



***LIFE18 NAT/IT/000972***

**Part C – detailed technical description of the  
proposed actions**

## **LIST OF ALL PROPOSED ACTIONS**

### **A. Preparatory actions, elaboration of management plans and/or of action plans**

- A1 Transboundary cooperation and coordination: establish the international Alpine wolf population working groups
- A2 Establishment and training of the wolf prevention emergency teams, evaluation of the initial situation and operations strategy
- A3 Training of new anti-poisoning dog units and coordination of international and national environmental judicial policy - definition of the overall strategy
- A4 Active involvement of hunting organizations in wolf population management and development of strategy for a predator-prey-hunters relationship evaluation
- A5 Optimization of an integrated surveillance of the wolf status at the international alpine population level
- A6 Hybridization in the alpine population and connection corridor: define protocols, management actions, and teams of interventions
- A7 Dealing with urban wolves: develop specific protocols for prevention, surveillance, and eventually managing bold wolves
- A8 Summary of Best Practices for wolf population management and Slovenia Management plan

### **B. Purchase/lease of land and/or compensation payments for use rights**

### **C. Conservation actions**

- C1 Wolf prevention emergency teams: damage inspections, preventive methods, moderation, wolf control, conflict mitigation in hot spot areas
- C2 Measures against illegal wolf killing and control of poison baits and coordination of international and national environmental judicial policy
- C3 Building strong partnership: involving hunters in wolf-prey ecosystem functioning understanding
- C4 Establishment of an integrated surveillance of the wolf status at the Alpine population level
- C5 Wolf-dog hybridization and injured wolves: detection and control in the Apennine ecological corridor and in the Alps
- C6 Decrease Habitat fragmentation and wolf traffic mortality through recovery of identified sink areas
- C7 Economic benefits with wolf-friendly protective ecotourism packages and products
- C8 The first special Life Alpine Young Ranger Wolf Program: in the field implementation over the boundaries to involve new generations in wolf conservation

### **D. Monitoring of the impact of the project actions (obligatory)**

- D1 Assessment of attitudes and perceptions about wolves among general public and key stakeholder groups
- D2 Assessment of socio-economic impact of the project and ecosystem functions
- D3 Evaluation of effectiveness of mitigation measures implemented to prevent traffic related wolf mortality in sink areas

### **E. Public awareness and dissemination of results (obligatory)**

- E1 Dissemination planning and execution
- E2 Stewardship and Media Office to Enhance Engagement, Replication and Multiplication of the Project Impact
- E3 Developing participatory approach and regional stakeholders' platforms
- E4 Education to train the stewards of tomorrow
- E5 Creativity for conservation: innovative dissemination campaigns
- E6 Touring thematic conferences

### **F. Project management (obligatory)**

- F1 Coordination, management and administration of the project by the project steering groups
- F2 After LIFE conservation plan

## DETAILS OF PROPOSED ACTIONS

### A. Preparatory actions, elaboration of management plans and/or of action plans

**ACTION A.1:** Transboundary cooperation and coordination: establish the international Alpine wolf population working groups

#### ***Description and methods employed (what, how, where, when and why):***

Common agreements on the details for implementing the project are necessary for a smooth start of the project, and coordinated working groups are fundamental to decrease management fragmentation. It is crucial that the alpine population be monitored and managed as a unique biological unit, with good coordination between the administrative bodies (be they intra- or inter-national) that share the population. The general coordination of the project will be the key action that will decrease administrative fragmentation (Threat No.1). There will be a strong coordination of every project activity to ensure a certain degree of consistency in conservation practices, surveillance, communication and conflict mitigation measures and to ensure that their independent actions enhance rather than hinder each other. This will directly address Threat No.1. The action will be further implemented by Action F1.

**1) Creation of the coordinated wolf groups in the LIFE WolfAlps EU for the implementation of the actions:** 5 coordinated wolf alpine working groups will be created that will interact and develop strong relationships for the implementation of the Project. In particular there will be a:

- "WolfAlps Steering Committee" with a responsible from each Partner for the general implementation of the Project in connection with Supporters
- "WolfAlps Technical-Conservation Group" that will have to deal with the implementation of actions A-C-D in coordination within regions and countries, with a member from each partner.
- "WolfAlps Communication Group" that will have to deal with the implementation of actions C-E in coordination within regions and countries, with a member from each partner.
- "WolfAlps Administrative Group" with an administrative officer from each partner, to rapidly identify coordinated administrative procedures.
- "International Scientific Committee": a scientific committee, with 1-2 members from each country, coordinated by the PM of the project, to help with advice on scientific matters when required.

If necessary, specific coordinated working groups will be set up for the implementation of specific actions.

**2) Spatial organization for the implementation of the project, within groups and among groups, within countries and among countries, with a defined strategy.** An agreement on the workflow and representation of the groups at the regional (especially within Piemonte), national and international level will be defined. A detailed list of meetings will be planned, over the years this will build a close working relationship within and between the members of the groups and to list specific inter and intra group goals and timelines. A detailed action plan for the first year of the project (2019-2020), with a timeplan, will be prepared with agreement on strategies and approaches to be adopted in every action. Action plans for years 2021-2024 will be developed in Action F1.

**3) Three days Kick off meeting:** The meeting will be held in Italy at the Coordinating beneficiary headquarters (Valdieri, Cuneo, Italy) within the first 2 months of the project and will be attended by at least two representatives per each partner institution. Soon after the signature of contractual relationship between the project beneficiary and the EU for co-funding of the project, all project beneficiaries will meet for this 3 day kick off meeting to implement the above point 1-2 and define the administrative procedures (a draft partnership contract that regulates the relationships between the coordinating beneficiary and each partner

will be prepared and discussed). Moreover a general introduction to administrative procedures will be conducted during the meeting, where the Common Administrative Provisions will be illustrated and discussed and critical rules for financial reporting will be highlighted. A demonstration will be given.

This strong initial moment is required for efficiency over the next 5 years. Groups' activities will be continued in Action F1 for the rest of the project and an annual project meeting will be held in every year, within action F1. In Action E1 for the Communication Group.

**Beneficiary responsible for implementation:**

APAM

APAM, the coordinating beneficiary, will be responsible of the coordination of the Action for its correct implementation among every partner and project area. Every partner will participate and contribute to the action.

**Assumptions related to major costs of the action:**

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** costs for coffee break organization have been benchmarked against the average costs that local service providers apply in similar services.

**Equipment costs:** there are no costs in the action.

**Consumable costs:** there are no costs in the action.

**Other costs:** reimbursement of travel linked to the project, for permanent staff involved in the project whose costs are not charged under personnel costs.

**A1's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
1 detailed action plan of the project for 2019-2020 with a timeplan for the implementation of each action	03/2020
18 Partnership Agreements	09/2020
Guide on administrative procedures	03/2020
Organization chart of the 5 groups and of the overall project structure, filled with identified responsables	10/2019
Detailed project action plan and timeplan for the first year	11/2019

**A1's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First kickoff meeting with two representatives per each partner institution	03/2020
Creation of coordinated wolf groups	03/2020

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION A.2:** Establishment and training of the wolf prevention emergency teams, evaluation of the initial situation and operations strategy

### ***Description and methods employed (what, how, where, when and why):***

Damages to livestock are one of the most important causes of human-carnivore conflict, which makes prevention crucial in solving problems. In the Alps, on one side wolves are expanding to new areas and on the other the governments are promoting livestock farming. This conflict is becoming more serious where preventive measures aren't correctly implemented. To reach both goals (wolf protection and agricultural land use) a sustainable farming system must be identified and promoted among local farmers, in strict connection with the Rural Development Programs (RDP). The negative attitude of local farmers towards wolf presence is often due to the lack of preventive measures and assistance from local authorities. Experience from other projects has shown that having project staff assist farmers in implementing prevention systems is instrumental in making local people not feel abandoned. The action addresses threats 3-5. We'll characterize the conditions of conflict, understand the mechanisms of wolf attacks on livestock and identify preventive methods good practices (considering the outputs from the LIFE WolfAlps). We'll then provide practical solutions developing a **first-aid wolf prevention Intervention units-WPIU** to be tested and implemented in each country, to **concrete operate in action C1**. To implement the below actions, a **multidisciplinary working group-MWG**, composed by different professional roles operators, will be created in Italian regions.

Steps to implement the action:

**1) Initial situation evaluation to focus interventions and ad-hoc optimal preventive strategies:** we will develop ad-hoc technical guidelines on preventive measures, using best practice guidelines developed by Life WolfAlps or other sources. We will differentiate between cattle and sheep prevention methods to be implemented at first recolonizing phase/first attacks to new farmers in known wolf areas, and long term strategies in stable wolf areas where pastures use preventive methods. All depredation data of the previous 3 years will be surveyed and collected into a database at a national level and compared. A survey on wolf damage refunding methods (i.e. RDP) and on prevention programs will be carried out at national level to understand the usefulness for breeders. Moreover the possibility of wolf damage refunding from the *De minimis* state aids will be locally evaluated in Italy. Considering this data the WPIU will implement ad hoc preventive strategies involving farmers. A specific study on wolf livestock depredations will be conducted in the areas occupied by transboundary packs of the PNM and APAM, to establish if the use of preventive systems and flock size affect the number of wolf attacks and victims, evaluating differences between France and Italy. A report will be produced.

**2) Transfer of best practices:** in the LIFE WolfAlps best practices and guidelines were developed for cattle and sheep prevention in the Western Italian Alps. We will organize 3 field visits to transfer best practices: 1 in Alpi Marittime, 1 in Alpi Cozie and 1 in Switzerland with Agridea.

**3) Development of WPIU operating strategy and activity protocol :** we will develop a new effective prevention approach consisting in a **first-aid model of WPIU to be tested and implemented in each country**. The WPIU will be trained and locally established to act in case of livestock depredation for rapidly implementing preventive tools, using *ad-hoc* optimal preventive strategies, indicating the correct use of LGD, providing administrative assistance and operating as mediators. Locally we will define the number of WPIUs and their composition, identifying Administrations to be involved and the operative strategy. The MWG will help in developing the strategy with internal meetings. After a general agreement among countries on the WPIU operations, a national strategy will be developed, with adaptations at regional levels.

**4) Creation of first-aid WPIU in the 4 countries:**



ITALY: for each WPIU we will define the area of activity and the operators to be involved. To have WPIU operating with a common approach, a coordinator WPIU manager will act at national level. We'll have 7 WPIU in Piemonte (2 in Cuneo managed by APAM, 1 in Alessandria by APAP, 2 in Torino by APAC, 1 in VCO and 1 in VC by APOS), 1 in Valle Aosta by RAVA, 3 in Lombardia by RELO and ERSAF, 1 in Liguria by RELI, and 1 in Veneto by PNDB, for a **total of 13 Italian WPIU** .

SLOVENIA: SFS will monitor livestock depredation events and find solutions which will be region-specific and general at the same time, allowing to adjust protocols. At each SFS regional office, in areas of wolf presence, we'll unite the damage inspectors involved in assessing wolf damages. **We'll establish 5 WPIU, involving at least 30 SFS operators.**

FRANCE: 1 full time WPIU managed by ONCFS will operate in France; a special WPIU including in the team a mobile shepherd will be implemented by PNM in the Park.

AUSTRIA: **3 WPIU** managed by AREC **will be established.**

**Total N. of WPIU will be at least 24.**

**5) Training courses and workshops** will be organized to prepare WPIU operators to intervene in damages and preventive cases. Regionally and nationally topics will be selected for the trainings according to needs.

**SLOVENIA:** SFS will organize **2 workshops for WPIU** to define conflicts and operational protocols and **2 workshops with field visits to educate members** on damage prevention methods and on the use of intervention kits.

**ITALY:** will organize 4 training courses in Piemonte (1 in Cuneo by APAM, 1 in Alessandria by APAP, 1 in Torino by APAC, 1 in VCO by APOS), 1 in Valle Aosta by RAVA, 1 in Liguria by RELI, 1 in Veneto by PNDB. In Lombardia the training will be organized by RELO and ERSAF and addressed also to volunteers (referring to the experience gained in projects like PASTURS) for a total of 1 general training course, 2 local training course, 2 training course for volunteers, 3 workshops for vets. Also in Piemonte there will be a regional workshop for ASL vets to improve depredation detection. **Total of 12 training courses and 4 workshops for veterinarians.**

**FRANCE:** 1 training course in Mercantour National Park by PNM and 1 in France by ONCFS.

**AUSTRIA:** 4 Workshops of 4 days each

**6) Specific evaluation will be done: a) in Austria by AREC: Evaluation of positioning systems for an adapted livestock/flock management complementing livestock protection measures and their possible use with WPIU.** This will lay the ground work and basis for the evaluation and improvement of positioning and sensor based systems within a flock, continued in C1. B) **In France by PNM: Analysis of diet for the evaluation of the availability of wild and domestic prey** to describe the different predation contexts according to packs' and individual's characteristics. WPIU will use results to propose solutions in C1.

### ***Beneficiary responsible for implementation:***

APAM

APAM will be responsible for the correct coordination among the different project areas and countries. In Italy APAM will coordinate the action, and APAC, APAP, APOS, METO, RAVA, RELO, RELI, PNDB will participate and contribute. In Slovenia SFS will be -responsible of the action. In Austria AREC will implement it. In France ONCFS will be responsible, and PNM will participate and contribute to the implementation.

**Assumptions related to major costs of the action:**

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** costs for events organization have been benchmarked against the average costs that local service providers apply in similar services.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.



**A2's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Report on the Evaluation of initial situation to focus interventions and Ad-hoc Optimal preventive strategies in the Alps	12/2020
WPIU operating strategy, one per country	09/2020
Report on the evaluation of positioning systems for an adapted livestock/flock management complementing livestock protection measures and their possible use	12/2020

**A2's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First field visit for transfer of best practices	08/2020
First WPIU created in each country	05/2020
First training course for WPIU in each country	10/2020

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION A.3:** Training of new anti-poisoning dog units and coordination of international and national environmental judicial policy - definition of the overall strategy

### ***Description and methods employed (what, how, where, when and why):***

The adequate preparation of wardens in detection of illegal activities is of great importance for wolf conservation and to counteract poaching activities. Poisoned baits and poaching can cause large wolf and wildlife mortality, and be dangerous to people and pets. However, poisoning is difficult to counteract because it is silent and hard to detect. The first LIFE WOLFALPS project has been successful in intensifying the level of poisoning detection and set up the first 5 anti-poisoning dog units (APDU) in the Italian Alps, which proved to be extremely successful in poison detection. In this project we will transfer the know-how and best practices developed on the topic to the other alpine regions and constitute new APDU in new areas, as well as reinforce the already constituted units, with an overall alpine coordination of the international and national environmental judicial policies. This action is preparatory for Actions C.2., and directly addresses Threat No.2. The personnel from the CAFO, Park Services, and Provincial Police will be selected in Italy for this task. Judicial policies from Italy, Austria, Slovenia and France will coordinate activities at alpine level to multiply key results.

The action will be implemented through at least 5 steps:

#### **1) Coordination and evaluation of the Initial situation:**

- at international level with police officers from the alpine countries, and **EUROPOL**, already active. A first meeting will be conducted with EUROPOL in The Hague in 2020 to establish coordination between countries, with the head of the Italian Carabinieri-Forestali (CUFA).

- at national and regional level with the regional managers of the CUFA together with the other subjects involved in the fight against poaching at local level (Regional forest corps of the autonomous regions, provincial police, park guards). A first Italian meeting of these bodies will be in Valdieri in 2019 to coordinate activities at the Italian alpine level.

**2) Development of operating strategy for the creation of a central structure of environmental policy**, which will support and coordinate environmental police forces in the fight against environmental crime and in particular poaching and poisoning wolves, managed by Carabinieri Forestali (CUFA). Local offices will be set up at the Provincial Forestry Carabinieri Command Groups, involving the personnel from the regional coordination of CAFO, Park Services, Provincial Police and regional forest corps of the autonomous regions.

**3) Creation and training of more “Anti poisoning dog units”, based on the results and methods developed in the first LIFE WolfAlps.** Due to the highly technical skill required to carry out this type of task, these dogs need specialized training. The dogs used will have a dedicated keeper. The dogs used for detection of poisoned bait and carcasses are extremely sensitive and need special continuous training. The knowledge and knowhow for training these dogs comes from the first LIFE WolfAlps project and will be implemented on the training courses, and the specific protocol of action dog keepers will follow over the years. For this the handlers need to be selected trained for at least the first 2 years by an acknowledged expert from the first LIFE WolfAlps. In this framework 3 new dogs will be trained in Italy: 1 in Lombardy Region by RELO, and 2 in the Piemonte Region, one with a dedicated dog keeper that will come from the APAM, and one from the Cuneo Province. Moreover a new APGU will be prepared in Austria by VUW, with a transfer of experience from Italy (APAM) to Austria (VUW), and the same professional expert involved. This experience will be integrated with the experience of the trainers of the Carabinieri Training Center of Florence with the possibility of developing **multi-tasking anti-poison units (poison, explosives and weapons)**. 3 new

anti-poison Dog Units will be formed by the Carabinieri to be allocated in alpine territory of the Regions of (Liguria, Lombardy and Veneto), currently without Carabinieri anti-poison dog units. The training activity will be carried out in Florence at the dog training center with 3 handlers for a training period of 5 months and a trainer for a period of 6 months. **A total of 7 new APDU will be set in the project: 6 in Italy, which will be coordinated with the existing ones, plus one APDU in Austria. The 5 APDT from the first LIFE WOLFALPS project will be maintained, reinforced and collaborate with these new units. These are 1 from APAM (which will train also a new dog), 1 from METO, 1 from APAC, and 2 from CAFO in Piedmont region.**

**4) Transfer of best practices and training courses for anti-poaching:** during the first LIFE WolfAlps project, best practices and guidelines were developed for anti-poaching activities in the Italian Alps. A dedicated workshop will be held to transfer best practices from CAFO to Austria and Slovenia in the eastern Alps. Connection to Slovenian Police investigate units (PIU) within LIFE Lynx project will be established. 2 meetings with LIFE Lynx project team, will be organized in Slovenia. Moreover 1 training course will be organized in Valdieri (APAM) on evidence collection, particularly important for anti-poaching teams that work with the APDT.

#### ***Beneficiary responsible for implementation:***

CUFA

CUFA will be responsible for the correct coordination within the different Policies in the Alps. In Italy, under CUFA coordination, APAM, APAC, METO, RELO, RAVA will participate and contribute to the action. In Slovenia SFS will contribute to the action, and in Austria VUW will implement one new anti-poisoning dog unit.

#### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** costs for events organization have been benchmarked against the average costs that local service providers apply in similar services.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**A3's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Operating strategy for of the central structure of connection of environmental policy	12/2020

**A3's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Transfer of best practices	12/2020
First operative new anti-poisoning dog team	12/2020

**A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION A.4:** Active involvement of hunting organizations in wolf population management and development of strategy for a predator-prey-hunters relationship evaluation

***Description and methods employed (what, how, where, when and why):***

Hunters often perceive wolves as a competitor for shared prey species, and this might be the cause for a widespread conflict among wolves and hunters. Wolves in the Alps feed mainly on large mammals, which are all game species and thus in the main interest sphere of hunters. Hence, hunters often blame the predators for reducing game abundance and availability, and claim to be partners in monitoring and management of the species. This happened in recent years especially in relation to a general documented decrease in roe deer populations. In the first Project LIFE WOLFALPS this stakeholder category was not effectively addressed, however after interviews conducted in first LIFE WolfAlps, hunters openly asked to be partners in monitoring this impact and understand quantitatively the process behind predator-prey relationships. In this LIFE WOLFALPS EU we would like now to increase their involvement in the development of the knowledge on wolves, as well as to consider their suggestions and discussion in any management strategy. We will therefore develop the work on predator-prey dynamics using a participatory approach, to address Threat No.4. Local platforms in action E3 will be also organized, together with the production of informative publications on predator-prey dynamics in action E1.2. Furthermore, the technicians of the Alpine hunting districts and hunters will be directly involved in the work.

This preparatory action, organized to effectively implement the consequent concrete action C3, will be implemented through at least 2 steps:

**1) Development of the strategy and design for the implementation of the predator-prey-hunter relationship evaluations**, to be carried on in a dedicated workshop by the Scientific Committee (Action A1), involving international experts, and definition of the 4 core areas for the implementation of the work that will be carried on in action C3. A 2 day workshop will be organized in Valdieri, Italy, by APAM, to define a document for the **“Coordinated scientific design and technical protocols to implement the predator-prey-hunter relationship evaluation”**, which will consider also the relationship of livestock presence in the overall evaluation and all the outcomes that will arrive from hunters from point 2 of the present action. **4 evaluation core areas will be defined in detail**, where the C3 action will be implemented, in particular:

- 1 evaluation core area in France where wolf packs and prey are present, defined by ONCFS
- 1 evaluation core area in Italy where wolf packs and prey are present, defined by APAM
- 1 evaluation core area in Slovenia where wolf packs and prey are present, defined by SFS and UL
- 1 evaluation core area in Italy where wolf packs are NOT present and prey are present, defined by ERSAF, which will work as a “control” for the all evaluation.

Replicates of the work outside the project will be conducted in order to compare the studies to different situations and have the results more generalized. In particular Majella National Park of Italy and VUW from Austria will be invited to the workshop for this purpose.

**2) Active involvement of hunting organization and hunters in the development of the action C3.** Meetings and workshops/training to be organized to develop a participatory approach. In particular:

**a) In the areas where the evaluation will be conducted directly (4 core areas), we will conduct**



**workshops / training to plan field activity and the coordination of the technical strategies for wolf and prey captures. Hence, local workshop with and training of hunters and personnel from partners for ungulate captures (roedeer) and participation in the evaluation in each area. In particular** 1 workshop/training session in France organized by ONCFS, 1 workshop/training session in Italy in Maritime Alps in Chiusa Pesio organized by APAM with involving local hunters and park rangers for coordination in roe deer captures, 1 workshop/training session in Italy in Stelvio National Park organized by ERSAF, 1 workshop/training session in Slovenia organized by UL and SFS.

**b) Development of the strategy for the involvement of the hunter in disseminating the findings beyond the evaluation areas, in collaboration with hunter associations and districts**, and in relation with Actions E1, and through the dedicated Awareness campaign developed in Action E1.1. with a related strategy of arguments and applications; the material needed for the campaign will be designed and produced in Action E1.2 in coordination with Action E2. The campaign will also be implemented in connection with the development of the concrete conservation action C3. To be able to accurately replicate the involvement of hunters over all the Alps, beyond the 4 direct evaluation areas, we will conduct dedicated meetings with hunters distributed in the regions to understand needs and spread knowledge and results. The annual meeting will be conducted through action C3, once the first results of the action C3 are available, we will “set the table” with a first group of local meetings, in particular in regione Piemonte we will organize at least 3 meeting with at least 30 local hunters each (1 in Alessandria province by APAP, 1 in Torino province by METO, 1 in VCO province by APOS). In regione Valle Aosta REVA will organize at least 1 meeting with local hunters, in regione Lombardia RELO and ERSAF will organize at least 1 meetings with local hunters. For a total in Italy of 5 local preparatory meetings with local hunters in the framework of Action A4 and C3. In Slovenia, France and Austria at least one meeting with hunters will be organized, **for a total of at least 8 local preparatory meetings with local hunters in the project. This action will be continued over the years in action C3, in connection with E3.**

### ***Beneficiary responsible for implementation:***

ERSAF

ERSAF will be responsible of the coordination of the Action. ONCFS, APAM, ERSAF, UL, SFS will coordinate the predator-prey evaluation in each own study area. VUW, APAC, APAP, METO, RAVA, RELO, PNM, RELI, PNDB will participate and contribute to the action in relation to the hunters' involvement.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements.

**External assistance costs:** costs for events organization have been benchmarked against the average costs that local service providers apply in similar services.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state. In **Equipment** category, expenditure on the purchase of radio collars for ungulates and wolves is significant. The unit cost (€ 2,000.00 for ungulates and € 3,000.00 for wolves) is the current market cost for such



equipment. **Other costs** include the cost of fuel reimbursement for external conventioned bodies (Association of hunters) for training\workshops participation and cooperation in prадator\pray study. These reimbursements will be calculated by applying the standard rate used by each partner for the use of the own organization's cars.

**A4's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Report: Coordinated scientific design and technical protocols to implement the predator-prey-hunter relationship evaluation	12/2020

**A4's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First local training of hunters and operators	12/2020
First meeting with hunters	12/2020

**A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION A.5:** Optimization of an integrated surveillance of the wolf status at the international alpine population level

***Description and methods employed (what, how, where, when and why):***

**ACTION A5.1 Organization of the best cost-effective strategy to optimize the integrated surveillance of the wolf status at the international alpine population level**

Successful wolf conservation in a human dominated landscape such as the Alps is possible only with an efficient and objective surveillance of the system. Elusive lifestyle and large population ranges that transcend national borders make surveillance of wolf populations challenging. Current monitoring activities end at national or even regional borders. With the first Project LIFE WolfAlps we coordinated the highly fragmented bodies in Italy to implement coordinated monitoring. With this LIFE WOLFALPS EU we aim at conducting a coordinated surveillance at international population level, which requires a huge effort in coordination and standardization of techniques. Detailed knowledge is necessary to understand the conservation status of the wolf population, and for the implementation of conservation actions (Action C1 to C7), and having good data is fundamental for proper communication (Action E1 to E6). Hence, this will directly address Threat 1 and help to address Threats 2-3-4. The action will consist on the following activities, organized:

1) at international level: the alpine Scientific Committee (Action A1) **will define the best cost-effective strategy to optimize the integrated surveillance of the Wolf Alpine Population Status. A 2 days workshop of the Scientific Committee** will be held in Valdieri (Italy) in 2020 (in connection with A5.2 and A7), where a **cost-benefit analysis and optimization of** methods will be conducted. We will produce a document (deliverable) that will also **define the standard criteria and definitions** to join the country data in order to produce a unique yearly population status estimate in C4. The workshop will be repeated in 2021, 2022, 2023 for regularly adapting approaches.

2) at national level: based on the deliverable, we will adapt each country strategy to the international needs. Then, we will hold the **annual workshops at the beginning of each surveillance year** locally, to give details to operators that will take part in the surveillance. In Italy we will conduct 9 workshops a year for 4 years: 1 in CN province by APAM, 1 in TO by METO, 1 in AL by APAP, and 1 in VCO and 1 in VC/BI by APAO (in Piedmont), 1 in Aosta by RAVA, 1 in Liguria by RELI, 1 in Lombardy by RELO, 1 in Veneto by PNDB. Each workshop will involve park rangers, Provinces and CAFO agents, hunting districts and volunteers. A specific App for cell phones connected to a PC program will facilitate field data collection. In France at least 10 workshops will be conducted annually by the ONCFS, and 1 in the PNM, for a total of 11. In Slovenia and Austria 1 yearly workshop will be organized. **For a total of 88 coordinated alpine workshops, which will prepare more than 2000 operators that will work with a homogeneous approach over the Alps.** The operators will be selected among the ones already operating. Moreover, for the new operators joining the program, **4 field training courses** will be held in Italy in 2020: 2 in Piemonte (1 by APAM and 1 by APAC), 1 in Lombardy by RELO; 1 in Liguria by RELI, to train at least 50-80 new operators in each.

Based on these efforts we will have an established population surveillance system, based on shared protocols, to join transboundary information in Action C4.

**ACTION A5.2 Development of cutting-edge genetic tools for fast, reliable and cost-effective surveillance of wolf conservation status**

Genetics is rapidly becoming one of the most important tools in wildlife management, which allows for rapid and cost-effective surveying of population parameters. While the 'traditional' genotyping method that is currently in use already provides reliable data for individual ID (which will be the basis for the first population size estimates in C4), it is slow and costly. The data produced is based on subjective »allele calling« by different technicians, and is difficult to share because data generated on different platforms are not directly comparable between labs. The method behind these analyses, capillary electrophoresis, is now becoming obsolete. The last decade provided us with advances in DNA sequencing, with increases in speed and decreases in costs. This emerging high-throughput DNA sequencing (HTS) produced rapid advances in medicine and other fields, but is slow to trickle into wildlife surveillance. UL successfully used HTS for monitoring brown bears in LIFE DINALP BEAR. We plan to develop similar methods for wolves. This will provide comparable results, with fast and cost effective genotyping of wolf samples. This means that dispersing wolves whose samples are analyzed in different countries could be identified, assisting in tracking population expansion in new areas. *The bulk of the genotyping work needed for the implementation of Action C4, based on A5.1, will be still done in the first years with »traditional« methods, and conducted as usual by national laboratories.* The new methods will then be developed at the same time, using the cutting edge HTS to provide the transition in the project to faster and more cost-efficient population size estimates. Few steps will be needed:

- 1) Create a "genetic wolf alpine group" (GWAG) coordinated by UL**, in strict connection with the Scientific Committee (Action A1), which will involve the genetic labs that in the past worked on wolf monitoring in the Alps at the country level.
- 2) Organize a 2 days genetic workshop** in Valdieri, Italy, connected with A5.1 with the GWAG, to find agreement and define the optimal strategy and methods to develop the HTS for large scale coordination and comparison of data.
- 3) Start implementing the work for developing the new technique at UL.** UL, and the **GWAG**, will design a lab protocol that will enable rapid genetic profiling of wolf samples. We'll use HTS of DNA markers at the individual and species level and will use DNA 'tags' to label each sample, enabling processing of 1000s of samples in a single sequencing run. When the sequences from such runs are harvested, specific data for each sample is collected using bioinformatics, enabling automated processing of huge numbers of samples rapidly. We will develop a set of »user friendly« bioinformatics tools for determination of genotype reliability. These tools will facilitate adoption of the new methods in other labs. We will develop the described protocols during the first 2 years of the project at UL. We will ask other partners to provide testing samples to cover entire genetic variability of wolves in the project area. This method will be fundamental for effectively detecting hybrids in A6. We will then start field-testing the methods in Action C4.
- 4) Invite all the genetic labs for training sessions at UL for the global implementation of the method, with a final genetic workshop in Slovenia.**

### **Beneficiary responsible for implementation:**

APAM

APAM will be responsible for the correct implementation of Action A5.1, and for the overall coordination of the Action. UL will be responsible for the correct implementation of Action A5.2.

### **Assumptions related to major costs of the action:**

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such

cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** costs for events organization have been benchmarked against the average costs that local service providers apply in similar services.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**A5's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Document "Surveillance strategy to optimize the integrated surveillance of the Wolf Alpine Population Status"	04/2020
Scientific document "Cutting edge genetic tools for fast, reliable and cost-effective surveillance of wolf conservation status, detection of hybridization with domestic dogs"	12/2023
Organization of a 2 days genetic workshops connected with a 2 day workshop of the Scientific Committee	12/2020

**A5's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First workshop organized at the beginning of the first surveillance yearly session	10/2020
First field training course organized at the beginning of the first surveillance yearly session	10/2020
Create a "genetic wolf alpine scientific group" coordinated by the UL genetic lab 15/12/2020	12/2020



**A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION A.6:** Hybridization in the alpine population and connection corridor: define protocols, management actions, and teams of interventions

**Description and methods employed (what, how, where, when and why):**

In Italy and other alpine countries, hybridization between wolf and dog is a source of justified concern and the scientific community considers it as a severe threat to wolf conservation as indicated by Threat 7. This action provides the preparation for the application of urgent conservation measures which will be applied in Action C5, to prevent loss of genetic identity and control the wide spreading cases of hybridization (present in the northern Apennine) into the alpine wolf population. This action will have a special role in the ecological corridor of the Piedmont-Liguria Apennine Mountains ("Piedmont-Ligurian Apennine Corridor and Urban" Project Area), which connect the Italian Apennine wolf population to the Alpine one. In the 90s, this corridor allowed the natural recolonization of the Alps. Today, it is also the connection with the principal introgression area in Tuscany, where we now see hybrids dispersing into the alpine population. Regione Piemonte through his delegated Authority, Ente di Gestione delle Aree Protette dell'Appennino Piemontese (APAP), together with Regione Liguria (RELI), will be the main actors in this area. However, other important hot spot areas might be identified over the Alps to then implement Action C5.

The action will be organized with the following activities, in particular we will:

**1) Organize a 1 day genetic-scientific workshop** in Piemonte, Italy, in **Valdieri**, following the results of the workshop organized in A5.2 and the international discussion within the genetic wolf alpine scientific group, in coordination with the Scientific Committee and other national/international experts. The aim of the workshop will be, to define **"a common international genetic protocol for detection of hybridization" for the alpine population**. The protocol will define agreements at country level and at international population level among countries, also in terms of methods and approaches needed for detection, definition of terminology, cut off limits, etc.

Within this first activity, in particular in Italy, ISPRA will provide a standardized sequencing and genotyping analysis protocol, with the implementation of the molecular panel applied in the WolfAlps project (8 Nuclear Microsatellites). ISPRA will coordinate the implementation of the marker panel currently used for non-invasive wolf hybrid monitoring projects in the Apennines. It includes 12 Nuclear Microsatellites (8 in common with the previous LIFE WolfAlps project), 4 Microsatellites located on the Y chromosome and the b-defensin CBD103 gene (kb). Such implementation will allow the integration and comparison of the detected genotypes in the Alps with the National ISPRA canid database obtained during the ongoing non-invasive wolf monitoring projects in Apennines, including the current Italian wolf monitoring project supported by the Italian Ministry of Environment. Additionally, the integrated marker panel will allow a more reliable analysis of the phenomenon of wolf-dog hybridization and introgression since it has been tested (or applied) in several studies and Life projects (IBRIWOLF, MED WOLF, MIRCo-lupo) focusing on wolf-dog hybridization in Italy. The total calibration of the protocols and genotypes among the approaches adopted during the previous LIFE WolfAlps project and ISPRA will be fundamental to understand and quantify the hybridization process along the Apennine corridor. This calibration will be maintained long term and used by any other new lab that wants to join the GWAG over the Alps. Moreover small panels of highly informative SNPs selected could be applied in more extensive monitoring plans through microfluidic techniques which allow the cost-effective genotyping of dozens of samples and markers at a time, even starting from non-invasively collected materials.

**2) Organize a 1-day workshop** in Piemonte, Italy, by APAP, in Bosio (AL), with the technical wolf alpine groups, in coordination with the Scientific Committee and other national experts and authorities, to define **a common management and intervention protocol for hybrid removal (e.g. capture and sterilization and release or capture sterilization captivity)** and find agreement at national and international levels. **The protocol, developed** in strict connection with the technical group (Action A1) and the national

authorities, **will define** methods and actions needed for the Apennine corridor and the Alps to remove hybrids, which will be agreed on both at country and at international alpine level. **In particular, a discussion on stray and free ranging dog presence and their management strategies to optimize the minimization of their impact will be carried out, based on local issues, and specific local evaluation made by the technical group, as part of the protocol.**

**3) Define locally the teams of intervention for hybrid capture and removal or sterilization**, in accordance with previous LIFE and other projects best practices and experiences on the topic (LIFE IBRIWOLF and LIFE MIRCo-lupo and Tuscany Region). We will create one operative team in coordination between APAP and RELI, and optimal training of the team will be organized when needed. At least 1 training course in APAP will be organized in 2020. Moreover APAM will prepare a team of 4 park rangers to move hybrids to the Centro Uomini e Lupi Captive Facility, if needed.

**4) Define, in accordance with the Communication group, the strategy of communication and the Awareness Campaign (in connection with Actions E1 and E2), and develop a round table with environmentalists and other interested stakeholders in the Apennine corridor to agree on hybrid management approaches.**

#### ***Beneficiary responsible for implementation:***

APAP

APAP and RELI will be co-responsible of the coordination of the Action and for the correct implementation in the "Piedmont-Ligurian Apennine Corridor and Urban" Project Area. APAM will be responsible for the correct coordination of the action within the different Project Areas and among Partners.

#### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements.

**External assistance costs:** costs for events organization have been benchmarked against the average costs that local service providers apply in similar services. APAM is expected to entrust ISPRA (Istituto Superiore per la Ricerca Ambientale del Ministero italiano) to standardize sequencing and genotyping analysis protocol. The cost included in the project is defined directly with the institute.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**A6's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Common international genetic protocol for detection of hybridization	12/2020
-Long term shared management strategy on management of hybrids at international alpine scal	12/2020

**A6's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
A special trained team ready to capture hybrids and injured wolves in the Apennine corridor	12/2020
A trained team at APAM ready to relocate hybrids and injured wolves to the captive facility	12/2020

**A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION A.7:** Dealing with urban wolves: develop specific protocols for prevention, surveillance, and eventually managing bold wolves

***Description and methods employed (what, how, where, when and why):***

Urban wolves are a new important issues especially present in higher density areas in the Western Alps of Italy and France and in the Apennine corridor (particularly in relation to Project area "Piedmont-Ligurian Apennine Corridor and Urban Areas"). The Piemonte region will be particularly involved in this action, given the local needs and considering the appearance of recent wolf packs close to Torino, Alessandria and Mondovi cities, which open new conservation and management issues, which will be solved firstly by the preparation of shared protocols. This will directly address threats n.5 and 8. Hence, the following workshops and working groups will be needed to work on specific protocols. These protocols will then be adopted by WPIU in Action C1, for surveillance in Action C4, and for dissemination actions in Action E1, E2 and E3, particularly in urban areas.

In particular we will produce:

- 1) A specific protocol for adapting surveillance and monitoring strategies in urban areas**, following the work of Action A5. A workshop with the technical and scientific committee will be hosted in Valdieri (in connection with the workshop of Action A5.1) to start developing the ad hoc strategy. A final protocol will be produced in English and translated if needed. This will be fully adopted and implemented in Action C5.
- 2) A specific protocol for adapting prevention strategies in urban areas**, following the work of Action A2. A workshop with the technical group and WPIU will be hosted by APAC (in Salbertrand in the province of Torino) to start developing the list and strategy of the activities needed. A final protocol will be produced in Italian/English. This will be adopted in Action C1 by local WPIU.
- 3) A specific protocol for the identification and definition of bold wolves**, considering the definition developed by LCIE and following the work of Action C5. A workshop with the technical group and the intervention team of Action C5 will be hosted in the province of Alessandria, in Casale, and organized by APAP to start developing the locally adapted protocol for eventually needed emergency activities in case potentially dangerous situations will be documented. A final protocol will be produced in Italian/English. This will be adopted in Action C5.
- 4) Awareness campaign related to the topic:** However these actions seem to be ineffective if not coupled with an important effort in awareness campaign and a decisional process shared with different social parts. Hence a specific awareness campaign will be developed on the topic in Action E1.1 with a related strategy of arguments and applications; the material needed for the campaign will be designed and produced in Action E1.2 in coordination with Action E2. In this action the campaign will also be implemented. This activity will be particularly delicate, and an important involvement of local associations will be needed to build partnership and support towards management and conservation actions related to the topic, in connection with Action E2 and E3.

***Beneficiary responsible for implementation:***

APOS

APOS, APAP and METO will be co-responsible of the coordination of the Action and for the correct implementation in the "Piedmont-Ligurian Apennine Corridor and Urban" Project Area. APAM will be responsible for the correct coordination of the action within the different Project Areas and among Partners.

**Assumptions related to major costs of the action:**

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** costs for events organization have been benchmarked against the average costs that local service providers apply in similar services.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**A7's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
A specific protocol for adapting surveillance and monitoring strategies in urban areas	12/2020
A specific protocol for adapting prevention strategies in urban areas	12/2020
A specific protocol for the management of bold wolves	12/2020

**A7's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First workshop for developing protocols organized	09/2020



## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION A.8:** Summary of Best Practices for wolf population management and Slovenia Management plan

### ***Description and methods employed (what, how, where, when and why):***

Within this action, we will summarize all key findings in activities regarding best practices for wolf coexistence and management developed in Actions A, C, D, and E, in a document called "**Summary of best practices carried out within LIFE WOLFALPS EU project**" (Summary). The Summary will be prepared following the multidisciplinary protocols, reports and recommendations developed within the LIFE WOLFALPS EU Actions. In particular, the outputs of Actions A, C, D, E will be directly used to build up the Summary. It will be produced, in an iterative process, with the contribution of every partner of the LIFE WOLFALPS EU project. The main objective of the Summary is to collect the best practices developed within LIFE WOLFALPS EU project, thereby increasing the potential for their long-term implementation within the project area and in other parts of Europe. It will contribute to conservation and give the directions how to minimize the human - wolf conflicts. A consensus on the content of the document will be sought among partners, and the participation of every partner to the drafting of the guidelines will be ensured through an iterative process of corrections and elaborations via internet and meetings, and by stimulating emails and comments. The Summary is an important instrument to establish a system of long-term conservation and management of wolf in the Alps, indirectly addressing Threats No. 2, 3, 4, 5, 6, 7, 8. Moreover, the Summary will be an instrument that will facilitate institutions to work cooperatively together and be coordinated in conservation actions, thereby direct addressing Threat No. 1.

Key activity in this action will be to elaborate and adopt a **revised strategic documents (Strategy and Action plan) for the wolf in Slovenia**, which will be adopted by the Ministry before the end of the project. This will be done in accordance with the project results, and will provide unified monitoring, common procedures of intervention groups and common provisions about compensation systems. Workshops/thematic platforms to discuss and elaborate the strategic documents with different stakeholders will be organized within action E.3.

In Italy a **round table with all the Regions and Autonomous Provinces, ISPRA**, and when available the Ministry of Environment, **will be organized once a year** to share all the results with management implications and best practices developed in Actions A, C, D, and E. In 2024 a final meeting of the regional Italian round table will be organized to share the Summary on best practices for the wolf alpine population management.

### ***Beneficiary responsible for implementation:***

SFS

SFS will be responsible of the action. In Italy APAM will contribute with the organization of the regional round table.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** costs for events organization have been benchmarked against the average costs that local service providers apply in similar services.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**A8's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Summary of best practices carried out within LIFE WOLFALPS EU project	03/2024
Revised strategic documents for the wolf in Slovenia	12/2023

**A8's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First Slovenian wolf group meeting	09/2020

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION C.1:** Wolf prevention emergency teams: damage inspections, preventive methods, moderation, wolf control, conflict mitigation in hot spot areas

### ***Description and methods employed (what, how, where, when and why):***

Damages to livestock are one of the most important causes of human-carnivore conflict, which makes prevention of the damages crucial in solving problems. Nowadays, on one side wolves are expanding and on the other the government is promoting livestock farming in the Alps. The conflicts because of wolf-caused damage to livestock are becoming more important as a source of animosity toward carnivores. To reach both goals (carnivore protection and agricultural land use) sustainable farming systems must be identified and promoted among the local farmers. The negative attitude of local people towards wolves' presence is often due to the lack of measures to prevent attacks to livestock and of assistance from local authorities. The action addresses Threats No.3,4. Experience from LIFE WolfAlps and other projects has shown that the constant presence of project staff assisting livestock owners in using prevention systems is instrumental in making local people not feel abandoned and not considered less than a protected species such as the wolf.

**The creation of first-aid wolf prevention intervention units-WPIU (Action A2) is the tool we will use to assist breeders effectively in case of livestock depredations, to evaluate the prevention strategy adopted and to immediately propose better *ad hoc* solutions to avoid future depredation events.** This represents an opportunity for mitigating conflicts and building trust between authorities and local people. Evaluations done in Austria (action A2) foresee supporting these efforts by minimizing the time between depredation events and WPIU intervention. **This concrete action follows the training and setting up of the WPIU in each country in action A2.**

Steps to implement the action:

**1) Single WPIU activity:** WPIU will act with a coordinated approach in hot spot areas of conflict for rapidly implementing preventive tools, using ad-hoc preventive strategies based on successful experiences, to indicate the correct use of fences, of livestock guard dogs-LGD, provide administrative assistance and active listening with a role of mediators. In case of need, the WPIU will operate together with the anti-poisoning dog teams (action C2).

In Italy the preventive tools will be given temporarily to breeders who suffer a depredation while they apply for RDP preventive tools, where available. In particular, RELO will use preventive tools acquired with regional funds from the LIFE WolfAlps "After LIFE conservation plan" implementation; they will be distributed by ERSAF during WPIU activities with no additional cost for the project. It is foreseen that, by the start of the project, a new RDP measure will be activated. Several WPIUs will foresee a technician expert in preventive measures and RDP funds, facilitating the exploitation of RDP funds, and promoting a wider use of preventive measures through other LIFE European funds. In Slovenia a workshop will be organized to renew the knowledge and adjust intervention protocols, 10 sets of electric fences will be distributed, regular visits made (at least 1/year) to farmers who received fences. 3 cattle farms will be selected for the establishment of best practice examples, following indications from LIFE WolfAlps and adapting them to the Slovenian context.

### **Expected results: at least 812 WPIU interventions foreseen over the Alps, of which:**

**ITALY (at least 366 interventions):** in Piemonte at least 5 interventions per CN/TO teams/year, 3 per VCO/VC/AL teams/year (total of at least 106 interventions). At least 100 WPIU interventions in Lombardy, 100 in Valle Aosta, 50 in Liguria and 10 in PNDB (Veneto).

**FRANCE (at least 496 interventions):** at least 20/year in PNM and in the rest of France at least 416 by ONCFS.

**SLOVENIA: at least 20 Interventions.**

**AUSTRIA: at least 10 interventions.**

**2) Coordination and constant evaluation for optimization of WPIU at country/regional level.** A comprehensive database collecting information on each WPIU intervention session and final analysis will be performed.

**3) The WPIU will be also used in improving the correct use of LGD and fences:** LGD proved in some occasions to be dangerous to people. It is important to intervene with solutions, such as using a dog-trainer to correct misguided aggressive behaviour through an assessment of the dog and its living conditions and recommending solutions (in connection with personnel from action C2). Round tables with stakeholders and institutions should be locally activated. Communication and dissemination among tourists will be further developed (in connection with E actions). 2 educational workshops for farmers will be organized in Piemonte: 1 on the correct use of LGDs by APAC, 1 for preventive methods by APAP. Meetings and workshops with stakeholders will be organized through action E3 to identify a suitable model to be replicated at local level based on participatory approach to foresee breeders needs and insert them into the operative strategy. In Slovenia LGD will be distributed from the LGD breeders network created in the LIFE DINALP BEAR. SFS will distribute 10 LGD pups to sheep breeders and 3 dogs will be raised to their adult phase by experienced breeders and then given to farmers who would like to skip the most sensitive period of dogs' integration in the flock.

**4) Practical field-testing of the reliability of sensor based systems on flocks and feedback for improvement, in the context of operating WPIU in Austria by AREC:** the test will give basis data for finding patterns of panic in a flock. The aim is to have a working system as part of the procedures of Austrian WPIU. Further result will be the recommendations and guidelines with the basic requirements necessary for the implementation of such a system elsewhere in the Alps.

**5) Development of a group of volunteers *Help shepherd*** to be used during the pasture period to give farmers assistance in their working routine in Italy. Volunteers, organized similarly to the already tested PASTURS from RELO, will be prepared with local workshops to be ready to collaborate with selected shepherds.

**6) Development of "Final long term guidelines for the implementation of the WPIU at each national level and cost effect evaluation"**

**7) Awareness campaign implementation for preventive actions and dissemination of WPIU activity** will be developed in Action E1.1 with a related strategy of arguments and applications; the material needed for the campaign will be produced in Action E1.2 and in coordination with Action E2. In action C1 it will also be **implemented in connection with the development of the concrete conservation action.**

### ***Beneficiary responsible for implementation:***

SFS

SFS, in collaboration with UL, will be the responsible of the coordination of the Action in Slovenia. ONCFS, in collaboration with PNM, in France. AREC, in collaboration with VUW, in Austria. APAM, in collaboration with APAC, METO, APOS, APAP, RELO, RELI, ERSAP, RAVA, PNDB, CUFA in Italy.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the

institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements.

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state. Costs for prevention systems, nets, accessories, acoustic deterrents are aligned with current prices deriving from recent supplies. In Other costs there are costs for voluntary "pastor help". Costs are limited to reimbursement of expenses for voluntary activities in the mountains.



**C1's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Final long term guidelines for the implementation of the WPIU at each national level and cost effect evaluation	05/2023
Recommendations and guidelines of sensor based systems on flocks and feedback for improvement, in the context of operating WPIU in Austria	05/2022

**C1's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First WPIU intervention in each country	08/2021
First educational workshop for improving LGD management	05/2022

**A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION C.2:** Measures against illegal wolf killing and control of poison baits and coordination of international and national environmental judicial policy

***Description and methods employed (what, how, where, when and why):***

The action will be implemented through these 4 steps, after the preparatory Action A.2., and to directly address Threat No.2.:

**1) Coordination and function of the International and National Environmental Polices, and constant surveillance of poaching on alpine scale:**

The central structure of connection, support and coordination of environmental police operators and forces for the fight against environmental crimes and in particular poaching and poisoning wolves will be coordinated by Carabinieri Forestali (CAFO), through local structures at the Regional Forestry Carabinieri Command Groups, at two levels:

a. at international level with police officers from the alpine countries also through the already active EUROPOL bodies, especially connecting officers from Austria, Slovenia, Italy and France. There will be one meeting of CAFO at EUROPOL, The Hague, to discuss the issue.

b. at national and regional level with the regional managers of the Carabinieri together with the other bodies involved in the fight against poaching at local level (Regional forest corps of the autonomous regions, provincial police, park rangers). CAFO will organize one coordination meeting per year in Torino.

The specific activities and objectives of the central structure will be:

- gathering and organizing information relating to violations of the environmental protection laws specially related to the species *Canis lupus*, in particular regarding poaching. Information originating from territorial law enforcement organizations (Provinces, Protected Areas, Hunting Areas, Local Police);
- ensure and develop the broadest mutual assistance between the various environmental police authorities, within the framework of the laws existing in the various countries of the Project partners;
- develop and promote any type of action that can effectively contribute to the prevention and repression of environmental and poaching offences on the *Canis lupus* species. 11 workshops of specialized police officers will be organized in Austria, 3 of them in VUW institute.

In Italy the personnel involved in gathering information will be the Carabinieri Forestali (CAFO), Local and Provincial Police, Park rangers, Guards of the hunting districts.

In Slovenia, within LIFE Lynx project, police investigative units have been established. The units were educated regarding wildlife crime, specifically large carnivore crime. Within this action C3 of LIFE WOLFALPS EU those "police investigative units" will be additionally educated about wolf crime (poaching, poisoning), where knowledge from the Italian "Anti poisoning dog teams" will be transferred. We will organize one educational workshop to train the selected Slovenian police officers in specialist procedures and issues related to cases of illegal killings of wolves. An exchange visit to "Anti poisoning dog team" in Italy will be organized for selected members of police investigate units of Slovenia.

**2) Function of the "Anti poisoning / weapons dog teams" based on the results and methods developed in the first LIFE WolfAlps divided in the following actions:**

**Every anti-polsoning dog team will conduct:**

**Regular training sessions: training sessions will be more frequent** in the first year when the team needs to strengthen relationships and needs to be closely followed by the professional dog-trainer. After the second year the training sessions can be less frequent, whereas the systematic interventions will increase.

**Systematic and preventive interventions: systematic and preventive interventions will be conducted and planned regularly by the dog team.** Every intervention will be documented with details.

**Urgent intervention after the discovery of a dead wolf or other animals reported poisoned: urgent interventions will be conducted** following any dead wolf documented or any other new poisoning event and organized in coordination with the policy area interested.

**Intervention after formal requests by other parties: interventions will be conducted when formally requested by mayors, in cities, etc.**

**Considering all the range of interventions, we estimate for each anti-poisoning dog unit at least 1 intervention a week, for 52 weeks, for 4 years, hence about 200 interventions per unit. Considering at least 11 APDU, we foresee at least 1000 interventions in the Alps over the 4 years.**

**3) Detailed toxicological analyses** on predator carcasses or on baits will be undertaken by the Istituto Zooprofilattico Zonale of Piemonte-Valle Aosta- Liguria Region for Piemonte and by other IZS for other regions. At least 20 toxicological analyses will be conducted in order to assess the type and incidence of poison.

**4) Awareness campaign implementation for anti-poaching and dissemination of anti-poisoning dog units activity:** a specific awareness campaign will be developed on the topic in Action E1.1 with a related strategy of arguments and applications; the material needed for the campaign will be designed and produced in Action E1.2 in coordination with Action E2. The campaign will also be implemented in connection with the development of the concrete conservation action, in particular we will consider organizing **the collection of formal reports, because 2** key factors are of utmost importance to support the fight against poaching and, in particular, against the use of poison for illegal killing:

**Collaboration with ASL, public and private veterinarians:** workshops will be organized by the Federazione Interregionale degli Ordini Veterinari della Regione Piemonte e Valle d'Aosta and the Associazione Culturale Veterinaria del Nord Ovest in collaboration with the University of Turin - Veterinary Department to foster collaboration.

**Raising awareness among vets** working in private animal clinics about the legal obligation to report suspected cases of poisoning and send the animals to the labs to determine the animals' cause of death.

To eradicate or at least minimize poaching and, in particular the use of poison, it is necessary to **raise general public awareness**, so that the poachers or potential poisoners become more and more isolated and stigmatized. Informed and concerned citizens are essential.

### ***Beneficiary responsible for implementation:***

CUFA

CUFA will be responsible for the correct coordination within the different Policies in the Alps, in Italy APAM, APAC, METO, RELO, RAVA will participate and contribute to the action. In Slovenia SFS will contribute to the action, and in Austria VUW will implement one new anti-poisoning dog unit.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**C2's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Exchange visit to "Anti poisoning dog team" from Slovenia to Italy	12/2023
Documented list and description of interventions and overall quantification	05/2024

**C2's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First intervention of each anti-poaching dog unit to look systematically for poison baits	12/2021
Workshop for selected police officers in Slovenia	12/2021

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION C.3:** Building strong partnership: involving hunters in wolf-prey ecosystem functioning understanding

### ***Description and methods employed (what, how, where, when and why):***

Hunters often blame predators for reducing the game abundance and availability and this might be the cause for a widespread conflict among wolves and hunters, however, little is known on the effect of the predation pressure and resource use in wolf-wild prey-livestock systems in Europe. This action aims to determine the predation pressure mainly on wildlife (but also on domestic animals) by integrating human practices (hunting), in strict partnership with hunters, as described in Action A4. The knowledge of interactions between the wolves, wild and domestic preys in its eco-systemic dimension is a prerequisite to have practical decision-making support tools for species and land management in their entirety, and this gets particularly effective if conducted through a participatory approach. The action includes the detailed measurement of the predation pressure exerted by wolf tracked by GPS in order to evaluate the respective roles of hunting and predation on wildlife, especially roe deer, while taking into account the pastoral dimension and the impact of the wolf on livestock. A particular attention will be given to involve stakeholders in the project process to ensure shared stewardship. We will conduct and compare 4 local predator-prey-hunter relationships to evaluate and be able to generalize the impact of wolves on prey in order to make recommendations on how to consider the predation role in hunting management. At least one hunting districts' management plan will be adapted in Italy, after project results, to take into account wolf predation in the system, and adapt accordingly hunters' harvest. Hunters will therefore be directly involved in creating a strong partnership. An ex-ante and ex-post human attitude survey to evaluate hunters involvement will be conducted (in Action D1). We will therefore develop a participatory approach to understanding predator prey dynamics in order to address Threat No.4.

The action will be implemented through at least 2 steps:

**1) Implementation of the predator-prey-hunter relationship evaluations**, after the deliverable developed in Action A4. The Scientific Committee (Action A1), involving international experts, will follow the work constantly and look out for local adaptations where needed over the years, in the framework of the agreed A4 deliverable. The participation of hunting, forestry and agricultural partners in the project of the study site is a prerequisite. Intermediate results will be regularly produced without waiting for conclusions at the end of the project. Overall results would be subject to at least one final scientist cooperative publication in English. 4 local reports for each evaluation area will be produced in the language of that country. The work will consist of **capturing and radio-collaring 1-4 wolves and at least 10 prey species (e.g. roe deer/red deer) in each core area. The 4 evaluation core areas** for this work will be defined locally in action A4, and they will be:

- 1 in France where wolf packs and prey are present, defined by ONCFS
- 1 in Italy where wolf packs and prey are present, defined by APAM
- 1 in Slovenia where wolf packs and prey are present, defined by SFS and UL
- 1 in Italy where wolf packs are NOT present and prey are present, defined by ERSAF, which will work as a "control" for the all evaluation.

Replicates of the work outside the project will be conducted in order to compare the studies to different situations and have the results more generalized. In particular Majella National Park of Italy and FIWI in Austria will be constantly involved for this purpose. Expected results, other than the ones already mentioned, include mapping the predation risk for wildlife and domestic flocks; accounting for predation in hunting management plans in particular in Slovenia and Italy; adaptation of the tools for monitoring wild ungulates



populations and the ungulate-environment equilibrium; forest damage management in response to the concentration/dispersion of ungulates.

**2) Active involvement of hunting organizations and hunters in the development of action C3.** Meetings and workshops/training to be organized to develop a continuous participatory approach over the 4 years of the work. In particular:

**a) In the areas where the evaluation will be conducted directly (4 core areas), we will hold workshops / training for the continuous training in field activities with local adaptations over time of the technical strategies for the wolf and prey captures. Hence, local workshops and training of hunters and personnel from partners for ungulate captures (roe deer) and participation in the evaluation in each area. In particular** 1 workshop/training session in France organized by ONCFS, 1 workshop/training session in Italy in Maritime Alps in Chiusa Pesio organized by APAM with involving local hunters and park rangers for coordination in roe deer captures, 1 workshop/training session in Italy in Stelvio National Park organized by ERSAF, 1 workshop/training session in Slovenia organized by UL and SFS.

**b) Involvement of the hunters in disseminating the findings beyond the evaluation areas, in collaboration with hunter associations and districts,** and in relation with Actions E1, and through the dedicated Awareness campaign developed in Action E1.1. with a related strategy of arguments and applications; the material needed for the campaign will be designed and produced in Action E1.2 in coordination with Action E2., after the first meeting conducted in Action A4 and continuing the path started in A4. To be able to accurately replicate the involvement of hunters all over the Alps, beyond the 4 direct evaluation areas, we will conduct continuous dedicated meetings over the 4 years with hunters distributed in the regions to spread knowledge and results. In particular in regione Piemonte we will organize at least 6 meeting with at least 30 local hunters in each (2 in Alessandria province by APAP, 2 in Torino province by METO, 2 in VCO/VC province by APOS). In regione Valle Aosta REVA will organize at least 2 meeting with local hunters, in regione Lombardia RELO and ERSAF will organize at least 2, in regione Liguria RELI will organize at least 3 meetings with local hunters, in Trento Autonomous province MUSE will organize at least 1 meeting with local hunters. For a total in Italy of 14 local meetings with local hunters in continuation of Action A4. In France ONCFS will organize 20 meetings to share results with the hunting community, in relation with action E2. In Slovenia and in Austria at least one meeting with hunters will be organized, **for a total of at least 36 local meetings with local hunters to involve them on the large scale after the results produced together with stakeholders in point 1.** This part of the action will be continued over the years, long term in the after LIFE, considering the strategies developed in E2 and E3.

### ***Beneficiary responsible for implementation:***

ONCFS

ONCFS will be responsible of the coordination of the Action for its correct implementation among every partner and project area involved. APAM, ERSAF, UL, SFS will coordinate the predator-prey evaluation in each own study area. VUW, APAC, APAP, METO, RAVA, RELO, PNM, RELI, PNDB will participate and contribute to the action improving the hunters' involvement.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**C3's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
4 Local reports (one in each core area)	12/2023
1 scientific publication	08/2024

**C3's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First local training of hunters and operators	12/2021
First meeting with hunters	12/2021
First roe deer/red deer collared	12/2021
First wolf collared	12/2022

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

***ACTION C.4:*** Establishment of an integrated surveillance of the wolf status at the Alpine population level

### ***Description and methods employed (what, how, where, when and why):***

Successful conservation and management of wolves in a human dominated landscape such as the Alps is possible only with an efficient surveillance of the system. Understanding of population parameters (population size, distribution, reproduction/mortality and dispersal) and their temporal dynamics is one of management foundations for any animal population. The goal of this action is to start a comprehensive, optimized scheme for the surveillance of the Alpine wolf population that will cover its entire range, based on the strategies developed in Action A5. This charismatic species mobilizes interest of a number of influential interest groups, and the only way to stop subjective agendas and ensure continuous coexistence of wolves with humans is to base management on solid scientific data. Elusive lifestyle and large population ranges that transcend national borders make surveillance of the alpine wolf population challenging. Current monitoring activities end at national or even regional borders. With the first Project LIFE WolfAlps we managed to coordinate the highly fragmented Italian Institutions, with this LIFE WOLFALPS EU project we aim at conducting **the first coordinated wolf surveillance at an international population level in Europe**. While this is recommended in the “Guidelines for Population Level Management Plans for Large Carnivores” endorsed by the European Commission, it is rarely implemented. In particular, a detailed knowledge of the presence and distribution of the wolf in the alpine countries is necessary to understand the conservation status of the wolf population, and for the proper implementation of project conservation actions (Action C1, C2, C3, C4, C5), and communication programs (Action E1, E2, E3, E4, E5, E6). Hence, this will directly address the Threat No.1. and contribute to address Threats No. 2, 3, 4. It also supports objective 1 and 2. The evaluation of the conservation status of the alpine wolf population will be based on the estimation of these primary population parameters: wolf population size (number of reproductive units and number of wolves), distribution, effective wolf population size (or other genetic parameters), and other information: level of connectivity with the Dinaric/Central European/Apennine population, detection of hybrids, health status evaluation. For this last topic, IZS Cermas in Italy will coordinate the evaluation of population health and sanitary conditions.

Therefore thanks to the Preparatory Action A5 we will have an established population scale surveillance strategy, based on shared protocols, to join transboundary monitoring information, with a cost/benefit estimation for optimized effort (especially in snow free areas). In Action C4 we will then **implement the wolf surveillance system for the duration of the project on a yearly basis (4 years)**. The surveillance will be conducted on a country level, based on the shared strategy (Action A5). We will produce annual reports at country level in each country’s language. Then, we will put together the datasets at population level, involving Switzerland and Germany as well, and produce **annual reports on the alpine wolf population status**. The work of putting together the international report will be done by the Scientific committee, and every year a different country will have the leadership and budget the amount of work to do it. Hence, based on the data collected, we will define the current population status (also identify precisely the level of hybridization present and detect possible hybrids) and trend over the 4 years per each country independently first, and after the country assessment, we will define the overall picture for the Alps and evaluate the Conservation Status of the alpine wolf population (if favourable or not) to set future short term goals and explicitly state the role of each country in the Alps to reach or maintain it.

Every country will have specific national approaches, in the framework of the coordinated strategy developed in Action A5, in particular:

*ITALY:* the program will follow the successful work of the first LIFE WolfAlps project and further adapt to the new International alpine strategy developed in Action A5. A strong coordination among Italian Alpine regions and provinces and parks will be guaranteed by the Centro Grandi Carnivori based at the APAM, involving Supporters. We will organize seasonal surveillance sessions, which will last 4-6 months within a season. The

integrated sampling design will collect non-invasive data both with systematic sampling sessions, integrated with opportunistic data. The general techniques will be: snow-tracking, non-invasive genetic analysis and tissue sample, wolf-howling techniques, photo-trapping. A series of systematic transects to collect wolf signs will be covered through the seasons. Intensive effort will be implemented in areas where wolf packs have been already detected and are present in high density, and less effort will be used in areas with no wolves detected.

**FRANCE:** both systematic sampling and opportunistic sampling will be conducted at national level, based on a wide network of operators, to collect non-invasive samples, based on the national approach adapted to the international strategy of Acton A5.. The general techniques will be: snow-tracking, genetic analysis non-invasive and tissue samples, wolf-howling techniques, photo-trapping.

**SLOVENIA:** Systematic surveillance of wolves in Slovenian Alps will be established. We will use different sources of information (predations, observations) to predict the potential areas of new wolf presence. Team of SFS field personnel will conduct snow-tracking trying to collect non-invasive genetic samples and estimate the number of wolves in these areas. Independently from genotyping in the national laboratories with the traditional method, UL will start field-testing the new HTS genotyping protocol, once its development in Action A.5.2 is completed. This will be done in Slovenia for one season in parallel with genotyping using the 'traditional' method. After this testing period, in Slovenia we will fully switch to using the HTS method. For Slovenia HTS genotyping protocol will be also used to monitor species composition in wolf food useful for Action C3 because it will also provide a quantitative assessment of the importance of different wildlife species for wolves.

**AUSTRIA:** The wolf surveillance program in Austria is coordinated by VUW and all relevant data is analyzed and archived in this institute. There is opportunistic genetic sampling in the whole area of Austria especially on livestock and wildlife kills (by saliva samples). Other sources such as feces, hairs, urine, blood and tissue samples are included as well. Additionally photos and other information from the public are collected and analyzed.

### ***Beneficiary responsible for implementation:***

APAM

APAM will be responsible for the correct coordination among the different project areas and countries. In Italy APAM will coordinate the action, and APAC, APAP, APOS, METO, RAVA, RELO, RELI, PNDB will participate and contribute. In Slovenia SFS and UL will be co-responsible of the action. In Austria VUW will implement it. In France ONCFS will be responsible, and PNM will participate and contribute to the implementation.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements.

**External assistance costs:** Costs for services and experts have been benchmarked against the average

costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state. In particular, in Consumable there are expenses for "camera traps", which unit costs differ according to model and performance. The more expensive models send images and videos of transits, the simpler ones only store the images.



**C4's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Annual report on the alpine wolf population status 2020/2021	12/2021
Annual report on the alpine wolf population status 2021/2022	12/2022
Annual report on the alpine wolf population status 2022/2023	12/2023
Final report on the trend of the alpine wolf population status 2020/2024	08/2024

**C4's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First data collected with the international approach by each country	12/2021

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION C.5:** Wolf-dog hybridization and injured wolves: detection and control in the Apennine ecological corridor and in the Alps

### ***Description and methods employed (what, how, where, when and why):***

In Italy, hybridization between wolf and dog is a source of justified concern and the scientific community considers it a severe threat to wolf conservation as indicated by Threat 7. This action, which provides for the application of urgent conservation measures, is essential to prevent loss of genetic identity due to the spreading of cases of hybridization (present in the northern Apennine) into the alpine wolf population. Another aspect is the case of injured wolves, which need to be promptly rescued, as they occasionally can display atypical behavior deviating from the wild (e.g. approaching villages and people). This might create problems in the correct perception of wolves by the public, therefore an immediate intervention in such cases is critical to minimize negative species perceptions. This action will have a special role in the ecological corridor of the Piedmont-Liguria Apennine Mountains, which connect the Italian Apennine wolf population to the Alpine one ("Piedmont-Ligurian Apennine Corridor and Urban" Project Area). In the 1990s, this corridor allowed the natural recolonization of the Alps. Today, it represents also the connection with the principal introgression area in Tuscany, where we now see hybrids dispersing into the alpine population. Regione Piemonte through its delegated Authority - APAP, RELI and RELO will be the main actors in this area. However, other important hot spots might be identified in the Alps so Action C5, after evaluation of Action C4, and based on the indications and protocols developed in Action A6 could be implemented. This action will directly address Threat No. 7.

The following activities will be needed:

- 1) In coordination with Action A5.2 and Action A6, based on results from Action C4, and in strict connection with the Technical Group and Scientific Committee (Action A1) and the genetic group (Action A6), **a big effort in detection of hybridization will be performed over the entire Alpine territory and on the Apennine corridor.** Based on this effort we will identify hot spots of hybridization and define the priority areas to focus the management effort of point 2. The DNA extraction laboratory set up in APAM in the first LIFE WolfAlps project will perform local DNA extraction, in connection with C4 and A5, rapidly when needed, especially in emergency cases.
- 2) In case of a detected and genetically proven hybridization case, **the present action aims to capture, sterilize and release wolf-dog hybrids, or to capture, sterilize, and keep in captivity those individuals, depending on the local context,** and following the guidelines developed by LIFE IBRIWOLF and the further implementation of LIFE MIRCo-lupo. **The team set up in Action A6 will capture hybrids.** The technical Wolf Conservation Group, in collaboration with ISPRA and local and national authorities, will discuss these 3 possibilities, case by case, and taking in consideration the local socio and ecological contexts, before making the final decision. Eventually direct removals can be considered at the end of the project if the number of cases of captivation are not sustainable in the long term, also considering that the removal of the wolf-dog hybrid is not always the best action. In fact, the removal of individuals that are included in the social structure of the stable packs could negatively impact the social and territorial dynamic of the local wolf population; so the action could include the possibility of the release of the sterilized hybrid, if this is thought to be of less impact in the present population dynamic, but essential for the long term conservation of the species. Following the LIFE IBRIWOLF Protocol, ISPRA gives authorizations to capture wolf-dog hybrids only after proven by genetic analysis by ISPRA. Therefore genetic analyses are required to verify wolf-dog hybrids in the field by ISPRA, following the output also of Action A5.2 and A6 (and then capture them). Connections will be made with LIFE IBRIWOLF and LIFE MIRCO projects, which have started activities to reduce the presence of hybrids in the wild. All of them have developed protocols including criteria for identification of hybrids, that will be taken into account in Action A6 and applied here. The estimated number of wolf-dog hybrids and injured wolves that will be captured/sterilized/recovered is hard to provide, because recovering

injured wolves is accidental and very hard to predict, in any case we can foresee that at least 2 hybrids will be removed, of which at least 1 in the Apennine corridor by RELI and APAM.

**3) Captive facility at the "Centro Uomini e Lupi":** the captive wolf facility at APAM, which already hosts rescued alpine wolves which are no longer releasable, will be the reference facility for hosting hybrids and injured wolves for all Italian Partners and the Alpine population. A special trained team of at least 4 park rangers of the APAM will be prepared in Action A6, to operate urgently in relocating captured injured wolves or hybrids. Coordination between the Alps and the Apennines for the further development of an official captive wolf facility, after the success in the first LIFE WolfAlps Project in coordination with ISPRA. 2 workshops will be implemented in Valdieri by APAM to maintain shared protocols.

**4) Prompt rescue of injured wolves when detected.** Injured wolves detected over the entire Italian area of the WOLFALPS project will be relocated, if needed, by APAM team and put in the captive facility "Centro Uomini e Lupi" for veterinarian assistance and released immediately, if the wolf's conditions and the local social acceptance allow it to be returned to the wild. These 2 possibilities (release or kept in captivity) will be evaluated in the framework of the Wolf technical Conservation Group, in connection with ISPRA for Italy. At least 3 injured wolves will be rescued.

**5) Awareness campaign implementation for hybridization and for building support towards management and conservation actions related to the topic:** nevertheless these actions seem to be ineffective if not coupled with an important effort in awareness campaigns and a decisional process shared with different representative of the local society. Hence a specific awareness campaign will be developed on the topic in Action E1.1 with a related strategy of arguments and applications. The material needed for the campaign will be designed and produced in Action E1.2 in coordination with Action E2. In action C5 the campaign will also be implemented in connection with the development of the concrete conservation action. This activity will be particularly delicate, and an important involvement of animal welfare and environmental associations will be needed to build partnership and support **management and conservation actions related to the topic.**

### ***Beneficiary responsible for implementation:***

RELI

RELI and APAM will be co-responsible of the coordination of the Action and for the correct implementation in the "Piedmont-Ligurian Apennine Corridor and Urban" Project Area. APAM will be responsible for the correct coordination of the action within the different Project Areas and among Partners.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**C5's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Report of documentation of every project intervention, concerning wolf-dog hybrids and/or injured wolves recovery	05/2024

**C5's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Capture-sterilize-release, or capture-sterilize-keep in captivity, the first wolf-dog hybrid	05/2024

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION C.6:** Decrease Habitat fragmentation and wolf traffic mortality through recovery of identified sink areas

***Description and methods employed (what, how, where, when and why):***

### **C6.1 Decrease Habitat fragmentation and wolf traffic mortality through recovery of identified sink areas**

The road and railways infrastructures decrease the quality and quantity of habitats, increase the mortality of wildlife caused by vehicular traffic and affect the fragmentation of habitats and populations of species. In the first LIFE WOLFALPS project, this issue was investigated, and it has been documented that this particularly affects wolves in the Valle Susa valley, Torino, Italy. The Alta Val di Susa is in fact characterized by a high wildlife accident rate caused by both vehicular and railway traffic, and there are many accidents involving deer and wolves. In particular for the latter the Valley can represent a "sink" area as highly attractive for the species, given the richness of wild ungulates and forests, but where there is a high mortality caused by a high human density and heavy traffic, as evidenced by the first LIFE WOLFALPS project. The valley floor is crossed by high-traffic routes: the Frejus A32 motorway, the Turin-Modane railway line and the national roads 24 and 335 (see attached map for the Action C6). Therefore, it is a priority to invest in specific mitigation measures that can reduce the mortality rate of the wolf and its prey and also to ensure and increase the permeability of infrastructures to wildlife corridors in Alta Valle Susa. This action addresses Threat n.6 and will involve at least 7 Natura 2000 Sites, as indicated in the attached map for the Action C6.

So the action will be developed with the following activities, where expected results are defined:

**1) Evaluation of previous studies and new data collected to identify corridors used:** Several studies have been conducted on the subject and will be taken into consideration, including "Territorial fragmentation from linear infrastructures: guidelines and best practices for the prevention and mitigation of impacts" drawn up by ISPRA (2011) in the series Manuals and Guidelines n. 76.1 / 2011 and the reports produced within the LIFE STRADE. The most used ecological corridors will be identified based on both previous data collected in the LIFE WOLFALPS and the data that will derive from Action C4. Moreover, working tables will be needed with the organizations that manage the infrastructures (ANAS for the state roads, RFI for the line railway, SITAF for the A32) in order to find shared and feasible solutions. A report will be produced.

**2) Set up a Working table with ANAS, RFI and SITAF** (the stakeholders involved in road construction and maintenance) **and the 2 project partners directly involved in the actions and in the area (METO and APAC).** The work table will decide for new interventions and maintenance of existing infrastructures. At least 3 meetings of the working table will be held in the Province of Torino, co-organized by METO and APAC.

**3) Planning of the road improvements:** based on the best practices and indications developed in the report produced in point 1 of this action, a detailed planning of the intervention will be defined in a specific document that will be produced in Italian.

**4) Direct Interventions and Implementation of technical countermeasures:** after the document developed in point 3, the defined direct interventions planned will be implemented. In particular: the cleaning of existing underpasses and the improvement of their environmental insertion (at least 3 interventions in 3 different areas), the installation of nets to direct wolves through the sections with greater permeability (at least 2 interventions in 2 different areas), the verification of the state of maintenance of the protective nets of the highway, the installation of road signs to alert drivers (at least 4 interventions in 4 different areas), the placement of reflective optical bollards (for at least 10 km). Finally, we will develop a mobile APP that signals the stretches of road most at risk of collisions with wildlife.



**5) Constant update on the 5 years of the project of the database on road and rail accidents with ungulates and wolves** for the Municipalities of the Alta Valle di Susa: the collaboration of all the organizations that manage the infrastructures (ANAS, SITAF and RFI), as well as the local police forces will be requested (CAFO, Traffic Police, Municipal Police) for the collection of accident data occurring during the project.

**6) Awareness campaign implementation for accident prevention**: one campaign to raise awareness of accidents with wildlife and wolves will be developed in Action E1.1; the material needed for the campaign will be designed and produced in Action E1.2. In the campaign will be implemented in connection with Action C6 and during the development of the interventions.

## **C6.2 Decrease of habitat loss and integration of wolf reproductive habitat needs into spatial planning**

The cheapest and most effective way to preserve connectivity and decrease habitat loss is to prevent development in small, critical areas that are particularly important for wolf reproduction. Sites for wolf reproduction are the most delicate areas for the species, which is highly mobile and adaptable to other habitat issues. An effective way to do this is to provide correct information for environmental impact assessment (EIA) that would include habitat preservation or restoration for reproductive sites in spatial planning, and conserve the most critical locations. We are tackling this in action C4, which will provide a solid understanding of the new presence of reproductive sites, together with the habitat suitability models already developed in the first LIFE WolfAlps. Here we would like to put into practice the knowledge and measures developed in the first LIFE WolfAlps, to develop a user-friendly **Environmental Impact Assessment (EIA) Guidelines handbook** that will be used for EIA studies in the areas of wolf presence. Hence, the spatial requirements of wolves will be taken into account in EIA studies, protecting key areas for reproduction, especially in at least 44 Natura 2000 sites directly involved in the project, which have been identified in project areas within the 19 Partners and 92 Supporters territories (see maps of project areas). The handbook will be produced in English/Italian. The idea is for the book to be used in future spatial planning, as a measure to prevent further fragmentation and habitat loss in hot spot areas of conservation. We will organize 4 educational seminars in Italy, one in each of the Regions involved (Piemonte, Lombardia, Liguria, Valle Aosta), for spatial planners and companies that carry out appropriate assessments and environmental impact assessments. At the seminar the experts will present and explain the main principles of wolf-friendly spatial planning. A discussion session will be facilitated and an evaluation sheet offered to participants. The best practice seminars and the book will be developed and implemented in connection with Action C7. This action addresses Threat n.6.

### ***Beneficiary responsible for implementation:***

METO

METO and APAC will be co-responsible of the coordination of the Action C6.1 and for its correct implementation in the Torino Province and Susa Valley. APAM will be responsible for the correct coordination of the Action C6.2 within the different Project Areas and among Partners.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses).

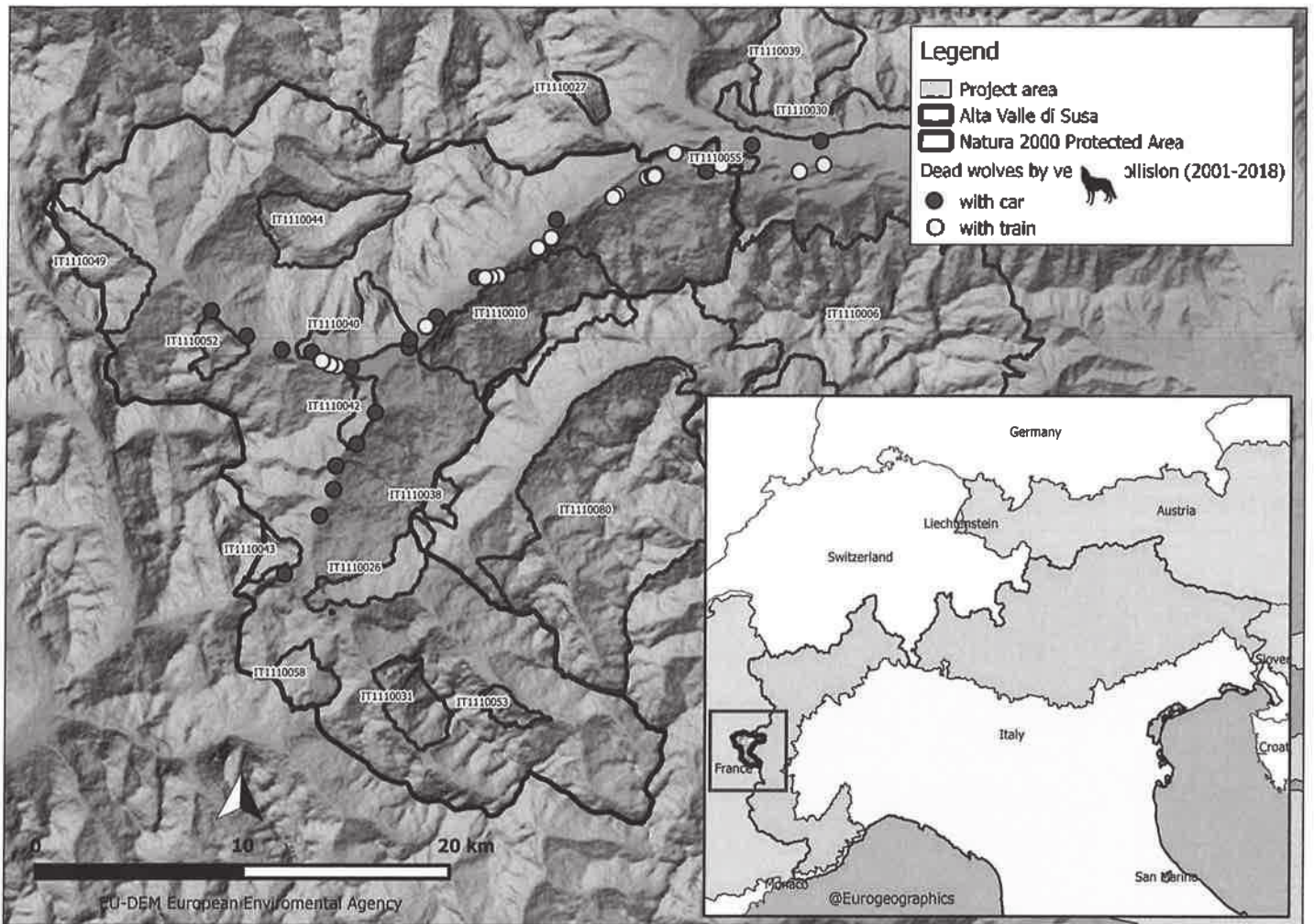
The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.



Name of the picture: Action C6\_ Wolf road-train mortality documented in Alta Valle Susa\_Torino province\_Italy



**C6's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Report on the valuation of previous studies and new data collected to identify corridors used	12/2020
Document on the planning of the intervention to decrease fragmentation in Val di Susa	12/2021
The user-friendly handbook "Environmental Impact Assessment (EIA) Guidelines for wolf conservation	12/2021

**C6's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First use of the mobile APP that signals the stretches of road most at risk of collisions with wildlife	06/2022
First educational seminar for the presentation of the EIA handbook 30/06/2022	06/2022



## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION C.7:** Economic benefits with wolf-friendly protective ecotourism packages and products

### ***Description and methods employed (what, how, where, when and why):***

One of the main threats to the conservation of *Canis lupus* in the Alps is the lack of social acceptance (Threat no.5): the wolf is seen as an economic damage to mountain agriculture and it is perceived as a potential threat to Alpine tourism. We aim to turn the wolf into a factor of economic development for the benefit of local operators in the areas where the predator is present through original, protective eco-tourism packages (i.e. with the minimum impact on the environment and on the species) and wolf-friendly products to improve the perception of the wolf and increase support for conservation. Wild animals are in fact among the most inspiring and marketable components of the environment and the wolf is one of the most charming and appealing species worldwide: promoting a minimum impact eco-tourism is a win-win action that supports local economy, improves wolf knowledge and raises tourists' awareness about the impact of hiking, directly addressing Threat 5-6 and increasing support for wolf conservation locally. The action is organized around six activities:

- 1) Guidelines for responsible wolf tourism.** At the moment there are no specific guidelines developed on how to use wolf based tourism in a responsible manner. We will upgrade the guidelines set out for responsible bear tourism in LIFE DINALP BEAR for sustainable wolf tourism in connection with EIA Guidelines handbook developed within Action C6. At least 2 meetings are planned in Slovenia to develop the guidelines. Communication materials promoting responsible tourism practices will be produced within Action E1.2.
- 2) Creation and marketing of original wolf-friendly protective eco-tourism packages.** Not all tourism initiatives are actually sustainable from an ecological point of view because they disturb wildlife (e.g. wildlife photography, wolf-howling and wildlife snow-tracking without any regulation) both directly interfering with the animals and indirectly because they take place where anthropic disturbance should be reduced to the minimum, especially during those critical periods of the year. We aim to create eco-tourism offers that demonstrably conserve the environment and improve coexistence with large carnivores, based on the guidelines for responsible wolf tourism (see point 1). Best practice examples of wolf-friendly itineraries will be developed in close cooperation with technical staff and local tourism organizations and operators, addressed to different target groups: schools, families, outdoor tourists. Activities will be designed in a manner that causes minimal disturbance to wolves and will include lectures on wolf biology, ecology, learning about wolves' habitat, recognizing their signs of presence and raising awareness about human-wolf coexistence. At least 8 new wolf friendly packages will be created: 5 in Italy (2 METO, 1 APAM, 1 RELO, 1 ERSAF), 1 transboundary (APAM together with PNM), 2 in Slovenia. At least 64 wolf-friendly ecotourism events (pastoral eco-tourism and snow-tracking hikes) will take place (10 METO, 20 RELO, 12 APAM, 8 APAP, 8 RELI, 6 APAC).
- 3) Training of nature guides and tourism operators.** Where already existing, the eco-tourism initiatives will involve nature guides, accommodation and facilities already trained and tested within the LIFE WOLFALPS Project. The performance of guides and other tourism operators will be crucial to obtain quality of guided experience. Workshops are needed to help them correctly understand the limitations that will be described in the EIA guidelines and be able to implement the guidelines respecting the limitations. On the other hand, workshops will also present the opportunities large carnivores provide for tourism and to improve knowledge about wolf conservation and responsible tourism in large carnivore areas. At least 5 workshops will be organized: 4 in Italy (2 APAM, 1 METO, 1 RELO) and 1 in Slovenia. In RELO the activities will be developed in close collaboration with the 3 Regional Parks and Parco Nazionale dello Stelvio. PNM will organize an educational visit for French farmers to meet Italian farmers involved in eco-tourism experiences.
- 4) Production and coordinated marketing of new wolf-friendly products. The production will**

**come** after the pilot experience of the "Land of Wolves" brand, successfully run as part of the LIFE WOLFALPS Project, and with the inspiring experience of LIFE DINALP BEAR project, who developed a bear friendly label to promote products and services that contribute to better coexistence with bears. We will create a self-sustaining network of wolf-friendly producers and ambassadors at the Alpine scale. We will upgrade the bear friendly and, where already existing, the wolf friendly offer with new products promoting coexistence with wolves. These will be promoted within the wolf-based tourism packages and ecotourism portal developed within LIFE DINALP BEAR and LIFE WOLFALPS integrating where possible. Wolf-friendly products and producers will be promoted thanks to a dedicated part of the project website and through the project social channels. This sub-action will make use of expert advice, to ensure sustainability in the after Life period. APAM will organize a living lab in Valdieri (at least 3 meetings) to elaborate a strategy for the recovery and use of wool (one of the critical issues that emerged from the questionnaires for farmers administered in the framework of LIFE WOLFALPS). At least 16 new wolf friendly products (e.g. cheese) will be created: 11 in Italy (4 APAM, 2 APAP, 1 APAC, 4 RELI) and 5 in Slovenia.

**5) Art camp.** Beside wildlife enthusiasts, we would like to reach other target groups and raise the awareness about tourism opportunities created by large carnivore presence among the wider community. Art can act as a medium to draw attention to the need for nature conservation as an essential element of sustainable development. With the help of external experts (like Artists for nature foundation or similar) UL will develop an art camp in Slovenia, embedding group of international and regional environmental artists into lives of key stakeholders involved in human-wolf relationship. The art camp will create a platform for dialogue among different groups within the local community (tourism workers, nature guides, local authorities, artists, craftsmen, farmers, foresters, etc.). An event with an on-site exhibition will be held that will attract local visitors, media and tourists.

**6) Awareness campaign implementation.** A specific awareness campaign will be developed in the Communication Strategy (Action E1.1), the dissemination materials needed will be designed and produced in Action E1.2 in coordination with Action E2.

### ***Beneficiary responsible for implementation:***

APAM

APAM will be responsible for the correct coordination within the different Project Areas and among Partners. UL will coordinate the action in Slovenia. In France PNM will work in coordination with APAM. In Italy many partners will be involved: METO, RELO, APAM, APAP, RELI, APAC, ERSAF.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements.

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising. APAM specifically planned costs for updating the image and packaging of Wolf Friendly products in order to share the project at the Alpine level. The quantification of the costs was based on the expenditure for the basic visual image realized in LIFE WOLFALPS project.



**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state. In Other costs, for developing ecotouristic packages with trained park guides, RELO plans to allocate resources to regional Parks, as the action carried out at local rather will have better results than implemented at regional level. RELO will maintain a coordination of the initiatives and costs, which will be reported in details by each Park.

**C7's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
64 eco-tourism events 31/7/2024	07/2024
Guidelines for responsible wolf-based tourism developed	10/2020
8 wolf eco-tourism packages are marketed (6 in Italy and 2 in Slovenia)	04/2023
Art camp	10/2022
16 new wolf friendly products	01/2024

**C7's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First eco-tourism event	07/2022
First training for guides and tourism operators	01/2021
First wolf friendly packages marketed	12/2020
First meeting of the Living Lab on wool use	12/2021

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION C.8:** The first special Life Alpine Young Ranger Wolf Program: in the field implementation over the boundaries to involve new generations in wolf conservation

### ***Description and methods employed (what, how, where, when and why):***

A generation of kids informed and committed to environmental protection is a powerful and effective long term investment for lasting support of wolf conservation in the Alps, directly addressing Threat no. 5. Starting from the topic of wolf conservation in the Alps (*Canis lupus* is a charismatic, flag and umbrella species) a transboundary special Life Alpine Young Ranger Wolf Program will be developed, adapting the model developed 15 years ago in the American National Parks, to create - outside the school and in the field - a generation of young people actively engaged in environmental conservation and aware of Natura 2000 network spreading from the Alpine Protected Areas (see map attached). This action invites the youngest Park visitors to become members of the Natural Park Service family, giving kids and families the opportunity to explore and learn about the wolf, smallest common denominator of many Alpine Nature Parks, and how they can help protect it today and into the future. Each Protected area could then develop its own coordinated program focused on its peculiar ecological strengths: for each program completed a different badge will be awarded and a different stamp on the Life Alpine Young Ranger passport, encouraging kids and families to travel and discover all the Alpine protected areas adhering to the Alpine Junior Ranger Program. This action fully exploits and develops the charisma of the wolf as a "flagship" species to raise interest and to call youngsters to action through: the discovery of Alpine biodiversity by visiting different European Protected Areas; a personal commitment (grounded in the emotional swearing in ceremony) in exploring, learning and protecting the environment. Considering the Partners, 12 national/regional Parks will develop the program. Moreover, thanks to the coordinated activity of the Stewardship Office and to supporter Alparc (i.e. the network of the Alpine Protected Areas), we will develop the replications of this action through its promotion beyond the Project partners, involving at least 17 more protected areas of the Alps (replicates), which are or are in the process of being supporters, participating in the Life Alpine Young Ranger (LAYR) Program, in order to further raise the awareness of Natura 2000 network. **The total number of networking Parks in the program will be at least 29 Parks over the Alps, from the 4 different countries.**

**1) Setting up and developing the first special Life Alpine Young Ranger Wolf Program.** We will create a transboundary network of all the Protected Areas adhering to the Life Alpine Young Ranger program that will be published online and constantly updated. A first networking and brainstorming workshop in Valdieri will form a solid starting point for the program. PNM will be the French coordinator of the program and it will organize a second workshop in France. Only if needed, a further international workshop could be organized by supporter Alparc - the network of Alpine protected areas. At least two workshops will be held to prepare this action.

**2) Shared Life Alpine Young Ranger (LAYR) Wolf Program: visual image and materials.** In collaboration with all the adhering Parks, APAM will develop a starting kit with common visual image, composed of:

- one booklet with fun educational activities about wolf suitable for different age groups (ranging from 6 to 14 years old) will be created (paper and online format);
- one "Wolf badge";
- one Life Alpine Young Ranger passport, to collect the stamps from each different Park;
- headscarves.

APAM will print at least 5000 booklet, badges, passports and headscarves. PNM will translate and print the booklet in French and UL will translate and print the booklet and passport in 400 copies in Slovenian, produce 800 pcs of badges and 800 pcs of head scarves. All the materials will be produced in Action E1.2 according to the general Communication and Engagement Strategy developed in Action E1.1.

**3) Training of Park officers, Park guides, Park volunteers and other personnel as local leaders of the program.** Parks will locally organize workshops to train the staff to lead the **Life Alpine Young Ranger Wolf Program**. **The first workshop** will be held in Valdieri and will be opened to guides and trainers of all interested protected areas.

**4) Pilot implementation of the Life Alpine Young Ranger Wolf Program with kids of mountain areas.** The first beneficiaries of the program will be the kids of the Parks' areas, who will test the program becoming the first Life Alpine Young Ranger Wolf Rangers of the Alps. At least 9 events will be organized to promote the program amongst local kids: 6 in Italy, and 1 in France and 2 in Slovenia. There will be at least one transboundary exchange field trip for kids from rural areas.

**5) Implementation of the Life Alpine Young Ranger Wolf Program over the boundaries.** By the end of the project we will have created an international network of at least 5000 young rangers to support wolf conservation all over the Alps, spreading from the Alpine Protected Areas and inspiring the next generation of Park stewards. A Life Alpine **Young** Ranger Celebration Day will be chosen for LAYR to meet together and exchange experiences in the different Alpine Protected Areas. At least 12 celebration days will be realized, 8 in Italy (APAM 4, APAC 4) and 4 in France (4 PNM).

**Awareness campaign implementation for launching the program:** a specific awareness campaign with a related strategy of arguments and applications will be developed on the topic in Action E1.2. The material needed for the campaign will be designed and produced in Action E1.2 in coordination with Action E2.

### ***Beneficiary responsible for implementation:***

APAM

APAM will be responsible for the correct coordination within the different Parks in the Alps, involved both as Partners (APAM, APAP, RELI, RELO, APAC, ERSAF, APOS, PNDB) and Supporters. In France PNM will coordinate the work.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise.

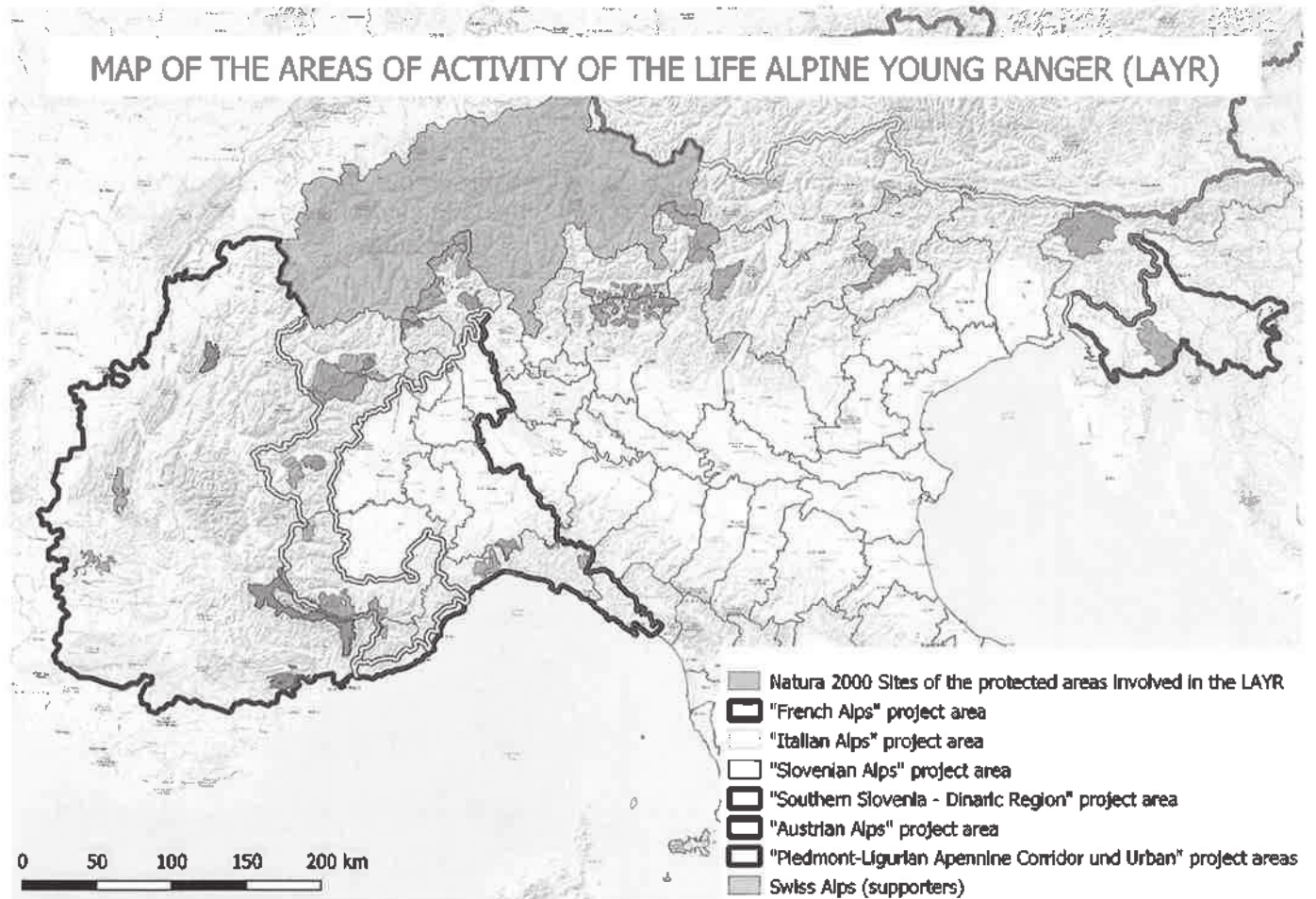
**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising. APAM

plans a collaboration with the network of Alpine Protected Areas (ALPARC) for the organization and promotion of the network of Alpine Junior Rangers

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

Name of the picture: LIFE Alpine Young Ranger Project Areas





**C8's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
The "Wolf badge"	12/2021
The Life Alpine Young Ranger passport	12/2021
The headscarf	12/2021
The booklet with fun educational activities about wolves suitable for different age groups (ranging from 6 to 14 years old)	12/2021

**C8's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First LAYR Celebration day	12/2022
First Map of the protected areas adhering to the LAYR program	12/2020
First training Park officers and LAYR animators	06/2022
First LAYR event for local kids	12/2022

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION D.1:** Assessment of attitudes and perceptions about wolves among general public and key stakeholder groups

***Description and methods employed (what, how, where, when and why):***

### **D1.1 Ex-ante assessment of attitudes and perceptions about wolves among general public and key stakeholder groups**

### **D1.2 Ex-post assessment of attitudes and perceptions about wolves among general public and key stakeholder groups**

In this action we will assess public attitudes towards wolves among inhabitants of the project area and specifically also among key interest groups identified as critical for wolf conservation during the first project LIFE WOLFALPS (hunters, farmers) as well as among other important interest groups targeted within this project (tourism workers, education professionals, etc.).

Public attitudes towards wolves and stakeholder involvement in the project will be assessed and evaluated in this action, both at the beginning of the project (Action D1.1), and at the end of the project (Action D1.2), in order to compare results and better understand the dynamics of the general attitudes towards wolf conservation in the Alps.

We will use the following 2 approaches:

Evaluation of stakeholder involvement in the project will be carried out using semi-structured interviews with a sample of representatives of stakeholders that were previously actively involved with the project through C actions. Throughout the course of the project we will interview at least 100 persons. The evaluation will be used as a lesson-learning tool during the project to help us adjust stakeholder involvement activities to local needs and specifics. At the project end and after it will help assess social impacts of the project and enable easier transferability and replicability of best practices.

Results of the LIFE WOLFALPS project are suggesting that different interest groups hold very different opinions about wolves and even within the same social group there were considerable differences across the project core areas (e.g. hunters in eastern and western Alps). In order to better understand the differences and underlying causes we will first use **qualitative social psychology methods** (focus groups and semi-structured in-depth interviews) to determine the main reasoning and narratives behind specific attitudes across the geographical and social structure. In each project area we will carry out at least three focus groups / interviews. In the following step we implement a **quantitative survey of public attitudes**. The main tool for collecting the data will be a structured questionnaire based on the results of the qualitative study. Certain key questions used in the attitude assessment during project LIFE WOLFALPS will be used to allow for direct data comparability thus enabling us to precisely assess the attitudes within a longer temporal frame. We will interview at least 100 randomly selected representatives of general public in each project area and at least 50 representatives of each interest group per project area.

The survey will be carried out during the first 18 months of the project in all selected project core areas (Action D1.1.)

The results of the survey will enable fine-tuning of actions which include stakeholder dialogue and other types of public outreach and communication activities (Actions E). It will also serve as a baseline study for assessing project results at the end of the project, in connection with Action D2. Overall this action will provide data

needed to address threats no. 3-4-5.

In Action D1.2, during the last 16 months of the project we will repeat the quantitative public attitude survey carried out in the beginning of the project in D1.1. The ex-post survey will use the same methods and approaches and allow for evaluation of what has happened with public attitudes toward wolves during the project life time.

### ***Beneficiary responsible for implementation:***

UL

UL will be responsible for the coordination of the action and its correct implementation among every partner and project area. Every partner will participate and contribute to the action.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**D1's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Report on ex-ante assessment of knowledge and attitudes of wolves	12/2020
Report on comparison of ex-ante and ex-post assessment of knowledge and attitudes of wolves	05/2024

**D1's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
-Questionnaires are delivered for the ex-post study	12/2023
Questionnaires are finalized and delivered for the ex-ante study	03/2020

## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION D.2:** Assessment of socio-economic impact of the project and ecosystem functions

### ***Description and methods employed (what, how, where, when and why):***

Concrete management actions must bear an impact on the ecosystem, both in ecological and economic terms. The purpose of this action is to evaluate the usefulness and the success of the C project actions implemented, in order to assess the impact of the present project on the ecosystem and on the welfare of the local populations.

The monitoring strategy of the action D2 will be defined within the first year of the project into:

- An *ex-ante* assessment featuring the socio-economic and biological background analysis of project areas compared to the project goals;
- The choice of biological, social and economic indicators, the *in itinere* monitoring tools and schedule;
- The assessment of new economic contexts discussing conceptual approaches to environmental accounting
- The *ex-post* data analysis and results evaluation, taking into consideration the possibility for the activities to be replicated elsewhere.

The proposed Action will consolidate the data and results of actions C on the local economy and social welfare. It will also integrate the results of all the C actions on the wolf conservation status.

To be effective this study will be structured from the first year and gather data for the whole duration of the project. It will have a strong coordination from EURAC, the responsible beneficiary of the action, to ensure that each partner reports periodically on the output and impact of the project. In particular, at the beginning of the project we will produce a set of socio-economic indicators that will be developed and agreed among the project team for each of the project actions. At the same time, we will also develop ecosystem functions indicators, and for this we will consult the MAES guidelines (Mapping and Assessing Ecosystems and their Services).

The quantitative economic impact assessment will examine how the LIFE WOLFALPS EU project will change the lives and the economy of current and future residents of the project area.

The indicators used to measure the potential economic impacts of the project will include the following:

- The increase of wolf-friendly protective ecotourism packages and products
- Increase in market size and expected revenues of wolf related local products
- The enhancement of the quality of the services of the area
- Changes in employment, capital invested and net income levels;

From a social point of view, gaining an understanding of community values and concerns is an important first step in conducting a sociological impact assessment. Such an analysis will allow the understanding of the perception of community members about how LIFE WOLFALPS EU project will affect their lives. A critical analysis of the factors contributing to the current social knowledge and acceptance is crucial to support any future decision to move ahead with development and protection of the project areas.

Social indicators will include:

- The changes in the scale of the threat that community members feel
- The changes in the behaviour towards wolf and wildlife in general (in connection with Action D1)
- The increased knowledge and acceptance of wolf by residents and tourists (in connection with Action D1)

The evaluation of the conservation status of the alpine wolf population will be based on the estimation of these primary population parameters, estimated in the framework of Action C4:

- Number of reproductive units (i.e. packs)
- Wolf population size
- Distribution
- Wolf population genetics parameters
- Other information: level of connectivity with the Dinaric, Central European and Apennine population, detection of hybrids, health information
- The decrease of habitat fragmentation and wolf traffic mortality (in connection with Actions C6-D3)

For each of the indicators frequency of assessment and baseline value will be established and database prepared. Overall, the project team once per year will carry out systematic assessments of agreed indicators. Project teams will be updated on the trends of specific indicators once per year and the implications for the project will be discussed at the project group meetings. Specific attention will be given to assessing the costs and benefits of the conservation actions implemented in the project. The results will be disseminated via project web page and social media once per year. All data collected via e-mail will be analysed at the EURAC.

A final report will be written at the end of the project. The results will be used to communicate to interested parties the best practices applied, and their positive impacts on the environment.

The action will be carried out in all four participating countries for the duration of the project. Measuring, evaluating and clearly demonstrating the impacts of conservation interventions on the socio-economic environment is critical for management, accountability, and lesson learning. This is particularly important for projects that consist of community-based activities or have the potential to affect local livelihoods in either a positive or negative way.

Our project proposal has all those elements:

- Community-based approach to maintain high public acceptance of wolves and related controversial issues,
- Actions that have the potential for positive impact on local livelihoods (e.g. tourism related action)
- Actions taking into account the number of wolves, which might increase and cause additional damage to livestock, thus negatively affecting local livelihoods.



Definition of the indicators to evaluate the impact of the project 15/12/2020

First set of indicators collected from all partners in the 4 countries 15/12/2020

***Beneficiary responsible for implementation:***

EURAC

EURAC will be responsible for the coordination of the action and its correct implementation among every partner and project area. Every partner will participate and contribute to the action.

***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, conferences).

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** there are no costs foreseen in this action

**D2's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Report on the assessment of socio-economic impact of the project and ecosystem functions	08/2024
Report: ex-ante assessment featuring the socio-economic and biological background analysis of project areas compared to the project goals	12/2020

**D2's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Definition of the indicators to evaluate the impact of the project	12/2020
-First set of indicators collected from all partners in the 4 countries	12/2020

**A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION D.3:** Evaluation of effectiveness of mitigation measures implemented to prevent traffic related wolf mortality in sink areas

***Description and methods employed (what, how, where, when and why):***

Although efficiency of different mitigation measures for reducing the number of wildlife-vehicle collisions has already been confirmed, the lack of data on behaviour of wolves in Italy around such deterrents still hampers their use. This makes this action essential for (i) getting a better understanding of wolves ethology that can be used for future adjustments of mitigation measures, and (ii) for confirmation of the efficiency of the mitigation measures used - to confirm the usefulness of the proposed best practice demonstration ('black-spots' equipped with deterrents and road signs or fences with the goal to decrease wolf traffic mortality; see action C6).

The effectiveness of all implemented mitigation measures on actual reduction of wolf mortality will be statistically analysed (e.g. by a comparison of the number of wolf traffic-mortality registered (action C6.1) on the selected sections of roads, using the data collected in action C6, by an evaluation of the wolf use of the highways and railways before and after implementation of the mitigation measures). This analysis and a final report will be prepared in the last year of the project.

***Beneficiary responsible for implementation:***

APAC

APAC and METO will be co-responsible of the coordination of the Action and for its correct implementation in the Torino Province and Susa Valley.

***Assumptions related to major costs of the action:***

**Personnel costs:** there are no costs foreseen in this action.

**Travel costs:** Few costs are foreseen in this action for METO's cars use for evaluating the effectiveness of mitigation measure in Val di Susa.

**External assistance costs:** there are no costs foreseen in this action.

**Equipment costs, Consumable costs and Other costs:** there are no costs foreseen in this action.

**D3's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Report on the evaluation of effectiveness of mitigation measures implemented to prevent traffic related wolf mortality in sink areas	05/2024

**D3's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION E.1:** Dissemination planning and execution

### **Description and methods employed (what, how, where, when and why):**

Communication plays a major role in the management of totemic species such as wolf. To the extent that in some cases communication is implemented as a conservation tool. A coordinated, effective and targeted communication will address Threats no. 1 and no. 5 diminishing management fragmentation, mitigating social conflicts and improving an objective, science based knowledge about wolf and about coexistence in the Alpine area both in rural contexts and in new urban ones through three sub-actions.

### **E1.1 Communication and Engagement Strategy**

The Communication strategy will be based on two staple concepts:

- 1) **“ecological stewardship”**, intended as the ethics of responsible planning and management of natural resources. The conservation of the wolf will be treated as a proxy for promoting biodiversity as a value. From the point of view of the environment, society, but also the economy.
- 2) **“shared interests” or “ownership”** with public and/or private third parties: instead of confining a communication output to the project partners’ direct intervention areas and dissemination potentials, the project outputs will be linked to the interest of relevant third parties, public or private, in order to multiply the impact of the project communication and enforce replication. The engagement mechanism will be based on sharing relevant benefits, according to the map of interest of the different actors realized in Action E2.1. From case to case, we will share with third parties a combination of assets - ranging from the project brand and promotion guidelines and materials, to scientific supervision and contents, to economic support. In exchange, we will ask to third parties to co-produce and multiply the project messages, contents and services.

A robust shared Communication and Engagement Strategy will be the main tool of the Communication Group. It will be designed in close connection with Action D1 and will be accordingly modified and fine-tuned based on its results throughout the project. The Strategy will provide basic elements such as: communication and engagement goals, contents, target groups, methods, project key messages and claims, project visual image, shared operating protocols, online tools to share materials amongst partners. It will include also concepts, goals, contents and methods of the awareness campaign for each conservation action. In particular 9 ad-hoc awareness campaigns will be developed, one for each conservation action (C1, C2, C3, C4, C5, C6, C7, C8, A7). MUSE will coordinate the process to achieve the shared Strategy.

At least one plenary coordination meeting of the Communication Group per year will be organized: in 2019 within the kick-off meeting in Action A1 and in 2020, 2021 and 2022 and 2023 within the general coordination meeting in Action F1. One additional meeting will be held in Trento to present the Communication and Engagement Strategy of the Project (2020). Every partner will have a communication responsible, moreover MUSE and APAM will have a dedicated full time communicator, in France (ONCFS) a part-time communicator will support all the communication activities, in Austria communication and education activities will be created with the external assistance of a specialized NGO.

### **E1.2 Development of the dissemination pack**

Coordinated dissemination products will positively impact on peoples’ knowledge and attitudes towards wolf-human coexistence and wolf conservation in the Alps, thus addressing Threats no. 1, 3, 4 and 5. Awareness campaigns and dissemination events for each conservation action will be elaborated and defined within the Communication strategy (Action E1.1).

**Dissemination products.** Dissemination products will be actively developed and implemented within their respective communication and conservation actions. In detail expected results are:

- 3 videos: 1 to present the project (APAM), 1 to present the anti-poison k-9 units (APAM, Dissemination campaign Action C2), 1 as dissemination campaign Action C6 (METO);-
- 1 booklet for Life Alpine Young Rangers, 1 passport for LAYR (Dissemination campaign Action C3; at least 5000 copies), 1 booklet for hunters (Dissemination campaign Action C3; at least 500 copies);
- 1 manual for monitoring operators (Dissemination campaign Action C4, at least 100 copies);
- 1 guidelines about responsible wolf tourism (Dissemination campaign Action C7)
- at least 4 brochures or leaflets (Dissemination campaign Actions C1, C5, C6)
- at least 2 posters: 1 project poster (at least 500 copies) and 1 anti-poison k-9 units poster (D
- at least 2 gadgets: t-shirt (at least 100 t-shirts) and headscarf (at least 5.800)
- at least 1 roll-up banner (19 , one for each partner)
- at least 50 events for general public all over the Alps

**Website, newsletter and social channels.** The LIFE WOLFALPS website will evolve into a multi- language platform to fit the new project framework by maintaining the domain and the main contents. At least 15 project newsletters will be delivered. Facebook LIFE WOLFALPS page will evolve into new LIFE WOLFALPS EU multi language page, becoming the main project social channel.

**LIFE Boards.** At least 19 LIFE Boards will be produced and installed one by each partner at their headquarters at the beginning of the project. The boards will be printed by APAM, contents and layout will be agreed on by all the partners.

**Layman's Report.** At least 5.000 copies of the Layman's Report paper version will be produced, partly in the language of the Coordinating Beneficiary (Italian) partly in English, French, German and Slovenian. An online version of the report will published on the project website and disseminated through the project newsletter. PNM will translate the texts in French, Slovenian partners and Austrian partners will take care respectively of the translation and printing of the Slovenian and Austrian versions.

### **E1.3 Networking with other LIFE and non-LIFE projects**

Many projects linked to wolf conservation and related topics are being developed throughout Europe and all over the world. We will establish contacts and exchange knowledge, pilot experiences, know-how with most of them in order to transfer best practices and to enhance the replication of most successful methods and experiences. At least 3 workshops will be organized in different project areas to work on the following relevant issues:

- "Wolf eco-tourism and Life Alpine Young Ranger program for nature conservation in the Alps"
- "Hybridization: detection, management and communication"
- "New challenges in communicating wolf conservation in the Alps"

Most relevant ongoing and recently ended LIFE Projects that will be involved are: LIFE Eurolargecarnivores,



LIFE Lynx, LIFE DinalpBear, LIFE SloWolf (ended), LIFE WolfAlps (ended), LIFE Medwolf (ended), LIFE Ibriwolf (ended), LIFE MIRCO LUPO. Timing and topics of the workshops could be adapted if particular circumstances make a subject particularly important to be faced in a given year.

**Beneficiary responsible for implementation:**

MUSE

MUSE and APAM will be co-responsible of the coordination of the Action for its correct implementation among every partner and project area. Every partner will participate and contribute to the action.

**Assumptions related to major costs of the action:**

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. APAM includes in this action the cost for a full-time Communication manager, who coordinates the activity of actions E, C7 and C8 in favour of all the project partners, in order to coordinate the action.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements.

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising. Costs for graphic design and printing of multiple products have been planned based on expenditure incurred in previous project for the same purpose. The LIFE WOLFALPS experience was considered positive, in relation to the excellent results achieved.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state. In Other costs, only the printing costs of some products have been foreseen, based on costs for similar products recently incurred by each partner.

**E1's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Wolf Alpine Communication Group Crisis Unit Protocol	03/2020
Project brochure	06/2020
Project roll up	06/2020
Project website	06/2020
LIFE board	12/2020
Layman's report	08/2024
15 newsletters	08/2024
LWA Communication and Engagement Strategy	03/2020
LWA Visual identity and brand manual	04/2020
Project poster	06/2020
Proxy analysis among project partners	01/2020

**E1's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Go-live of the project website	06/2020
Go-live of the project Facebook page	12/2019
Launch of the project video	12/2020
First networking meeting	03/2021
First project gadget	06/2022

## **E. Public awareness and dissemination of results (obligatory)**

**ACTION E.2:** Stewardship and Media Office to Enhance Engagement, Replication and Multiplication of the Project Impact

### ***Description and methods employed (what, how, where, when and why):***

With the Stewardship and the Media Office we will address Threat no. 1, reducing fragmentation in wolf conservation communication all over the Alps; Threats no. 3 and 4, empowering the engagement of hunters and farmers and Threat no. 5 by ensuring an effective, transversal dissemination of correct information by calling to action a wider range of third parties that have shared interests in wolf conservation and communication.

### **E2.1 Stewardship Office**

The highly innovative Stewardship Office will map, build and maintain an Alpine network constituted both of key stakeholders (livestock breeders, hunters, environmentalists) but also by a wider public interested by the presence of the wolf (e.g. hikers, but also cultural or artisan associations, nature Parks, teachers, nature guides, tour operators, publishers) to involve them in project activities, to share relevant information and project results with them in order to obtain three main goals: enhancing engagement, multiplying the impact of the project by entrusting the dissemination of some contents and products directly to third parties interested in doing so (e.g. travel agencies interested in selling wolf eco-tourism packages in connection with Action C7; cultural associations interested in hosting project conferences and exhibitions in connection with Actions E1.2 and E5; teachers interested in having high level experts' conferences in the classrooms in connection with Action E4), fostering the replications of successful experiences (e.g. further Alpine Protected Areas should enter the Junior Ranger program in connection with Action C8, ...). We will build a win-win situation where everyone gains in working together for wolf conservation according to the two key concept at the base of the Stewardship office: those of "ecological stewardship" (i.e. the ethics of responsible planning and managing of natural resources) and of "shared interests" (i.e. third parties will transfer, replicate and multiply the impact of the project if there are any common shared interests). The Office will be composed by a member of each partner and it will meet during the annual Wolf Alpine Communication Group Meetings within Actions A1 and F1. At least 5 meetings will be organized. If needed, more meetings can be organized.

In detail, the expected results of the Stewardship Office are:

- a shared stakeholders map drafted by all partners.
- at least 10 additional supporting forms (i.e. Form A8) to be signed thanks to its work.
- the LIFE WOLFALPS EU Stewardship Program: an online tool featuring a list of stakeholders and supporters officially collaborating with the project, the terms of their engagement, and a report of the outputs they produced. By the end of the project this online resource will be published in a book, as a guide to sustain the activities of the stakeholders and supporters in the after-LIFE period.

### **E2.2 Media Office**

The Wolf Alpine Media Office will feature at least a native speaker/writer in each one of the project languages. It will coordinate the relationships with the media. It will produce the Alpine Press Review collecting daily the main articles about the project and wolf presence in the Alps across all the intervention areas to detect critical hot spots where it is necessary to intervene in real time, with a specific conservation and/or communication action. The Alpine Press Review will collect at least 1000 articles.

The Office will produce, translate and disseminate coordinated press releases in several languages (Italian, French, Austrian, Slovenian) and it will carry out fact checking and debunking. At least 50 press releases will be written and disseminated.

At least 12 workshops will be specifically designed for media communicators - journalists, bloggers and youtubers - all over the Alps, providing them project related materials, reports and data: 10 workshops in Italy (2 APAM, 2 APAC with METO, 2 RELI, 1 APAP, 1 RELO, 2 MUSE), 2 workshops for journalists in Slovenia (SFS) and 1 educational tour in France (PNM). Moreover, 10 press conferences for journalists will be organized in France by ONCFS. We want to improve the level of local awareness of reporters about the project and the overall importance of nature conservation, LIFE programme, and Natura 2000 network and to affirm the project as a well-established, authoritative source of information about all the issues related to wolves in the Alps.

As expected results we plan to collect: at least 50 project press releases both at Alpine and local level (at least 3 at Alpine level: launching, middle term, final); at least 50 media outputs about the project in popular newspapers, radio or television channels; an extensive Shared Alpine Press Review about wolf in the Alps and project with at least 1.000 entries.

### ***Beneficiary responsible for implementation:***

MUSE

MUSE and APAM will be co-responsible of the coordination of the Action for its correct implementation among every partner and project area. Every partner will participate and contribute to the action.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**E2's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Stewardship program	06/2024
Stakeholders map	03/2020
Fact Checking and debunking protocol	12/2020
Shared Alpine Press Review about wolf in the Alps and project with at least 1.000 entries.	08/2024
At least 4 popular articles published in Slovene hunting magazine	06/2024

**E2's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Project launch press release	12/2019
First 100 articles in the shared Alpine Wolf Press Review	12/2020
First workshop for journalists and communicators	06/2021



## **E. Public awareness and dissemination of results (obligatory)**

**ACTION E.3:** Developing participatory approach and regional stakeholders' platforms

### ***Description and methods employed (what, how, where, when and why):***

A participatory approach involving and engaging key stakeholders (farmers, hunters and environmentalists) is functional to a lower conflict level (thus addressing Threats no. 3 and 4) acting in two directions: increasing the knowledge of stakeholders on wolves and considering their needs and suggestions. Through thematic platforms and local meetings tailored for each stakeholder, we will make them true actors in the process of building wolf-human coexistence in the Alps in close connection with C Actions. They will become messengers for the project results, helping us to gain and maintain support for the project among different types of public.

### **E3.1 Thematic platforms**

A key output of the Stewardship Office (Action E2.1), will be the organization of Stakeholders Dialogue Platforms. In LIFE WOLFALPS these participatory meetings proved to be extremely useful "antennas" to disseminate project vision, mission and results, and to "detect" firsthand the general project consensus, the themes on which to intensify local efforts and any issue emerging during the project life cycle. Smaller, focused platforms will perform better in terms of participation and inputs received in relation to a certain topic. Thus, as set out in the Stakeholders Engagement Map (Deliverable E2.1.) the partners will organize a set of different "Thematic Dialogue Platforms" according to the local stakeholders, challenges, and needs. Each Thematic Platform will run on a periodic basis during the project (at least once a year for 3 years). All the Platform's meetings proceedings will be published in progress on the website and on a printed booklet by the end of the project.

EURAC will define the strategy for the thematic platforms in each project area. According to the results of Action E2.1 and the strategy (E1.1), EURAC will guarantee harmonization, coordinate and organize a set of local stakeholders' platforms in each project area for the duration of the project. EURAC will design each specific intervention and ensure its running. Each platform will be designed as a participatory process, making use of innovative approaches that include dialogue and conflict resolution techniques aiming to support the stakeholder platform in converging to a set of potential actions to be implemented for an improved and more widely accepted management of wolves. Where needed, external professional facilitators will provide their assistance. Each local platform will take in at least 3 stakeholders' workshops.

France has already structured round table discussion groups at local and national level developed in the frame of the Wolf National Management by ONCFS. So these round table discussion groups will be the place where the results of C Actions will be shared and discussed and where indications and needs from stakeholders should be implemented. The strategies and methods used for the LIFE platforms will be adopted in these round table discussions. Moreover, in France PNM will organize an additional platform with at least 3 meetings. Hence, at least 2 platforms with 3 meetings each will be organized in France. In Austria the approach will be similar, with 1 platform with at least 2 meetings. In Slovenia 1 livestock breeders platform will be organized with at least 1 meeting. The network of collaborating sheep breeders established within LIFE DINALP BEAR will be enriched with cattle breeders to settle a larger network of people who would like to prevent damages and to work proactively. In Italy a total of 7 different platforms will be organized with at least 2-3 meetings each, following the outputs and needs of the main C actions: 2 in Piedmont Region (one regional and one local in VCO province), 1 in Valle d'Aosta Region, 1 in Lombardy Region, 1 in Liguria Region, 1 in Trento province organized by MUSE, and 1 in Bolzano province organized by EURAC. The platform organized by APOS in VCO will be a continuation of the local platform first set up by LIFE Euro Large Carnivores, which will end in 2021. **Therefore, the total will be of 11 different platforms of which 7 in Italy, 1 in Austria, 2 in France and 1 in Slovenia, in connection with Action A8.**



The action E3.1 is strictly related to the regional platforms that will be established in the framework of tender ENV.D.3/SER/2018/0021, with the title "Support to additional regional / local platforms on coexistence between people and large carnivores", coordinated by IEA. EURAC Research will be involved in this tender as a local link to South Tyrolean stakeholders and will operate in close cooperation with the LIFE WOLFALPS EU project in order to exchange information, experiences of local stakeholders, ideas and new approaches for local wolf coexistence, in coordination with IEA and the European tender.

## E3.2 Meetings with stakeholders

Local meetings with stakeholders will be organized to discuss with them on a local scale the issues most relevant for each category, to keep them closely informed about our project and the overall importance of nature conservation, LIFE program and Natura 2000 network and to involve them in project activities according to the Stewardship Program (Action E2.1).

In Slovenia meetings of farmers will be organized annually (4 meetings within the project) to discuss damage occurrence and damage prevention methods. Farmers will be invited to present their opinions and share their experiences. We will present them the updated results and analyses of our work and give them feed-back about the results of their work and a short report about the results of the collaboration. At least 25 meetings with farmers will be organized: 10 in Italy (4 METO, 3 RELI, 2 APAC, 1 APAM), 4 in Slovenia (SFS), 10 meetings in France (ONCFS) and 1 in Austria. These meetings will be complementary to the meetings organized within Action C1.

We consider here the general coordination of the meetings with hunters that will be organized over the 5 years of the project by each partner, in particularly considering the ones organized in the framework of action A4 and C3 to share results from the predator-prey-hunters relationship evaluation. In particular in Piedmont Region we will organize at least 12 meeting with local hunters (4 in Alessandria province by APAP, 2 in Cuneo province by APAM, 3 in Torino province by METO, 3 in VCO and Vercelli Biella province by APOS). RAVA will organize at least 3 meetings with local hunters, RELO and ERSAF will organize at least 3 meetings with local hunters, RELI will organize at least 3 meetings. For a total in Italy of 21 meetings with local hunters in the framework of Action A4 and C3. In Slovenia and in Austria at least one meeting with hunters will be organized. Moreover, in France ONCFS will organize 20 meetings to share results with the hunting community, **for a total of at least 43 meetings with hunters in the project.** MUSE and APAM will also organize 1 annual meeting with environmental associations for 3 years for a total of 6 meetings.

### ***Beneficiary responsible for implementation:***

RAVA

RAVA and EURAC will be co-responsible of the coordination of the Action, EURAC will be responsible for its correct implementation among every partner and project area. Every partner will participate and contribute to the action.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway

tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**E3's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Platform's meetings proceedings booklet	05/2024
First meeting of a platform conducted within the common strategy	11/2021

**E3's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First thematic platform in Slovenia organized	12/2021
First meeting with environmental associations	12/2020
First meeting with farmers	11/2021
First meeting with hunters 30/11/2021	12/2021

## **E. Public awareness and dissemination of results (obligatory)**

**ACTION E.4:** Education to train the stewards of tomorrow

### ***Description and methods employed (what, how, where, when and why):***

Educational activities directed to school aged children are considered to be of systemic relevance in awareness and behavioral change campaigns because young kids, especially in primary schools are still contracting their set of values and beliefs with society to use in adult life. Therefore, all the main Conservation scientists agree on the fact that information is a support action, while education is a constituent action in large carnivore conservation addressing Threat no.5. Through educational programs focused on wolf conservation and environmental knowledge, we will try to create a lasting base of environmental literacy, stewardship, and problem-solving skills for today's youth. In Austria education activities will be implemented by a specialized NGO in collaboration with VUW. Ex ante and ex post questionnaires could be used to measure the effectiveness of the educational activities (Action D1). Our educational proposals are:

#### **Training courses and summer school for teachers and nature guides (ambassador replications):**

"ambassador teachers" trained during project LIFE WOLFALPS proved to be a powerful tool of dissemination, capable of multiplying the impact of the project's educational actions and extending their duration in the after-LIFE period. At least 19 training courses for teachers will be held by the end of the project: 13 in Italy (4 MUSE, 4 RELO, 3 APAC, 2 APAM), 5 in Austria (VUW) and 1 in France (PNM). At least 4 summer schools will be organized 2 in Italy (APAM) and 2 in Austria (VUW). At least 300 new ambassador teachers will be trained by the end of the project.

**Kamishibai Theater (nursery school):** animated reading through a small Japanese theater that includes the passage of drawn boards inspired by the true stories of special wolves like Ligabue or Slavc or the fictional story of Lupinella. At least 4 Kamishibai theaters will be produced, 3 in Italy and 1 in Slovenia.

**A Wolf in a Backpack** (primary schools; age 8-10 and lower secondary school; age 11-14): educational kit to talk about basic facts of wolves and their habitat will be produced. The kit will be contained in a backpack to facilitate outdoor activities and will contain mainly objects that kids can touch, which allows them indirect contact with the animal. Educational materials for outdoor learning (games and field work tasks) about wolves and their habitat will be prepared. The kit will be produced in at least 50 copies. 10 outdoor workshops for primary and lower secondary school children will be carried out in Slovenia for at least 200 students.

**More Experts in the Classroom** (upper secondary schools; especially vocational upper secondary schools: environmental, veterinary and agricultural technician programs; age 15-18): through Stewardship Office (Action E2.1) and in Slovenia through consultative groups (already established within project LIFE Lynx) we will ask various stakeholders (such as livestock breeders, hunters, foresters, wildlife biologists, etc.) to present their experiences and life with wolves in schools. In this way, teachers will be able to involve students on the different points of view about natural facts and the need for environmental diplomacy to manage the wilderness in inhabited areas. At least 50 conferences will be held. In Slovenia: after the presentations, the project facilitator (educational expert) will mediate the role-play activity. In this way, students will be involved in active discussion and will get in touch with multi-disciplinary aspects of wolf conservation and human-wolf coexistence. The role-play cards will be prepared in SLO and translated into Italian and adapted in Italy (APAM). 10 workshops for at least 200 primary and lower secondary school students implemented in Slovenia and 3 in Italy.

**WolfQuiz (secondary schools):** an interactive quiz made with Kahoot, the online software that allows kids to answer via their mobile phone and where the response time is calculated. The type of program used aims to make the quiz more appealing. The questions are taken from news, stories or statements that are commonly made. The kids will have to evaluate if they are true or false or choose the right one. Each question is followed by group comments and reflections. At least 1 quiz translated in the four project

languages.

**"Lupinella" companion Book:** the extremely successful character of the illustrated book "Lupinella" will have its come back using the same innovative PPP (Public Private Partnership) formula, with a new editorial product that will become a companion book of the "Lupinella" tale (e.g a sticker book of the Lupinella forests, an activity book to search for signs of Lupinella in the Alps, a pop-up book with alpine landscapes dioramas...). MUSE will produce the book with the support of all the Italian partners and will send copies of the book to the consortium.

**UnversiWolf (university):** Conferences and/or on the field activities for university students. At least 3 conferences in Italy (1 APAM, 2 RELO) and 3 field trips in Austria (VUW) by the end of the project.

### ***Beneficiary responsible for implementation:***

MUSE

MUSE will be responsible of the coordination of the Action for its correct implementation among every partner and project area involved. VUW, SFS, APAM, APAC, RELO, ERSAF, PNM, RELI, PNDB will participate and contribute to the action.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**E4's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Role play educational cards prepared	12/2019
Wolfquiz	09/2021

**E4's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First summer school implemented	12/2020
First training course for teachers implemented	06/2021
First workshop for secondary school kids	06/2023



## **A. Preparatory actions, elaboration of management plans and/or of action plans**

**ACTION E.5:** Creativity for conservation: innovative dissemination campaigns

### ***Description and methods employed (what, how, where, when and why):***

Highly innovative, creative and artistic productions can be an effective tool of dissemination of scientific contents through immersive, emotional experiences. We will create two touring activities specially designed for urban areas, where wolves are now showing up. They will effectively address Threat no.5 (i.e. the loss in general public support on wolf conservation that resulted from LIFE WOLFALPS Human Dimension studies) informing and engaging (mainly) the public of towns through a fun, challenging and playful experience (wolf escape room) and through an intense, emotional experience through music, colours, atmospheres (immersive show). In details, our two proposals are:

**Immersive show/exhibition:** following the success of the LIFE WOLFALPS travelling exhibition "Tempo di Lupi" we propose for LIFE WOLFALPS EU a second travelling exhibition on wolves, but this time starting from personal emotions and feelings to end with the wolf as a cultural animal. This riskier approach integrates the existing communication based on biological, ecological and sociological perspectives. It will be a particularly innovative exhibition that will continue the tradition of LIFE WOLFALPS communication, trying new strategies in raising awareness of large carnivores. Practically, we will commission to high level visual artists, digital works of art reflecting basic feelings about wolves and wilderness. We will use immersive spaces to present these works to the public in special spaces where people can "lose themselves" in suggestions at the very heart of nature conservation. The experimental touring show - an absolute novelty for Italy in the domain of conservation - will travel around at least 2 sites, Trento and Milan.

**Escape room:** escape rooms are the new sensation in entertainment and few science engagement institutions are experimenting with the format to communicate science related issues and they seem extremely effective in involving audiences in themes otherwise considered difficult, divisive, and controversial or "only for experts". Their collaborative game mechanics suit themes in which negotiations and group dynamics are important, their novelty proved to be attractive to audiences that would not normally come to a museum exhibition. This innovative communication product will be a multi-language travelling escape room that addresses the theme of wolf - human coexistence from an interactive, gamified point of view. The touring show will travel around at least 4 sites.

### ***Beneficiary responsible for implementation:***

RELO

RELO, MUSE and APAM will be co-responsible of the coordination of the Action for its correct implementation among every project area, where applied. SFS and PNM will contribute to the action.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide

for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements.

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising. APAM has included the cost for the study and the implementation of an "Escape room". The cost has been estimated by looking for productions similar to the one you want to achieve.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.



**E5's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Leaflet for Wolf immersive show	06/2022
Leaflet for the Wolf escape room	06/2022

**E5's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Opening of the immersive show	06/2022
Opening of the escape room	06/2022

## **E. Public awareness and dissemination of results (obligatory)**

### **ACTION E.6:** Touring thematic conferences

#### **Description and methods employed (what, how, where, when and why):**

Sharing knowledge and experiences can considerably increase effectiveness of wolf conservation and is essential for improvement of cooperation in management at population level. Touring thematic conferences will be held in 4 consecutive years (2020, 2021, 2022, 2023) in main areas all over the Alps:

- In 2020 the thematic conference will be organized in Italy, Bolzano by EURAC.
- In 2021 the thematic conference will be organized in France, Barcelonnette by ONCFS with the support of PNM
- In 2022 the thematic conference will be organized in Italy, Aosta by RAVA and in Austria by VUW
- In 2023 the thematic conference will be organized in Italy, Torino by APAM with the support of APAC and METO
- In 2024 the final project Conference will be organized in Italy, Trento by MUSE.

Topics around which the meetings will be developed include:

1. Transboundary monitoring and management measures
2. Anti-poaching and anti-poisoning issues
3. Methods for increasing co-existence between wolves and human activities
4. Habitat Fragmentation, conservation measures and concrete solutions
5. Detection and control of hybridization
6. Any other factor that threatens wolf conservation.

However, if particular circumstances make a subject particularly important to be discussed in a given year, the conference topics will change accordingly. The conferences will be open to anyone interested in the subject; hence, the target audience is the general public, including locals, citizens, stakeholders, technicians in the field, students and people working at local and national institutions.

The final event organized in Trento in 2024 will be the project Final Conference. The final event will present to insiders and to the general public the project main achievements, best practices, constraints and how they have been addressed. It will entail, formal speech sessions (the actual Final project Conference) workshops and informal dissemination events. The Final Conference will be the opportunity to set the status quo of wolf research and management activities in the Alps.

#### **Beneficiary responsible for implementation:**

VUW  
VUW, EURAC, ONCFS, RAVA, APAM and MUSE will organize in coordination the thematic conferences in each



own respective project area. Every partner will participate.

***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state.

**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements: UL: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 13 eur/day (national) or 40 eur/day (abroad), hotel cost 50€ per night. SFS: institutional car according to internal rules (0.37 eur/km); private car according to the national rules (0.37€/km), subsistence 16 eur/day (national) or 45 eur/day (abroad), hotel cost 50€ per night

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising.

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state.

**E6's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Thematic conference and final conference proceedings	08/2024

**E6's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
First thematic conference	12/2020



## **F. Project management (obligatory)**

**ACTION F.1:** Coordination, management and administration of the project by the project steering groups

### ***Description and methods employed (what, how, where, when and why):***

Project coordination among the different partners will be the responsibility of Ente di Gestione delle Aree Protette delle Alpi Marittime (APAM). APAM staff are experienced in managing EU-funded projects at national and international level and have already managed the LIFE WOLFALPS (2013-2018). The coordinating beneficiary will manage the whole project through an organization, which is better illustrated by the organizational chart (see the Figures attached). This will be headed by the project responsible (**PR**), member of APAM's permanent staff. Moreover, the WOLFALPS project will see the presence of a **full time project manager** - APAM Additional Staff (**PM**), a **full time technical manager** - APAM Additional staff (**TM**), a **full time communication manager** - APAM Additional Staff (**CM**), an **administration responsible of the APAM permanent staff (AR)**, who will be responsible for project financial management, with the support of a **dedicated part-time administrative employee** (Permanent Staff), and a **full time administrative employee - APAM Additional Staff**).

The PR will ensure effective and prompt implementation of all project activities, she/he will hold meetings and discussions for assessing project progress and eventually discuss the strategic actions to be taken. She/he will oversee the work of the AR and will hold the formal communication with the EU. The PR will also supervise the preparation of all reports by the PM, TM and CM to the EC and the preparation/revision of contracts for all consultants and subcontractors.

The PM will follow the project implementation together with the TM, which will follow the technical implementation of all project activities, and CM, which will follow the communication activities, under the overall guidance of the AR, and will work in tight collaboration with her/him in order to make sure that the necessary contracts and agreements for consultants and project participants are prepared in due time, and that the project budget is being used effectively and expenses made in due time. APAM staff will prepare and sign **partnership agreements** with the project partners and will regularly maintain contacts with project partners. Coordination through skype, video, phone calls, and teleconferences will be held on a constant basis, while a **3-day overall project meeting will be held every year**. Project meetings will be held in Italy at the Coordinating beneficiary headquarters (Valdieri, Cuneo, Italy) and will be attended by at least two representatives per each partner institution. Following the kick-off meeting of Action A1, **there will be 4 meetings, respectively in 2020, 2021, 2022, 2023**. Hence, all partners will meet every year to share the experiences of the last few months and to set up common approaches for the development of the future actions to be implemented, following action A1.

Each partner will have staff dedicated to financial administration of the LIFE budget, according to Action A1, and the technical implementation of activities under their responsibilities, particularly devoted to the necessary administrative procedures for LIFE project implementation. Staff will hold continuous communication with the respective team leaders in APAM for seeking advice and get guidance on timing of all activities. Moreover, all project partners have identified members of their own staff for the local administration.

In accordance with the Guidelines for Applicants, an **external financial audit** will be performed at the end of the project for those beneficiaries requesting a Union Contribution of at least 750,000 euros. The auditor shall verify compliance with national legislation and accounting rules and certify that all costs incurred comply with the grant agreement. The auditor's report will be delivered following the guidelines set by the Commission.

Finally, we intend to continue on an annual base the work of the **5 coordinated wolf alpine working groups** settled in Action A1. They will be dealing with technical aspects related to project actions

implementation, and, dealing with communication activities related to the project and wolf issues in general.

A detailed **action plan** will be developed at the beginning of each year, according to action A1. All partners will be asked to contribute in planning the development of activities they are responsible for. These detailed action plans will include a time table for the year and a «comments» column, where detailed descriptions of activities developed or problems will be reported. The PM, together with CM and TM, will request **3-monthly updates** on the progress of actions implementation and will check the involvement of each partner, as well as action timing with regards to the project proposal. Monthly meetings will be held among APAM staff (PM, TM, PR, AR and CM) in order to assess the monthly updates against the project objectives and action implementation. A organization chart is given to the partners.

### ***Beneficiary responsible for implementation:***

APAM

APAM, the coordinating beneficiary, will be responsible of the coordination of the Action for its correct implementation among every partner and project area. Every partner will participate and contribute to the action.

### ***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise. Some partners employ Junior and Senior researchers, in such cases the daily costs comply with costs of personnel performing similar tasks under a university contract for each state. APAM, as coordinating beneficiary, foresee the costs for 3 people: 1 Project manager, 1 technical expert and 1 administrative expert, which will coordinate the overall project activities and partners

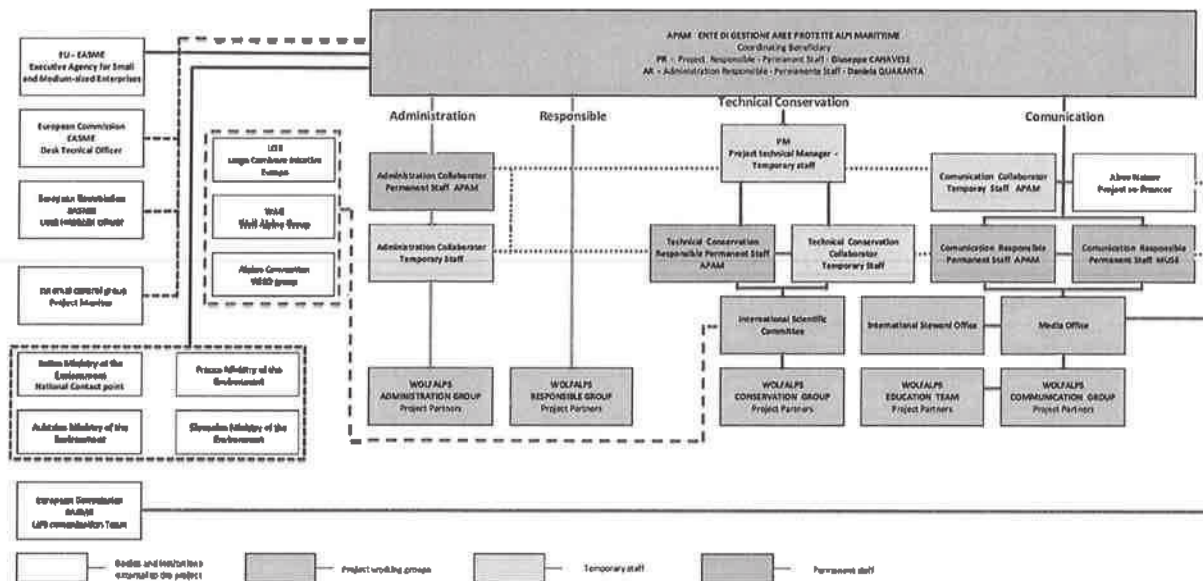
**Travel costs:** Travel costs were estimated by calculating average distances, costs for hotel, meals, highway tolls, from beneficiary premises to possible locations of the events (meetings, field visits, training courses). The reimbursement of the use of an organization's own cars have been calculated as indicated in the guide for applicants. UL and SFS estimated the travel costs according to the national or beneficiaries' rules for mileage and subsistence cost reimbursements

**External assistance costs:** Costs for services and experts have been benchmarked against the average costs that local service providers apply in similar services and costs for similar specialized expertising. APAM, capitalizing the previous experience, has foreseen the costs for the implementation of the financial software realized in LIFE WOLFALPS. It will be used by each partner as a fundamental tool to centralize the financial data and proofs of expenditures

**Equipment costs, Consumable costs and Other costs:** were estimated by researching prices in on-line stores, inquiries with local service providers and current prices for similar kind of work in each state. In Equipment, the costs for a little off-road vehicle to be used for all the project actions implementation



Name of the picture: Organizational chart PROJECT STAFF WOLFALPS EU

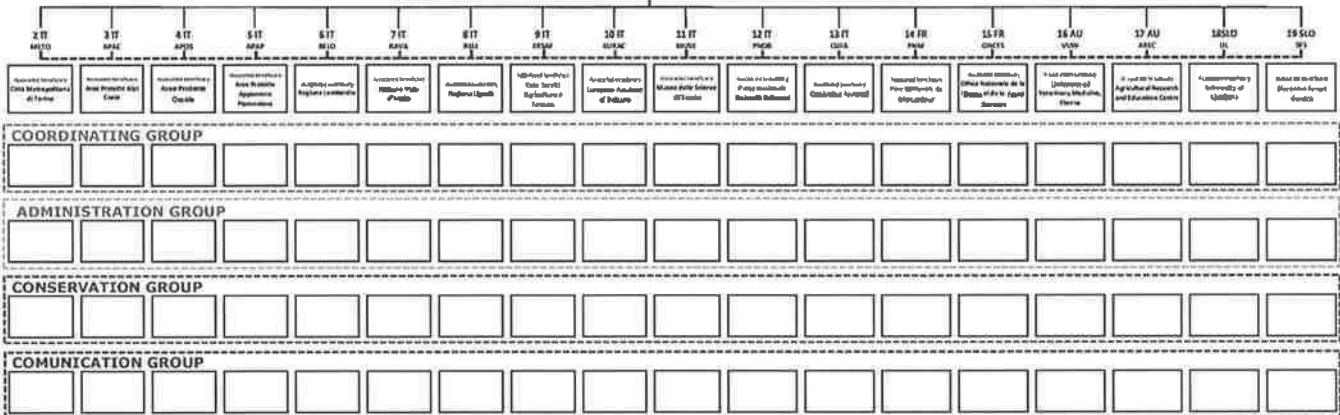


Name of the picture: Management Chart WOLFALPS EU

LIFE18 NAT/IT/00012 LIFE WOLFALPS.EU  
 Coordinated actions to improve wolf-human coexistence at the alpine population level

MANAGEMENT CHART

3 IT  
 Coordinating Beneficiary - Regione Piemonte  
 Area Protezione Animali - Centro Grandi Carnivori - AP444  
 Project Responsible (PR) - @mariapaola.caboviasa





Name of the picture: F1-Rationale-of-the-project-consortium-table-page1

LIFE18 NAT/IT/000972 LIFE WOLFALPS EU

Table of rationale of the project consortium

Number	Acronym	Beneficiary	Country	Role in the project
1	APAC	Ente di gestione Aree Protette Alpi Cozle	IT	The partner has the role of leading the project actions in the Protected Areas of the Cottian Alps in coordination with the Metropolitan City of Turin with dedicated staff and in particular with an antipoison dog unit. The Body has a fundamental role Action C6 - "Habitat fragmentation and wolf traffic mortality through recovery of identified sink areas" which includes the realization of mitigation measures to reduce the mortality rate of the wolf and its prey and also to ensure and increase the permeability of infrastructures to wildlife corridors in Alta Valle Susa.
2	APAM	Ente Gestione Aree Protette Alpi Marittime (Coordinating Beneficiary)	IT	In relation to the experience gained in the LIFE WOLFALPS project, the Body has the role of general coordinator of the project. The Centre for Large Carnivores (CGC) has been set up by the Piedmont Region. The Agency acts in the name and on behalf of the Piedmont Region. CGC has the role of guiding and coordinating all the protected areas of the Piedmont Region.
3	APAP	Ente di gestione Aree Protette Appennino Piemontese	IT	The partner has the role of leading the project actions on the Protected Areas of the Piedmont Apennines with the coordination at the level of the Provinces of Asti and Alessandria and with particular attention to the management of the Actions on hybrids in strong synergy with the Liguria Region (REL).
4	APOS	Ente di gestione Aree Protette Ossola	IT	The partner has the role of implementing the project actions in the Ossola Protected Areas with the coordination of the northern areas of the working with the Piedmont Region with the Provinces of Verbania and Novara and with the Val Grande National Park.
5	AREC	Agricultural Research and Education Centre	AU	The partner has the role of leading the project actions in the Austrian territory in strong synergy with the University of Veterinary Medicine Vienna with particular reference to prevention actions in favour of mountain pasture activities.
6	CUFA	Carabinieri Forestali	IT	In addition to coordinating anti-poaching activities and research activities and the fight against poisons for the entire project, the Partner will carry out wolf monitoring on the Veneto Region, which has not joined the project.
7	ERSAF	Ente Servizi Agricoltura e Foreste	IT	The partner has the role of leading the project actions in the entire Lombardy Region in strong synergy with the Lombardy Region (RELO) and in particular in the Stelvio Lombardo Park Authority, which is directly managed by ERSAF.
8	EURAC	Accademia Europea di Bolzano	IT	The partner, in relation to its consolidated experience, will carry out the actions related to the project result indicators and to the economic and social impact of the project.
9	METO	Città metropolitana di Torino	IT	The partner has the role of leading the project actions in the area of the Province of Turin in coordination with the Protected Areas of Cottian Alps (APAC), with dedicated staff and in particular with an antipoison dog unit.
10	MUSE	Museo delle Scienze di Trento	IT	The partner, in relation to its consolidated experience, will coordinate with the Coordinating Beneficiary of the project (APAM), all the activities related to tourism, communication and educational activities.
11	ONCS	Office Nationale de la Chasse et de la Faune Sauvage	FR	The partner has the role of leading the project actions on the whole French territory in strong synergy with the Parc National du Mercantour (PNM) and with the coordinating beneficiary of the project.

Name of the picture: F1-Rationale-of-the-project-consortium-table-page2

12	PNDB	Parco Nazionale Dolomiti Bellunesi	IT	The partner will carry out project actions in the territory of the Municipalities that are part of the Park Community, as well as in the area bordered by the Park. The Authority will coordinate with Forestry Carabinieri (CUFA) of the Veneto Region for the monitoring activities on the territory of the Region.
13	PNM	Parc National du Mercantour	FR	The partner has the role of leading the project actions in the territory of the Park in strong synergy with the ONCFS and with the coordinating beneficiary of the project. For years the Parc National du Mercantour has been working in close synergy with the Maritime Alps Protected Areas Management Authority (APAM), being bordering for more than 35 km and having several cross-border wolf packs.
14	RAVA	Regione Autonoma Valle d'Aosta	IT	The partner has the role of leading the project actions on the whole Region of Valle d'Aosta in strong synergy with the Protected Areas of Valle d'Aosta.
15	RELI	Regione Liguria	IT	The partner will implement the project actions in the whole Liguria Region in strong synergy with the Protected Areas of the Piedmont Apennines (APAP) and with particular attention to the problems due of the presence of hybrids.
16	RELO	Regione Lombardia	IT	The partner has the role of leading the project actions on the whole Lombardy Region in strong synergy with ERSAF. The Region has the role of controlling and coordinating the regional Nature Parks and the management of the Natura 2000 Network.
17	SFS	Slovenian Forest Service	SLO	The partner has the role of leading the project actions in the Slovenian territory in strong synergy with the University of Ljubljana with particular reference to damage prevention actions.
18	UL	University of Ljubljana	SLO	The partner has the role of leading the project actions in the Slovenian territory in strong synergy with Slovenian Forest Service with particular reference to the actions of monitoring and knowledge of the species. In particular, the partner coordinates the activities of Human Dimension and Genetics.
19	VUW	University of Veterinary Medicine Vienna	AU	The partner has the role of leading the project actions in the Austrian territory in strong synergy with Agricultural Research and education centre with particular reference to the actions of monitoring and knowledge of the species.



**F1's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
Progress Report	11/2020
Midterm Report	05/2022
Midterm Report	11/2023
Final Report	11/2024
3-months reports for the duration of the project	08/2024
Action plan 2021	12/2020
Action plan 2022	12/2021
Action plan 2023-2024	12/2022

**F1's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
Set up of project administrative procedures	03/2020
Project working teams established	03/2020

**F. Project management (obligatory)**

**ACTION F.2:** After LIFE conservation plan

***Description and methods employed (what, how, where, when and why):***

The activities developed in the project represent best practices that will only have long term effects if effectively implemented even after the end of the project. The relevant authorities, being either supporters or partners of the project will be responsible for the continuation of some of the activities and the after LIFE conservation plan will explain in detail what actions will be needed after the end of the project and the methodology for implementing them to ensure coherence. The after Life plan will be produced during the last part of the project, in order to organize those activities that will need to be continued after the end of the project. They will include many activities, such as: the long term assessment of wolf population status at the population level, the continuation of WPIU work, the coordination of the working groups, the control of illegal activities, the control of hybridization, the continuation of the young alpine ranger program, the long term communication activities. Responsibilities and means for undertaking these actions will be detailed and agreed upon. The plan will include two sections, one per country and a section for the activities in common to guarantee long term coordination (e.g. long term management of the Working Groups).

***Beneficiary responsible for implementation:***

APAM

APAM, the coordinating beneficiary, will be responsible of the coordination of the Action for its correct implementation among every partner and project area. Every partner will participate and contribute to the action.

***Assumptions related to major costs of the action:***

**Personnel costs:** For **Permanent staff**, the workload for planned activities were estimated based on previous experiences. The workload was multiplied by the daily rate for a specific role in the project and the institution. For **Additional staff**, daily rates are based on the participating institutions' salaries paid to employees for comparable tasks and expertise.

**Travel costs:** there are no costs foreseen in this action

**External assistance costs:** there are no costs foreseen in this action

**Equipment costs, Consumable costs and Other costs:** there are no costs foreseen in this action



**F2's PROJECT DELIVERABLE PRODUCTS**

<b>Deliverable name</b>	<b>Deadline</b>
After LIFE conservation plan	06/2024

**F2's PROJECT MILESTONES**

<b>Milestone name</b>	<b>Deadline</b>
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## DELIVERABLE PRODUCTS OF THE PROJECT

Name of the Deliverable	Number of the associated action	Deadline
Organization chart of the 5 groups and of the overall project structure, filled with identified responsables	A 1	31/10/2019
Detailed project action plan and timeplan for the first year	A 1	29/11/2019
Role play educational cards prepared	E 4	31/12/2019
Proxy analysis among project partners	E 1	31/01/2020
1 detailed action plan of the project for 2019-2020 with a timeplan for the implementation of each action	A 1	30/03/2020
Guide on administrative procedures	A 1	30/03/2020
LWA Communication and Engagement Strategy	E 1	31/03/2020
Stakeholders map	E 2	31/03/2020
Wolf Alpine Communication Group Crisis Unit Protocol	E 1	31/03/2020
Document "Surveillance strategy to optimize the integrated surveillance of the Wolf Alpine Population Status"	A 5	30/04/2020
LWA Visual identity and brand manual	E 1	30/04/2020
Project brochure	E 1	30/06/2020
Project poster	E 1	30/06/2020
Project roll up	E 1	30/06/2020
Project website	E 1	30/06/2020
WPIU operating strategy, one per country	A 2	15/09/2020
18 Partnership Agreements	A 1	30/09/2020
Guidelines for responsible wolf-based tourism developed	C 7	31/10/2020
Progress Report	F 1	30/11/2020
-Long term shared management strategy on management of hybrids at international alpine scal	A 6	15/12/2020
A specific protocol for adapting prevention strategies in urban areas	A 7	15/12/2020

A specific protocol for adapting surveillance and monitoring strategies in urban areas	A 7	15/12/2020
A specific protocol for the management of bold wolves	A 7	15/12/2020
Action plan 2021	F 1	15/12/2020
Common international genetic protocol for detection of hybridization	A 6	15/12/2020
Fact Checking and debunking protocol	E 2	15/12/2020
Operating strategy for of the central structure of connection of environmental policy	A 3	15/12/2020
Organization of a 2 days genetic workshops connected with a 2 day workshop of the Scientific Committee	A 5	15/12/2020
Report on ex-ante assessment of knowledge and attitudes of wolves	D 1	15/12/2020
Report on the Evaluation of initial situation to focus interventions and Ad-hoc Optimal preventive strategies in the Alps	A 2	15/12/2020
Report on the evaluation of positioning systems for an adapted livestock/flock management complementing livestock protection measures and their possible use	A 2	15/12/2020
Report on the valuation of previous studies and new data collected to identify corridors used	C 6	15/12/2020
Report: Coordinated scientific design and technical protocols to implement the predator-prey-hunter relationship evaluation	A 4	15/12/2020
Report: ex-ante assessment featuring the socio-economic and biological background analysis of project areas compared to the project goals	D 2	15/12/2020
LIFE board	E 1	31/12/2020
Wolfquiz	E 4	30/09/2021
First meeting of a platform conducted within the common strategy	E 3	30/11/2021
Action plan 2022	F 1	15/12/2021
Annual report on the alpine wolf population status 2020/2021	C 4	15/12/2021
Document on the planning of the intervention to decrease fragmentation in Val di Susa	C 6	15/12/2021
The Life Alpine Young Ranger passport	C 8	15/12/2021
The booklet with fun educational activities about wolves suitable for different age groups (ranging from 6 to 14 years old)	C 8	15/12/2021

The headscarf	C 8	15/12/2021
The user-friendly handbook "Environmental Impact Assessment (EIA) Guidelines for wolf conservation	C 6	15/12/2021
The "Wolf badge"	C 8	15/12/2021
Midterm Report	F 1	30/05/2022
Recommendations and guidelines of sensor based systems on flocks and feedback for improvement, in the context of operating WPIU in Austria	C 1	30/05/2022
Leaflet for Wolf immersive show	E 5	30/06/2022
Leaflet for the Wolf escape room	E 5	30/06/2022
Art camp	C 7	31/10/2022
Action plan 2023-2024	F 1	15/12/2022
Annual report on the alpine wolf population status 2021/2022	C 4	15/12/2022
8 wolf eco-tourism packages are marketed (6 in Italy and 2 in Slovenia)	C 7	30/04/2023
Final long term guidelines for the implementation of the WPIU at each national level and cost effect evaluation	C 1	30/05/2023
Midterm Report	F 1	30/11/2023
4 Local reports (one in each core area)	C 3	15/12/2023
Annual report on the alpine wolf population status 2022/2023	C 4	15/12/2023
Exchange visit to "Anti poisoning dog team" from Slovenia to Italy	C 2	15/12/2023
Revised strategic documents for the wolf in Slovenia	A 8	15/12/2023
Scientific document "Cutting edge genetic tools for fast, reliable and cost-effective surveillance of wolf conservation status, detection of hybridization with domestic dogs"	A 5	15/12/2023
16 new wolf friendly products	C 7	31/01/2024
Summary of best practices carried out within LIFE WOLFALPS EU project	A 8	30/03/2024
Documented list and description of interventions and overall quantification	C 2	30/05/2024
Platform's meetings proceedings booklet	E 3	30/05/2024



Report of documentation of every project intervention, concerning wolf-dog hybrids and/or injured wolves recovery	C 5	30/05/2024
Report on the evaluation of effectiveness of mitigation measures implemented to prevent traffic related wolf mortality in sink areas	D 3	30/05/2024
Report on comparison of ex-ante and ex-post assessment of knowledge and attitudes of wolves	D 1	31/05/2024
After LIFE conservation plan	F 2	30/06/2024
At least 4 popular articles published in Slovene hunting magazine	E 2	30/06/2024
Stewardship program	E 2	30/06/2024
64 eco-tourism events 31/7/2024	C 7	31/07/2024
1 scientific publication	C 3	30/08/2024
15 newsletters	E 1	31/08/2024
3-months reports for the duration of the project	F 1	31/08/2024
Final report on the trend of the alpine wolf population status 2020/2024	C 4	31/08/2024
Layman's report	E 1	31/08/2024
Report on the assessment of socio-economic impact of the project and ecosystem functions	D 2	31/08/2024
Shared Alpine Press Review about wolf in the Alps and project with at least 1.000 entries.	E 2	31/08/2024
Thematic conference and final conference proceedings	E 6	31/08/2024
Final Report	F 1	30/11/2024

#### MILESTONES OF THE PROJECT

Name of the Milestone	Number of the associated action	Deadline
Go-live of the project Facebook page	E 1	31/12/2019
Project launch press release	E 2	31/12/2019
Creation of coordinated wolf groups	A 1	30/03/2020
First kickoff meeting with two representatives per each partner institution	A 1	30/03/2020

Project working teams established	F 1	30/03/2020
Questionnaires are finalized and delivered for the ex-ante study	D 1	30/03/2020
Set up of project administrative procedures	F 1	30/03/2020
First WPIU created in each country	A 2	30/05/2020
Go-live of the project website	E 1	30/06/2020
First field visit for transfer of best practices	A 2	30/08/2020
First Slovenian wolf group meeting	A 8	30/09/2020
First workshop for developing protocols organized	A 7	30/09/2020
First field training course organized at the beginning of the first surveillance yearly session	A 5	30/10/2020
First training course for WPIU in each country	A 2	30/10/2020
First workshop organized at the beginning of the first surveillance yearly session	A 5	30/10/2020
-First set of indicators collected from all partners in the 4 countries	D 2	15/12/2020
A special trained team ready to capture hybrids and injured wolves in the Apennine corridor	A 6	15/12/2020
A trained team at APAM ready to relocate hybrids and injured wolves to the captive facility	A 6	15/12/2020
Create a "genetic wolf alpine scientific group" coordinated by the UL genetic lab 15/12/2020	A 5	15/12/2020
Definition of the indicators to evaluate the impact of the project	D 2	15/12/2020
First local training of hunters and operators	A 4	15/12/2020
First meeting with hunters	A 4	15/12/2020
First operative new anti-poisoning dog team	A 3	15/12/2020
First wolf friendly packages marketed	C 7	15/12/2020
Transfer of best practices	A 3	15/12/2020
First meeting with environmental associations	E 3	30/12/2020
First 100 articles in the shared Alpine Wolf Press Review	E 2	31/12/2020
First Map of the protected areas adhering to the LAYR program	C 8	31/12/2020

First summer school implemented	E 4	31/12/2020
First thematic conference	E 6	31/12/2020
Launch of the project video	E 1	31/12/2020
First training for guides and tourism operators	C 7	31/01/2021
First networking meeting	E 1	31/03/2021
First training course for teachers implemented	E 4	30/06/2021
First workshop for journalists and communicators	E 2	30/06/2021
First WPIU intervention in each country	C 1	30/08/2021
First meeting with farmers	E 3	30/11/2021
First data collected with the international approach by each country	C 4	15/12/2021
First intervention of each anti-poaching dog unit to look systematically for poison baits	C 2	15/12/2021
First local training of hunters and operators	C 3	15/12/2021
First meeting with hunters	C 3	15/12/2021
First roe deer/red deer collared	C 3	15/12/2021
Workshop for selected police officers in Slovenia	C 2	15/12/2021
First meeting of the Living Lab on wool use	C 7	31/12/2021
First meeting with hunters 30/11/2021	E 3	31/12/2021
First thematic platform in Slovenia organized	E 3	31/12/2021
First educational workshop for improving LGD management	C 1	30/05/2022
First educational seminar for the presentation of the EIA handbook 30/06/2022	C 6	30/06/2022
First project gadget	E 1	30/06/2022
First training Park officers and LAYR animators	C 8	30/06/2022
First use of the mobile APP that signals the stretches of road most at risk of collisions with wildlife	C 6	30/06/2022
Opening of the escape room	E 5	30/06/2022
Opening of the immersive show	E 5	30/06/2022

First eco-tourism event	C 7	31/07/2022
First wolf collared	C 3	15/12/2022
First LAYR Celebration day	C 8	31/12/2022
First LAYR event for local kids	C 8	31/12/2022
First workshop for secondary school kids	E 4	30/06/2023
-Questionnaires are delivered for the ex-post study	D 1	15/12/2023
Capture-sterilize-release, or capture-sterilize-keep in captivity, the first wolf-dog hybrid	C 5	30/05/2024

#### ACTIVITY REPORTS FORESEEN

Please indicate the deadlines for the following reports:

- Progress Reports n°1, n°2 etc. (if any; to ensure that the delay between consecutive reports does not exceed 18 months)
- Mid term report payment request (for project longer than 24 months or with Eu contribution of more than EUR300,000)
- Final Report with payment request (to be delivered within 3 months after the end of the project)

Type of report	Deadline
Progress report	30/11/2020
Midterm report	30/05/2022
Midterm report	30/11/2023
Final report	30/11/2024

## TIMETABLE

Action		2019				2020				2021				2022				2023				2024						
		I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV			
<b>A. Preparatory actions, elaboration of management plans and/or of action plans</b>																												
A.1	Transboundary cooperation and coordination: establish the international Alpine wolf population working groups	■	■	■	■																							
A.2	Establishment and training of the wolf prevention emergency teams, evaluation of the initial situation and operations strategy	■	■	■	■																							
A.3	Training of new anti-poisoning dog units and coordination of international and national environmental judicial policy - definition of the overall strategy	■	■	■	■																							
A.4	Active involvement of hunting organizations in wolf population management and development of strategy for a predator-prey-hunters relationship evaluation	■	■	■	■																							
A.5	Optimization of an integrated surveillance of the wolf status at the international alpine population level	■	■	■	■																							
A.6	Hybridization in the alpine population and connection corridor: define protocols, management actions, and teams of interventions	■	■	■	■																							
A.7	Dealing with urban wolves: develop specific protocols for prevention, surveillance, and eventually managing bold wolves	■	■	■	■																							
A.8	Summary of Best Practices for wolf population management and Slovenia Management plan																											
<b>B. Purchase/lease of land and/or compensation payments for use rights</b>																												
<b>C. Conservation actions</b>																												
C.1	Wolf prevention emergency teams: damage inspections, preventive methods, moderation, wolf control, conflict mitigation in hot spot areas																											
C.2	Measures against illegal wolf killing and control of poison baits and coordination of international and national environmental judicial policy																											
C.3	Building strong partnership: involving hunters in wolf-prey ecosystem functioning understanding																											
C.4	Establishment of an integrated surveillance of the wolf status at the Alpine population level																											
C.5	Wolf-dog hybridization and injured wolves: detection and control in the Apennine ecological corridor and in the Alps																											
C.6																												



