



MINISTERUL
MEDIULUI



LIFE Connect Carpathians
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LIFE Connect Carpathians After-LIFE Conservation Plan 2019-2024



Project Details

Enhancing landscape connectivity for brown bear and wolf through a regional network of NATURA 2000 sites in Romania

Project duration: 01 September 2013 – 28 February 2019

Total cost: €3,264,811

EU contribution: €2,448,608

Coordinating Beneficiary: Fauna & Flora International

Associated Beneficiaries: General Inspectorate of the Romanian Gendarmerie
Ministry of Environment, Romania
Asociatia Zarand, Romania

Project Area: Apuseni-Southern Carpathian Corridor

Project website: <http://connectcarpathians.ro/>

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1. Project overview and current situation

1.1 Project context

The Carpathian Mountains are an important biodiversity reservoir for brown bear (*Ursus arctos*) and wolf (*Canis lupus*) in Europe. An assessment of environmental suitability for large carnivores identified the isolation of the Apuseni Mountains (Western Carpathians) from the Southern Carpathians in Romania as a pressing conservation issue. The Apuseni and Southern Carpathians are connected via a landscape corridor that is increasingly fragmented but remains the only route through which bears, wolves and other wildlife can move between these two mountain regions. It is therefore crucial to maintain landscape connectivity within this corridor to ensure that bear and wolf populations in the Apuseni Mountains do not become demographically, genetically or ecologically isolated and to achieve and maintain the Favourable Conservation Status (FCS) of both species in this region of Romania. A key part of a long-term initiative to establish and maintain an ecological network in this landscape, the LIFE Connect Carpathians (LCC) project directly addressed the key drivers of landscape fragmentation in the Apuseni-Southern Carpathian corridor.

Area/location

The LCC project area comprises of 17 Natura 2000 sites spanning 8 counties and covering some 4,300km². The Apuseni-Southern Carpathian Corridor (hereinafter referred to as the Corridor), is dominated by a complex of largely natural ecosystems with an exceptional diversity: a landscape of old growth forests, semi-natural deciduous and coniferous woodland, lakes, rivers, valley wetlands, cliffs and caves. This 150 km long corridor comprises of a network of 17 Natura 2000 sites covering 434,935 ha as listed below.

ROSCI0002: Apuseni	75,943 ha	ROSCI0070: Drocea	26,108 ha
ROSCI0324: Muntii Bihor	20,884 ha	ROSCI0407: Zarandul de Vest	8,888 ha
ROSCI0042: Codru Moma	24,650 ha	ROSCI0064: Defileul Muresului Inferior	34,149 ha
ROSCI0291: Coridorul M. Bihorului – Codru Moma	7,591 ha	ROSCI0355: Podisul Lipovei-Poiana Rusca	35,738 ha
ROSCI0298: Defileul Crisului Alb	16,558 ha	ROSCI0250: Tinutul Padurenilor	7,174 ha
ROSCI0289: Coridorul Drocea - Codru Moma	3,229 ha	ROSCI0219: Rusca Montana	12,747 ha
ROSCI0325: Muntii Metaliferi	14,302 ha	ROSCI0292: Coridorul Rusca Montana - Tarcu-Retezat	24,443 ha
ROSCI0217: Retezat	43,560 ha	ROSCI0126: Muntii Tarcu	58,656 ha
ROSCI0406: Zarandul de Est	20,315 ha		

Target species - *bear and wolf*

The Corridor is especially important for large carnivores, which require large territories and areas through which to disperse. Official figures from 2016 (MoE, 2016) estimate that Romania's bear population is between 6,050 and 6,640 individuals, which represents circa 40% of the EC's bear population (15,000 to 16,000 (LCIE, 2016)). It is estimated that the Apuseni Mountains are home to nearly 5% (260-320 individuals) of the national population and the official data from the County Environmental Protection Agencies (EPA) indicates around 663 bears within the Corridor, including Retezat National Park and Apuseni Nature Park.

Official figures in 2016 (MoE, 2016) estimate that Romania's wolf population is around 2,840 individuals, representing circa 21.8% to 20.2% of the EC's wolf population (13,000-14,000

(LCIE, 2016)). Official data gathered from EPA in the same year indicates that around 801 wolves are present within the Corridor, representing approximately 28.2% of Romania's wolf population, or 6% to 8% of the wolf population within the EC.

Socio-economic context

There are approximately 200,000 inhabitants living in rural towns and villages located in and adjacent to the project area. Outside of the main towns, agriculture and forestry based livelihoods predominate. The Corridor is a living landscape and it is critical that any approach taken to conserve the connectivity and its species be integrated, delivering conservation in ways that also take into account the needs and values of local people who live and work in the landscape. Conservation is often seen as an obstacle to development and the project's actions could be perceived locally to impact on local people.

The social, economic and cultural landscape of the region is undergoing significant change as a result of many factors, including unrestrained economic growth and accession of Romania into the EU. The region suffers from chronic rural de-population, with the size of the community of Petris (located at the centre of the Corridor) decreasing by 50% within the last 30 years, for example. The majority of the rural population are dependent on small-scale agriculture and in some communities levels of vulnerability are high with the majority struggling to secure daily food requirements. Results from the project's knowledge, attitudes and perceptions survey suggest that the majority of adults (50%) visit the forest weekly to obtain food or resources.

Evident socio-economic impacts in the region include the abandonment of agricultural land, increased pressure on the forest with illegal logging, increased poaching and visible poverty. Community spirit and morale is in many areas extremely low. This combination of demographic change, lack of motivation, isolation from markets and lack of experience and apathy towards decision-making processes, provides a significant challenge in engaging the community in conservation activities. With some 36 identified main groups with a stake or interest in the Corridor, including up to 201 hunting concessions, stakeholder engagement is particularly complex.

Threats

Key threats to the long-term functional connectivity of the Corridor include the fragmentation of the landscape by infrastructure development and changes to land-use. Threats are also posed by inadequate management plans and policies for conserving bear and wolf and for cohesively managing the ecological network of Natura 2000 sites. Conflict between people and wildlife and poaching impact directly on priority species and inhibit co-existence. Negative perceptions and attitudes of stakeholders towards conservation and bears and wolves enable many of the activities and behaviours that result in negative impacts on the landscape and priority species. While the lack of knowledge of the ecology of bear and wolf and low conservation capacity within this region prevents the development of suitable management plans and the delivery of actions to ensure their effective conservation.

1.2 Aims and objectives

Commencing 1st September 2013 the 5.5 year LCC Project aimed to secure the connectivity of the Corridor for bear and wolf. By implementing the objectives below, the project sought to maintain the functional connectivity of the Corridor and prevent bear and wolf populations from being isolated, thus enhancing the Favourable Conservation Status of these species. The project objectives were to:

- Increase functional connectivity through the securing and restoring of critical habitat and landscape features as (micro) corridors through a connectivity pinch point and the promotion of sympathetic land management in the wider area.
- Address the direct threats, namely human-wildlife conflict and poaching, to bears and wolves and associated prey species within the Corridor, and to build back local knowledge to allow the co-existence of humans and large carnivores.
- Promote integrated conservation of the landscape through developing the information base and capacity of responsible agencies and developing Regional Species Action Plans and harmonised forestry and hunting strategies for the bear and wolf, their habitats and prey, in the Corridor.
- Enhance the awareness and support of the local population and other stakeholders for the conservation of the bear and wolf and the Natura 2000 sites in the Corridor.

1.3 Results

The LCC Project ended on 28th February 2019 having successfully achieved all of the Project objectives (section 1.2). A detailed description of the Project's results is provided in the Project's Final Report. An overview and summary of the results is provided below.

The project has provided a model for interventions at both the landscape and local scale to address connectivity issues, from which others may now learn. The project adapted and applied best practices and demonstrated new approaches, translating the theory of landscape conservation and connectivity, into practice on the ground. The focus on halting the decline of two priority species – the bear and wolf – through increased enforcement, the addressing of human-wildlife conflict and the coordination of future conservation actions through regional species actions plans, supports improvements in the conservation status of the priority, and other, species that share this landscape. The project promoted regional cooperation between 17 Natura 2000 sites, helping ensure good management and strengthening their combined approach to the conservation of bear, wolf and connectivity within this landscape. In this way benefiting other important carnivores such as the lynx and reinforcing Natura 2000 network functionality. The results of key project actions are summarised as follows:

- **Stakeholder engagement and socio-cultural assessments to promote integrated conservation and raise awareness for long-term conservation**
A participatory approach was adopted throughout all project actions, and stakeholders were engaged through meetings, workshops, training and public events and in direct implementation of conservation actions. The project directly engaged with just over 2,600 participants representing more than 260 organisations from public authorities to members of local communities and hunters and foresters. Surveys indicate that participants directly engaged in the project have an increased awareness of bears, wolves and landscape scale conservation, are more supportive of conservation and have an increased capacity for implementing landscape scale conservation.
- **Facilitate coexistence between people and large carnivores by reducing the levels and severity of damages**
An Intervention Team was established, in partnership with the Gendarmerie, to respond to dangerous incidences with wildlife. The team was authorised to operate by the Hunedoara County Prefect. Uniquely for Romania, all responsible authorities with competencies for managing wildlife agreed and signed a protocol enabling and supporting the operation of the Intervention Team across multiple counties and disciplines for the duration of the project. The Intervention Team was very active and responded successfully to a range of issues including

releasing bears from snares, translocating a problem bear, preventing human injuries from dangerously habituated bears, and damages to livestock and property by bears and wolves and other problematic species.

The deployment of electric fences and Carpathian shepherd dogs to guard livestock reduced damages and demonstrated that such methods can be 100% effective when used correctly. Support to farmers to access the Government's damage compensation scheme was also provided, as well as advising and supporting the Damage Inspection Commission and providing advice on damage prevention measures and deterrence to prevent further damages.

- **Reduce poaching as a direct threat to bears and wolves**

The Gendarmerie created two specialised Mountain Units in the Corridor, which were equipped and trained by the project, enabling the Units to conduct anti-poaching patrols. The enhanced presence of Gendarmerie Units and effective anti-poaching patrols has, according to official reports, reduced the levels of wildlife crime in the Corridor. The Gendarmerie has shared experiences with Gendarmerie units in Italy, Spain and Switzerland and is currently seeking to establish new anti-poaching units within Romania.

- **Increasing the information base and level of knowledge for development of conservation management plans**

A broad suite of ecological surveys and spatial analyses were implemented to assess the conservation status of bears and wolves. While large areas of suitable habitat for both species were identified, and no evidence for the genetic isolation of bears and wolves was found, the connectivity of the Corridor has decreased due to new (unforeseen by the Project) road improvement schemes in the north-east and south-east of the Corridor and a railway upgrade project between Arad-Simeria.

- **Harmonisation of Forestry and Hunting approaches to include conservation objectives**

The potential impacts of modern forest and hunting practices on bear and wolf were assessed and guidelines and advice were provided to hunters and foresters to ensure that practices included conservation objectives. Forest management plans were amended to take into account Natura 2000 site (conservation) management plans. Hunters were engaged in monitoring wildlife and in supporting farmers to prevent damages of crops and livestock by bears and wolves.

- **Securing connectivity and restoring critical habitat**

Connectivity across the Mures River Valley, a critical pinch-point in the Corridor, has been increased through the purchase of 133 hectares of mostly abandoned arable land, circa 45 hectares of which has now been cleaned of invasive scrub *Amorpha fruticosa* and restored to forest habitat, which facilitates wildlife movement.

- **Promoting long-term conservation through Regional Species Action Plans for bear and wolf**

Results from across the project's actions were used to develop conservation actions to be implemented through Regional Species Action Plans (RSAP), one for bear and one for wolf. The RSAPs were widely consulted on and have been formally approved by the Ministry of Environment for implementation post project.

- **Ecosystem Services**

A range of studies were undertaken (on forestry, connectivity and agricultural services) and tools used to determine ecosystem services available within the Corridor, and the project's impact on these. These show that the project has contributed significantly to ecosystem services including provisioning - employment and firewood, regulation – sequestration and pollination, supporting – genetic diversity and cultural and conservation investment.

- **Community benefits**

Project assessments clearly indicate positive increases in well-being amongst community stakeholders engaged by the project, including increased knowledge, economic benefits through employment and the deployment of wildlife damage prevention measures. Ultimately these translate into increased stakeholder tolerance towards wildlife. While the project contributed to well-being, there were a number of negative changes experienced by local people within the project area, but beyond the scope of the project, during the project timeframe including: continued socio-economic decline, increased timber extraction by large companies with negative economic and environmental impacts, and transient bee-keepers increasing disease risk.

- **Communications**

A project website (www.connectcarpathians.ro) and a project Facebook page were used to communicate project activities. Brochures, leaflets, guidelines and a mobile exhibition were used to engage stakeholders in conservation through multiple participatory events including workshops, school visits and public events.

The LCC Project successfully addressed a wide range of threats to landscape connectivity and the priority species within the Corridor. However, many threats are enduring, e.g. interactions between people and wildlife, and need to be addressed consistently and effectively over the long-term. Further, the location, size, habitat and land use structures and other complexities of the Corridor, and its many stakeholders and their changing interests, predetermine that continued work is required to maintain conservation gains and to address increasing or new threats to connectivity and priority species.

1.4 SWOT Analysis

Following the successful completion of the LCC Project it is necessary to identify and consider new and ongoing issues, problems and challenges facing the project area and priority species. The SWOT analysis presented on pages 9 and 10 presents the relevant strengths, weaknesses, opportunities, and threats, which help identify the main conservation needs, actions and priorities for the landscape and species to be targeted through this After-LIFE Conservation Plan.

1.5 Summary of situation at project end

1.5.1 Weaknesses and Threats

Looking forward, and to ensure that the conservation gains made by the project will be sustained, and with reference to the SWOT table on pages 9 and 10, there are a number of weaknesses and threats that need to be addressed including:

- To priority species:

Further support to stakeholders on the implementation of approved plans and demonstration of approaches for the management of bear and wolf is required. Actions need to be monitored

and lessons need to be fed into future revision processes for policies, plans, strategies and management approaches.

- From infrastructure:
The ongoing monitoring of landscape connectivity and existing and new transport infrastructure development is required to identify where such projects impact on connectivity, especially at key pinch-points, and / or priority species, and in order to recommend and support appropriate mitigations.
- From wildlife conflict:
The ongoing management of conflicts between local people and large carnivores and other wildlife, including the application of damage mitigation measures within the Corridor and neighbouring areas is required. Conflicts may arise in new locations and mitigation measures may need to be adapted. Further support to local people to access the Government's compensation scheme, which may in the future carry the burden of increased species' numbers as a result of the success of the project, will be required.
- From poaching, wildlife related crime and incidences:
Poaching and incidences with wildlife will need to be controlled through continued support and engagement with the Mountain Gendarme anti-poaching units and the Intervention team. As project success bites, new preferred poaching locations may emerge requiring additional or up-scaled anti-poaching effort.
- From Government changes and failing community support:
Through their actions as farmers, foresters, for example, local people can present both challenges and opportunities to the conservation of the Corridor and priority species. New residents and business entrepreneurs in particular, may lack connection to the landscape, and may thus present the greatest challenges to the 'living landscape' vision. The ongoing engagement of local people in future conservation actions and the provision of benefits from these are critical to ensuring conservation gains in the long term. Positively engaged communities are also better informed and able to advocate for conservation in a changing political environment.
- From lack of capacity:
It is critical to retain an experienced, professional and locally staffed conservation team that is well connected to the stakeholder and local community network and able to access future funding opportunities for conservation and other complimentary activities including species conservation, infrastructure mitigation, land purchase, anti-poaching, wildlife crime and community activities.
- Human, plant, animal disease outbreaks (linked to climate change):
It is commonly accepted that risks to biodiversity can be best ameliorated and mitigated within healthy ecosystems. The actions of the LCC and this proposed After-LIFE plan would further ensure the resilience of the Corridor to future shocks and stresses.

SWOT Analysis table

Strengths	Weaknesses
<ol style="list-style-type: none"> 1 FFI and partner staff team continues to operate post LCC Project with funding from other sources. 2 Apuseni-Southern Carpathians corridor is a flagship landscape for FFI, ensuring further investment in conservation. 3 Regional Species Action Plans approved by the Ministry of Environment for implementation. 4 Intervention team established, providing rapid response to emergency situations generated by dangerous wild animals and continues to be operational alongside GIRG anti-poaching units. 5 The presence of a state authority - the Romanian Gendarmerie - gave greater recognition and increased authority/gravitas. 6 GIRG anti-poaching units established, resourced and equipped, and continue patrols within Hunedoara County. 7 FFI/partner ranger team established and operational post LIFE+ through a new Project. 8 Connectivity has been secured through land purchase across the Mures river valley. 9 Habitat restoration and management activities on purchased land continue enhancing connectivity delivered through the FFI/partner team. 10 AZ and FFI built-up a good collaboration with forest administrators / foresters and game managers/hunters and sectoral authorities. 11 Guidelines for harmonization of forestry and hunting sector developed 12 Responsible authorities and stakeholders are more aware of the Corridor and engaged in its conservation. 13 Community conservation approach used land management / restoration activities to provide employment and benefits to local people. 14 FFI and partners, through the Zarand Initiative, continue to support the sustainable development of local communities within the Corridor. 	<ol style="list-style-type: none"> 1 Lack of clear policy for management of bear and wolf at the National Level as National Management Plans wait to be implemented. 2 Conflicts between people and large carnivores and different stakeholders persist. 3 Development of transport infrastructure without appropriate mitigations continues to impact on landscape connectivity. 4 Limited funding opportunities for continuing conservation actions to secure connectivity. 5 Harmonization requires significant capacity building within sectors (forestry, hunting and protected areas administrations). 6 The interest of stakeholders in harmonization depends on supplementary or compensatory payments. 7 Considerably long timeframes are required to assess the impact of forestry and game management on species population trends. 8 Uncertainty in policies and responsibilities for the management of Natura 2000 sites within the Corridor persist. 9 Poaching of wildlife continues. 10 Communications and collaboration with other responsible authorities is sometime difficult. 11 Difficulty in accessing timely accurate data on hunting quotas.

Opportunities	Threats
<ol style="list-style-type: none"> 1 MoE open to collaborate on implementation of RSAPs. 2 MoE committed to using harmonisation guidelines to promote the approach in Natura 2000 sites where wolves and/or bears are present. 3 Effective implementation of National Management Plans for bear and wolf will build support from stakeholders. 4 Key stakeholders, hunters, communities and responsible authorities continue to support conservation actions and want to be engaged. 5 There is greater awareness amongst media and general public of environmental issues. 6 Office base and team retained in Deva as platform for current and future conservation delivery. 7 Increased requests for partnering on projects in the region. 8 We still have the buy-in of all stakeholders. 9 Facilitating coexistence project is building on LIFE+ work and enables sustained presence in the Corridor to mitigate HWC. 10 More scrutiny of what we do and the science behind it causes us to continually improve. 11 Commitment to pursue further land purchases to strengthen the micro-corridors and secure a larger territory of land under long-term conservation management. 12 Land owned by FFI offers chance to develop a sustainable business approach to support land management and wider conservation actions. 13 Innovation on habitat restoration and community conservation approaches. 14 Positive engagement with GIRG is leading to new project ideas. 15 Clearer understanding of conservation importance and needs of the landscape leading to new projects focused on other priority species. 16 Ongoing support of Romanian MoE and Gendarmerie. 17 New support to Zarand community products increases sustainability. 18 GIRG can promote proposals for legislative changes to obtain greater competences to address wildlife crime 	<ol style="list-style-type: none"> 1 Human, plant, animal disease outbreaks (linked to climate change). 2 New residents & entrepreneurs don't behave in line with 'living landscape' vision. 3 Tensions / infighting amongst stakeholders. 4 Loss of support for landscape level multi-sectorial approach amongst authorities and agencies at national and local level. 5 Presence of large carnivores in project area leads to increased human-wildlife conflict (HWC). 6 Project activities continue to improve the conservation status of bear and wolf which may have negative economic consequences to some stakeholder groups (e.g. hunters). 7 Increasing levels of wildlife damages that are not mitigated for may lead to increased levels of HWC. 8 Construction of new roads and infrastructure without mitigations for landscape connectivity and species could impact landscape at key pinch-points in the Corridor. 9 Changes to motorway construction mitigations could impact landscape and species at key pinch-point in the Corridor. 10 No further land available for sale in Mures or at other, to be identified, priority areas. 11 No funds available to continue with management of land at Mures and Vorta forest. 12 No / poor implementation of Natura 2000 payments. 13 Understaffing and under capacity of authorities and of forestry, hunting and protected areas management structures 14 Continuing threats from intensive agriculture/ commercial forestry, etc. 15 Change of Government results in less / no support for conservation activities.

1.5.2 Strengths and Opportunities

The LCC Project put in place the necessary capacities (staff, plans, strategies, resources and infrastructure) to address the conservation needs and priorities identified in the initial project proposal including:

- An experienced and resourced conservation team and Government (Gendarme) anti-poaching and joint intervention teams are in place and continuing with activities post project, with a motivation by the Gendarme to introduce new anti-poaching teams in new areas of Romania;
- Formal plans for the long-term conservation of priority species approved at the Governmental level, providing a basis for future conservation actions;
- Human-Wildlife Conflict actions were expanded, through a new parallel project, to an additional 3,000 km² area connecting the project landscape to the wider southern Carpathian mountain range, which remains active and ensures continued presence also in the project area;
- Land secured through the project remains protected and is in the process of being fully restored to habitat that facilitates wildlife movement at the Mures Meadows connectivity pinch-point;
- The profile of the Corridor has been increased and responsible authorities and stakeholders are more aware of its importance and more engaged in its conservation;
- Community conservation approaches on secured land will continue to provide employment and benefits to local people;
- FFI and partners, through the Zarand Initiative, continue to support the sustainable development of local communities within the Corridor;
- There is an active interest in upscaling and deepening conservation approaches and experiences to the national level by Government stakeholders;
- The presence of an active team and increased landscape profile are leading to new opportunities to continue with the conservation of critical habitats and different priority species in the Corridor, each of which will make a direct contribution to building the resilience of the landscape and its biodiversity.

These capacities now provide the foundation / the strengths and opportunities that enable the effective continuation and expansion of the LCC project actions, as detailed below.

2. After-LIFE objectives and methodology

The LCC Project has been a fundamental and important part of a long-term initiative whose aim is to establish and maintain the ecological connectivity of the Apuseni-Southern Carpathian corridor (known locally as the Zarand Landscape). The LCC Project Coordinating beneficiary and partners continue to collaborate on post project actions designed to achieve this aim.

2.1 After-LIFE objectives

The objectives of this After-LIFE Conservation Plan are as follows:

1. Ensure that the conservation gains made by the LCC Project will be sustained, building on the lessons learnt, results achieved and collaborative approach.
2. Secure connectivity of the Apuseni-Southern Carpathian corridor through land purchase, habitat management and restoration and the promotion of sympathetic land management.

3. Facilitate coexistence between carnivores and people within the Apuseni-Southern Carpathian corridor through addressing threats of human wildlife conflict and poaching of bears and wolves and associated prey species within the corridor.
4. Secure and enhance other priority key species populations and their habitats in order to protect these species in their own right and to contribute to further building the resilience of the Apuseni-Southern Carpathian corridor.
5. Promote and increase capacity for integrated conservation and long term planning of the Apuseni-Southern Carpathian corridor and key species through training and capacity building activities.
6. Engage local people to achieve long term conservation of the landscape and its bear and wolf populations through improving local livelihoods and enhancing awareness, education, and governance of the local population for conservation of the landscape.

The key Actions required to achieve these objectives are presented in After-Life Action Plan tables below:

3. After-LIFE Action Plan

Objectives	Actions	Priority	Timeframe	Responsible Institute	Funding need & possible sources*
1. Ensure that the conservation gains made by the LCC Project will be sustained, building on the lessons learnt, results achieved and collaborative approach	1.1 Maintain an experienced and resourced local conservation team tasked with enhancing the stakeholder and local community network and continue with conservation actions within the Corridor and expand actions to connect areas, as well as to other priority species.	1	2020-2024	FFI & AZ	€150,000 per year from diverse sources.
	1.2 Develop and implement a fundraising plan to secure funding for After-LIFE actions.	1	2020-2024	FFI & AZ	FFI Internal
2. Secure connectivity of the Apuseni-Southern Carpathian corridor through land purchase, habitat management and restoration and the promotion of sympathetic land management.	2.1 Restore 25 ha of land purchased but not planned for restoration through the LCC Project within Defileul Muresului Natura 2000 site.	2	2020-2022	FFI	€50,000 Diverse sources
	2.2 Purchase a further 21 hectares of land in Mures meadows to complete the securing of micro-corridors 1 (3ha), 6 (5ha), 7 (10ha), and 8 (3ha), within Defileul Muresului and Podiseul-Lipovei-Poiana Rusca Natura 2000 sites.	2	2020-2024	FFI	€200,000 Investment funds
	2.3 Monitor landscape connectivity of the 133 ha of land purchased in the Mures Meadows and assess contribution to connectivity within Defileul Muresului Natura 2000 site.	1	2020, 2022	FFI & AZ	€50,000 Diverse sources
	2.4 Monitor and assess landscape connectivity across the Corridor, especially at two new key pinch-points impacted by infrastructure development and develop mitigations (Muntii Bihor and Coridorul M. Bihorului – Codru Moma Natura 2000 sites) .	1	2019-2020	FFI & AZ	€50,000 Trusts & Fdns Statutory funds
	2.5 For 2.2 (and 2.4 if mitigations is required) assess feasibility and complete land title investigations of potential parcels to be purchased.	2	2020-2024	FFI	€10,000 Trusts & Fdns
	2.6 Develop a land purchase plan to secure the finances needed to secure the total land area required to complete micro-corridors 6, 7 and 8 in Defileul Muresului Natura 2000 site.	2	2020-2021	FFI	€15,000 Trusts & Fdns
	2.7 Develop a sustainable business approach to generate income from the management of the purchased land and use this to fund land management and for investments in conservation actions.	1	2019-2020	FFI	€20,000 Ethical Investment fund

Objectives	Actions	Priority	Timeframe	Responsible Institute	Funding need & possible sources*
	2.9 Continue with harmonisation activities with game managers (monitoring, damage prevention, anti-poaching), foresters & hunters.	1	2019-2021	AZ, RG, HM, PAM	€300,000 National Funds (POIM), LIFE+
	2.10 Contribute to revision of technical norms for forestry and hunting.	2	2019 - 2023	AZ, MoE	€5,000 Internal funds
	2.11 Develop EIA guidelines for forest management plans.	2	2019 - 2023	AZ, ANPM	€50,000 National funds (POCA)
3. Facilitate coexistence between carnivores and people within the Apuseni-Southern Carpathian corridor through addressing threats of human wildlife conflict and poaching of bears and wolves and associated prey species within the Corridor and establish a veterinary service to support both wildlife and farmers across the area.	3.1. Strengthen intervention teams' ability to respond to attacks on livestock, verify damages and translocate animals.	2	2020-2024	FFI, AZ, RG	€200,000 Trusts & Fdns Statutory funds
	3.2. Deliver training to new Gendarme staff and units at the Hunedoara and other counties level, relevant to the Corridor, and provide support for all the counties within the Corridor in emergency preparedness management activities for dangerous wild animals.	1	2020-2024	RG	€100,000 Statutory funds
	3.3. Maintain GIRG Anti-poaching teams and patrols established during the LCC project including upkeep of equipment, patrol database and maps and annual reporting protocols.	1	2020-2024	RG	€12,000 - €15,000 State funds
	3.4. Maintain existing and build relationships with local communities, people (such as farmers) and interest groups (including hunting associations and local authorities) in connecting areas and develop our understanding of the agricultural and land-use practices across this region.	2	2020-2024	FFI, AZ, RG	€200,000 Trusts & Fdns Statutory funds
	3.5. Conduct surveys to ascertain livestock numbers and level and severity of conflict problems in connecting areas.	3	2020-2023	FFI, AZ	€50,000 Trusts & Fdns Statutory funds
	3.6. Increase the understanding of the compensation process, including the need to assess the damage, value the compensation and submit the claim; explore innovative compensation schemes.	1	2020-2023	FFI, AZ	€50,000 Trusts & Fdns Statutory funds
	3.7. Provide electric fences to reduce levels of damage and conflicts by reducing numbers of crops lost by farmers.	1	2021-2024	FFI, AZ	€100,000 EC Agriculture funding

Objectives	Actions	Priority	Timeframe	Responsible Institute	Funding need & possible sources*
	3.8. Provide and train livestock guard dogs, erect electric fences and support farmers in the compensation processes to mitigate incidences of human-wildlife conflict.	1	2021-2024	FFI, AZ	€100,000 Trusts & Fdns Statutory funds
4. Secure and enhance other priority key species populations and their habitats in order to protect these and to contribute to building the resilience of the Apuseni-Southern Carpathian corridor.	4.1 Support the implementation of the Regional Species Actions Plans for bear and wolf, where possible, by leading or supporting others to deliver actions that contribute to the delivery of the plan.	1	2020-2024	FFI, AZ	€250,000 Statutory funds
	4.2 Organise and facilitate annual meetings of key stakeholders to assess progress on RSAP delivery to include the GIRG and 17 Natura 2000 site administrators within the Apuseni-Southern Carpathian Corridor.	2	2020-2024	FFI, AZ	€10,000 Statutory funds
	4.3 Monitor and collate data and lessons on the favourable conservation status of bear and wolf and feed these into future revision processes for policies, plans, strategies and management approaches, with involvement of the GIRG and 17 Natura 2000 site administrators within the Apuseni-Southern Carpathian Corridor.	2	2020-2024	FFI, AZ	€100,000 Statutory funds
	4.4 Lead on or support others to lead on new conservation projects that will protect priority species and contribute to maintaining and enhancing the resilience of the Corridor and connecting areas.	2	2020-2024	FFI, AZ	€250,000 Trusts & Fdns Statutory Funds
5. Promote and increase capacity for integrated conservation and long term planning of the Apuseni-Southern Carpathian corridor and key species through training and capacity building activities.	5.1. Support links with national and international peer network to continue building capacity for dealing with wildlife conflicts.	2	2020-2024	FFI, AZ	€50,000 Trusts & Fdns Statutory funds
	5.2. Strengthen scientific capacity to facilitate improved data gathering, analysis, storage and share data to inform conservation activities.	2	2020-2024	FFI, AZ	€100,000 Trusts & Fdns Statutory funds
6. Support and promote sympathetic land management with communities through improvement and	6.1. Deliver a participatory approach to develop a community development plan for the Zarandul de Est Natura 2000 site at the heart of the Apuseni-Southern Carpathian corridor.	2	2020-2024	FFI, AZ	€25,000 Trusts & Fdns
	6.2. Maintain the multifunctional centre/milk collection facility as the hub for the local communities' actions.	2	2020-2024	FFI, AZ	€50,000 Trusts & Fdns

Objectives	Actions	Priority	Timeframe	Responsible Institute	Funding need & possible sources*
diversification of livelihood activities that have been delivered in parallel and bring added value to the LCC Project.	6.3. Continue with product development, sales and marketing to support dairy, honey, oils, fruits and preserves.	2	2020-2024	FFI, AZ	€50,000 Trusts & Fdns
	6.4. Continue with activities to revive and promote local traditions and culture linked to biodiversity and the conservation of the Corridor.	3	2020-2024	FFI, AZ	€15,000 Trusts & Fdns
	6.5. Engage local people in habitat restoration activities through paid employment and the provision of other benefits to low-income families.	2	2020-2024	FFI, AZ	€100,000 Trusts & Fdns
	6.6. Continue with schools programme including the development of a teaching module for elementary and secondary schools on large carnivores and their behaviours in modern Europe.	2	2020-2024	FFI, AZ	€20,000 Trusts & Fdns

Notes:

FFI	Fauna & Flora International	MoE	Ministry of Environment
AZ	Asociata Zarand	RG	Romanian Gendarmerie
ANPM	National Agency for Environmental Protection	HM	Hunting units managers
PAM	Protected area managers	Fdns	Foundations

*Funding secured at project end totals circa €730,000 and is focused primarily on actions 1.1-1.2, 2.3, 2.6-2.7, 3.1, 3.4-3.6. 3.8, 4.1, 6.1-6.5, and these actions are currently ongoing.

4. Conclusion

It is crucial to maintain landscape connectivity within the Apuseni-Southern Carpathian corridor to ensure that bear and wolf populations in the Apuseni Mountains do not become demographically, genetically or ecologically isolated and to achieve and maintain the Favourable Conservation Status (FCS) of both species in this region of Romania. The LIFE Connect Carpathians (LCC) project was established to address key threats to the functional connectivity of the landscape and two priority species, the bear and wolf, within it. The project area covers some 4,300km² and is home to circa 10% (663 individuals) of the Romania's population of bears and 28% of Romania's wolf population. Their conservation status is directly linked to the functionality of the corridor, which is threatened by infrastructure development, changes to land-use, conflict between people and wildlife and poaching.

The LCC Project ended on 28th February 2019 having successfully achieved its objectives. The Project provided a model for interventions at both the landscape and local scale to address connectivity issues, from which others may now learn. The project adopted a participatory approach engaging stakeholders in all project actions to increase the functional connectivity of the corridor and to improve the conservation status of priority species. Stakeholders benefited from increased awareness and through direct benefits from project activities; such that stakeholders are now more supportive of conservation. Partners benefited from increased capacity, such that each partner is able to continue focusing on the landscape and priority species conservation post project.

However, many of the threats are enduring and need to be addressed consistently and effectively over the long-term. Further, the location, size, habitat and land use structures and other complexities of the Corridor, and its many stakeholders and their changing interests, predetermine that continued work is required to maintain conservation gains and to address increasing or new threats to connectivity and priority species. Threats remain from: transport infrastructure developments, human-wildlife conflicts, poaching and other wildlife related crime and incidences and potential disease outbreaks linked to climate change. The retention of conservation capacity and the ongoing engagement of local people in future conservation actions and the provision of benefits from these are critical to ensuring conservation gains are retained in the long term. Fortunately, the LCC Project put in place the necessary capacities to address the conservation needs and priorities identified. These capacities remain in place and provide a foundation for the delivery of actions detailed in this AFTER-LIFE Conservation Plan.

The Plan includes 6 objectives to be delivered through 36 actions designed to ensure that the conservation gains made by the LCC Project will be sustained. The first objective is to build on the lessons learned, results achieved and collaborative approach taken by the LCC project in order to achieve the remaining 5 objectives of: Objective 2) Securing connectivity of the Apuseni-Southern Carpathian corridor; 3) Facilitating coexistence between carnivores and people within the Apuseni-Southern Carpathian corridor; 4) Securing and enhancing other priority key species populations and their habitats to further build the resilience of the Landscape; 5) Promoting and increasing capacity for integrated conservation and long term planning through training and capacity building activities, and; 6) Engaging local people to achieve long term conservation goals through improving local livelihoods.

The Projects partners wish to thank the European Commission and the LIFE+ Project External monitors for their excellent financial and technical support and advice to the project. We also thank the many stakeholders who opened their doors and gave their time and energy working with and supporting the Project. Your support enabled the LCC Project's success and your continued support will be critical to the delivery of this conservation action plan and, thus the conservation of the Apuseni-Southern Carpathian corridor and the priority species and ultimately the local human communities that live within it.