the same time, lack of basic infrastructure and employment opportunities, together with the limited support for commercial projects and business start-ups further encourages youth to leave rural areas (Socio-Economic Survey Study, 2013).

²³ World Bank (2023). Albania Overview. <https://www.worldbank.org/en/country/albania/overview>.

²⁴ UNDP (2020).

²⁵ Transparency international (2022). Corruption Perception Index. <https://www.transparency.org/en/cpi/2022>

²⁶ USAID <https://www.usaid.gov/albania/economic-growth-and-trade> (accessed September 2023)

²⁷ INSTAT (2023). <https://www.instat.gov.al/en/themes/demography-and-social-indicators/population/#tab3>

²⁸ World Bank Open Data (2020). Data Retrieved October 2020. [Data Bank: Population Estimates and Projections. Albania.](#)

23. **Poverty.** Albania remains one of the poorest countries in Europe, with an at-risk-of-poverty rate of 23.4% in 2018, compared to 16.9% in the 28 EU countries. According to UNDP 39.1 percent of people living in Albania are multi-dimensionally poor in 2023²⁹. Long-term unemployment represents 66% of the unemployed, with women, youth and those with limited education being the most excluded from jobs. Household consumption fuelled by remittances (9.4% of GDP in 2019) continues to be one of the main drivers of growth (UNCT, 2020). Poverty in Albania is estimated to have fallen significantly to 22 percent of the population in 2021; however, inflation could disrupt this trend. Between 2016 and 2019, income-based poverty declined by 11.8 percentage points, from 40 percent to 28 percent of the population, as GDP per capita grew at 3.6 percent per year on average. Employment has almost recovered to its 2019 level and unemployment remained mostly stable at 11.5 percent since 2019. The latest Gini index available using the new Survey of Income and Living Conditions for 2020 (reference year 2019) was 34.9.³⁰ Based on the 2012 Living Standards Measurement Survey and as illustrated in Figure 2, the highest poverty rates (over 28%) were found Northern and Central mountainous areas. Highest poverty rates in the project's targeted area (ranging from 20% to more than 28%) were found in the eastern part of Elbasan county, and both the South-Eastern and North Eastern part of Fier county.³¹

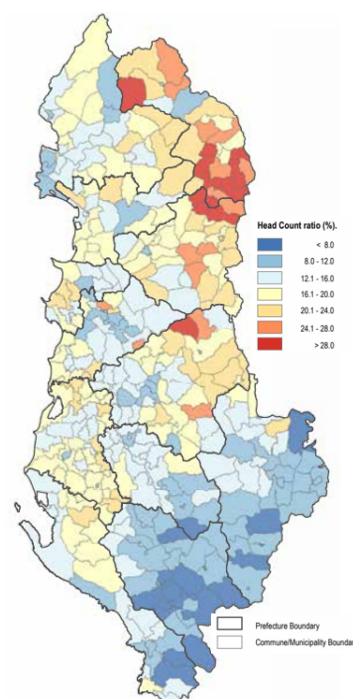


Figure 2 - Poverty Map Albania, 2012

24. **Tourism.** Over the years, tourism is crystallizing as one of the main engines of Albania's economic development. During 2017, the tourism sector recorded a direct contribution of USD 1.12 billion, accounting for about 8.5% of GDP. The total contribution is almost three times higher at USD 3.47 billion, accounting for about 26.2% of GDP. For the next 10 years, a significant increase of the contribution of this sector to the economy is predicted. Natural landscapes and rural areas provide opportunities for the development of rural tourism, ecotourism and outdoor activities, while coastal tourism concentrates summer tourism, focused mainly on activities close to beach areas, as well as short visits to several coastal protected zones and is already well developed.

25. **Gender and social inclusion.** Despite ongoing improvement and consolidation of the normative framework on gender equality and the empowerment of women, its implementation lags significantly behind. The national gender machinery and the institutional mechanisms to coordinate the implementation of legislation, policies and action plans remain weak, understaffed and under resourced. Violence against women and girls is still pervasive and deeply rooted in patriarchal traditions that have shaped Albanian society (Albania Council of Ministers, 2018). In both the private and public life, there is a clear power distribution of the roles assigned to women and men, with 83% of Albanian families reportedly headed by men (UNCT, 2020). 53 % of Albanian women report having experienced one or more forms of violence and limited economic opportunity and social services, despite improved levels of women's political participation in parliament (29.5 %) and the executive branch (57 %). The employment rate for women is 54.4 %, compared with 68.2 % for men.³²

26. Women's contribution to agriculture in Albania is significant, with 54% of employed women working in this sector. However, rural women have limited access to agricultural inputs and limited off-farm opportunities compared to men³³, such as land, property, productive assets, remittances, technology and finance. Rural women have been particularly affected by the 2012 legislation on

²⁹ UNDP (2023). [Multidimensional Poverty Index: briefing note for countries on the 2023 Multidimensional Poverty Index](#).

³⁰ World Bank (2022). [Albania Poverty & Equity brief](#).

³¹ World Bank (2016). [Portraits of Poverty and Inequality in Albania](#).

³² UN Women (2021). Country Portfolio Evaluation: Albania

³³ UN Women (2020). Albania Country Gender Equality Brief.

property registration and ownership rights, which foresaw the issuing of the certificate of ownership of agricultural land in the name of the head of household only: women currently represent 50% of the agricultural workforce but they head only 6.5% of all farms and are often excluded from decision-making (UNCT, 2020).

Agriculture and fisheries

27. Agriculture is a key sector in the Albanian economy, contributing 19% to GDP and 36% to total employment in 2020³⁴. Forty-one% of the population live in rural areas of which the majority is engaged in agriculture. The wider agri-food system, including food-related services, processing and manufacturing, is directly or indirectly the source for almost half of the economy-wide jobs³⁵. Land use in Albania consists of 42.8% agricultural land (of which 22.3% is arable land, 3% is permanent crops, and 17.4% is permanent pasture), 28.8% forest and 28.2 % other.³⁶

28. The land reform was initiated in 1991 aimed to redistribute land equally to all those who had worked in collective and state farm, namely the “head of the household”, with negative consequences for women as mentioned above. It is estimated that by mid/1993 during the early phase of the transition into a market economy, 470,086 hectares representing over 90% of the collectivized land formerly managed by state cooperatives were distributed to 383,069 rural households in Albania.³⁷ The new household holdings, however, still remain heavily fragmented into at least 1.5 million separate parcels of land, including an average of about 3 agricultural parcels and one house plot for each family. This approach radically reshaped the farm structure of Albania’s agriculture, resulting in numerous small farms and high land fragmentation that hindered the development of agriculture.

29. According to the latest available data, Albanian farms are characterised primarily by family and small-scale farms, 86% of them with a surface of 2 ha or less. Most Albanian farms are mixed farms, as a strategy to reduce economic risk with different production systems, and because of the limited access to markets that can absorb large quantities of a single product (FAO 2020). Family farms and smallholders are critical for food security of the Albanian population, as well as for poverty reduction in rural areas. Weak compliance with food safety and quality requirements also impedes the competitiveness of Albanian agri-food products. Furthermore, agriculture is a climate sensitive sector and projected climate change poses serious risks to the Albanian agriculture sector, affecting soil characteristics, seed genetics, pests and diseases. Coupled with continued inefficient agronomic practices, these risks are impacting crop yields.³⁸ The sector is trying to transform further, by developing several new strategies and policies, especially since the membership application to the EU was submitted in 2008.

30. Albania is characterised by two pedoclimatic zones: the continental, internal one and the Mediterranean coastal area. This divides the country in three main agroecological areas: lowlands where intensive agriculture is practiced (the Myzeqe plain which is included in the project is the most intensive area for agriculture production in Albania), the hills where arable crops and fruit trees are mainly cultivated and the mountains with mainly grasslands, fruit crops and some cereals (Kullaj et al. 2018). In mountainous and hilly areas, small-scale farms with an average area of 1.5 ha are predominant, which include diversified crops and livestock present on a single farm (Jani and Kume 2018). Farming products are mostly for family and self-consumption, with excess products going into the market channels. In small-scale farms a higher use of local cultivated varieties is observed, as farmers tend to conserve specific crops adapted to the local soil and climatic conditions. Normally, they tend to use organic fertilisation with manure, composting, and crops rotations. However, a lack of information on best farming practices, inadequate farming techniques, the misuse of pesticides and fertilisers, and the negative impacts on the environment from overgrazing and burning crop residues are frequently observed (Kullaj et al. 2018).

³⁴ INSTAT (2020). Albania in Figures.

³⁵ World Bank (2017). Agriculture for Jobs and Growth in the Western Balkans: A Regional Report.

³⁶ https://www.indexmundi.com/albania/land_use.html (2018 est.)

³⁷ Lemel, H. (1998). Rural Land Privatisation and Distribution in Albania: Evidence from the Field. *Europe-Asia Studies*, 50(1), 121–140. <http://www.jstor.org/stable/153408>

³⁸ MARD, Albania (2020). The Strategy for Agriculture, Rural Development and Fisheries 2021-2027.

31. The **vegetable sector** has witnessed remarkable growth, particularly in the area of greenhouse vegetables. Since 2010, the area dedicated to greenhouses has expanded considerably, paving the way for increased production and export opportunities. This expansion, coupled with advancements in production technologies, has led to a substantial rise in the output of key greenhouse-grown vegetables, most notably tomatoes which accounted for 51.6% of the total greenhouse production in 2022. At the same time field vegetables, such as potatoes and white beans form a cornerstone of Albanian agriculture, with around 50,000 farmers dedicating their efforts to their cultivation. These vegetables, often grown for self-consumption, contribute significantly to household food security. Onions, cabbages, and carrots are among the other notable field vegetables grown in Albania.

32. Albania's vegetable production is concentrated in the coastal and hilly areas of central Albania, encompassing the regions of Fier, Tirana, and Berat. This concentration stems from favorable natural conditions for vegetable cultivation, along with established traditions and accumulated expertise. In 2022, Albania's overall vegetable production reached 1,357,825 tons, with Fier prefecture leading the production (534,351 tons), followed by Berat (139,775 tons) and Tirana prefectures (136,951 tons) [INSTAT]. Fresh vegetables dominated the production landscape in 2022, representing 67% of total production, followed by melons (23%) and dried vegetables (about 10%). Tomatoes accounted for 34.41% of total fresh vegetable production, cucumbers for 14%, and peppers for 10%. In the dried vegetable category, dry onions held a share of 84%, while watermelons dominated melon production with 82% (INSTAT). Greenhouse vegetable production plays a crucial role in Albania's agricultural sector, accounting for 22.90% of total production. Fier and Berat prefectures collectively contribute 79.87% of greenhouse vegetable production. In 2022, greenhouse vegetable production witnessed a notable growth of 7.22% compared to the previous year (INSTAT).

33. **Fruit production.** Permanent crop production in Albania encompasses fruit trees, olives, citrus, and grapes. In 2022, fruit tree production in Albania reached an impressive 295,428 tons, with a 2.86% increase compared to the previous year. The Korce prefecture led fruit tree production, accounting for 23% of the total output, with apples taking center stage (62.97% of the national production) [INSTAT]. While fruit tree cultivation is prevalent among Albanian farms, only a few specialize in large-scale orchard operations. Approximately 2,640 farmers manage orchards exceeding 1 ha, often showcasing a variety of fruit types. Pome fruits, primarily apples, lead Albania's fruit production landscape, accounting for 41.96% of the total output (INSTAT). Grape production reached 211,178 in 2022 tons, with 60.78% represented by vineyards. The Berat prefecture emerges as the most productive region for grapes in Albania (INSTAT). Plums, cherries, and other stone fruits collectively involve 100-200 farms with orchards larger than 1 ha, with plums representing the largest category in this group (46.31% of total production). Citrus production in 2022 reached 55,118 tons, with Vlora prefecture taking the lead, contributing 35,781 tons (INSTAT).

34. **Olive production** in 2022 surged to 157,710 tons, representing a remarkable 43.16% increase from the previous year. The Fier prefecture is the leading producer, contributing 43,827 tons. Olives destined for oil production accounted for 81.71% of the total olive output, with the Berat prefecture experiencing significant growth in this area (INSTAT).

35. **Chestnuts and walnuts** collectively make up 81% of the nut tree group, experiencing an 18.24% increase in walnut production in 2022 (INSTAT). Nearly 50% of fruit exports from Albania are dominated by walnuts and chestnuts, with the country consistently ranking between 9th and 11th globally in chestnuts exports in recent years.³⁹ In the project areas under consideration, relevant production is found in Librazhd with 8,000 trees, and Elbasan and Korca with a collective 5,000 trees.⁴⁰ Walnut production primarily occurs in the form of small patches of state forest or with a few trees planted by smallholder farmers in mixed orchards.

36. **Cereals production** reached 690,854 tons in 2022. Fier prefecture has the highest level of cereals production with 171,017 tons, following by Elbasan and Korce prefectures with 95,376 tons and 81,092 tons (INSTAT).

³⁹ Albanian Daily News (February 2021). [Albania ranked 9th in World for Chestnut Export](#). (accessed on 17th November 2023).

⁴⁰ Invest in Albania (February 2021). [Albanian Products: Chestnuts](#). (accessed on 17th November 2023)

37. **Medicinal Aromatic Plants** (MAPs) are a highly important sector of Albania's economy, generating significant revenue and employment opportunities. The country's rich biodiversity and favorable climate conditions have led to a thriving MAPs industry, as over 15% of 3,250 species of Albania plants have medicinal, aromatic, spice, or tannin value. Around 95% of total MAPs are exported, contributing to around 20% of agriculture exports.⁴¹ MAPs offer opportunities for product diversification and value addition in the agricultural sector: the processing of MAPs into essential oils, extracts, and other value-added products can increase their market value and enhance their economic potential. The MAPs sector provides direct and indirect employment for a large number of people in Albania, particularly in rural areas. It is estimated that over 80,000 rural dwellers are involved in the collection, processing, and marketing of MAPs.⁴²

38. **Livestock.** The livestock sector contributes more than half of the agricultural GDP. The Albanian cattle population represents 50% of the total livestock units (with around 300 thousand head of cattle recorded in 2022) and accounts for 85% of the national milk production, the rest being supplied by small ruminants. The majority of cattle are local breeds, such as the Albanian Shorthorn Cattle, known for their adaptability to the region's climate and terrain. Sheep and goats are equally significant, with sheep populations reaching approximately 1.3 million and goat populations estimated at 700 thousand.⁴³ These small ruminants are primarily reared for their meat and milk, making a substantial contribution to household food security, particularly in rural areas.

39. Traditionally, cattle are managed using a combination of indoor and outdoor rearing. In lowland areas where pure breeds predominate, cattle are often reared indoors, with limited access to pasture. In contrast, in hills and mountain areas, local and crossbreed cattle are managed both indoor and outdoor, and often sheep and goats are reared at the same family farm. Dairy farms are relatively small and face several challenges including low milk prices, the high price of animal feed and supplements, farmland fragmentation, limited access to land irrigation, and bureaucratic procedures to obtain limited subsidies.⁴⁴

40. As a general categorisation, dairy production systems in Albania can be broadly categorized into mixed crop–livestock system and agro-pastoral system. The small ruminant production is done in several ways: a) extensive system with the transhumance 6 to 8 months (all regions); b) semi-intensive system to transhumance 5 to 6 months; c) grazing system on permanent pasture near the farm; d) natural pasture within walking distance (return of sheep/goats to the farm in the evening).⁴⁵

41. Regarding the meat sector, in the last decade, the process to increase productivity slowly progressed, with an increase in total output and a growth in average meat yield of slaughtered animals; in particular, beef meat output remained essentially the same over the whole decade. The trend was different for sheep, goat, and broiler breeding, which showed a slow, but constant increase in meat yield, with a resulting sizable output increase (+12.9; 46.0% and 17.6%, respectively). At present and for the foreseeable next future, meat production is organised almost totally as extensive breeding, especially for ruminants.⁴⁶

42. **Fisheries** in the targeted area is characterized by (i) lagoon fisheries; and (ii) coastal fisheries. Illegal fishing activity occurs both inside the lagoon and in the coastal area, but data on catches is not reliable since the reporting is not yet fully regulated. The fishing activity in the Karavasta lagoon, is formally carried out by the Divjaka Fisheries Management Organization (FMO - *OMP-Divjake*), in three fishing weirs. A total number of 50 professional fishermen are members of the FMO, and practice fishing in the lagoon in accordance with the co-management plan. The activity of artisanal fishery with boats is done using trammel nets, and gill nets. During the November-December season, 40 fyke nets are set in the lagoon, mainly for catching eel.

⁴¹ AGT & DSA, IPARD (May 2021). Medicinal Aromatic Plants Sector Study.

⁴² Ibid

⁴³ Ibid

⁴⁴ Koleci X. & al. (2021). An Overview of Current Approaches and Challenges to the Control of Endemic Infectious Cattle Diseases in Albania. *Front. Vet. Sci.* 8:671873. doi: 10.3389/fvets.2021.671873

⁴⁵ AGT & DSA, IPARD (May 2021). Milk Sector Study Report.

⁴⁶ AGT & DSA, IPARD (May 2021). Meat Sector Study Report.

Table 1 - Average catch inside the Karavasta lagoon for the period 2021 (all data in mt)

Nr.	Common name	Scientific Name	Quantity	Relative %
1	Mulletts	Mugilidae	24.5	53.92
2	European seabass	Dicentrarchus labrax	1.36	3.0
3	Gilthead seabream	Sparus aurata	0.42	0.92
4	European eel	Anguilla Anguilla	3.61	7.94
5	Flatfish	Solea. etc.	1.95	4.29
6	Caramote prawn	Melicertus kerathurus	0.1	0.22
7	Blue crab	Callinectes sapidus	13.5	29.7

43. Fishing in the coastal area consists mainly of small boats since there are no set landing sites where large boats can be harbored. A study carried out in 2019 for the SSF in the Albanian coast showed that in the Lushnje-Fier zone, the main areas used for small scale fishery included the Karavasta Lagoon, the Semani river and some small beaches used mainly by the local community. The number of vessels identified in the area was 52. The majority used trammel nets as primary fishing gear. There are no specific data for this part of the coast but for the entire Albanian coast the main species caught by SSF are: sea breams, sea bass, mullet, cuttlefish, red mullet, shrimp, common dentex, leerfish, hake, and squid.

44. The blue crab (*Callinectes sapidus*) is a species native to the western Atlantic waters; it inhabits shallow waters up to 90 m depth and its progressive expansion from the Atlantic Ocean to the Mediterranean and Black Sea is also correlated with climate change. This species was first identified along the Albanian coasts in 2006 and is considered among the 100 worst invasive species in the Mediterranean as it is in direct competition with native species and adversely impacts marine ecosystems and small-scale fisheries. It has since proliferated aggressively with significant impacts on both biodiversity and the local livelihoods of fisherfolks.⁴⁷ Warmer sea temperatures are providing ideal conditions for the blue crab to thrive and are severely impacting coastal ecosystems, with fisherfolks reportedly catching 300kg of crab a day for only 5-6kg of fish, while also damaging fishing nets, reducing the fishing catch and devastating marine ecosystems.⁴⁸ Blue crabs have already disrupted the natural balance of native populations, leading to the decline or even extinction of some species, especially local crabs. They also damage underwater seagrass beds that serve as nurseries for local fish, while decimating the mussels and snails they feed on. While considered a delicacy in the US there is currently no local or national market for the crabs that fetch €0.40 cents/kg compared to €14/kg for red mullet, which aids its proliferation also as there is no natural predator.⁴⁹

Governance, Institutional and Policy Framework for Adaptation

45. **Governance.** The Republic of Albania is a constitutional republic with a democratically elected parliament. The president is the Head of State and has general powers as Commander-in-Chief of the army and Chair of the national Security Council. He is also the head of the High Council of Justice. Legislative power is concentrated in the Albanian Parliament. The system of government is based on the separation and balancing of legislative, executive and judicial powers. Since the early 1990s, Albania has implemented important structural reforms to promote equitable economic growth and improve governance and public service delivery. In a transition from a centrally planned to a market-oriented economy, this has included macroeconomic and fiscal sustainability, financial sector stabilisation, energy reform, social assistance and disability reform, and territorial decentralisation. The legislative power belongs to a single organ, the assembly of Albania. The assembly consists of 140 deputies. The Council of Ministers is created at the beginning of each legislature of the assembly after the legislative election, as well as when the position of the Prime Minister is vacant. The Prime Minister is the main figure of the executive power. The Council of Ministers carries out foreign and domestic policies and directs and controls the activities of the ministries and other state organs. The parliament must approve legislation proposed by cabinet members to come into force.

⁴⁷ Kamberi, Elvis, et al. (2020) The Occurrence of Blue Crab (*Callinectes sapidus*, Rathbun 1896) in the Vaini Lagoon. *Albanian j. agric. sci.*, 19.4: 60-63.

⁴⁸ Exit News (2021). <https://exit.al/en/albanian-fishermen-continue-struggle-against-blue-crabs/> (accessed Sept 2023)

⁴⁹ Agence France-Press (31/07/2020) in Courthouse News Service <https://www.courthousenews.com/blue-crab-invasion-spells-doom-for-albanian-fishermen/> (accessed September 2023)

46. Since the Administrative Territorial Reform of 2015, Albania is divided into twelve administrative counties (or Qarqe), which are further divided into 61 municipalities (bashki and komuna).⁵⁰ Local governments' autonomy has been consecrated by the decentralization laws. According to this principle and legislation, their competences and resources are clearly defined in coherence with a prevailing subsidiarity principle. The municipalities include within them Administrative Units. The municipalities are the first level of local governance, responsible for local needs and law enforcement. Local governments share responsibilities with the central government on matters such as social services, health care and education. Their own competences are infrastructure, water supply and sewerage, cleaning and waste removal⁵¹. The capital of Albania is Tirana.

47. **Institutional Framework for Adaptation.** The Ministry of Tourism and Environment, is responsible for Albania's climate change related activities, scientific evaluations, and leadership. The MTE is the highest governmental body responsible for environmental protection and formulation of environmental policy and legislation in the country. The Albanian Government has made climate change adaptation and development within the country a high priority. An interministerial Working Group on Climate Change (iMWGCC) was established as a permanent coordinating body for climate change issues. It is headed by the Deputy Minister of Environment at the political level, and supported by nominated technical focal points in each and every related institution. Albania's Climate Change Unit (CCU) is the national United Nations Framework Convention on Climate Change (UNFCCC) focal point and collaborates with an interdisciplinary and inter-institutional technical team established to fulfill Albania's duties as a UNFCCC member.⁵² The State Environmental Inspectorate identifies and responds to issues related to environment and climate change. The responsibilities of the National Environmental Agency (AKM) include permitting, environmental impact assessment, and public information and to support the retrofit and expansion of the country's the existing observational network of weather and hydromet stations.

48. **Policy Framework for Adaptation.** Albania submitted its Fourth National Communication to the UNFCCC in 2022, its Third National Communication to the UNFCCC in 2016 and its Nationally-Determined Contributions in 2016 (updated in 2021). The country has also recently initiated its National Adaptation Plan (NAP) process through the implementation of the Green Climate Fund (GCF) financed NAP Readiness Project⁵³. Albania has also developed and adopted a number of primary and secondary pieces of legislation regarding the environment that have an impact on responses to climate change. Additionally, legislation regulating other sectors that have a considerable impact on climate change, such as energy, forest and other sectoral legislation, have also been enacted, and these often transpose a number of EU Environmental Directives.⁵⁴ A number of additional national policies and strategies contribute to the definition of a national framework for adaptation and are highlighted in section II. D. Strategic Alignment.

Exposure to climate change: current climate, observed and projected changes

Current climate

49. Albania enjoys a Mediterranean climate, with mild and humid winters followed by hot and dry summers. Albania's climate follows the country's topography, with temperatures and precipitation varying by altitude and distance from the sea, resulting in considerably different climate conditions between agro-ecological zones. The majority of the country's rainfall occurs between November and March, with lower amounts during the June to September growing season. The coastal plains experience a strong maritime influence, causing a gradient of lower temperatures and reduced precipitation eastwards from the coast.⁵⁵ Annual average air temperatures range from 11.3 °C in

⁵⁰ Law No. 115/2014 "On Administrative-Territorial Division of the Local Government Units in the Republic of Albania

⁵¹ [https://search.oecd.org/regional/regional-policy/profile-](https://search.oecd.org/regional/regional-policy/profile-Albania.pdf#:~:text=In%202014%2C%20the%20Law%20No.%20115%2F2014%20%E2%80%9COn%20Administrative-Territorial,as%20constituent%20administrative%20units%20of%20the%20new%20municipalities)

Albania.pdf#:~:text=In%202014%2C%20the%20Law%20No.%20115%2F2014%20%E2%80%9COn%20Administrative-Territorial,as%20constituent%20administrative%20units%20of%20the%20new%20municipalities

⁵² Republic of Albania (2016). [Third National Communication of the Republic of Albania under the UNFCCC](#).

⁵³ <https://www.greencimate.fund/document/adaptation-planning-support-albania-through-undp>

⁵⁴ Republic of Albania (2016). [Third National Communication of the Republic of Albania under the UNFCCC](#).

⁵⁵ Ibid.

mountainous areas to 21.8°C in lowland and coastal areas, while minimum annual average temperatures range from -0.1°C to 14.6°C, respectively. Figure 3 shows the distribution of annual average maximum and minimum temperatures.⁵⁶

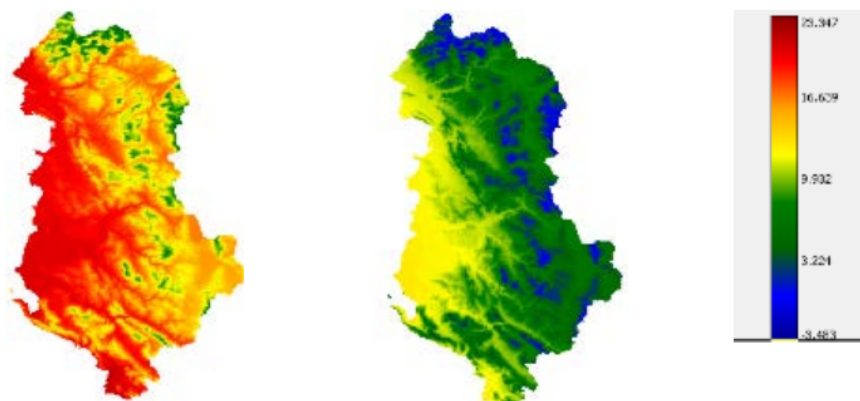


Figure 3 - Distributions of average maximum temperature (left) and average minimum temperature (right)
Source: Fourth National Communication of the Republic of Albania under the UNFCCC (2022)

50. The annual average precipitation total is 1430 mm. However, the spatial and seasonal distribution of rainfall varies; 70% of the annual rainfall occurs during the cold half of the year. 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 60-120 cm. In the West Plains lowlands to the southwestern coast, snow is rare.⁵⁷

Observed changes in climate

51. **Temperature.** As shown in Figure 4, Albania has experienced an increase in mean annual temperature of 1°C since the 1960s. Temperature increases have been observed to be higher in the summer months. Heat waves, across the eastern Mediterranean, are expected to increase in intensity, duration and frequency, possibly by as much as six-to-eight times, per year.⁵⁸ Albania's northern part of the coastal zone typically has lower temperatures in the winter season compared to the middle and southern zones, but summer temperatures are similar across all coastal regions. Additionally, the number of cold waves has been observed to have decreased since 1960.⁵⁹

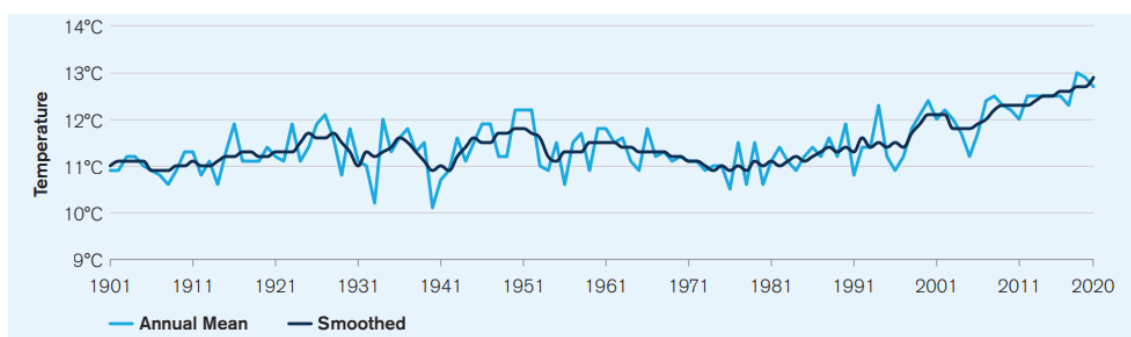


Figure 4 - Observed temperature for Albania, 1901–2020 (WB Climate Change Knowledge Portal - 2020)

⁵⁶ Republic of Albania (2022). [Fourth National Communication of the Republic of Albania under the UNFCCC](#).

⁵⁷ Ibid.

⁵⁸ USAID (2016). [Climate Change Risk Profile – Albania](#).

⁵⁹ Picari, V. and Dervishi, S. (2019). [Analysis of Urban Heat Island Phenomenon and Mitigation Strategies for Tirana, Albania. International Building Performance Simulation Association](#).

52. **Precipitation.** Albania has received the majority of its precipitation in its western zones, and primarily in the northwest. While precipitation for Albania has a high degree of intra-season variability, since the 1960s, a slight (but statistically insignificant) decrease in mean annual precipitation has been observed.⁶⁰ However, the northern part of the coastal zone has experienced an increase in the number of rainy days per year.⁶¹ While overall, seasonal precipitation patterns reveal no significant change, rainfall intensity has increased. The increased intensity of rainfall has an impact on flood events as well as the degree of maintenance and preparation of infrastructure that is required to manage flood waters.⁶²

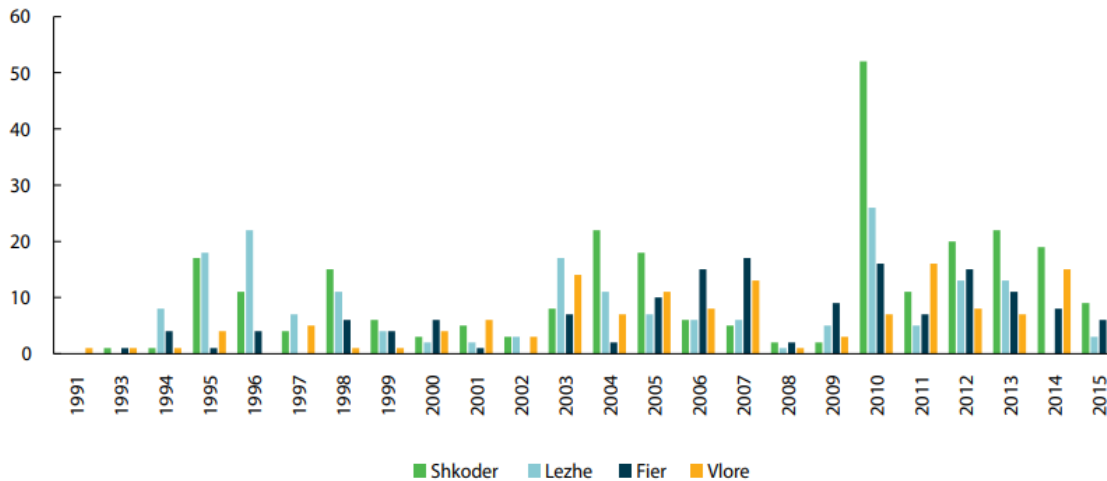


Figure 5 - Distribution of number of weather-related disasters in different coastal stations

53. There is evidence that the rate of disaster events has been increasing during the period of 1993-2013, in correlation with climate change. The years with highest recorded incidents of hydro-meteorological disaster correspond with climate extremes in the climate cycle (Figure 5). Floods have a huge impact in terms of human life, economy, agriculture and environment. There is a main peak in 2010 in which the losses reached nearly 0.15 % of the GDP of the country. The average expected losses per year is estimated to be around 370 million of LEK (3.2 million US\$), with a maximum of 4 billion LEK (35.2 million US\$) arising from the Shkodra flood in 2010.⁶³ Marked floods also occurred in 2014, 2015, 2016, 2017, 2018, 2021, 2022 and 2023.⁶⁴

Projected changes in climate

54. **Temperature.** Climate projections⁶⁵ for Albania indicate that the mean annual temperature will increase for all seasons, with the most significant increases taking place in the summer months (between June and September: 5.8°C under RCP 8.5). Along the Albanian Coast, maximum temperatures in the summer could increase by 1.5°C (RCP 2.6) to 6.4°C (RCP 8.5) by 2100. In winter months, minimum temperatures could increase by 0.9°C (RCP 2.6) to 3.8°C (RCP 8.5), with impacts on snow formation in mountains. The frequency of extremely high temperatures is also expected to increase: in Fier for example, the return period for 3 consecutive days with extreme temperatures above 40.5°C is expected to decrease from once every 30 years (approx.) to once every 6 to 8 years.

55. In line with these projections, more hot days and heat waves are very likely over the targeted area. More frequent and severe droughts as well as increased fire risk can be expected. At the same time, minimum temperatures are likely to be higher, with less cold waves and the rarefaction of snow and frost days, but a possible increase of late frost in upstream areas. This could translate in a shift of

⁶⁰ USAID (2016). [Climate Change Risk Profile – Albania](#).

⁶¹ Hodenbrog, L. et al. (2019). Intensification of summer precipitation with shorter time-scales in Europe. Environmental Research Letters. URL: <https://iopscience.iop.org/article/10.1088/1748-9326/ab549c/meta>

⁶² Republic of Albania (2016). [Third National Communication of the Republic of Albania under the UNFCCC](#).

⁶³ Ibid.

⁶⁴ USAID (2016). [Climate Change Risk Profile – Albania](#).

Floodlist. 2023. <https://floodlist.com/tag/albania>

⁶⁵ Republic of Albania. Fourth National Communication to UNFCCC (2022) and NDC (2021)

seasonality both for fisheries and agricultural production, as well as for tourism. Indeed, the vegetative season is likely to start earlier and finish later, while productivity in the summer season may decrease as a result of water stress, but also exceeding temperature tolerance of certain cultures (e.g. extreme temperatures affect tomato and pepper flowering).

56. **Precipitation.** By 2050, precipitation for Albania is expected to decrease between 2.1% (RCP 2.6) and 4.3% (RCP 8.5) from the 1986-2005 baseline of 929.7 mm. By 2100, in a 2°C world, precipitation would have decreased by 1.8% (less than by 2050), while under a 4°C world, it would have decreased by 12.2%. Annual precipitation in coastal Albania is expected to decrease between 1.6 to 2.9% by 2050, and by 1.6 to 7.1% by 2100. Precipitation is likely to decrease the most during summer months (8.7 to 38.1% by 2100). However, precipitation is expected to increase during winter months, between 1.8 to 3.2% by 2050 and between 1.8 to 7.8% by 2100.⁶⁶

57. Variability of precipitation is expected to increase in Albania, with an increased frequency and intensity of heavy rainfall events. For Albania, the Standardized Precipitation Evapotranspiration Index (SPEI), which considers changes in the mean of 12-month cumulative water balance, taking into account evapotranspiration, is expected to decrease by a median of 0.34 to 2.08 by 2100, indicating negative and worsening water balance conditions, especially in the South of the country.

58. A further consequence of the predicted changes in precipitation is related to the occurrence of the 24hr maximum precipitation over the threshold that is considered as a hazardous event (as already observed as increasing in past years). Although the number of extreme precipitation events can be expected to increase in terms of magnitude and frequency, the reduced levels of precipitation will also lead to an increase in the number of consecutive days without precipitation (drought), in turn exacerbating the expected water stress associated with increased temperatures and heat waves.

59. **Sea level rise.** Based on satellite imagery, the Adriatic coasts of Albania have changed between 1985 and 2011, from a measured coastline of 535 km in 1985 to 557 km in 2011. While projections for the whole Albanian coast are not available, projections for the Drini Mati River Delta (North) indicate that sea level could increase anywhere from 45 cm (RCP 2.6) to 60 cm (RCP 8.5) by 2100, while projections for the Vjosa basin (South) indicate increases between 25 and 105 cm by 2100⁶⁷ (these simulations do not consider tectonic movements). The maps below (Figure 6) show areas that would be under water with a 25 cm (minimal) and 105 cm (maximal) sea level rise in the lower part of the intervention area. It should be noted that these projections do not include the effects of tipping points, commonly associated with extreme sea level rise.

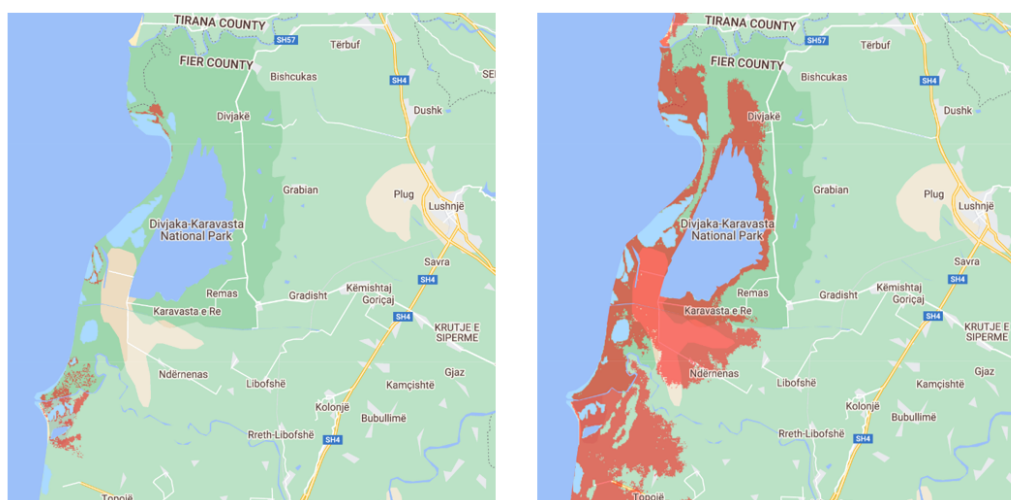


Figure 6 - Project area under sea water for 25 cm sea level rise (left) or 105 cm sea level rise (right) Maps prepared using the Climate Central Coastal Risk Screening Tool (<https://coastal.climatecentral.org/>)

⁶⁶ Republic of Albania (2016). [Third National Communication of the Republic of Albania under the UNFCCC](#).

⁶⁷ Environmental Status Report 2021 (National Environmental Agency, Sep. 2022).

Vulnerability to climate change and expected impacts

60. Due to a combination of political, geographic, and social factors, Albania is recognized as vulnerable to climate change impacts, ranked 75 out of 181 countries in the 2020 ND-GAIN Index.⁶⁸ As outlined by the Fourth National Communication, river basins sectors and systems (such as water resources, agriculture, biodiversity and forests, soils, health, disaster risk, tourism, population and settlements, and gender) are particularly vulnerable to climate change and their adaptation requires a range of integrated measures.

61. Upper parts of river basins are characterized by mountainous ecosystems, which provide vital services, including water, forest, carbon storage and cultural values. People in and around mountain regions depend on these services for livelihood, income generation, food, health and well-being. Due to climate change, average temperatures are raising faster in mountainous areas than in other areas, and climate change induced warming increases with altitude. With the combination of reduced snow accumulation zones and accelerated melting, runoff timing changes, resulting in an increased flow after rainfall. The disruption of river and water flow in mountainous areas affect water availability for agriculture, throw off existing water storage and infrastructures, and can lead to flash flooding.⁶⁹

62. At the same time, Albania's coastal areas, constituting the lower part of river basins are "critically vulnerable" to climate change and other extreme climatic events⁷⁰. Indeed, most of the Adriatic coastal area of Albania is flat and low-lying and this makes coastal systems, including human settlements, particularly susceptible to climate change and vulnerable to sea-level rise and changes in intensity and frequency of flooding. According to the Census data of 2011, the narrow coastal belt, which represents only 11.78% of the overall surface of the Republic of Albania, is inhabited by 36.3% of the total population. The biodiversity found on the coastal zone of Albania, and in particular in lagoons and wetlands that have been designated as protected areas, is of global significance. The coastal zone of Albania is already subject to considerable anthropogenic perturbation and alteration.⁷¹

63. As exposed previously, climate change is already impacting Albania, and extreme weather events (heavy rains, potential flood risk, strong winds, droughts) have intensified in the last decades with severe consequences on the local economy, and deepening existing socio-economic imbalances. More specifically, the following impacts are observed and are expected to increase as a result of the above mentioned climate projections.

64. **River basins and water resources.** Both the Shkumbini River Basin Management & Climate Change Adaptation Plan (2017), and the Semani River Basin Management Plan (2019) highlight expected climate impacts on the associated river basins. In the Semani River Basin, water demand was expected to rise by 170% between 2019 and 2027, while runoff was expected to decrease by 13.5% as the result of combined decreased precipitation, and increased temperatures. Changes in precipitation regimes as a result of climate change will increase the risk of flooding in winter, and risk of heat stress and droughts in summer, with direct impacts on agriculture and livelihoods. Increased runoff will also be associated to increased land degradation and erosion, in turn affecting agricultural land as well as riverbanks and the downstream lagoon through sediment transport and siltation.

65. In addition to submergence, seawater intrusion into freshwater aquifers in deltaic areas is an increasing problem associated with rising sea level. The Shkumbini and Semani rivers mouths are highly influenced by the sea level. In this context the expected sea level rise will affect the river flow and increase the river water level, leading to the flooding of the flat areas on both sides of the rivers. The expected increase in number of storm surges due to climate change will increase the size and magnitude of flooded and eroding coastal areas. In this context, the river mouth, beaches, and lagoons are particularly vulnerable to the adverse effects of climate change.

⁶⁸ WB Climate Change Knowledge Portal (CCKP, 2020). Albania - URL: <https://climateknowledgeportal.worldbank.org/country/albania>

⁶⁹ Hock, R. & al. (2019). High Mountain Areas. *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 131-202.

⁷⁰ Bruci E., Le Tissier M., et al. (2013). Identification and implementation of adaptation response measures in the Drini-Mati River deltas' project (financed by GEF/GoA/UNDP,2008 -2013).

⁷¹ Republic of Albania (2016). *Third National Communication of the Republic of Albania under the UNFCCC*.

66. **Soils.** Mediterranean regions are particularly vulnerable to erosion because of the highly irregular behaviour of the rainfall regime, both on spatial and temporal scales; inappropriate agricultural management practices, overgrazing and wildfires. Erosion rates are higher in mountainous areas than in lowlands due to the steeper relief and the higher and more intense rainfalls. Land erosion is estimated to be at high levels in all river basins and especially along the Seman and Shkumbini rivers. Some of the factors that influence erosion are: climate conditions, such as rainfall (amount, intensity and frequency); temperature; physical characteristics of soil; the conditions of the relief (slope) and land use; vegetation cover and degradation (deforestation, fires, overgrazing, etc.); topography modifications (construction of roads, urban centers, etc.); and water management policy (sewers, hydro works, dikes, etc.). Increasing air temperatures, prolonged drought, uneven rainfall, increasing rainfall, and a reducing annual amount of snow lead to disruption of the runoff and more pronounced formation of torrential flows, erosion, riverbank degradation and landslides, with threats to surrounding infrastructure.

67. **Coastal ecosystems.** As a result of sea level rise, the level of the rivers in the low-lying coast is expected to increase in the upper parts of the basin and the flow will decelerate. In total, until 2050, approximately 1082.45 km² (32% of the coastal area or 3.76% of the country's surface) will suffer direct consequences from flooding. A majority of existing agriculture and industrial areas will be lost due to sea level rise. Huge amounts of arable lands will be lost or become un-usable due to inundation and increased salinity. Most coastal habitats, such as sand dunes, fresh and brackish water wetlands, marshes and lagoons, will be lost or further deteriorate. The Adriatic coastline will regress towards the continent, and coastal erosion will intensify, leading to migration of coastal wetlands and other habitats inland where they will be impeded by embankments and drainage schemes constructed as part of the wetland reclamation work that took place during the 50's-60's of the last century.⁷² The resulting loss of natural habitats will in turn affect the breeding of endangered species such as – in the proposed intervention area – that of the curly pelican *Pelecanus crispus* and the loggerhead sea turtle *Caretta caretta*.

68. Lagoons such as Karavasta are fragile transitional ecosystems. Lagoon–sea exchanges are driven by tides and wave action and are often the largest component of lagoon water balance. Lagoon barriers are eroded by climate change related changes in wave conditions and wind patterns, requiring continuous sediment deposition to maintain them. Water quantity and quality in the lagoons is influenced by the rate at which the lagoon loses or gains water from evaporation, precipitation, groundwater input, surface runoff, and exchange with the sea. As mentioned above, increased temperatures and other climate change effects together with the decreased inflow of fresh water from the surrounding area lead to increased eutrophication and changes in water quality and salinity. In Karavasta, changes in the phytoplankton and zooplankton composition are monitored, together with the increase of alien species population such as the blue crab *Callinectes sapidus*, competing with the local crab populations.

69. **Forests.** With the expected rise in the frequency and severity of droughts as a result of climate change, the risk of fire will increase in the future, in particular, during the months of July and August, when the amount of rainfall is very low. The likely decrease of precipitation and increase of wind speeds are expected to favor their spread and damages. Besides direct impacts, fires can also cause indirect damage that can result in the degradation of the environment, a reduction in the resistance of forests to pests and diseases and the destruction of authentic landscapes and soil structures. Forests are also expected to be affected by a reduction in forest growth due to storms, pests and diseases.

70. **Agriculture.** Increased temperatures and heightened precipitation variability are expected to have an adverse impact on the agriculture sector and overall economy. Additionally, an increase in extreme weather events poses a serious threat to agriculture production, water availability, food security and economic growth for the majority of the rural population who depend either directly or indirectly on the agricultural sector. The rural poor will be disproportionately affected and in particular, those areas that are already under marginal rain-fed production will be increasingly at risk. Changes in the mean values of precipitation parameters can have far-reaching consequences into the country's

⁷² Ibid.

ecosystems and biodiversity, food production, water resources and rivers. Changes to precipitation patterns and intensity can lead to more frequent flooding in key agricultural zones as well as landslides or erosion along embankments and mountainous areas.^{73 74}

71. A detailed work on projection of expected changes (annual and seasonal) in the crop yields under medium climate change scenario is presented in the study “Reducing the Vulnerability of Albania’s Agricultural Systems to Climate Change”⁷⁵. It is concluded that the seasonal changes in climate have clear implications for crop and livestock production, if no adaptation measures are adopted beyond those that farmers already employ (such as changing planting dates in response to temperature changes). The results show that grapes and olives will be most affected by climate change, with grape yield declines in all AEZs and olives particularly affected in the Intermediate AEZ. However, yield increases are also possible, for example for winter wheat, as climate change will likely result in an extended growing season, more moderate fall and winter temperatures, and greater precipitation and water availability during the wheat growing season. Alfalfa production should also increase in most regions. Effects on maize vary by region, with increases in the highlands and decreases in other regions.

72. Considering the period of plant growth (their phenological stages) some crops are expected to be more influenced by the water stress than others. For many crops, the periods of maximum number of consecutive days without precipitation coincides with three quarters of their development stages. Some crops like; maize with short cycle, soybean, maize, spring wheat, barley, beans, tomatoes, cabbage, millet, onion, sorghum, pepper, sunflower and watermelon are expected to be affected from the maximum number of days without precipitation, because their development phases are expected to happen in that period without rains. Alfalfa and winter wheat are expected to be less affected, but in general the changes in precipitation are expected to affect most of the crops.

73. Increased temperatures and the threat of waterlogging of fields due to intense rainfall and or flooding may also result in an increased presence of pests and diseases harmful to yield production and quality. Other expected impacts on agriculture include earlier flowering and harvest dates in cereals; reduced yield of some crops due to heat waves and droughts; increased water demand for irrigation; and salinization of coastal land used for agriculture due to sea water intrusion combined with increased water demand for irrigation.

74. **Livestock.** The potential climate change impacts on livestock include, among others: water availability, expected change in forage production yield, spread of pests and diseases, heat stress, existence of the rare and/or local breeds, and expected changes in animal production.

75. **Gender and social inclusion.** Research has provided evidence that the effects of climate related disasters that impact human populations in areas such as agricultural production, food security, water management and public health are not gender neutral, as women and children are among the highest risk groups. Albania ranks as one of the top ten countries in the world with the highest economic risk from multiple hazards, in particular flooding and earthquakes. Hazards can adversely impact crop and livestock production and damage critical infrastructure affecting the whole population; however, they have increased and compounded consequences on rural women, who face increased risks of losing their subsistence agriculture production; single mothers or women heads of households, who are at risk of losing their homes and falling into homelessness and poverty; women victims of domestic and/or intimate partner violence, and other groups with an increased vulnerability (UNCT, 2020). Protection of the country’s environment has not kept pace with its economic growth and no information exists on the extent to which gender equality goals have been mainstreamed into the national legal and policy framework on environment and climate change⁷⁶.

⁷³ FAO (2018). [Comprehensive analysis of disaster risk reduction and management system for agriculture in Albania.](#)

⁷⁴ Teqja, Z., Kopali, A., Libohova, Z. and Owens, P. (2017). [A study of the Impacts of climate change scenarios on the plant hardiness zones of Albania.](#) J. of Appl. Meteorology and Climatology. 56(3): 615–631.

⁷⁵ Sutton, William R., Jitendra P. Srivastava, James E. Neumann, Kenneth M. Strzepek, and Peter Droogers (2013). Reducing the Vulnerability of Albania’s Agricultural Systems to Climate Change: Impact Assessment and Adaptation Options. World Bank Study. Washington, DC: World Bank. doi:10.1596/978-1-4648-0047-4. License: Creative Commons Attribution CC BY 3.0

⁷⁶ Ibid.

Theory of change

76. Due to a combination of political, geographic, and social factors, Albania is recognized as vulnerable to climate change impacts. As outlined in the Fourth National Communication, river basins sectors and systems are particularly vulnerable to climate change and their adaptation requires a range of integrated measures. Indeed, climate induced modifications of the water cycle affect landscapes throughout the watershed. In upstream areas, accelerated snowmelt results in decreased water storage in highland pastures, while increased runoff coupled with extreme precipitation events affect downstream areas through land degradation, possible landslides and riverbank erosion, together with an increased occurrence of floods. Ecosystem degradation resulting from climate change directly affects production systems in targeted river basins, with loss of topsoil and decreased water infiltration and recharge. Mountain and mid-range livestock productivity is impacted by heat waves and reduced fodder as a result of drought cycles. Vegetative cycles are disrupted by changes of seasonality and increases in pest and diseases, and farmers resort to unsustainable and maladaptive increase of chemical inputs use, resulting in runoff to nearby rivers or wetlands. At the same time, lagoon fisheries' productivity decreases as a result of climate induced increase in salinity and water temperature, favouring the proliferation of invasive species such as the Blue Crab.

77. Thanks to Adaptation Fund supporting the full cost of adaptation of activities planned under the project, the present initiative seeks to bring about a paradigm shift by which Albania will establish a consistent framework for ecosystem and livelihood resilience based on integrated landscape management at river basin or lagoon scale:

- Under its first component, the project will support the **improved climate resilience of ecosystems** (Outcome 1), by promoting an Integrated Landscape Management approach, through collective identification of climate change challenges and introduction of holistic and context-specific solutions in the targeted territorial units (namely two river basins and their shared delta). The latter will consist in a combination of EbA solutions (for riverbank protection, protection against coastal erosion, and restoration of degraded land), together with protection against forest fires, and conservation of highland summer pastures. Gender considerations will be integrated in the planning and implementation of EbA actions. Under this component, 23 Local Adaptation Plans will be developed at municipality level, for the resilience of at least 5,000 hectares. These processes will also look at relevant Value Chains.
- Under the second component, the project will support the **enhanced climate resilience of local livelihoods** (Outcome 2), both by supporting ecosystem restoration through the diffusion of climate resilient practices at farm level (in line with the principles of agroecology, looking at a variety of value chains – VCs), and with income diversification thanks to (i) resilient fisheries and the management of the Blue Crab invasive species, and (ii) the integration of agro-ecotourism value chains, also as a means to promote the value of resilient landscapes. As such, the component will both benefit from and contribute to the resilience of ecosystems promoted under component 1. Support to resilient agriculture, fisheries and agro-ecotourism will follow a modular approach, starting with the identification, mapping and structuring of relevant VCs, followed by tailored technical assistance, and completed by access to equipment under a Value Chain Fund.
- The third component seeks to **establish strategies and mechanisms for river basin and lagoon adaptation integration at national level, to enable wider replication** (Outcome 3). To do so, Lumi will consolidate the information generated by studies under the project, share lessons through trainings and awareness raising, targeting a wide range of stakeholders, and establish a framework for the promotion of EbA in the country (including by supporting dedicated curricula in the university).

78. The Ecosystem based Adaptation approach repairs degraded ecosystems and allows agriculture and other livelihoods to become resilient to climate change. EbA – which has been introduced by the Secretariat of the Convention on Biological Diversity – is applicable in many situations: (i) conservation of agrobiodiversity for climate adaptation; (ii) establishment of diverse agroforestry systems to cope with increased climate risk; (iii) conservation and restoration of forests to stabilize slopes and regulate water flows; (iv) sustainable management of wetlands and floodplains for

maintenance of water flow and quality; etc. Improved agricultural productivity through EbA lessens flood damages, makes water available year-round, sustains itself under extreme weather, enhances biodiversity, strengthens watershed/landscape functions and improves food security.

Project Area and targeting strategy

79. **Target groups.** The Lumi project's target groups⁷⁷ will be: (i) vulnerable semi-subsistence rural smallholders (households below the threshold for already existing subsidies); (ii) economically active smallholders and small-scale processors; as well as (iii) private sector actors along the selected value chains, such as agro-enterprises and traders; as well as all relevant stakeholders for the resilient management of sub-watersheds, and who will benefit from the enhanced resilience of local ecosystems and their services. It is estimated that the project will reach out to close to 36,000 persons. Rural women and youth will be specifically targeted.

80. **Social targeting.** The project will apply a combination of different measures to target its beneficiaries, e.g. selecting VCs suitable for poor households, earmarking funds for women and youth and providing training on business skills and resilient agricultural practices. Lumi will put special emphasis on addressing gender inequalities and empowering women. This will be done in three ways: (i) recognizing of gender differences in adaptation needs and capacities as part of landscape and cluster planning processes; (ii) promoting gender-equitable participation and influence in adaptation decision-making processes; (iii) supporting gender-equitable access to finance and other benefits resulting from investments in adaptation. In addition, rural youth will be targeted. Emphasis will be put on promoting their economic empowerment and enabling them to have an equal voice and influence in rural institutions and organizations, especially in terms of landscape and cluster management. Fifty percent of the beneficiaries will be women and 30% youth.

81. **Geographic targeting.** The Lumi project will work in 4 counties and up to 23 municipalities located in the two targeted river basins and their shared delta (see Table 2 below and Figure 7). The project will focus on rural areas. The precise intervention sites for the development of new value-chains will be identified in a participatory manner over the first years of implementation, and the elaboration of Local Adaptation Plans will confirm these areas. The exact sites of individual project activities will be determined both by the participatory process of rural value chain structuring and implementation of priorities under the LAPs. The table below provides a brief description of the targeted area (see also *Geography of the targeted area*):



Figure 7 - Albanian municipalities and counties & project area

Table 2 - Description of targeted counties and municipalities

Targeted counties and municipalities	Description
<p>KORÇË COUNTY</p> <p>5 Municipalities: Korçë, Devoll, Kolonjë, Maliq, and Pogradec</p> <p>Korçë county includes the source of the Shkumbini river, and all of the upper part of the Semani river basin</p>	<p>The region of Korça is rich with diverse natural resources including two lakes (Ohrid and Prespa), three National Parks (Drenova, Gërmenj and Prespa), two rivers (Osum and Upper Devoll) and Gramozi mountain, all of which make this region a very attractive destination.</p> <p>In 2013, the GDP of Korça was ALL 78,886 million, with a contribution of 5.8% to national GDP. Blessed with natural resources and tourist attractions, this region represents an important economic area of the country. Although this subalpine zone has traditionally been involved in the cultivation of crops on arable land and fruit farming (thanks to its continental climate), it is also known for its agrobusiness and tourism. The large size of its agricultural land ranks it second nationwide, and</p>

⁷⁷ In line with this, the targeting criteria for the selection of Value Chains supported at local level will include among others: (i) small scale and non highly-commercial value chain; (ii) value chains around typical and local products that can be linked to agro-ecotourism and enhance the value of the local landscape; (iii) potential to engage women and youth.

<p>Pustec municipality is part of the county but not included in the Semani river basin. It should also be noted that only part of the Kolonjë municipality is included in the Semani river basin.</p>	<p>agricultural products account for 32 percent of all revenues. Korça economy relies on agricultural development, but major businesses also include civil construction sector and the production of construction materials, food sector and services. Korça is also one of the most important cultural and educational centers of Albania. There are numerous museums in the city which describe the cultural activity for centuries. The Faculty of Agriculture of the University of Korçë is the only higher education institutions that offer degrees in agriculture-related sciences apart from the Agricultural University of Tirana. Both of these universities are public.</p>
<p>BERAT COUNTY 5 Municipalities: Berat, Dimal, Kuçovë, Poliçan and Skrapar Berat county concentrates all the middle part of the Semani river basin.</p>	<p>The Berat county is characterized by a hilly and mountainous landscape, where flatlands and hilly areas play an important role in farming activities. The soil structure and Mediterranean climate combined with micro-climates favour the production of vegetables, olive and fruit trees, figs and medicinal and aromatic plants. Land used for forestry covers an area of 53,833 ha (about 30 %), agriculture an area of 52,919 ha (29.4%) and meadows and pastures a total area of 30,472 ha (about 17 %). Berat is traditionally well-known for its agriculture, as well as fruit and olive fruit processing. “Kokërrmadh i Beratit” is a table olive fruit and one of the specialities of this region. The percentage of oil extracted from its fruits ranges from 18 to 20%.</p> <p>In 2013, the GDP of Berat was ALL 49,828 million, contributing 3.7 percent to national GDP (INSTAT, 2015b). Tourism-based businesses exploit the city’s historical and architectural heritage. Small family farms seek to promote traditional products while looking to expand into the national level and possibly into international markets. They represent the largest employment sector in Berat. About 30,834 families are involved in agricultural activities owning small farms averaging 1 to 1.4 ha. Handcraft production is another important sector of economy with high potential of development.</p>
<p>ELBASAN COUNTY 7 Municipalities: Belsh, Cerrik, Elbasan, Gramsh, Librazhd, Peqin and Prrenjas Elbasan county concentrates most of the upper part of Shkumbini river basin</p>	<p>The Elbasan county is the fourth most populated and the third largest of Albania, comprising 227,581 hectares. About 32% (around 73,000 hectares) of the Elbasan county is arable. The rest is covered with forests and pastures or is otherwise unusable. The surface dedicated to grazing is about 34,000 ha, for a total of 106,000 cattle and 248,000 sheep and goats reared in the county. Cereals, tobacco and vegetables are the main crops, together with olive trees, grape for wine and fruit-trees.</p> <p>From the late 1980s onwards, the region has suffered from emigration (from rural to urban areas, and either to Tirana or abroad). However, the number of inhabitants has not substantially changed, as many emigrants from neighbouring regions migrated to the city of Elbasan. The majority of the population in the county is rural (65% of the total population). Approximately 63% of the labour force of the region is engaged in agricultural activities. Land holdings per household are on average 1.34 hectares in rural areas (smaller in Elbasan municipality and higher in Gramsh municipality). While the number of proper agricultural enterprises in the Elbasan county is quite low (113), farming plays a major role in the region. In fact, the Elbasan county includes about 56,000 farmers (more than 1/5 of the population).</p>
<p>FIER COUNTY 6 Municipalities: Fier, Divjakë, Lushnjë, Mallakastër, Patos and Roskovec Fier county includes the lower part of Shkumbini and Semani river basins and their shared delta. Parts of Fier and Mallakastër are excluded from the Semani river basin.</p>	<p>Fier county is the third most populated of Albania with 271,672 inhabitants (INSTAT, 2023). The vast part of Fier county lies in the low plain area and includes a large part of the Myzeqe Field, the most intensive agriculture area of Albania.</p> <p>59% of the population of the Fier county lived in rural areas in 2011, showing the importance of the agricultural sector in local economic life. Fier county leads the production of cereals and vegetables in Albania, but also includes production from olive trees (notably Kalinjoti cultivar), fruit trees, and livestock (representing 17.25% of cattle, 11.84 % of sheep/goats and 20.88% of poultry production.). The county has very fertile lands which constantly become threatened by floods along the two rivers (Skumbini and Semani). Fier also has a significant coastline that stretches from the Vjose River estuaries to the Shkumbini River estuaries on the borders of the Divjake-Karavasta National Park which it encompasses. The Municipality of Mallakastër presents a different landscape with fields alternated with low hills (up to 712m). Fier municipality is the centre of the oil, bitumen and chemical industries in Albania.</p>

B. Project Objectives

82. **Objective.** The objective of the project is to *build resilience of the ecosystems and communities in the Shkumbini and Semani rivers basins and the Karavasta lagoon as their shared delta.*

83. **Outcomes.** The project will achieve the stated objective through three outcomes:

- **Outcome 1.** Improved climate resilience of ecosystems
- **Outcome 2.** Enhanced climate resilience of local livelihoods
- **Outcome 3.** Strategies and mechanisms for river basin and lagoon adaptation integrated at national level to enable wider replication

C. Project Components and Financing

Table 3 - Project components and financing

Project Components	Expected Outcomes	Expected Concrete Outputs	Amount (USD)
Component 1 Integrated management of the Shkumbini and Semani river basins and their shared delta through Ecosystem based Adaptation	Outcome 1. Improved climate resilience of ecosystems	Output 1.1. Priority adaptation measures identified with local stakeholders	800,000
		Output 1.2. Priority Ecosystem-based Adaptation measures for integrated landscape management implemented	2,660,000
Component 2 Sustainable livelihoods in the Shkumbini and Semani river basins and their shared delta	Outcome 2 Enhanced climate resilience of local livelihoods	Output 2.1. Agriculture, fisheries and agro-ecotourism value chains mapped and structured	800,000
		Output 2.2. Technical assistance provided to enhance climate resilience of selected value chains	1,010,000
		Output 2.3. Financial support to climate adaptive activities provided	2,240,000
Component 3 Solutions for river basin and lagoon adaptation in Albania	Outcome 3. Strategies and mechanisms for river basin and lagoon adaptation integrated at national level to enable wider replication	Output 3.1. Relevant knowledge products prepared and disseminated to key stakeholders.	370,000
		Output 3.2. Local and national institutions supported in the creation of mechanisms and strategies for river basin and lagoon adaptation	461,014
Total project activity cost			8,341,014
Project Execution cost (9.5%)			875,576
Total Project Cost			9,216,590
Project Cycle Management Fee charged by the Implementing Entity (8.5%)			783,410
Amount of Financing Requested			10,000,000

D. Projected Calendar

Table 4 - Projected calendar

Milestones	Expected Dates
Start of Project Implementation	(January) 2025
Mid-term Review (MTR)	(June) 2027
Project Completion	(December) 2029 (5 years)
Project Closing	(June) 2030
Terminal Evaluation	(December) 2029

Part II: PROJECT JUSTIFICATION

A. Project components

Component 1. Integrated management of the Shkumbini and Semani river basins and their shared delta through Ecosystem based Adaptation

Outcome 1. Improved climate resilience of ecosystems

84. River basins or watersheds are coherent territorial units for landscape management, delineated by the natural, topographic boundaries of the total surface that feeds a river with its precipitation and seasonal snowmelt. As a consequence of more erratic precipitation patterns, accelerated snowmelt, and extreme temperatures, soil erosion and flash floods from water runoff occurring in higher altitude areas will affect downstream areas with increased severity. Watersheds also often overlap socio-economic ensembles, as inhabitants of the upper territories rely on markets and services that tend to be concentrated in the more accessible areas downstream or at the core of the valleys. These natural and human relationships of interdependence often qualify the watershed (encompassing several settlements) as the relevant scope of intervention for climate adaptation efforts related to landscapes. Protecting the adaptive features of healthy watersheds, such as: meander belts, riparian wetlands, floodplains, terraces, sediment transfer areas, water storage and nutrient cycling capabilities, natural hydrologic regimes, and riparian corridors helps maintain system resilience to climate change.⁷⁸

85. Under this first component, the project will promote an Integrated Landscape Management approach, through collective identification of climate change challenges and introduction of holistic and context-specific solutions in the targeted territorial units (namely two river basins and their shared delta). The latter will consist in a combination of Ecosystem Based Adaptation solutions (for riverbank protection, protection against coastal erosion, and restoration of degraded land), together with protection against forest fires, and conservation of highland summer pastures. Gender considerations will be integrated in the planning and implementation of EbA actions. Under this component, 23 Local Adaptation Plans will be developed at municipality level, for the resilience of at least 5,000 hectares. These plans will also look at relevant economic activities in the area (including VCs) and their adaptation needs, in relation with the support planned under the second component.

Output 1.1. Priority adaptation measures identified with local stakeholders

86. Climate change induces multiple risk on the livelihood of rural communities and their surrounding agroecosystems. While most stakeholders are familiar with the notion of climate change, and can relate it to some of its already visible consequences (e.g. increased duration and severity of droughts, change of seasonality, extreme precipitation events, etc.), the full scope, scale and cascading consequences to which populations must prepare is less tangible. At the same time, effective climate adaptation strategies for communities along the targeted watersheds need to be anchored in their physical reality, taking into account existing and predicted risks at the relevant local landscape level (e.g. sub- or micro-watershed). Providing an objective and scientific ground to prioritize interventions will help diffuse conflicts within a community and build a consensus to support climate-resilient investments.

87. Under the present output, the project will support relevant studies to further characterise the climate vulnerability of considered landscape units: the Shkumbini river basin, the Semani river basin, and their shared delta constituted of the Karavasta lagoon (Divjaka Karavasta National Park). Because watershed health is a dynamic property that can vary with future changes in climate and human activity, a watershed assessment also evaluates the vulnerability of watershed health to future degradation. Watershed vulnerability is based on a combination of (i) watershed exposure, (ii) sensitivity, and (iii) adaptive capacity.⁷⁹

88. **Rapid assessments.** While the complexity of local landscapes induces localized variations (micro-climates) which require time-consuming observations for a comprehensive representation,

⁷⁸ <https://www.epa.gov/hwp/developing-watershed-vulnerability-index>

⁷⁹ Ibid

available public, open-source and academic data combined with generic predictive models can be used as a readily available tool to assess general trends and quickly deliver a first-step description of the climate vulnerability of target territories. The studies will rely on the latest available climate data (including the flood risks assessment for the Shkumbini and Semani rivers prepared under the Western Balkans Investment Framework “Improvement of Flood Protection Infrastructure on Erzen-Ishëm, Shkumbin, Seman and Vjosa Rivers” project and possibly relying on the Climaproof platform under development by UNEP for the region). GIS rapid vulnerability analysis will also be established at the level of the relevant territory for the target groups for all targeted municipalities.

89. **Planning process.** The integrated management and enhanced resilience of entire river basins, cannot succeed without the support and participation of local populations at the forefront of the environmental shifts that transform these ecosystems as a result of climate change. While geophysical observations and models can assess the relative vulnerability of different territorial components, an effective prioritization of adaptation efforts can only result from the involvement of the stakeholders whose livelihoods, resources and quality of life will be affected. A series of collective discussions with communities will be organized to characterize the climate vulnerability of local landscapes, putting the watershed aspect at the centre of discussions. The methodology used will align with that promoted by UNDP for the preparation of Local Adaptation Plans at Municipal level (as part of the NAP process), but will also emphasize the watershed management aspect, by facilitating consultations and exchanges between upstream and downstream communities, and rely on the principles of Integrated Land Use Planning promoted by both UNCCD and UNCBD.

90. The process will also be informed by a gender and youth analysis, taking an intersectional approach and exploring the roles and relationships between people of different genders, as well as gender- and youth-specific opportunities, barriers, and decision-making power. With this knowledge, climate-resilient interventions can be planned and implemented in ways that recognise gender and age roles and dynamics while tackling discriminatory norms and practices.

91. Through these participatory meetings, participants will incorporate their own experience and vision of the territory with the aim to build a consensus around priority actions and investments (including investments eligible under the project) to improve the climate resilience of their territory. During the planning processes, opportunities will be created for meaningful participation by women, youth and others whose voices are often left out of decision making. This will require targeted consultations, capacity building, and engagement of facilitators from the excluded groups.

92. The first final under this input will include **Local Climate Adaptation Plans** (at municipal level, for each of the targeted municipalities), including georeferenced maps, highlighting key vulnerabilities and priorities of intervention in the area. The participatory process may lead to the joint identification of indicators to monitor implementation progress. The plans will highlight priorities with regards to: (i) agricultural/pastoral practices (including pasture management); (ii) forest management; (iii) sustainable land management (SLM); (iv) improved water storage; (v) infrastructure resilience; (vi) on farm diversity (in relation with the technical support provided under component 2); (vii) protected areas, etc. The resulting documents will be shared with all local stakeholders. Such mappings will also provide a comparative advantage for local stakeholders (groups of producers, settlements or municipalities) seeking to access other investments targeting climate adaptation. These plans will look at relevant economic activities and their adaptation needs (in synergy with component 2).

93. In municipalities where LAPs have already been developed, the project will build on the existing process and plans to continue engaging local communities on the topic of climate adaptation, further identifying and prioritising potential investments, and where relevant – updating existing plans based on the information collected.

94. **In-depth assessments.** Additionally, and based on the participatory processes at municipal level, the project will support the revision of both the Shkumbini and Semani rivers management plans, further taking into account the expected impacts of climate change throughout both watersheds. As part of this process, the project may support the introduction of zoning regulations to avoid development in vulnerable areas prone to flooding and erosion, based on the assessment for sensitive and exposed habitats along the riverbanks. This will consist in identifying sensitive areas

where no water extraction for irrigation will be allowed, and where limitations to other economic activities will be applied. In addition, measures will be taken in the local development plans for prevention of water pollution caused during flooding events, reposition or prevent construction of storage and production facilities for agriculture and livestock in the flood-prone areas. The revised plan will also consider the possibility to restore and/or maintain natural flood plains to allow rivers to meander and remain connected to their flood plains, and thus reduce impact of floods on communities and infrastructure (in line also with the introduction of zoning regulations).

95. Finally, the project will conduct a detailed study on specific climate vulnerabilities of Karavasta lagoon and Divjaka Karavasta National Park, with a view to also extrapolate results to other coastal wetlands in the country/region. The results of this study will also be used to update DKNP Management Plan, under the responsibility of RAPA. The revision of this management plan will also follow a participatory process, engaging all relevant stakeholders: local authorities, Fisheries Management Organization, farmers, herders, stakeholders from local tourism sectors, environmental NGOs, local associations, etc.

96. Indeed, the role of wetlands in protecting against coastal flooding is increasingly being recognised, and recent research⁸⁰ shows that wetlands have a critical role in coastal protection from flooding resulting from sea level rise (SLR) and climate change. Specifically, wetlands strongly reduce storm flooding and the resulting economic consequences that threaten homes, industry, and infrastructure. At the same time, research into the fish stock health of the Karavasta lagoon identifies a lack of documentation of climate impacts and global SLR on fish stocks due to the specific lagoon environmental particularities such as depth, limited connections with the sea, sediment dynamics, size, as well as water temperatures and productivity. The same research paper calls for efforts in specific modelling to define projections and impacts on the Karavasta lagoon.⁸¹

97. **Capacity building.** Competent authorities of the Shkumbini and Semani river basins (river basin agencies and councils) as well as in DPNK (RAPA Fier) will be trained to manage and monitor implementation of management plans and adaptation measures in particular.

Output 1.2. Priority EbA measures for integrated landscape management implemented

98. The Upscaling Ecosystem based Adaptation Strategic Framework for Albania (2020) recognizes that Albania suffers from a major gap in terms of implementation at scale, and a preference to continue with investing in ‘business as usual’ solutions with regards towards climate change adaptation, notably considering that over 90% disasters in Albania are water-related. Healthy watersheds help to offset the potential impacts of climate change in a variety of ways: (i) maintenance of baseflow during periods of drought; (ii) flood mitigation as a result of: natural stormwater infiltration, floodplain connectivity, and natural surface- and groundwater hydraulic storage; (iii) air and water temperature regulation associated with: native forested and riparian vegetative shading, and evapotranspiration; (iv) riparian and stream habitat corridors for species migration to more suitable environments; and (v) carbon sequestration in native flora and soils.

99. Under the present output, the project will support the implementation of integrated Ecosystem based Adaptation solutions to protect critical sections of targeted watersheds, in accordance with the studies and Local Adaptation Plans supported under output 1.1. Based on the participatory mapping of climate vulnerabilities, representatives of stakeholders whose activities impact the resilience or vulnerability of the shared watershed will collectively identify, formulate and prioritize preventive and protective actions (including EbA measures) to implement in order to stabilize or contain erosion, and limit the consequences of extreme events (e.g. floods or forest fires) on ecosystem services that benefit the broader community. Such ecosystem services include (but are not limited to): (i) soil fertility, in forest, pasture and agricultural areas; (ii) water retention and aquifer recharge, through a healthy and well-structured soil and heterogeneous landscape features preventing excessive velocity and surface run-off of precipitations; (iii) provision of timber and NTFP (including fuel wood); (iv)

⁸⁰ Fairchild, T.P., Bennett, W.G., Smith, G., Day, B., Skov, M.W., Möller, I., Beaumont, N., Karunarathna, H. and Griffin, J.N., (2021). Coastal wetlands mitigate storm flooding and associated costs in estuaries. *Environmental Research Letters*, 16(7).

⁸¹ Shumka, S., Nagahama, Y., Hoxha, S., & Asano, K. (2023). Overfishing and recent risk for collapse of fishery in coastal Mediterranean lagoon ecosystem (Karavasta lagoon, southeastern Adriatic Sea). *Fisheries and Aquatic Sciences*, 26(4).

biodiversity corridors that maintain the complexity and the balance of multiple trophic chains, ensuring a natural regulation of parasitic, pest and other pathological pressure under sustainable thresholds; and (v) the aesthetic value of the landscape, as an asset for an income diversification strategy that may include rural tourism.

100. Support to pastoralism through ecological and pastoral diagnosis. While excessive modification of landscape through human activities is harmful to ecosystems, depopulation can also lead to increased exposure of mountain landscapes to degradation caused by climate change. Rural inhabitants can contribute to preventing climate induced risk by maintaining the presence of grazing herds in pastures and meadows, acting as fire-cutting corridors and maintaining a heterogeneous landscape offering diverse niches and trophic chains to multiple species. Selective collection of fuel wood can also reduce the risk of uncontrolled fires (e.g. by targeting stressed and vulnerable trees). If trained and equipped properly, pastoralists can contribute to environmental monitoring and act as a first line intervention force, alleviating the burden on municipal fire brigades.

101. In line with the priorities identified in the Local Adaptation Plans in upper parts of the watersheds, the project will provide direct technical support to herders to improve or adjust their practices, evaluate the impact of these changes on the landscape and on their pastoral system, including for example the management of fodder for winter months, considering the pressure added on this resource by droughts, together with a wider reflection on pastoral practices as ecosystem conservation solutions (including to reduce the risk of forest fires through the establishment of grazing corridors, or cultural heritage protection through highland pasture management practices, etc.).

102. For this support, a field diagnosis will be conducted to understand the interactions between pastoral practices (grazing periods, grazing paths, enclosure creation, etc.) and vegetation dynamics at different scales (farm, management unit, topo-facies), with a focus on the chronological timeline of the evolution of livestock systems using pastoral resources. This will be followed by a monitoring phase, to assist breeders in their management choices and evaluate impact of changing practices, on the environment and farming system⁸².

103. Monitoring, prevention, risk management and early intervention in areas prone to forest fires. The project will support local communities increase their capacities to monitor, prevent, managed and intervene on climate related disasters, by supporting access to critical equipment in line with identified needs (from small equipment to larger machinery). Such equipment will be procured through public-calls, and will encourage focusing part Municipalities' regular budget for equipment on priority material, in particular with regards to the risk of forest fires.

104. Rehabilitation of degraded land upstream the watershed. The project may implement sustainable land management measures, depending on needs and priorities identified in the Local Adaptation Plans. Such measures include a variety of techniques that combine living vegetal material (seeds, seedlings, shoots or propagation cuttings) as well as dead biomass (branches, trunks, logs, stakes) to create physical structures that attenuate the slopes, reduce the velocity of run-off water, enhance soil permeability and ground water recharge, and improve the cohesion of topsoil layers and its resistance to erosion. Other features and layouts such as geotextiles, nets or stone walls can also be used. SLM measures typically refer to linear structures that are perpendicular to the main slope direction, but afforestation of broader surfaces can also be included in the definition.

105. The implementation of appropriate measures in each pre-identified vulnerable area will follow a meticulous decision-making process, taking into account the potential for measures to reduce erosion and runoff in critical sites, by creating progressive terraces, enabling natural assisted regeneration (e.g. on a site where a previous forest fires may have left the soil bare and exposed to erosion/landslides) and enhancing infiltration upstream the river basins.

106. Riverbank protection stabilization. Bank erosion is a natural process in stable rivers; however, it can become accelerated and exacerbated by modifications of river flow as a result of climate change. Channel incision and widening from hydrologic alteration in watershed is an example

⁸² Tools such as the Mil'Ouv methodology described in [Garnier A. *et al.* (2016). Adaptation of an ecological and pastoral diagnosis to the Albanian context: Challenges and lessons learned] can be used as reference.

of indirect bank destabilization cause. Bank degradation result in societal impacts (property loss from undermining structures and sedimentation of in-stream structures) and environmental impacts (fine sediment loading affecting water quality and aquatic habitat through fouling and eutrophication; channel widening modifying sediment transport capacity and damaging riparian habitats). Bank stabilization both protects riverbanks from degradation and prevent the lateral migration of the alluvial channel (which can put property at risk).

107. Riverbank protection relies on two approaches: (i) strengthening the bank through hard (riverbank riprap & retaining walls) and soft approaches (bio engineering and vegetation), and (ii) reducing hydrodynamic force using flow control structures. The project will rely on a mix of these approaches to consolidate riverbanks, prioritizing areas evaluated as most at risk under output 1.1.

108. **Afforestation, reforestation and naturally assisted regeneration.** Based on legal constraints (e.g. regarding the choice of tree species), but also projected changes in climate for the coming decades or century, service providers will be invited to submit offers to provide reforestation (where tree cover is restored on a previously forested area) and afforestation services (where trees will be planted as part of the Local Adaptation Plans, on previously open areas). Reforestation and afforestation plans should (i) avoid monospecific populations which are vulnerable to parasitic and other disease attacks, and (ii) maximize diversity and complementarity of tree species with the surrounding environment (e.g. providing continuity of habitat for the fauna, etc.).

109. Assisted Natural Regeneration consists in selecting and letting grow spontaneous trees in agricultural, pastoral or forest land. It is a simple technique, that is disseminated through awareness raising, some basic technical skills on conducting ANR, selecting and pruning trees, and some tools (pruning shears, marking of young plants, and possibly grafting). Afforestation and reforestation need to be thoroughly planned to consider access to water, as young trees may need regular watering. Both in ANR and afforestation/reforestation, young trees need to be protected from animals and people through surveillance and awareness raising.

110. **Biodiversity corridors.** In the lower part of targeted watersheds, former wetlands that were drained for agriculture have in parts been abandoned due to salinization combined with outmigration. These areas play critical role in offering resting and breeding shelters on birds migratory pathways. Waterbird ecological corridors are defined as linear habitats that connect two or more waterbird habitat patches in a heterogeneous landscape (Beier and Noss, 1998). In other words, it is a linear or zonal layout in the ecological environment that can communicate and connect relatively isolated and scattered ecological landscape units (i.e., patches) to increase the landscape connectivity of waterbirds. Importantly, these ecological links provide waterbirds with spaces to rest, perch, overwinter, reproduce, and migrate, and are crucial components of migratory ecosystems (Chetkiewicz et al., 2006). The establishment of waterbird ecological corridors can reduce the fragmentation of waterbird habitat landscapes, in addition to connecting scattered waterbird habitats (Zhou and Song, 2021) and providing a passage for waterbirds to move through. In turn, this allows waterbirds to freely spread and migrate between different habitats. These corridors can also increase the genetic exchange between waterbird species to prevent the isolation of waterbird populations, in addition to playing a crucial role in the preservation of minimum population numbers and the protection of waterbird diversity in the face of global climate change (Ersoy et al., 2019). The project will support the creation of such biodiversity corridors, to partially restore the continuity between Karavasta and Narta lagoons, that was lost after past drainage operations. This may also be connected to support to agro-ecotourism activities under Component 2.

111. **Coastal protection and dune stabilization,** may be implemented, using autochthonous plants (trees, shrubs and grass) to control erosion activity and stabilize pseudo-dunes. The selected plants will serve to improve the degraded habitats of the site, and in the future, to reduce the negative effects of sea storms in the surrounding areas. The rehabilitation of degraded specific habitats by climate impacts will be by considering planting of native grass and Mediterranean shrubs not only as an instrument for dune stabilization, but also as a crucial basic habitat for specific wildlife of the Protected Area. Coastal protection approaches will rely on by good practices implemented in the previous GEF/UNEP project in Kune Vain, and must rely on restricting access to more sensitive areas.

Component 2. Sustainable livelihoods in the Shkumbini and Semani river basins and their shared delta

Outcome 2. Enhanced climate resilience of local livelihoods

112. The multiple impacts of climate change on livelihoods and production systems go beyond floods, and drought and heat cycles, to also include an increase in pests and diseases and invasive species, hail and late spring frost. Under this component, the project will support the **enhanced climate resilience of local livelihoods** (Outcome 2), both by supporting ecosystem restoration through the diffusion of climate resilient practices at farm level (in line with the principles of agroecology / looking at a variety of value chains), and with income diversification thanks to (i) resilient fisheries and the management of the Blue Crab invasive species, and (ii) the integration of agro-ecotourism value chains, also as a means to promote the value of resilient landscapes. Support to resilient agriculture, fisheries and agro-ecotourism will follow a modular approach, starting with the identification, mapping and structuring of relevant VCs, followed by tailored technical assistance, and completed by access to equipment under a Value Chain Fund (VCF). The present component will both benefit from and contribute to the resilience of ecosystems promoted under component 1.

113. The targeting criteria for the selection of Value Chains (VCs) supported at local level will include among others: (i) small scale and non highly-commercial VCs; (ii) VCs around typical and local products that can be linked to agro-ecotourism and enhance the value of the local landscape; (iii) potential to engage women and youth. The list below refers to relevant VCs that exist in the project area and which the project may support (in compliance with pre-defined criteria):

- Small livestock VCs in mid-range and mountainous areas (upstream). Livestock is a primary VC in mountainous and mid-range areas of Albania (upstream the targeted river basins), and is as such critical to increase producers' resilience by providing a stable income and sustainable livelihoods. Integrating livestock in agro-forestry systems will decrease fire risk. Seasonal migration to highland summer pastures with herds of sheep and goats is part of the traditional lifestyle that is nowadays threatened by rural depopulation, and extensive grazing is below the bio-capacity of the vast common pastures, and contributes to eliminating excess flammable biomass that fuel wildfires, while maintaining an open landscape.
- Medicinal and Aromatic Plants (MAPs). Climate change is expected to disrupt logistic supply chains. MAPs are an important source of revenue for many rural households, particularly in mountain areas. Local aromatic and medicinal herbs play an important role in food seasoning and dietary diversity. In combination with other food, they are essential ingredients to add value to local culinary products (e.g dried meat, cheese, etc.). Medicinal herbs also play a role in health (prevention as well as curative purpose), and therefore also act as a first line of health care in remote areas.
- Fruit trees (apples, plums, grape, chestnuts, figs, etc.) and olive trees. Orchards and olive groves offer integrated adaptation solutions to protect soils and improve water infiltration, and offer shadow, local micro-climate, and carbon storage. Local varieties have proven more resilient than some imported varieties and their typicity has strong potential (e.g. Berat figs).
- Horticulture (beans, potatoes, etc.). The cultivated surface and production of vegetables in Albania has been increasing drastically since 2010. There has been an improved performance of the vegetable sector, especially in the case of greenhouse vegetables, correlated however with an unsustainable intensification. Main production areas are situated in lowlands, and while farmers are rather independent in their capacity to conduct and commercialize products, practices tend to be maladaptive, especially in the context of climate change, with high chemical input use (included within protected areas), and issues with water management (associated also with salinization). The project will promote a shift towards more sustainable practices, with the aim to also reduce the impact on the environment for farmers interested in promoting local varieties with reduced use of chemical inputs.
- Fisheries. The project will focus specifically on fisheries VCs in the Karavasta lagoon and surrounding area as a case study. Fisheries provide both risks and opportunities in the face of climate change. Fishing provides food security, livelihoods, jobs, and income but also carry

high risk and uncertainty because of their total dependence on climate impacted fishery resources. The activities will target small-scale fisheries operating in the coastal area and fisherfolks that are part of the Divjaka FMO.

- Agro-ecotourism actively contributes to adaptation and resilience. Indeed, it (i) enables the protection of landscapes and enhancement of ecosystem services, making them more resilient to climate shocks, by incentivizing the conservation of local landscapes (which attract tourists); and (ii) promotes local and traditional knowledge, which has a key role for adaptation, by valorizing the local patrimony and traditional cultural lifestyles. Additionally, agro-ecotourism offers a sustainable source of income, which contributes to the resilience of most vulnerable stakeholders.

114. It is expected that up to 36,000 local stakeholders (50% women, 30% youth) will benefit from the support delivered under this outcome. By the end of the project, up to 80% of directly targeted households should report (i) the adoption of environmentally sustainable and climate resilient technologies and practices, and (ii) an increased stability of income. It is also expected that the adoption of agroecology and other climate resilient practices at farm level could contribute to the resilient management of up to 500 hectares of agricultural land.

Output 2.1. Agriculture, fisheries and agro-ecotourism value chains mapped and structured

115. One key barrier to adaptation is the lack of social capital. Sufficient social capital influences the quality and set of options (or constraints) that households face when threatened by climate change. Indeed, adaptation is a dynamic social process, as the ability of societies to adapt is determined, in part, by the ability to act collectively. The project will focus on promoting the expansion of competitive and resilient value chains for a portfolio of products with confirmed market and adaptation potential, and comparative advantages for smallholder production in the project's intervention areas. Careful consideration will be given to viable "investment pathways" for smallholders in each of the prioritized products. Structuring of VCs to help aggregate supply and reduce transaction costs between buyers and farmers is also vital if smallholders and especially those making minimum initial investment are going to be able to succeed in becoming reliable suppliers. In contrast, smallholders operating in isolation face problems in accessing competitive markets and their investment pathways are challenging, often requiring much larger minimum investments to reach a viable minimum scale as a standalone producer.

116. **The first step of value chain structuring is the mapping of pre-identified VCs.** The mapping is a pre-condition to VC development, and entails the identification of all stakeholders connected to the value chain, confirmation of potential of the value chain, verification that the project target groups will benefit from its development, as well as confirming buyers' demand, climate risks analysis, analysis of players, and attractiveness of opportunities to smallholders, especially the next generation. For **agricultural value chains**, the project will support the mapping of VCs at local level (municipality and around) based on preidentified products listed above.

117. **Blue crab.** The project will support the Divjaka FMO in facing the Blue Crab invasive species issue, by seeking to develop alternative income generating activities and propose the sustainable development of the fishing sector based on a new Blue Crab Value Chain. The project will conduct a study to propose solutions to develop the value chain, by identifying potential local solutions for processing, pinpointing opportunities of outlets (both for tourism and for exportation), and could bring in expert cooks to promote the blue crab and provide training for local businesses and restaurants. The development of this value chain may build on the Tunisia success story, where a USD 24 million export industry was developed in just a few years⁸³. The Karavasta lagoon case study will act as a reference for the rest of the country, and can be replicated through future projects.

118. **Agro-ecotourism value chain mapping and analysis.** Agro-ecotourism as a value-chain will be targeted with a wider geographic scale than other project-supported VCs. While poorer and more vulnerable stakeholders are often left out from initiatives linked to agro-ecotourism, the project will

⁸³ <https://www.tp24.it/2023/09/23/english-news/from-invasion-to-opportunity-tunisia-s-thriving-blue-crab-industry/195051>

support their inclusion in this “Value Chain” by bringing together smallholders and other relevant stakeholders: a study covering all municipalities and characterizing the opportunities associated with agro-ecotourism in each of them will be conducted, and a network of stakeholders will be animated, targeting especially smaller producers, women and youth. The creation of the network will rely on local leaders, supported by previous and/or ongoing projects, as well as local Slow Food focal points.

Output 2.2. Technical assistance provided to enhance climate resilience of selected VCs

Support to climate resilient agriculture

119. Communities that are highly vulnerable to climate change have a strong need to adapt, but their risks of adopting inappropriate interventions are also significant. When interventions for adaptation are inadequate, or unsuccessful adaptation (maladaptation) occurs, vulnerability is further elevated to create a vicious cycle. In the future, large-scale agricultural models alone cannot meet the challenges of a changing climate and increased demands for food; and small-scale productions will become increasingly important due to greater environmental concerns. There is no doubt that, in the face of increasingly pronounced climatic impacts, the importance of agroecology, which puts small farmers and farms in focus, will increase.

120. Agroecology is considered a bottom-up, wider approach mostly used to describe a holistic ecological system of small-scale self-sustained farming in which environmental principles are highly apparent, regardless of payment schemes or short-term profit. In Albania, the term agroecology has a little recognition as a complex approach in farming and food system transformation. At the farm level, some agroecological principles and practices are present, mostly in small-scale farms, where traditional crop and tree varieties, and animal breeds are maintained in a mixed production system. Training courses and on-farm assistance on sustainable agricultural practices are provided by certain national and international NGOs. Unfortunately, such programs or services are not adopted by ministerial extension services, which often lack resources and skills in organic agriculture and/or agroecology.⁸⁴ A paper on agroecology in the Western Balkans⁸⁵, aiming to identify trajectories of agroecology development and capacity in the transformation toward resource-efficient agriculture and management of natural, social, and economic capital, selected the following 16 practices to represent “agroecological practices”: cover crops, crop rotation, organic fertilization, mulch, organic farming, intercropping, biofertilization, biological pest control, conservation tillage, agroforestry, green manure, compost, agroecological zones, genetic resources, and biodiversity and buffer strips⁸⁶.

121. The project will develop **targeted trainings on agroecology and other climate resilient practices** for relevant value chains across the agro-ecosystems found within the two river basins targeted by the project. The trainings will be aimed both at extension services and producers. Private sector partners (notably input companies) will also be engaged in this process, as they constitute a key reference for producers (who often rely on them rather than public extension services). This will support a shift from the business as usual model that relies on chemical inputs based intensification.

122. **Peer to peer learning and focused trainings.** The project will encourage peer to peer learning by facilitating visits from other producers to practitioners who adopt agroecology and other climate resilient practices. Additionally, specific punctual trainings will be organized for interested producers to address the gaps identified, for example on composting, vermicomposting, integrated pest management, water use efficiency, etc.

123. **Identification and promotion of adapted and resilient crop varieties (resistance to heat, salinity, etc.) and diversification.** This activity will target value chains throughout the intervention area, and will in particular support the identification of local varieties that are most adapted/resilient to climate challenges (heat, salinity, drought, etc.). The project will collaborate with relevant partners

⁸⁴ AE4EU Horizon 2020 project and the European Association Agroecology Europe (2023). [Mapping the development of agroecology in Europe](#).

⁸⁵ Ibid.

⁸⁶ Wezel, A., M. Casagrande, F. Celette, J. F. Vian, A. Ferrer, and J. Peigné (2014). Agroecological practices for sustainable agriculture. A review. *Agronomy for Sustainable Development*.

(e.g. Centre for Technology Transfer focusing on vegetable production in Lushnje) to test, identify and promote relevant varieties. The project will only support the promotion of local varieties.

Participatory review of legal acts and regulations for lagoon and coastal fisheries

124. Based on the analysis carried out by the current JICA project in DKNP, and the situation of the fish stock in the area, a review of the regulations that govern the sector in the area will be carried out. This will include: (i) an assessment of the climate related vulnerability to the wetland and coastal fishing stock (in relation to activities under output 1.1); (ii) the promotion of the integration of the coastal small-scale fishery with the ones operating in the wetland and the potential for having a common landing site; (iii) the review of the local co-management plan of Divjaka FMO in line with the carried-out assessment and to adapt to future changes; and (iv) the improvement of the local monitoring and inspection capacities to minimize the illegal fishery and lower the fishing pressure in the lagoon and related coastal area.

Promotion of local agricultural / fisheries products (e.g. with Slowfood)

125. The study on agro-ecotourism under output 2.1 will take into consideration previous similar studies done in the area, and envisage recommendations to link project supported Value Chains with agro-ecotourism (as an outlet). Based on the analysis of the products and of the touristic facilities present in the area, some local agriculture and fisheries products will be promoted. This will include:

- Promotion of use of agricultural products that are local, from non-intensive farming and that are adaptable to local climate challenges (in relation with targeted agriculture VCs);
- Promotion of use of local fishing species (including the low value ones) and the use of invasive alien species already present in the area (blue crab);
- Promotion of touristic facilities that use the Slow Food concept, that do not negatively affect the project area (do not create pollution or environmental stress in the sensible areas) and that are adapted to climate change.

Output 2.3. Financial support to climate adaptive activities provided

126. **Agriculture Value Chain Fund (VCF).** Matching grants for private investments promotion will be offered on a competitive basis to smallholders and SMEs engaged in the supported VCs, specifically targeted to stimulate resilient investments in the priorities identified in Local Adaptation Plans. This may be on investments in small commercial nurseries to increase supply of certified plant material, expansion of smallholder production to increase the supply of products in a target locality, small machinery to reduce workload and accelerate farm works in critical periods, and/or investment in collection/storage/cooling/processing facilities to absorb production thus reducing post-harvest loss. The rationale for the use of grants is to stimulate resilient investment to address identified bottlenecks, introduce innovations and/or achieve minimum critical mass in local value chains. Once the investments are successful and VCs become more dynamic, other smallholders will be able to copy them at lower risk, and without the same level of grant subsidies.

127. **Fisheries VCF.** Matching grants for private investments promotion will be offered on a competitive basis to Fisherfolks operating in the Karavasta lagoon. Based on the updates of the existing regulation in the lagoon, the VCF will support local beneficiaries with proper tools and measures to implement such regulations. This will include: supply of the FMO licensed members with the proper fishing gears that are in line with the regulations (mesh size, length, marking etc.); upgrade of the fishing weir to allow for the free movement of juveniles and adults during the required period; support to the FMO administration and the fishery inspectors with the necessary tools for proper inspection of the area; support with specific gears (crab traps) to explore the possibility of lowering the blue crab invasive population in the lagoon and the coast; etc.

128. **Agro-ecotourism VCF.** Solutions for most vulnerable stakeholders who want to engage in tourism will also be considered. A fund will be established for the development of specific activities or infrastructures related to agro-ecotourism, and that demonstrate their potential for a shift towards increased climate adaptation. Such investments may include: enhancing hosting conditions for agro-ecotourists including: structural and completion work (masonry, wooden framework, plaster, flooring,

etc.), thermal comfort (insulation, heating system, ventilation network, etc.), connecting utilities (cabling, drainage, lighting, waterpipes, lavatories, etc.), furniture; etc.

129. The project will also look at supporting municipalities implement activities in relation with agroecotourism such as mapping beach territories and limiting access to sensitive areas, designing and maintaining trail networks, maintaining information systems along trails and touristic sites with billboards and data on natural values, climate impacts and sensitive areas, etc.

Component 3. Solutions for river basin and lagoon adaptation in Albania

Outcome 3. Strategies and mechanisms for river basin and lagoon adaptation integrated at national level to enable wider replication

130. The integrated watershed management approach promoted under the project responds holistically to critical needs and priorities identified in the Fourth National Communication, in particular by relying on solutions such as Ecosystem based Adaptation, both at farm and wider landscape level. However, the Strategic Framework for upscaling EbA in Albania (2020) notes that key government ministries, including the Ministry of Tourism and Environment, Ministry of Agriculture and Rural Development (MARD) and the Ministry of Infrastructure and Energy, do not have a framework for implementing and upscaling EbA across the country.

131. Additionally, and regarding agroecology as Ecosystem based Adaptation solution implemented at farm level, it can be noted that the subject is still nascent in the country, and not integrated in any curriculum. The Agricultural University of Tirana (AUT) and the University of Korça “Fan S. Noli” are the only universities offering degrees in agricultural, food and environmental sciences. AUT, one of the largest academic institutions in the Western Balkans, offers courses in a wide range of subjects. In the Department of Agriculture, agri-environmental and organic crop production is addressed but they do not constitute a single course. Though agronomy students can attend courses on integrated rural development, marketing, rural sociology and finance, it is not compulsory to integrate them in their curricula. Strong support from institutions and a clearer perspective towards the multi-dimensional nature of agroecology are necessary to create the basis for a sustainable impact in the country.

132. Finally, the National Strategy on Climate Change (2019) has recognized the need to work towards raising public awareness of climate change. It highlights that climate change still does not get the proper appreciation in public opinion, as climate awareness at all levels remains low and cooperation between all relevant stakeholders requires further strengthening. The approaches foreseen in the strategy call for further major interventions. This includes capacity development activities at the central and local levels, as well as a communication strategy on climate change issues, addressed to the central and local levels, as well as public and private stakeholders. Achieving awareness through educational institutions is considered a priority of the development, outreach and engagement strategy on climate change. This includes designing educational modules on climate change and incorporating knowledge on climate change into relevant curricula.

133. The present component will seek to address these gaps, by mainstreaming river basin and lagoon adaptation solutions based on this and other projects’ experience. To do so, Lumi will consolidate the information generated by studies under the project, share lessons through trainings and awareness raising targeting a wide range of stakeholders, and establish a framework for the promotion of EbA in the country (including by supporting dedicated curricula in the university).

Output 3.1. Relevant knowledge products prepared and disseminated to key stakeholders

134. Activities under this output will consist in documenting project activities and their impact, while consolidating information generated by the project, and other relevant initiatives in the countries, in order to identify best practices for river basin and lagoon adaptation, and facilitate their replication at national and regional level.

135. **Partnerships with universities to generate knowledge and international collaboration.** In particular, the project will promote the engagement of national and international (regional) postgraduates/master students to document thematic project experiences (agroecology practices,

participatory vulnerability analysis, participatory watershed management, integrated landscape management, etc.). The final products will be the thesis produced by each student, which will adopt an analytical approach and seek to propose conclusions that may be useful for policy discussion and decision making.

136. **Strategic documents.** At the same time and based on studies generated by the project, a number of strategic documents will be consolidated such as: (i) Strategy for river basin adaptation in Albania; (ii) Strategy for lagoon adaptation in Albania; and (iii) EbA strategy and action plan in Albania. These products will be discussed and adopted by relevant stakeholders at national and local level.

137. **Communication on project results.** Specific communication packages on river basin adaptation, lagoon adaptation, and EbA will be designed with the support of communication companies, targeting the local and national public. Lessons will be shared through a series of information and public discussion workshops. The project will also consider networks through which to document and share these lessons at subregional level.

Output 3.2. Local and national institutions supported in the creation of mechanisms and strategies for river basin and lagoon adaptation

138. **Capacity building on integrated adaptation solutions.** Based on the products elaborated under the previous output, the project will organize a series of capacity development workshops targeted at policy and decision-makers, at national and municipal level, with the aim to sensitize stakeholders on the integrated approaches supported by the project for river basin and lagoon adaptation, together with EbA. Up to 400 individuals, representative of institutions, local authorities, monitoring and development agencies, local organisations, etc. will participate.

139. **Creation of curricula dedicated to adaptation at the Agricultural University of Tirana.** Additionally, the project will support the creation of innovative curricula focused on climate change and adaptive approaches such as agroecology at the master's level within Agricultural University of Tirana (AUT). This cross-cutting specialization will be offered in disciplines such as agriculture, forestry, natural resource management, spatial planning, social science and more. Furthermore, the project will involve the engagement of Universities by engaging master students in the evaluation of project activities (under Output 3.1).

B. Project benefits

140. Albania's primarily rural population is very vulnerable to the effects of climate change, with extreme rain events frequently resulting in destructive floods, while agricultural livelihoods and drinking water supplies are threatened during dry periods, and production systems are under increased pressure of pests and diseases. As temperatures rise, climate scenarios predict more severe and frequent occurrence of these extreme conditions, along with a reduced total annual rainfall. These changes place Albania's population at risk.

141. The project aims to provide economic, social, and environmental benefits, with particular attention to the most vulnerable communities and groups, including through gender considerations. EbA, the approach at the core of the project, can typically yield multiple benefits, and has long supported social challenges such as food and water security, disaster risk reduction, together with adaptation to and mitigation of climate change, while improving sustainable livelihoods and protecting ecosystems, food security and biodiversity. IFAD, as Implementing Entity, relies on its Social, Environmental, and Climate Assessment Procedures (SECAP) to enhance social, environmental, and climate resilience throughout the project. The project is expected to benefit at least 36,000 vulnerable people in 23 municipalities.

142. **Economic benefits.** The integrated implementation of Ecosystem based Adaptation at watershed and farm level will ensure the sustainability of ecosystems and thus the greater resilience of farming systems, with a direct impact on livelihoods. The project's main economic benefits rely on: (i) improved climate change adaptation of farmers with stabilized or increased incomes; (ii) improved resilience of fisherfolks livelihoods with increased incomes thanks to the development of the blue crab value chain and the adoption of more sustainable fishing practices; (iii) the restoration and protection

of local landscapes in relation with the promotion of agro-ecotourism activities throughout the project's area of intervention. Additionally, activities under component 3 will reinforce the pool of national expertise on climate adaptation and agroecology, and support processes to streamline resource mobilization around river basin adaptation, lagoon adaptation and EbA (together with the support to Local Adaptation Plans under Component 1).

143. Non quantifiable economic benefits will also be derived from the enhanced ecosystem services associated in particular with ecosystem restoration practices supported under the first component, but also with climate resilient farming practices supported under the second component, including among others: reduced soil erosion, increased carbon sequestration (through reforestation, assisted natural regeneration and SLM), avoided water runoff and biodiversity losses, avoided forest fires, etc.

144. **Social benefits.** The project will target vulnerable smallholders, and especially those below the threshold for already existing subsidies from the Government. The project's targeting strategy will ensure that services are provided in a fair, equitable and inclusive manner. The social benefits of the project are multiple: building social capital, economic empowerment and social inclusion (especially of women, youth and vulnerable households). The project relies on participatory and bottom-up processes, bringing together a wide range of stakeholders to participate in dialogue, decision-making and implementation, with the aim to lead transformative processes for more resilient landscapes, in particular by supporting a common understanding on the interrelation of landscape units that form the wider watershed (e.g. upstream and downstream areas).

145. The project will put special emphasis on addressing gender inequalities and empowering women, as it is vital to meeting the challenge of reducing the climate vulnerability of livelihoods and ecosystems in Albania. This will be done in three ways: (i) recognition of gender differences in adaptation needs and capacities as part of landscape and VC planning processes; (ii) gender-equitable participation and influence in adaptation decision-making processes; (iii) gender-equitable access to benefits resulting from investments in adaptation. In addition, special attention will be given to promoting a more equitable balance in workloads and in the sharing of economic and social benefits between women and men, for example by introducing time and labour-saving technologies. Finally, female role models will be promoted. Fifty percent of the project's beneficiaries will be women.

146. **Environmental benefits.** The project primarily targets the resilience of ecosystems, using EbA both at wider landscape and at farm level, thanks to interventions supported under component 1 and 2. The rehabilitation and protection of fragile and degraded ecosystems through an integrated watershed approach will yield direct environmental benefits including among others: reduced soil erosion, increased carbon sequestration (through afforestation, reforestation, ANR and SLM), avoided water runoff and biodiversity losses, avoided forest fires, etc.). The project notably targets the Divjaka Karavasta National Park, which includes the first Ramsar site of Albania, and will aim to increase climate resilience of the area while reducing the drivers of environmental degradation that result from maladaptive and unsustainable agricultural practices.

C. Cost Effectiveness

147. The project is based on an integrated approach, consisting in concentrating investments within consistent landscape units, to maximize impacts, and hence cost effectiveness. Indeed, this approach both allows to guarantee multiple benefits thanks to the complementarity of interventions, and to generate downstream benefits thanks to integrated planning and management. At the same time, the project relies on Ecosystem based Adaptation which provides alternatives that, compared with traditional infrastructure and engineering projects, are both cost-effective and capable of providing multiple benefits, and increasing resilience.

148. Under its first component, the project promotes locally led adaptation planning, and the implementation of EbA measures together with improved landscape management (pastoral management and reduction of forest fires). These low-cost approaches both guarantee local ownership and replicability of actions, while restoring ecosystem services and protecting the landscape against possible climate induced disasters (floods, landslides, fires). They are also cost

effective in the sense that they avoid future and higher costs associated with degradation and loss of ecosystem services.

149. Under component 2, the project will support the sustainable and resilient development of local agricultural, fisheries and tourism value chains, by promoting the principles of EbA/agroecology, with direct environmental and social benefits. As mentioned previously, EbA practices and agroecology in particular have proven to be cost-efficient, which is a key incentive for the long-term adoption and sustainability of these climate-resilient practices and technologies by the farmers and local stakeholders. In particular, the type of climate resilient agricultural practices supported under the second component tend to show net additional incomes under the foreseen climate scenarios, meaning that farmers adopting these practices are likely to be better off in the long run.

150. Finally, Component 3, focused on knowledge integration and policy support also contributes to the cost-effectiveness of the project, by supporting the establishment of strategies for river basin adaptation, lagoon adaptation and the diffusion of EbA in Albania, enabling to streamline resource mobilization and allocation, resulting in a more cost-effective and coherent approach at national and local level. At the same time, investments in knowledge, learning and curricula on climate adaptation and agroecology with the Agricultural University of Tirana will support the upscaling of these cost-effective and resilient practices in the country on the long term.

151. The project proposal preparation will include a comprehensive cost-benefit analysis of all components and activities, as well as an alternatives analysis to ensure cost efficiency. This analysis will assess the financial implications of each component, taking into account factors such as implementation costs, maintenance requirements, and long-term sustainability.

D. Strategic alignment

152. **Background.** Albania ratified the United Nations Framework Convention on Climate Change in October 1994, and it entered into force on 01 January 1995. Albania ratified the Kyoto Protocol of the UNFCCC on 01 April 2005. Albania holds the status of the Non-Annex I Party to both these legal documents. Albania signed the Paris Agreement on 22 April 2016, and ratified it on 21 September 2016.

153. The project targets key objectives of the **Albania revised NDC (2021)**, and is directly contributing to adaptation measures identified for the following: *Strengthening the enabling environment; Adapting the supporting built environment (for the water sector); Adapting the supporting natural environment (both with the adoption of integrated, ecosystem-based approaches (EbA) and/or nature based solutions (NbS), together with the Promotion of climate-smart and sustainable agriculture, forestry and fisheries.* The project will also align on revised the NDC priority to *Promote gender equality in terms of climate change adaptation* by mainstreaming gender considerations.

154. The **Fourth National Communication** report to the UNFCCC (2022) largely builds on the **Third National Communication** to the UNFCCC (2016). Both present national circumstances, greenhouse gas inventory, and an assessment of the country's vulnerability and adaptation to climate change, highlighting the sectors and regions that are most vulnerable to climate change impacts, while providing an analysis of the potential adaptation measures. The Fourth National Communication includes a detailed focus on watershed management approaches through the example of the Vjosa river basin, which can be extended to other river basins. The present project will directly implement priority measures identified in both documents, by replicating the watershed approach recommended in the Fourth National Communication, and supporting an integrated approach touching upon *green, soft* and to a limited extent *grey adaptation* as outlined in the TNC.

155. The project contributes to the objectives and priorities set out in the following documents:

- **The National Strategy for Climate Change and Action Plan 2020-2030** is the main strategic document on addressing climate change in Albania, and was approved by the Albanian Government in July 2019. It is designed to support the implementation of EU legislation on environment and climate, aimed at strengthening coordination across sectors to climate adaptation measures, environmental protection, and sustainable development. The

NSCC focus is put on mitigation and adaptation of climate change in Albania. The preparation of the strategy has been completed together with the national adaptation and mitigation plans and the Law on Climate Change.

- **The Law on climate change** (Law No. 155/2020 "On Climate Change") provides in Article 67 Point 1/b the identification of appropriate measures to reduce vulnerability and increase the recuperative abilities to climate change of the relevant sectors and their implementation. The law includes an obligation for Ministries to identify climate adaptation measures at the program/objective/project/product and activity level and became part of the annual guideline for the preparation of MTBP 2018–2020 issued by the Minister of Finance.
- **The National Strategy for Development and Integration 2022-2030** includes "*resilience and adaptation to climate change*" as part of its policies. The vision of this policy is "a strong and stable economy for Albania through a path of low emissions and green economic growth". The second goal of this Policy is: "*To ensure the protection of the country from the effects of climate change through adaptive measures with a focus on the coastal area until 2030*".
- **The Strategy of Agriculture, Rural Development and Fisheries, 2021–2027** includes in its vision "*To enable the rural areas and the agriculture, agro-industry and fishing sectors in Albania (...) to better withstand the challenges related with climate change, biodiversity, and the green economy*". The First Strategic Policy includes as second General Objective "*the Sustainable management of natural resources and taking measures to mitigate the negative effects as a result of climate change*".
- **The National Strategy for Integrated Water Resources Management (2017)**, which objectives include: effective management of natural disasters; provision of flood protection (preliminary flood risk assessment, maps of flood risk areas, flood risk map, flood risk management plans), and preparing for drought and water constraints.
- **The Water Resources National Strategy 2018-2027**, includes amongst its strategic objectives in the river basin integrated management: "*Erosion Protection in the coastal areas*" and "*Plans and Measures related to the effects of climate change*".
- **The Convention on Biological Diversity Strategy and Action Plan (2014)**.
- **The Land Degradation Neutrality Target for Albania and Soil Erosion Measurement Norms and Standards (2019)**.
- **The National Strategy for Protected Areas 2019-2023 (NSPA)** serves as the overarching framework for managing and conserving Albania's rich natural heritage. It outlines a comprehensive approach to safeguarding biodiversity, enhancing ecological resilience, and promoting sustainable development within protected areas.
- **The Forests Policy Document 2019-2030**, includes: Policy No. 10 "Protection of Forests" Measure 32 "Strengthening the forest fire protection capacities for the municipalities and protected areas administration" and for the Policy No. 12 "Regeneration of forests", Measure No. 37 "Plan for the forestation in damaged area with new techniques and maintenance".
- **The National Strategy and Action Plan on Gender Equality (2022-2030)** reflects the priority and special attention that the Government of Albania pays to achieve gender equality as well as ending gender-based violence and domestic violence, by taking into account women and girls adequate treatment as prerequisites to sustainable development.

156. At subregional level, the project is aligned with the **Green Agenda for the Western Balkans** and associated action plan, envisaged by the European Green Deal, which was endorsed at the Summit in Sofia in November 2020 by the Western Balkans leaders. The project is aligned with the following two pillars of the Green Agenda: pillar 3 – *Biodiversity, aiming to protect and restore the natural wealth of the region* and pillar 5 *Sustainable food systems and rural areas*.

157. The project will contribute directly to the following **Sustainable Development Goals**: SDG 1 (No poverty), SDG 2 (Zero hunger), SDG 5 (Gender equality), SDG 8 (Decent work and economic growth), SDG 12 (Responsible consumption and production), and SDG 13 (Climate action).

E. National Standards and Environmental and Social Policy

158. Albania has specific legislation requiring the need for an Environmental Impact Assessment (EIA): the framework Law No.10431 of 09.06.2011 “On Environmental Protection” amended, which aims to reflect EU Directives and best practice towards environment management, and establishes the environmental protection framework, institutional framework and competencies, environmental impact assessment principles and environmental permitting. Based on the provisions of the legal framework for EIA procedure in Albania, activities under the present project will not need to follow the in-depth EIA procedure, nor the preliminary EIA procedure.

159. **Biodiversity and Protected Areas.** The MTE is responsible for natural resources conservation and management in Albania, including the protection of the environment, forest resources, biodiversity, pastures and watercourses. Law No. 81/2017 “On Protected Areas” defines the different categories of the PAs in Albania, and their management prescriptions. Under this Law, for the National Parks / Category II (Divjaka Karavasta is a national park), a number of restrictions apply. Other activities are conditioned to the obtention of environmental permits and include amongst others: *the change of natural state of water reservations, sources, lakes and wetland systems, scientific research and monitoring programs, utilization and temporary storage of agricultural chemicals.*

160. **Other relevant laws** that may apply to the project include, amongst others: Law no. 139/2015 “On Local Self-Government, Article 26, point 1, At the local level, the municipality provides measures to protect air, soil and water quality from pollution; Law no. 156/2013 for changes on law no.111/2012 “On Integrated Management of Water Resources”; and DCM no. 342, 04.05.2016 “On the approval of territorial boundaries of water basins in the Republic of Albania, the center and council of each one”.

F. Duplication

161. Following the consultation process, the absence of risk of duplication with other projects or programmes was confirmed. The project is the result of a thorough national assessment of the climate change adaptation needs and recommended course of action. The needs assessment process conducted in the preparation of the project and the detailed analysis of the synergies and potential overlaps with other projects, as displayed in the table below, shows opportunities for complementarity, synergies and learning from other relevant initiatives, with no risk of geographic overlap.

Table 13: Analysis of risks of duplication

Other projects/partners	Summary	Geographic overlap	Identified synergies
WBIF/EIB “Improvement of Flood Protection Infrastructure on Erzen-Ishëm, Shkumbin, Seman and Vjosa Rivers” by 2030 EUR 105,512,500	This project seeks to increase the level of flood protection management in Albania to prevent damages to human health, flora, fauna and the economy. Specifically, the project entails the construction/rehabilitation of longitudinal embankments, weirs and cross panels along rivers Erzen-Ishem, Shkumbin, Seman and Vjosa.	Erzen-Ishëm, Shkumbin , Seman and Vjosa Rivers	The present project will build on the outputs (risk analysis) of this project and complement interventions by supporting “Green adaptation” through Ecosystem-based Adaptation measures to reduce flood risk.
World Bank / Climate Resilience Agriculture Development Project in Albania (CRAD) 2024-2029 EUR 64,600,000 loan	The project includes the following components: (i) Promoting Climate Smart Agriculture and Access to Markets; (ii) Enhancing Compliance with Food Safety and Quality Standards; and (iii) Strengthening Evidence-based Analysis Capacity of MARD and Municipalities. Under the first component, the project includes dedicated support to enhancing irrigation and drainage systems in Divjaka and Lushnje Municipalities. The project targets highly commercial VCs.	Whole country with dedicated support to irrigation/ drainage in Divjaka and Lushnje municipalities.	Benefits in terms of improved irrigation systems brought under this WB project may reach Lumi’s target group. Complementarities are guaranteed by the different target groups receiving support to climate resilient agriculture, with WB targeting commercial VCs, while Lumi will support the development of small scale VCs with poorer producers.
GIZ - Sustainable Development of Rural Areas in	The project aims to build an enabling policy environment, establish innovations in agriculture and rural tourism and replicate them across the	Whole country with targeted support to	The present project builds on lessons from ongoing GIZ experience and will seek

Albania II (Sustainable Rural Development II) 2023-2027 EUR 11,850,000 (Co-financing EUR 4,150,000)	market. In agricultural production the project focuses on greenhouse vegetables, fruits and dairy, adopting biological pest control to increase quality and production. In rural tourism the project promotes outdoor sports, agritourism and destination management, for instance, several agritourism providers and a tour operator have created a wine tour to attract international tourists. The project also aims to transform the entire agriculture and rural tourism sector into an innovation and knowledge-driven system.	agriculture VCs in Lushnje and Korce	complementarity in VCs supported (again with Lumi supporting more vulnerable and less commercial producers)
GCF/UNDP “Advancing Albania’s Planning for Medium and Long-Term Adaptation through the Development of a NAP Process” Readiness 2019 – 2023 USD 2,997,907	The project supports the Government increase its capacity to address the country’s climate change vulnerabilities. Specifically, to develop a national plan for CCA through (i) strengthening of a national mandate, strategy and steering mechanism that focuses on assessing and addressing capacity gaps; (ii) the development of a NAP Strategy action plan document and its implementation plan; and (iii) the development of financing, monitoring and evaluation strategies to ensure that capacities and funding options are institutionalized for the long-term sustainability of adaptation planning beyond project life.	Albania	The present project will build on the ongoing process and particularly methodology to support to the preparation of Local Adaptation Plans at municipality level.
JICA/Capacity Building for Improving Ecosystem-Based Management for Divjaka-Karavasta National Park 2021-2024 EUR 1,500,000	The project aims to prepare a model on ecosystem-based management of PAs based on the experiences of DKNP. The project is working in several topics including: (i) Biodiversity Monitoring; (ii) Sustainable Fisheries; (iii) Sustainable Agriculture; and (iv) Eco-tourism and Environmental Education.	Divjaka-Karavasta National Park (Fier county)	The JICA project yielded useful outputs and lessons for possible future interventions supporting DKNP which the present project may build upon.
GEF/UNDP - Mainstreaming Biodiversity in Coastal Development and Planning for Sustainable Tourism Development 2023-2027 9,300,000	The project’s objective is to position the development of the tourism industry in Albania as a positive influence on the status of biodiversity in coastal Key Biodiversity Areas, and as pillar of sustainable livelihoods, through mainstreaming biodiversity in tourism planning and development .The project includes two technical components: Component 1: Enabling framework for mainstreaming biodiversity into coastal tourism development; Component 2: Catalyzing biodiversity-friendly coastal tourism	Albania’s coastal zone, (specifically around Key Biodiversity Areas), including (not priority) DKNP .	Based on exchanges with UNDP during formulation, this project includes very limited support to tourism in DKNP (e.g.. installation of binoculars) with limited possibility for duplication as DKNP has not been retained a priority for the project. The Lumi project may build on lessons from this initiative.
SCCF/UNEP - Building the Resilience of Kune-Vaini Lagoon through Ecosystem-based Adaptation (EbA) 2016-2020 USD 1,900,000	The project aimed to increase the capacity of government and local communities living nearby the Kune Vain Lagoon System (KVLS) to adapt to climate change using an integrated suite of adaptation interventions, including EbA. The outcomes of the project were improved technical and institutional capacity of policy- and decision-makers in Albania to address climate change risks through the implementation of adaptation interventions, including EbA; demonstration of adaptation interventions within the KVLS; improved awareness and knowledge on EbA.	Kune-Vain Lagoon (Lezhë Country – North Albania)	The present builds in part on positive lessons from this project, in particular for EbA measures for lagoon adaptation.
“EU4Nature” UNDP and Agenzia Italiana per la Cooperazione allo Sviluppo (AICS) 2023-2028 EUR 7,552,388.00	The project will support Albania in improving the management of protected areas with a focus on areas particularly important for biodiversity, as part of preparing for the Natura 2000 network. The overall intervention targets improved effectiveness of management of protected areas. The Action will strengthen the capacities of relevant institutions, revise and compile new management plans for protected areas and for the use of forest and non-timber forest products, support the establishment of performance	Protected Areas throughout the country	The project will build on this experience specifically for activities that may be implemented within protected areas

	monitoring systems, support the implementation of conservation measures, support CSOs in implementing nature-based solutions and measures against environmental crime, and raise awareness on Natura 2000 and conservation		
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G. Learning and Knowledge Management

162. Effective Knowledge Management (KM) – including the collection, generation and dissemination of information – is an important component of climate change adaptation. Learning from adaptation activities and being able to transform knowledge into products that are targeted at various audiences is essential to effective climate change adaptation.

163. The project is conceived to generate lessons on tools, methodologies and approaches for climate adaptation in river basins and lagoons, which could be replicated in the country but also at subregional level. The project will document its experience on piloting agroecology practices, mapping climate vulnerability, proposing nature-based solutions for integrated landscape management, integrating pastoral and ecological practices, etc. Under component 3.1., specific knowledge products will be generated, including master students and postgraduate thematic thesis, as well as communication products on climate change, river basin adaptation, lagoon adaptation and EbA.

164. The KM system, integrating planning, M&E and communication, will have the following objectives: (i) continuous information to improve project performance; (ii) identification, analysis, documentation and dissemination of best practices; (iii) interactive and inclusive communication with all stakeholders; and (iv) visibility for policy dialogue and advocacy. To this end the project will establish an overall results-based M&E/KM strategy.

165. The overall responsibility for KM and communication will rest with the project’s M&E Officer, who will coordinate with other members of the Project Implementation Unit (PIU), Government counterparts and other project stakeholders to identify case studies that illustrate the impact that the project has had on improving the climate resilience of rural livelihoods and centralize key information generated. More generally the M&E Officer, together with the rest of the PIU, will process the knowledge generated into an appropriate format for the general public and disseminate it. This will be done through workshops and seminars, electronic/digital media (radio, television, and internet – emails and websites); social media (YouTube, Facebook, Instagram, etc.), and print media (flyers, brochures, reports, working papers, monographs, manuals).

166. The project will also document lessons learned and disseminate knowledge products through annual performance reports (APRs), briefing notes, infographics & flyers, knowledge platforms, project performance reports (PPRs), the mid-term evaluation report (MTR) and terminal evaluation report, project stories and project videos.

H. Consultative Process

167. The identification of the present concept note was initiated by the Food and Agriculture Organization of the United Nations (FAO) at the request of MTE, and pursued by IFAD in a hybrid manner. From September to November 2023, a number of consultative meetings were conducted remotely with national counterparts. A joint IFAD and FAO in-country mission took place from 23 to 27 October 2023. A wide range of stakeholders was consulted, both at national and local level, including relevant Ministries and Government Agencies (Ministry of Tourism and Environment, Ministry of Agriculture and Rural Development, Water Resource Management Agency, IPARD), Extension Services (Agriculture Extension Agency Lushnja (AREB), Centers for the Transfer of Agricultural Technologies of Lushnja and of Fushe-Kruje), Technical and Financial Partners (EU, FAO, GIZ, JICA, UNDP, UNEP, UNWomen, SIDA, World Bank), NGOs/CSOs (Bird Protection League, HorizontEU, INCA, PPNEA, Urban Research Institute), Private Sector (input company agronomist), resource persons, researchers and Accademia (Agriculture University of Tirana), as well as stakeholders from Divjaka and Lushnje municipalities (Divjaka mayor and municipality’s chief engineer, Fier Regional Agency for Protected Areas administration, Fisheries Management Organization, women farmers,

park ranger, local women association). Special attention was given to ensure a gender and youth focus in these consultations. As such, institutions dealing with gender and youth issues, both public and from the civil society, were consulted. The appropriateness of time and location of consultation meetings, especially for women, was taken into account.

168. Key inputs from these consultations and from the mission include the following:

- An integrated landscape management approach following the delineation of the two river basins (Shkumbini and Semani) enables covering a wide range of livelihoods, including highly climate vulnerable rural dwellers in mid-range and mountainous areas. The variety of landscapes calls for a number of relevant EbA measures, from riverbank protection and flood management measures, to anti-erosion measures and forest protection (forest fire management). Sustainable pasture management can be considered in relation also with the development of rural tourism covering a larger variety of landscapes and seasons. This type of geographic approach is very much aligned with Albania’s Fourth National Communication, which showcases the Vjosa river basin as a reference.
- Cross sectoral approaches and multidisciplinary dimensions are at the centre of climate adaptation solutions in Albania. For example, the water sector, which is critically vulnerable to climate change, sees the involvement of a large number of institutional stakeholders, with the Water Resources Management Agency at the centre, but also the Ministry of Agriculture and Rural Development in charge of primary and secondary irrigation systems, and Municipalities in charge of tertiary irrigation. Similarly, the need to find integrated solutions that serve both the resilience of ecosystems and livelihoods requires to engage with all relevant sectors and stakeholders, including environment in general, forests, farms, pastures, fisherfolks, etc. A single sector project cannot yield a sufficient level of impact.
- Climate challenges in Divjaka Karavasta are essentially characterised by the increasing strain on water resources that results from higher temperatures and more erratic rains (prolonged drought periods). This further translates in an increased water demand for agriculture and horticulture in particular, all while resources availability is decreasing. At the same time, the lagoon suffers from a reduced intake of freshwater (due to drainage systems and water use for agriculture) combined to increased evaporation associated with raising temperatures, which in turn increases the salinity of the lagoon. These changing conditions are ideal for the proliferation of the invasive Blue Crab which is threatening the livelihoods of local fisherfolks. Climate change is also associated with the increase in pests and diseases affecting agricultural production, to which farmers tend to respond with an increased use of pesticides.
- The project needs to properly balance between “soft” support (through studies, planning processes, trainings, etc.), and “hard” interventions. As learned also in past experiences, stakeholder engagement can be successfully achieved by demonstrating concrete project outputs beyond what can be perceived as less tangible support. The expectation for this project is hence to include a consistent menu of concrete interventions.

I. Justification for funding

169. The justification for the requested funding lies in the comprehensive assessment of the full cost of adaptation associated with implementing the present project. The project is focused on the climate resilience of vulnerable landscapes and populations of Albania. Thanks to Adaptation Fund supporting the full cost of adaptation of activities planned under the project, the present initiative will bring about a paradigm shift by which Albania will establish a consistent framework for ecosystem and livelihood resilience based on integrated landscape management at river basin or lagoon scale. The table below highlights the baseline and alternative adaptation scenario under the project.

Table 5 - Baseline and alternative adaptation scenario the Adaptation Fund will help materialize

Business as usual scenario	Adaptation Fund additionality
Component 1. Integrated management of the Shkumbini and Semani river basins and their shared delta through Ecosystem based Adaptation	
The climate induced modifications of the water cycle affect landscapes throughout the watershed. In	- Up to 23 Local Adaptation Plans established in 23 municipalities, through a participatory process

<p>upstream areas, accelerated snowmelt results in decreased water storage and water stress in highland pastures, while increased runoff coupled with extreme precipitation events affect downstream areas through land degradation, possible landslides and riverbank erosion, together with an increased occurrence of floods. In low lying downstream areas, flood risks are particularly high, while sea level rise coupled with increased irrigation as a result of water stress lead to salinization of land and water resources. Sea level rise and increased occurrence of storms also translate into coastal erosion. In the whole area, increased occurrence of drought together with increased occurrence of pests and diseases fragilize forests, making them more prone to fires. Adaptation solutions rely only on costly infrastructure and are not implemented in an integrated manner, resulting in low impact.</p>	<ul style="list-style-type: none"> - Detailed climate impact studies conducted for the Shkumbini river basin, Semani river basin and Karavasta lagoon and reflected in corresponding management plans - Pasture management, Fire management, Eba measures encompassing reforestation, RNA, riverbank protection, dune stabilization, biodiversity corridors, etc. increase the resilience of more than 3,000 hectares of watershed against climate risk such as landslides, floods, forest fires and coastal erosion, while enhancing water infiltration and groundwater recharge.
<p>Component 2. Sustainable livelihoods in the Shkumbini and Semani river basins and their shared delta</p>	
<p>Climate induced ecosystem degradation directly affects production systems with loss of topsoil and decreased water infiltration and recharge. Mountain and mid-range livestock productivity is impacted by heat waves and reduced fodder as a result of drought cycles. Fruits, olives, chestnuts and horticulture products vegetative cycle are disrupted by changes of seasonality and increases in pest and diseases, and farmers resort to unsustainable and maladaptive increase of chemical inputs use, resulting in runoff to nearby rivers or wetlands. The combination of droughts with heightened water needs results in increased irrigation, putting a further strain on water resources and increasing salinization in coastal areas.</p> <p>At the same time, lagoon fisheries' productivity decreases as a result of climate induced increase in salinity and water temperature, favoring the proliferation of invasive species such as the Blue Crab, with no outlet.</p> <p>Ecosystem degradation translates in a loss of attractivity of the whole area and income derived from tourism is lost.</p> <p>As a result of these combined impacts, smallholders resort to maladaptive practices and/or outmigration, further accelerating the degradation of local landscapes, particularly in mountainous areas.</p>	<ul style="list-style-type: none"> - Mappings and studies are conducted at local level for several small-scale agricultural VCs, and for the agro-ecotourism VC to analyze their climate vulnerability and understand local dynamics and linkages. - A dedicated study and VC analysis and development is conducted for Blue Crab, and a marketing campaign is launched to promote it. - A review of the regulations that govern the Fisheries sector in Divjaka is carried out to improve management practices - Extensionists and service providers are trained on agroecology and climate resilient practices tailored to these VCs and deliver services to producers, benefitting to over 10,000 farming households or close to 36,000 people. Technical services are also supported to identify and promote local resilient and adapted crop varieties. - Peer to peer exchanges are organized and specific trainings are also delivered to 500 producers, leading to the increased resilience of at least 500 hectares of agricultural land. - 800 grants are delivered under the VCF for agriculture, 100 grants for fisheries and 100 grants for agro-ecotourism to enhance the development and resilience of targeted VCs. 23 municipalities are also supported for small activities around agro-ecotourism. - 80% of targeted households report the adoption of environmentally sustainable and climate resilient technologies and practices, directly contributing to their enhanced climate resilience - 80% of household targeted have stable and sustainable sources of income (increasing their adaptive capacity).
<p>Component 3. Solutions for river basin and lagoon adaptation in Albania</p>	
<p>Albania does not develop strategies for integrated climate resilient looking at cross sectoral solutions, such as integrated landscape management or EbA. The country continues to promote business as usual and short term development, leading to maladaptive practices with negative impacts on the environment.</p>	<ul style="list-style-type: none"> - 10 master students are engaged to document project activities and approaches. - Studies and communication products are developed based on project results and approaches, including river basin adaptation, lagoon adaptation and EbA and information is shared at local, national and regional levels. - The Strategy on river basin adaptation, Strategy on lagoon adaptation and Strategic framework and action plan for EbA in Albania are developed and approved.

	<ul style="list-style-type: none"> - 400 individuals, representative of institutions, local authorities, monitoring and development agencies, local organisations are trained on the same topics - Dedicated curricula on climate adaptation and agroecology are created in AUT
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J. Sustainability

170. The project is based on and driven by sustainability principles that are promoted throughout its activities by i) emphasising the active participation of communities in the implementation and management of project interventions, as a means to also ensure ownership of the project and its outcomes by all relevant stakeholders; ii) strengthening the community's technical capacity to ensure stakeholders have adequate knowledge and skills to maintain the benefits of the project interventions; iii) promoting the adoption of cost-effective and environmentally friendly and long-lasting solutions to help restore, improve and/or protect the ecosystem; iv) training communities on agroecology and other climate-resilient agricultural techniques and v) ensuring ownership of project activities by all project stakeholders (smallholders, extension services, municipalities, national institutions, Ministries and project partners).

171. Additionally, the project is fully aligned on relevant policies and strategies at national level, but also with the findings and recommendations from the IFAD agroecology stocktake study⁸⁷. By adopting integrated and holistic approaches, such as EbA and agroecology, and focusing on activities that promote community ownership, responsible governance, and enabling policies, the project maximizes its potential for sustainable food systems transition and development effectiveness.⁸⁸

172. **Environmental sustainability** is embedded in the project, notably through the adoption of an Ecosystem based Adaptation approach both at farm and landscape level, respectively through the integrated planning of sustainable land management measures and the promotion of agroecology. The project will rely on participatory approaches to fully address issues that affect the long-term sustainability of natural resource management and the welfare of local communities.

173. **Replicability** will be further ensured by a strong ownership of local stakeholders, starting with the capacitation of local extension services and private sector providers to ensure continued delivery of technical support at local level. In addition to developing the social capital of targeted communities, the project will encourage peer-to-peer exchanges and learning, while also developing dedicated curricula with the University and involving master students in documenting project approaches. The learning process at the core of the project is another guarantee of replicability, facilitating the capitalization of methodologies, tools and approaches and their replication within the targeted area, but also beyond, at national and subregional level.

K. Environmental and Social Impacts and Risks

174. The environmental and social screening presented in the table below provides a brief overview of the risk assessment that will be further detailed in the ESMP and evidences the minor risks related to the project, and for which additional detail and dedicated mitigation measures will be integrated into the project. As a result of these elements, the project has been identified as **Moderate risk** with regards to socio-environmental aspects.

175. During the project preparation phase, the proposal will undergo detailed assessments in accordance with both the Adaptation Fund and IFAD's SECAP, as well as gender policies. To ensure transparency and inclusivity, the project proposal stage will engage in further public consultations at ministerial levels, with beneficiaries, donor and partner organizations, NGOs, civil society, academia,

⁸⁷ IFAD (2021). [Stock-take report on agroecology in IFAD operations: An integrated approach to sustainable food systems](#).

⁸⁸ The IFAD stock-take shows that Adaptation to Climate Change, Environment and Natural Resource Management, Gender Equality and Women's Empowerment, Food Security, Human and Social Capital, Sustainability and Effectiveness all have higher ratings in the AE-based projects (rating given during supervision and completion of IFAD's projects), showing the comparative advantage of integrated agroecology approaches in achieving IFAD's development effectiveness targets and Adaptation Fund mandate.

and women and farmer associations in the country. Comprehensive records will be maintained as evidence of all consultations conducted.

176. The project aims to identify and implement priority adaptation measures for the Shkumbini and Semani river basins, and their shared delta including the coastal area and Karavasta lagoon, in line with the priorities set forth by the Government. The project complies with the relevant national legislation and the investments undertaken by the project will promote climate resilience and take into consideration the vulnerability of the target areas in terms of climate-risks.

Table 6 – Adaptation Fund Environmental and Social Checklist

Checklist of Environmental and Social Principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
ESP 1 <i>Compliance with the Law</i>		No risk. The project will be executed by the government; the risk of non-compliance with the law (especially with regards to laws related to protected areas, river basin management and environmental impact assessment) could come from service providers that will be contracted during implementation. Relevant local and national stakeholders will be consulted at project proposal stage to ensure that all applicable legal requirements are taken into account.
ESP 2 <i>Access and Equity</i>		Low risk. The project is designed to decrease the vulnerability, and increase resilience, of targeted communities, in particular the most vulnerable and marginalised groups such as women and youth. The project's participatory and inclusive approach will enable fair and equitable access to project benefits to all participants, including marginalised and vulnerable groups, who meet the project eligibility criteria. There is a low risk that the project would find difficulty in including some of the most vulnerable groups such as women due to traditions and norms in rural areas. Participation of the project target groups will be closely monitored through the M&E system. The Grievance Redress Mechanism will also be an avenue in case individuals and/or communities feel excluded or marginalized from project benefits. The identified risk is low and will be fully mitigated by the project's approach, including its targeting strategy and its gender action plan to be developed at project proposal stage.
ESP 3 <i>Marginalized and Vulnerable Groups</i>		Low risk. Marginalized and vulnerable groups – especially women - will be further consulted during the proposal development process to ensure that their identified threats, priorities and mitigation measures are reflected, in particular with the establishment of a Gender Assessment and Gender Action Plan. Interventions will target marginalised and vulnerable groups, including vulnerable semi-subsistence farmers (households below the threshold for already existing subsidies), women and youth. There is a low risk that the project would find difficulty in including some of the most vulnerable groups such as women due to traditions and norms in rural areas. Participation of the project target groups will be closely monitored through the M&E system. The Grievance Redress Mechanism will also be an avenue in case individuals and/or communities feel excluded or marginalized from project benefits. The identified risk is low and will be fully mitigated by the project's approach, including its targeting strategy and its gender action plan to be developed at project proposal stage.
ESP 4 <i>Human Rights</i>	X	Low risk. No activities will be proposed that could present a risk of non-compliance with either national requirements relating to Human Rights or with International Human Rights Laws and Conventions.
ESP 5 <i>Gender Equality and Women's Empowerment</i>		Low risk. The Project will undertake a Gender Assessment at project proposal stage. To address the identified gender issues, the project will take proactive measures to integrate gender focused strategies, ensuring it will not pose a risk to the principle of gender equality and women's empowerment. In particular, three strategic pathways for gender equality and women's empowerment will be followed: (i) promote economic empowerment to enable rural women and men to have equal opportunities to participate in and benefit from profitable economic activities; (ii) enable women and men to have an equal voice and influence in rural institutions and organizations; and, (iii) achieve a more equitable balance of workloads and the sharing of economic and social benefits between women and men. Additionally, gender aspects will be mainstreamed in the project's assessment of climate risks at local level under Component 1 and relevant adaptation measures promoted under Components 1 and 2. Gender mainstreaming will also be supported throughout the activities associated with Component 3. Women will make up

		50% of the beneficiaries and their participation in the project will be monitored. The implementation of the gender action plan will be monitored. Complaints if any will be addressed through the Grievance redress mechanism.	
ESP 6	Core Labour Rights	X	Low/no risk. The project will ensure respect for international and national labour laws and codes, as stated in IFAD's policies.
ESP 7	Indigenous Peoples	X	Not applicable. There are no Indigenous Peoples in the project area
ESP 8	Involuntary Resettlement	X	Not applicable. The project will not engage in resettlement activities (nor in economic resettlement activities)
ESP 9	Protection of Natural Habitats		Low risk. Project activities are designed to not negatively affect any natural habitats. The project may include interventions in a protected area and Ramsar site: the Divjaka Karavasta National Park, with the view to reinforce the climate resilience of the park, protect biodiversity, and reduce drivers of environmental degradation (including unsustainable agricultural practices). Interventions within DKNP will be closely monitored, in close collaboration with RAPA Fier. As part of the ESMP, the project will identify relevant critical habitat areas beyond DKNP and monitor that the project's implementation will not affect them nor DKNP negatively. This will be mapped and reported in the PPR.
ESP 10	Conservation of Biological Diversity		Low risk The project may include interventions in a protected area and Ramsar site (DKNP), with the view to reinforce the climate resilience of the park, protect biodiversity, and reduce drivers of environmental degradation (including unsustainable agricultural practices). The activities of this project will not adversely impact the conservation of biological diversity, but rather strengthen it, thanks to dedicated activities (e.g. biodiversity corridors, conservation of highland pastures, management of invasive species, etc.). The project will also support research to identify and promote resilient local varieties. As part of the ESMP, the project will identify the relevant critical biodiversity areas (beyond DKNP) and monitor that the project implementation will not affect them negatively. This will be mapped and reported in the PPR.
ESP 11	Climate Change		Low risk. Dairy and meat production are essential agricultural activities in the upper parts of targeted river basins, and the project will provide support to these value-chains, with possible limited additional greenhouse gas (GHG) emissions. The ESMP to be developed at project proposal stage together with the M&E framework will include mitigation measures to ensure herd sizes are monitored. Any potential increase in herd size by will be offset through Ecosystem based Adaptation measures and improved pasture management and the resulting reduction of fire risk.
ESP 12	Pollution Prevention and Resource Efficiency	X	Low risk. The project will actively promote the adoption of climate resilient practices (including integrated pest management) and efficient water use. Site specific risks are very limited, and can be easily identified and effectively addressed.
ESP 13	Public Health	X	No risk. No adverse impact on public health related issues is envisaged under the project.
ESP 14	Physical and Cultural Heritage		Low risk. The project is not expected to have negative impacts on the physical and cultural heritage of Albania, and will support Albanian physical and cultural heritage by the recognition and promotion of traditional practices in agriculture and for agro-ecotourism. Through the ESMP the project will identify if any national or international cultural heritage will be included in or near the project zones and describe the location of the heritage in relation to the project.
ESP 15	Lands and Soil Conservation	X	No risk. The project will promote Ecosystem based Adaptation, encompassing sustainable land management practices at landscape (ecosystem) and agroecology at farm level, with direct benefits in terms of Lands and Soil conservation.

Part III: IMPLEMENTATION ARRANGEMENTS

A. Alignment with Adaptation Fund Result Framework

Table 7 - Alignment with Adaptation Fund Result Framework

Project Outcomes	Project Outcome indicators	Adaptation Fund Outcome	Fund Outcome Indicator	AF Grant Amount (USD)
Component 1. Integrated management of the Shkumbini and Semani river basins and their shared delta through Ecosystem based Adaptation				
Outcome 1. Improved climate resilience of ecosystems	Number of hectares of ecosystem protected	Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	5. Natural resource assets maintained or improved under climate change and variability-induced stress	3,460,000
Component 2. Sustainable livelihoods in the Shkumbini and Semani river basins and their shared delta				
Outcome 2 Enhanced climate resilience of local livelihoods	% of households reporting adoption of environmentally sustainable and climate resilient technologies and practices % of smallholders reporting an increased stability of income (production/commercialization)	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.	N/A	4,050,000
Component 3. Solutions for river basin and lagoon adaptation in Albania				
Outcome 3. Strategies and mechanisms for river basin and lagoon adaptation integrated at national level to enable wider replication	Number of policies, strategies and investments influenced by project experience Number of staff from targeting institutions reporting increased capacity to respond to, and mitigate impacts of, climate-related events	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	831,014
Project Outputs	Project Output Indicators	Fund Output	Fund Output Indicator	Grant Amount (USD)
Component 1. Integrated management of the Shkumbini and Semani river basins and their shared delta through Ecosystem based Adaptation				
Output 1.1. Priority adaptation measures identified with local stakeholders	Number of planning documents approved at local level	Output 5: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	5.1. No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	800,000
Output 1.2. Priority EbA measures for integrated landscape management implemented	Hectares of land under Ecosystem-based Adaptation approaches			2,660,000
Component 2. Sustainable livelihoods in the Shkumbini and Semani river basins and their shared delta				
Output 2.1. Agriculture, fisheries and agro-ecotourism value chains mapped and structured	Number of VC mapping conducted Number of smallholders households involved in the selected VCs	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	N/A	800,000
Output 2.2. Technical assistance	Number of households receiving			1,010,000

provided to enhance climate resilience of selected value chains	technical assistance to increase the climate resilience of their VC			
Output 2.3. Financial support to climate adaptive activities provided	Number of VCF grant recipients			2,240,000
Component 3. Solutions for river basin and lagoon adaptation in Albania				
Output 3.1. Relevant knowledge products prepared and disseminated to key stakeholders	Policy-relevant knowledge products developed and shared with relevant stakeholders	Output 7: Improved integration of climate-resilience strategies into country development plans	7.1. No. of policies introduced or adjusted to address climate change risks (by sector)	370,000
Output 3.2. Local and national institutions supported in the creation of mechanisms and strategies for river basin and lagoon adaptation	Number of people trained on good practices for resilient management of river basins and lagoons in Albanian institutions			461,014

B. Implementation arrangements

177. **Implementing Entity.** IFAD is submitting this project as an accredited Multilateral Implementing Entity (MIE) for the AF. In its capacity as MIE, IFAD will be in charge of the project cycle management, overseeing overall project progress, including financial oversight, monitoring and evaluation support, as well as technical backstopping and reporting to the AF. IFAD will also undertake the oversight and quality control of the proposed project ensuring that the Gender Policy and Environmental and Social Policy is respected through its SECAP.

178. **Executing Entity.** The Executing Entity for this project will be the Ministry of Tourism and Environment. The MTE is the highest governmental body responsible for environmental protection and formulation of environmental policy and legislation in the country. The Ministry will establish a Project Implementation Unit (see below) for day to day management of the project.

179. **Project oversight.** It is proposed that the Project Steering Committee (PSC) is chaired by the Ministry of Tourism and Environment, and includes representatives from the Ministry of Agriculture and Rural Development, the Water Resource Management Agency, the Ministry of Health and Social Welfare, the National Agency for Protected Areas, the Prefectures of Fier, Elbasan, Berat and Korçë together with the Fier Regional Agency for Protected Areas. In addition, the PSC may include other relevant projects to maximize synergies (e.g. WB, GIZ, etc.), representatives of relevant NGOs and CSOs, etc. The PSC will approve the AWPB and review the periodic progress, financial, audit and supervision and implementation support reports. The PSC will also review the status and adequacy of the implementation of recommendations from the auditors and IFAD supervision missions.

180. The **Project Implementation Unit (PIU)**, established by the MTE with the oversight of the PSC, will be responsible for: (i) overall management of the project; (ii) coordinating project implementation; (iii) development of the AWPB and undertaking project M&E and KM activities; (iv) meeting all reporting obligations on the implementation progress and results of the project to IFAD, Adaptation Fund and the PSC; and (v) coordination with the IFAD Country Team to ensure accountability for programme coordination and the effective and efficient utilisation of the project funds for their intended purposes. FAO will be mobilized as implementing partner for specific project outputs (as will be further defined at project proposal stage).

Part IV: ENDORSEMENT

A. Record of endorsement on behalf of the Government⁸⁹

Mr. Sofjan Jaupaj Director General Economics Affairs and Support Services Ministry of Tourism and Environment Albania	Date: December, 12 th 2023
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B. Implementing Entity Certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Implementing Entity coordinator	Mr. Juan Carlos Mendoza Casadiegos Director Environment, Climate, Gender and Social Inclusion Division Strategy and Knowledge Department International Fund for Agricultural Development (IFAD)
e-mail:	juancarlos.mendoza@ifad.org
Date: 8 January 2024	
HQ contact Person	Ms Janie Rioux Senior Climate Finance Specialist – AF Coordinator
e-mail	j.rioux@ifad.org
Project contact person:	Mr Walid Nadim Nasr Lead Regional Environment and Climate Specialist
e-mail	w.nasr@ifad.org
	Mr Philippe Remi Country Director for Albania
e-mail:	p.remi@ifad.org

⁸⁹ Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Annex 1: Letter of endorsement by the Government



REPUBLIC OF ALBANIA
MINISTRY OF TOURISM AND ENVIRONMENT

No. 7522 Prot.

Tirana, 21/12 2023

The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: afbsec@adaptation-fund.org
Fax: 202 522 3240/5

Subject: Endorsement for the Ecosystem-based Adaptation for Livelihood resilience in Albanian lagoons and river basins project (Lumi)

In my capacity as designated authority for the Adaptation Fund in Albania, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the country.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the International Fund for Agricultural Development. The executing entity will be the Ministry of Tourism and Environment of Republic of Albania.

Sincerely,

**DESIGNATED AUTHORITY FOR ADAPTATION FUND
GENERAL DIRECTOR**

SOFJAN JAUPAJ

