

Action plan for improving ecological connectivity in Albania-Greece Pilot region

Vikos-Aoos National Park; Protected areas Mount Dousko,
Oreokastro, Merope Forest, Gormos Valley, and Delvinaki Lake

Bredhi i Hotovës National Park; Natural Reserve Gërmenj-
Shelegur.

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1. Introduction

Improving ecological connectivity (EC) within landscapes by establishing ecological corridors has been proposed to counteract the negative effects of habitat fragmentation and climate change on biodiversity. In this context, the Interreg Adrion DINALPCONNECT project was launched in 2020 with the aim of improving EC by combating environmental vulnerability and habitat fragmentation and securing ecosystem services in the Adriatic-Ionian region (Gazoulis et al., 2022). Pilot areas have been established between the protected areas of Italy-Slovenia, Slovenia-Croatia, Croatia-Bosnia and Herzegovina, and Albania-Greece. The objective of the Action Plan for Enhancing Ecological Connectivity in the Albania-Greece Pilot region is to serve as an important tool for managers to identify and monitor the interventions that need to be taken by key local stakeholders in order to develop and implement policies and strategies at local and national levels for biodiversity conservation and sustainable development of the area.

2. Description of the Pilot region

The cross-border pilot area is located in southern Albania and northern Greece. It is part of the agro-ecological zone encompassing the southwestern mountain region (Devoll, Korçë, Kolonjë, Përmet, Pogradec, Tepelenë and Gjirokastër districts) in Albania and the Pindus Mountains (Konitsa, Pogoni, Zagori and Ioannina districts) in Greece. It is characterized by a southern European continental climate, mountain ranges and a Mediterranean forest biome consisting of forests, shrubs and grasslands. A typical ecological grazing system has been created through years, whose traditional economy is based on the breeding of small ruminants, with a mixed system of short- and long-distance transhumance herds. The Pilot region is crossed by the Aoos-Vjosa river basin, whose valley is a natural green infrastructure and river habitat corridor, and one of the most pristine and well-preserved river basins in southern Europe (Öncel, 2019; MP, 2016). The Pilot region is part of a single ecosystem, which in Albania revolves around the mountain ranges of the Bredhi-Hotoves-Dangelli National Park (the largest in Albania) and the managed protected areas of Piskal-Shqeri and Gërmenj-Shelegur (Keci and Krog, 2013). In Greece, the natural ecosystems of the pilot area are mainly forests (hybrid spruce, black pine, deciduous oak, mountain cypress), low and high shrub ecosystems (deciduous evergreens and deciduous shrubs), grasslands and riparian habitats (Figure 1).

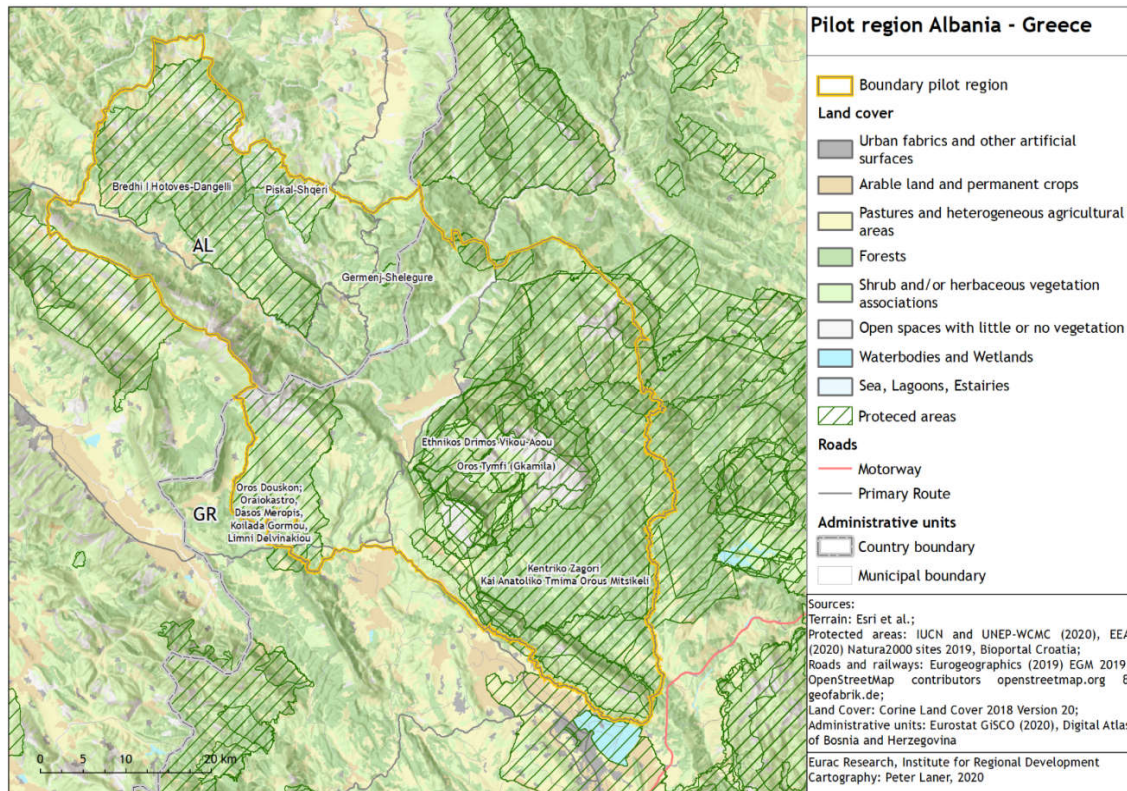


Figure 1. Illustrative map of Albania–Greece Pilot region.

On the Albanian side, the pilot area is included in the territory of three municipalities, namely: i) Permet, ii) Kolonje (part of) and, iii) Skrapar (part of). On the Greek side, the pilot area is included in the territory of four municipalities, namely: i) Konitsa, ii) Pogoni, iii) Zagori and, iv) Ioannina.

Local governments and protected areas management authorities are the main public authorities in charge of the pilot area management. The management of the protected areas in Albania depends from Gjirokaster and Korca regional offices of the National Agency for Protected Areas (NAPA), i.e. RAPA Gjirokaster (for Bredhi i Hotoves National park) and RAPA Korca (for Gërmenj-Shelegur Natural Monument and Piskal-Shqeri) (Keci and Krog, 2013). In Greece, the management of Vikos-Aoos National Park is subject to the Vikos - Aoos and Pindos National Parks Management Agency and the management of the protected areas Mount Dousko, Oreokastro, Merope Forest, Gormos Valley, and Delvinaki Lake is subject to a civil non-profit company “Pindos Perivallontiki” with headquarters in Ioannina city. The Kastoria Development Agency (Greece) also plays an important role (within the

framework of the EU-financed LEADER rural development approach) (Gazoulis et al, 2017; Apostolakis and Simixhiu, 2008; Dimopoulos et al, 2017).

Local development NGOs are also important stakeholders. They have been particularly active in protecting the Aoos-Vjosa River, which has been well preserved but is now threatened by existing and planned energy infrastructure and the impact of various local development measures that are hardly ecologically sustainable.

There are no large economic players or large polluting industries. However, the process of depopulation and the disruption of the traditional eco-pastoral system leads to a decline in traditional agricultural and agri-food production, which is only partially compensated by a certain increase in tourism flows and a corresponding development of rural tourism small and medium enterprises, mainly related to Ho.Re.CA Activities and other tourism services (MP, 2018; MP, 2020). As a result, some types of more structured and long-term initiatives are mainly promoted by tour operators, usually located outside the pilot area, developing an increasingly wide range of tourism services. Other small and medium enterprises and private actors in general tend to focus on individual and local issues without a development vision.

3. Action plan for Pilot region Albania-Greece

3.1. Vision of the Pilot region

Vision statement:

“The Albania-Greece pilot region is the core of the largest eco-pasture system in the Western Balkans, spanning Albania, Greece and Western Macedonia. The conservation and sustainable management of permanent grassland habitat is a key issue for the entire Green Infrastructure, including Ecological Connectivity and mitigating the effects of social change.”

3.2. Theme and evaluation of the theme

Theme A. Sustainable management of permanent grasslands

The pilot area hosts many important biodiversity features that have evolved in balance with transhumance and nomadic pastoralism (Keci dhe Krog, 2013; MoTE, 2019). Traditional grazing systems are adapted to the life cycles of organisms such as plants, insects and invertebrates, and even mammals (Bego et al, 2018). These practices promote ecological connectivity and give pastures time to recover. In addition, plant species diversity in pastures can contribute to the varying quality of different animal products. For example, the quality of sheep and goat milk is greatly influenced by the feeding system used by the producer (Biber, 2006). Among the various husbandry systems practiced around the world, grazing has the most positive impact on the composition of milk. Sheep and goats differ in many ways, especially in their selectivity in the plant species they prefer to eat. In general, goats prefer shrubs (herbaceous and woody dicotyledonous plants such as herbs, leaves and stems of shrubs), while sheep eat grasses (Castro & Fernández-Núñez, 2016).

Unfortunately, not only has the type of livestock changed in recent years (cattle instead of sheep and goats, foreign breeds instead of native breeds), but the positioning and size of farms has also changed. The importance and abundance of vegetation, flowering time and other environmental aspects are not really considered and the life cycle of many organisms (plants, invertebrates, amphibians, wild herbivores, etc.) is disturbed. Infrastructure, which plays a key role in pasture management, is neglected. The main green infrastructures functional the preservation of permanent grasslands in the pilot area are: i) the permanent pastures, especially highland pastures in protected areas, ii) water resources and in particular the watering points, much useful both for small ruminants breeding and wildlife. Access to water in highland areas is a key resource for the eco-pastoral system, so that preservation of water quality in the Aoos-Vjosa affluent and watering points construction and maintenance are quite important; iii) the forests, which in the area are a major resource for environmental services and provide essential resources for the eco-pastoral system, such as fuelwood and a wide range of NTFP, such as edible nuts and some MAPs (CNVP, 2017; CNVP, 2018a;

MoARD, 2021).

The preservation of the main green infrastructure in the region, the Aoos-Vjosa river basin has a paramount importance for the whole area of Pindus and Southern Albania, but it is not a key priority for the pilot area permanent grasslands, so it is not included among green infrastructures to be improved, also because its relevance goes well beyond Dinalpconnect Action plan scope, objectives and means. However, the good condition of the riverine habitat is also a result of healthy forestry and permanent grassland green infrastructures, so that foreseen action will also positively affect part of the river basin.

Nowadays, the new type of grazing competes with other "soft" activities such as hiking and beekeeping. Ecological connectivity is compromised by degradation of important ecosystem elements. The increase in livestock production in grazing systems is due to both rangeland expansion and intensification (Godde et al., 2018). These expansion and intensification dynamics can put pressure on the environment and compete for land with other uses (e.g., cropland, energy production, forests, urban areas), resulting in socioeconomic and environmental tradeoffs (Smith et al., 2010). Given the rapid changes in global livestock demand and production, the large spatial extent of grazing systems (22% of the Earth's ice-free land area), and the impacts of grazing system dynamics on our society and the environment, there is an urgent need to influence the drivers of grazing system dynamics to support more sustainable systems. Sustainable grazing management that is compatible with other environmentally friendly activities such as hiking, beekeeping, and agritourism, along with the production of high-quality products, will create a culture of protecting natural habitats and wildlife from other illegal activities such as hunting, gathering of fragrant plants, and logging.

General objective A

Because biodiversity in the pilot area is strongly linked to traditional grazing practices, these practices should be viable and maintained over the long term and not replaced by grazing systems that do not serve connectivity.

Specific objective AA

Adoption of territorial management tools to preserve the eco-pastoral system.

Specific objective AB

Increase the flows of investments to improve the Green Infrastructures functional to eco-pastoral system preservation, especially permanent grassland habitat and to improve Ecological Connectivity.

Specific objective AC

Pro-biodiversity businesses are promoted and infrastructure to develop Pro-Biodiversity Businesses is improved, giving priority to livestock agrobiodiversity preservation, preventing replacement of small ruminants with bovines.

Specific objective AD

Raise awareness among local people, users and visitors about the importance of protecting biodiversity and stopping other illegal activities that harm pastures biodiversity, such as aromatic plant collection, hunting, etc., as well as agro-tourism and the development of pro biodiversity businesses (PBB).

3.3. Activities

Table 2. Table with activities, indicators, timeframe and associates.

| Theme A Sustainable management of permanent grasslands | | | | | | | | | | | | | | | | |
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| General objective A | | | | | | | | | | | | | | | | |
| Because biodiversity in the pilot area is strongly linked to traditional grazing practices, these practices should be viable and maintained over the long term and not replaced by grazing systems that do not serve connectivity. | | | | | | | | | | | | | | | | |
| Code of activity | Activity | Indicators | Priority | Timeline of implementation | | | | | | | | | | Associates | Country of implementation* | Financial cost |
| | | | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | | | |
| Specific objective AA: Adopt territorial management tools to preserve the eco-pastoral system. | | | | | | | | | | | | | | | | |
| Indicators for the specific objective AA: Consistent mapping of permanent pastures in the pilot area; 3 Protected Areas management plans produced or updated; 3 Forestry and pasture management plan produced or updated; 2 Municipal development plans updated to include green infrastructures; all municipalities included in LEADER/LAG | | | | | | | | | | | | | | | | |
| AA1 | Mapping of pastures and transhumance routes in the pilot area | -1 comprehensive map of permanent pastures in the pilot area - update every three years | 1 | X | | | X | | | X | | | X | AUA | Gr/Al | -8,000€ for hiring external expert for conducting mapping |
| AA2 | Updating the BH National Park management plan and drafting a management plan for PS and GS protected areas. | - 6 public hearings for management plan drafting - 1 management plan updated and extended to 2030 – BH National Park - 2 Management plans or 1 unified MP drafted for Emerald sites in Kolonje. | 1 | | X | X | X | | | | | X | X | NAPA, RAPA Gjirokaster and Korçë | Al | -1,200 € per lecture - 50,000 € for updating BiH MP -30,000 € for drafting a new MP |

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| AA3 | Update Skrapar Forest and Pastures Management Plan, draft Permet and Kolonje FPMP | - 3 public hearings - 1 Forest and Pasture Management Plan updated - 2 FPMP drafted | 2 | | X | X | X | | | | | x | x | Skrapar, Permet and Kolonje Municipalities | AI | -1,200 € per public hearing - 15,000 € for updating Skrapar FPMP -30,000 €for drafting FPMP |
| AA4 | Updating the management plan of Permet and Kolonje Municipalities to include PBB and green infrastructures role | - 6 public hearings - 2 Municipal development plans updated; - Permet Operational Investment plan updated | 3 | X | X | X | | | | | | | X | Permet and Kolonje Municipalities | AI | -2,000 € per event/public hearing - 35,000 € for updating each |
| AA5 | Modifying/drafting LAG local action plans to include green infrastructures, BBB change into PBB and eco-pastoral system preservation | - 20 PBB involved in local Action Plan adaptation - Kolonje LAG Local Actin Plan Modified (LAG Kolonja e Gjelber, 2018) | 4 | | X | X | | | X | | | | | Kolonje LAG, Permet and Skrapar BBB and NGOs | AI | -5,000 € for PBB involvement - 20,000€ for the LAG action plan modification |

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| AA6 | Establishing LEADER/LAG in Permet or extending Kolonje LAG to Permet | <ul style="list-style-type: none"> - 10 public hearings - 1 LAG established or existing LAG extended to include Permet | 5 | X | X | X | | | X | | | | | Municipality Permet, Pro-Permet, other NGOs, Rural Parliament | AI | -1,200 € per public hearing -25,000 € establishing/e xtending the LAG |
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*country where activity will be implemented

| Code of activity | Activity | Indicators | Priority | Timeline of implementation | | | | | | | | | | Associates | Country of implementation* | Financial coast |
|---|--|--|----------|----------------------------|----|----|----|----|----|----|----|----|-----|---|----------------------------|--|
| | | | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | | | |
| Specific objective AC:Support local breeds adapted to the conditions of the pilot region and discourage the replacement of sheep and goats with cows. | | | | | | | | | | | | | | | | |
| Indicators for the specific objective AB: Meetings with associated stakeholders | | | | | | | | | | | | | | | | |
| AB1 | Encourage regular habitat maintenance by sustainable grazing based on local breeds | -1 meeting per year with local farmers, - 1 meeting per year with local government and local farmers representatives -three visits of local farmers to successful local breeds farms | 2 | X | X | X | X | X | X | X | X | X | X | Center for Genetic Improvement (KFBZ) and other beneficiaries of Greek Strategic Plan for CAP | | -500 € per meeting for travel expenses -3,000€per travel - visiting other farms in Greece or in other Mediterranean counties. |
| AB2 | Restore watering points and watering retaining points | - 2 investments financed in pilot area – IPARD III Forestry Measure (AGT and DSA, 2021b) | 1 | | | X | X | X | X | | | X | X | NAPA, RAPA Gjirokastr and Korçë, ARDA local offices | Al | -50,000 € per investment |

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| AB3 | Recovery/maintenance of transhumance trails physical infrastructure contributing to EC | 1 investment financed through CBC AI-Gr 1 investment financed through IPARD III LEADER ((AGT and DSA, 2021c) | | | X | X | X | | | | | | | | Municipalities Permet and Kolonje | AI-Gr (CBC) AI (LEADER) | -0.15 Million € - CBC project budget |
| AB4 | Increase investments in reforestation and fire prevention | 3 investments financed – IPARD III Forestry Measure(AGT and DSA, 2021b) | | | X | X | X | X | | | | | X | X | ARDA local offices, Individual PBB | AI | -40,000 € per investment |
| AB5 | Improve infrastructures affecting permeability and prevent negative impact of new infrastructures on EC | | | X | X | X | X | X | X | X | X | X | X | X | Municipalities Skrapar, Permet and Kolonje, ADF, WB, individual BBB (hydropower) | AI | |

*country where activity will be implemented

| Code of activity | Activity | Indicators | Priority | Timeline of implementation | | | | | | | | | | Associates | Country of implementation* | Financial cost |
|---|----------|------------|----------|----------------------------|----|----|----|----|----|----|----|----|-----|------------|----------------------------|----------------|
| | | | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | | | |
| Specific objective AC:Support local breeds adapted to the conditions of the pilot region and discourage the replacement of sheep and goats with cows. Indicator for the specific objective AB: Meetings with associated stakeholders | | | | | | | | | | | | | | | | |

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| AC1 | Communication with the authorities dealing with pasture management in order to sensitize them for the necessity to support local breeds, pastoralism and transhumance | 5 Interviews with public servants in charge for livestock, local breeds or/and biodiversity in relative agencies. 1 workshop per year | 1 | X | X | X | X | X | X | X | X | X | X | AUA | Gr/AI | -1,000€ per workshop |
| AC2 | Support PBB in agri-food sector: ecological transition for viticulture, MAP growing and small-scale small ruminants breeders; organic agriculture, build up/restore high mountain small-scale dairy processing units; support beekeepers in formalization and growth; development of small-scale PBB specialized in processing biodiversity products, including beverages, MAPs and control hunting | 7 investments financed in pilot area IPARD III Primary Production, Food processing and Agro-environmental Measures 2 Investments financed through IPARD III Diversification measure or bilateral support (SDC, GIZ) (AGT and DSA, 2021c) | 1 | | X | X | X | X | X | | | X | X | NAPA, RAPA Gjirokaster and Korçë, ARDA local offices, individual PBB | AI | - 50,000 € per investment -60,000 € per investment |
| AC3 | Development of sustainable tourism products and infrastructures in | 1 Investment financed IPARD III Diversification Measure Sustainable tourism | 1 | | X | X | X | X | X | | | X | X | Territorial promotion NGOs (Pro Permet, Visit | AI (IPARD III) AL/Gr | - 60,000 € per investment - 30,000 € |

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| | cooperation with the protected areas' institutions | and/or green infrastructures financed through IPARD III LEADER 5 PBB supported through CBC AI-Gr | | | | | | | | | | | | Gjirokaster), RAPA Korçë and Gjirokaster, individual operators | (CBC) | investment each PBB |
| AC4 | Develop and promote cross-border products and services through networking of activities (such as cheese road, wine road, etc.), using territorial approach. | 1 Cross-border project for PBB support and sustainable tourism formulated and financed | 2 | | | X | X | X | | | | | | Plot area local governments, Tour operators, PBB | AI/Gr | 150,000 € included in CBC project budget |
| AC5 | Development of quality schemes for agri-food PBB | Participants to existing schemes increased by 50% New quality scheme established in BH National park and buffer area | 2 | X | X | X | X | X | X | X | X | X | X | Slow Food Foundation, NGOs (CESVI, AAM, DSA) RAPA Gjirokaster | AI/Gr | 120,000 € support package for both countries |
| AC6 | Build and maintain digital platform for regional promotion of the area and services and pro-biodiversity products (part of L/T platform) | 1 Trading platform established | 3 | X | X | X | X | X | X | X | X | X | X | PBB, DSA | AI/Gr | -20,000 – 50,000 € including search and transaction costs |

| Code of activity | Activity | Indicators | Priority | Timeline of implementation | | | | | | | | | | Associates | Country of implementation* | Financial coast |
|---|---|--|----------|----------------------------|----|----|----|----|----|----|----|----|-----|--|----------------------------|-------------------|
| | | | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | | | |
| Specific objective AD:Raise awareness among local people, users and visitors about the importance of protecting biodiversity and stopping other illegal activities that harm pastures biodiversity, such as aromatic plant collection, hunting, etc., as well as agro-tourism and the development of pro biodiversity businesses (PBB). | | | | | | | | | | | | | | | | |
| Indicator for the specific objective AC: Open events to educate the public and interact with potential stakeholders. | | | | | | | | | | | | | | | | |
| AD1 | Education of local people (farmers and other users) about the importance of grasslands and sustainable use of grasslands and about the support opportunities. | - 3 interviews withthe families practicing transhumance on sustainable grassland management per year - 3 organized events for public on grassland importance and conservation | 2 | | x | x | x | x | x | x | | | | NECCA Department of Northern Pindos National Park | Gr/AI | -1,200€ per event |
| AD2 | Raisingof public awareness of the importance of grasslands and issues related to their long-term sustainability. | -An event organized in Agricultural University of Athens for public, on grassland importance and conservation | | | x | x | x | x | x | x | | | | AUA | Gr/AI | -1,200€ per event |
| AD3 | Dissemination of the Dinalpconnect project results to agriculture and agroforestry stakeholders and raising public awareness on issues related to sustainable grassland | -Info day near the Pilot region at the 29th Agroticaat the International Exhibition and Conference Center of TIF HELEXPO in Thessaloniki. | | | x | x | x | x | x | x | | | | AUA | Gr/AI | -1,200€ per event |

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| | management in Greece and the broader Adriatic-Ionian region. | | | | | | | | | | | | | | | |
| AD4 | Seminar for tourist operators | 1 seminar every two years | 1 | x | | x | | x | | x | | x | | Public or private bodies, | Gr/AI | -2,000 € per seminar |
| AD5 | Seminar for hunters | 1 seminar every two years | 2 | | x | | x | | x | | x | | x | Public or private bodies, | Gr/AI | -2,000 € per seminar |
| AD6 | Seminar for mountaineers | 1 seminar every two years | 1 | x | | x | | x | | x | | x | | Public or private bodies, | Gr/AI | -2,000 € per seminar |
| AD7 | Seminar on agro tourism and certified products | 1 seminar every two years | 2 | | x | | x | | x | | x | | x | Public or private bodies, | Gr/AI | -2,000 € per seminar |
| AD8 | Improve stakeholders know how on developing sustainable tourism products and PBB | 20 events, including info days with 500 SH attendance 40 SH regularly involved | 1 | | | | | | | | | | | Tour Operators, NAPA regional branches, Municipalities, tour operators, Local Development NGOs, LAG | AI/Gr | - 1,400 € per event |
| AD9 | Communication to BBB and PBB on investments supporting Green Infrastructures and socio-ecosystem preservation using IPARD III and CBC | 50 BBB involved 20 applications to IPARD III for purposes C1 or C2 | 1 | | | | | | | | | | | ARDA, MARD, Chambers of Commerce, applicant and consulting enterprises | AI/Gr | - 10 meetings /field missions 300 € each |
| AD10 | Communicate key role of Green Infrastructures in | 1 event per country per year | 2 | | | | | | | | | | | MARD, MoET, NAPA. Local | AI/Gr | - 700 € per event |

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| | local development and in eco-pastoral system preservation and need for increased private sector contribution to the process | 5 school days per year (2 AI, 3 Gr) 10 Events with local stakeholders | | | | | | | | | | | Governments, NGOs, academic Institutions | | - 300 € per mission -1,400 € per event |
| AD11 | Communicate to local stakeholder advantages to include protected areas administrations into local development planning and implementation initiatives to promote PBB, especially in agri-food and tourism | Yearly workshops including local governments, Protected areas management, tour operators, PBB and | 2 | | | | | | | | | | Municipalities, RAPA, PBB, national/intnl tour operators, Local development NGOs | AI/Gr | -700 € per workshop |
| AD12 | Communication on PBB and sustainable tourism quality schemes harmonization; on compliance with EU-wide standards (CETS, Products of Parks) | 4 thematic workshop and conferences Targeted communication activities included in a new CBC AI-Gr | 3 | | | | | | | | | | AI: RAPA Gjirokastra and Korçë, NGOs Gr: | AI/Gr | -650 € per workshop communication activities -15,000 € |
| AD13 | Advocacy at central administration level to introduce preference scoring for investments promoting EC and for eco-pastoral systems preservation – for IPARD III and other financial | IPARD III preference scoring system for eco-pastoral systems, young PBB entrepreneurs, and Green Deal application ADF investment policy supporting eco-pastoral systems preservation | 3 | | | | | | | | | | Municipal Administrations, NAPA, MARD, MoET, ARDA, ADF | AI | 2,000 € |

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| facilities | | | | | | | | | | | | | | | | | |
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Note on indicators:

The selected indicators can be divided into two categories:

- Indicators related to results:** These indicators are essentially related to the re-orientation of the most relevant planning tools in the pilot area and to the number and amount of relevant investments in infrastructures and SME that can contribute to the improvement of preservation conditions of the permanent grassland habitat. These indicators measure the *effectiveness* of the action towards the specific objective of each axis.
- Indicators related to activities:** mostly related to communication and, monitoring axes. These can be considered as indicators of efficiency and effectiveness (feedback from participants).

Measuring the impact indicators (comparing EC parameters with or without the project) *would require a specific action inside the monitoring axis, aimed at measuring EC in the pilot area. However, no suitable financial tools were identified for this purpose, so that this monitoring action would prove highly relevant, but not financially feasible or sustainable.*

The indicators related to the expected flow of investments related to the action plan could seem very high; still they are to be considered realistic. Especially in Albania, where much less resources for rural development and environment protection are available as compared with any EU member state, the flow of investments have been estimated based on a statistical analysis of investments actually made in the previous IPARD II programming period (2014-2020) for the same typology of investments in the same municipalities. *The issue will be more about quality and coordination of investments, rather than on total amount; hence the importance of axis D (Communication) in the action plan.*

3.4 Risk, assumptions and mitigation measures

Table 3. Possible risks, impact on implementation of action plan and mitigations measures

| Risk | Likelihood that the risk will occur | Impact of the risk on implementation of action plan | Mitigation measures |
|--|-------------------------------------|---|--|
| Overgrazing | High | Overgrazing can reduce ground cover by vegetation, causing erosion and compaction of the soil by wind and rain. This reduces the ability of plants to grow and water to penetrate the soil, which damages soil microbes and leads to serious land degradation. | Mapping of pastures can be focused on vegetation cover in order to locate overgrazing. In addition, grazing management practices based on a livestock density below the sustainable stocking rate (Bernue's et al. 2011), can be applied to the Pilot area. |
| Illegal logging | Medium | Illegal logging is a threat to permanent pastures in the pilot area due to high fuel prices. Logging residue extraction affects understory vegetation and ground-dwelling organisms may also be affected as structural diversity decreases when timber is removed from the landscape (Ranius et al., 2018). | Reducing illegal logging could be achieved by expanding timber certification, improving concession management, active protection of high-risk areas, clarification of tenure, and increasing enforcement of forest laws, and increasing penalties for lawbreakers (Li et al., 2008). |
| Invasive Alien Plant Species (IAPS) | High | Climate change favors the introduction of invasive alien plant species (IAPS) in the pilot area (Gazoulis et al., 2022). IAPS can take advantage of unsustainable grassland management practices and displace native plant species, resulting in biodiversity loss. | Identify IAPS populations in the Pilot area and raise public awareness to identify high-risk areas. Evaluate Integrated Weed Management (IWM) practices to eradicate invasive populations and establish competitive grassland communities that can resist potential invasions. |
| Poor coordination of investments | High | Positive impact on biodiversity and EC reduced or nullified | Stronger communication function, connection with LAGs for coordinated action of the actors |
| Inadequacy of financial framework ¹ | High | Investments are not made for limitations in eligibility and difficulties in funds absorption | Reinforced communication function, cooperation with Payment Agency (Albania) |
| Reluctance of | High | Minimal resources for | Proposal for a new AL-Gr CBC |

¹¹ In Albania there are no public resources allocated for the period 2021-27 for pastures; Natura 2000 is not yet established; several IPARD III Measures are not yet certified

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| SH to coordinate action and in preliminary and communication activities | | communication and social capital improvement result in uncoordinated action and poor quality of investments | project strongly focused on communication |
| Political cycles lead to local governments reduced commitment in introducing and applying appropriate planning tools | Medium | Inadequate role of local administrations in implementing improved planning tools and focus on ensuring investments quality | Involvement of increasing number of SH; speeding up approval of long-term planning tools; communication focused on economic SH, technical bodies of institution and NGO not linked to specific political cycles. |
| Scarce impact of action plan on reversing negative long-term trends for targeted habitat | Medium | Overall collapse of the traditional eco-pastoral system and permanent grassland habitat shrinkage is not stemmed | major role of PBB quality schemes for preservation of eco-pastoral system and sustainable tourism |

4. Literature

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5. Appendices

- Pilot area ID
- Action plan workshop report
- SWOT analysis report
- Short description of GIS analysis of ecological connectivity in Pilot region including a map