



LIFE18 NAT/IT/000972

TECHNICAL APPLICATION FORMS

**Part B - technical summary and overall
context of the project**



LIFE 2018

FOR ADMINISTRATION USE ONLY

LIFE18 NAT/IT/000972

LIFE Nature and Biodiversity project application

Language of the proposal:

English (en)

Project title:

Coordinated actions to improve wolf-human coexistence at the alpine population level

Project acronym:

LIFE WOLFALPS EU

The project will be implemented in the following Member State(s) and Region(s) or other countries:

Austria	All regions
France	Provence-Alpes-Côte d' Azur
	Rhône-Alpes
	Auvergne
Italy	Piemonte
	Liguria
	Lombardia
	Valle d'Aosta
	Trentino-Alto Adige
	Veneto
	Friuli-Venezia Giulia
Slovenia	All regions

Expected start date: 01/09/2019

Expected end date: 30/09/2024

LIST OF BENEFICIARIES

Name of the **coordinating** beneficiary: Ente di Gestione delle Aree Protette delle Alpi Marittime

Name of the associated beneficiary: Ente di Gestione delle Aree Protette delle Alpi Cozie

Name of the associated beneficiary: Ente di gestione delle Aree Protette dell'Appennino Piemontese

Name of the associated beneficiary: Ente di Gestione delle Aree protette dell'Ossola

Name of the associated beneficiary: Höhere Bundeslehr- und Forschungsanstalt für Landwirtschaft
Raumberg-Gumpenstein

Name of the associated beneficiary: ARMA DEI CARABINIERI - Comando Unità Forestali, Ambientali ed
Agroalimentari

Name of the associated beneficiary: Ente Regionale per i Servizi all'Agricoltura e alle Foreste

Name of the associated beneficiary: Accademia Europea di Bolzano

Name of the associated beneficiary: Città Metropolitana di Torino

Name of the associated beneficiary: MUSE - Museo delle Scienze

Name of the associated beneficiary: Office National de la Chasse et de la Faune Sauvage

Name of the associated beneficiary: Ente Parco Nazionale Dolomiti Bellunesi

Name of the associated beneficiary: Parc national du Mercantour

Name of the associated beneficiary: Regione Autonoma della Valle d'Aosta

Name of the associated beneficiary: Regione Liguria

Name of the associated beneficiary: Regione Lombardia

Name of the associated beneficiary: Slovenia Forest Service

Name of the associated beneficiary: University of Ljubljana

Name of the associated beneficiary: University of Veterinary Medicine, Vienna

LIST OF CO-FINANCERS

Name of the co-financer: Federal Ministry for Sustainability and Tourism

Name of the co-financer: Direction régionale de l'environnement, de l'aménagement et du logement
Auvergne-Rhône-Alpes (DREAL Aura)

Name of the co-financer: FONDAZIONE CAPELLINO

Name of the co-financer: Fondation François Sommer

Name of the co-financer: Ministrstvo za okolje in prostor Republike Slovenije - The Ministry of the
Environment and Spatial Planning of the Republic of Slovenia

Name of the co-financer: Ministrstvo za okolje in prostor Republike Slovenije - The Ministry of the
Environment and Spatial Planning of the Republic of Slovenia

PROJECT BUDGET AND REQUESTED EU FUNDING

Total project budget: 11,939,693 Euro

Total eligible project budget: 11,939,693 Euro

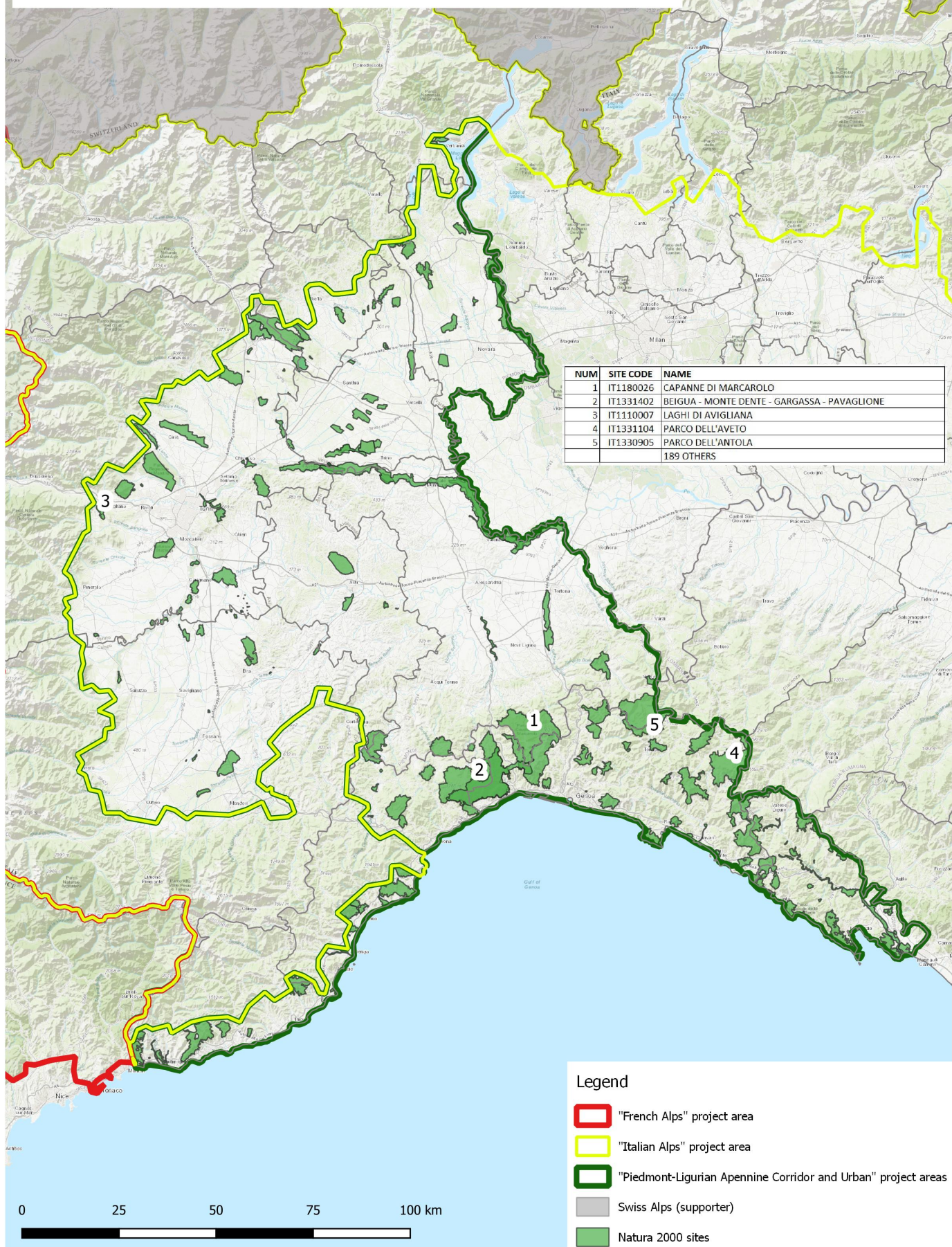
EU financial contribution requested: 7,029,000 Euro (= 58.87% of total eligible budget)

SECTOR

Nature

Name of the picture: "Piedmont-Ligurian Apennine Corridor and Urban" Project Area

PIEDMONT-LIGURIAN APENNINE CORRIDOR AND URBAN PROJECT AREAS



GENERAL DESCRIPTION OF THE AREA / SITE(S) TARGETED BY THE PROJECT

Name of the project area:

"Italian Alps" Project Area

Surface area (ha): 4,990,646.000

Surface description:

EU protection status:

SPA ☒ **NATURA 2000 Code** IT1160057, IT1160056, IT1110006, IT1110010, IT1110080 and others
516 SPA and/or SCIpSCI ☒ **NATURA 2000 Code** IT1160057, IT1160056, IT1110006, IT1110010, IT1110080 and others
516 SPA and/or SCI**Other protection status according to national or regional legislation:**

Protected areas form an important network of natural habitats and traditional landscapes along the project area. This network is made up of different categories of protected areas and the main are: 4 National parks (Dolomiti Bellunesi, Gran Paradiso, Stelvio, Val Grande) for a total of 5697.6 Km², 37 Regional and/or nature parks covering a total of 4257,2 Km² and 521 Sites belonging to 2000 Nature Ecological Network set up under Habitats Directive 92/43/EEC and Birds Directive 2009/147/EC.

Main land uses and ownership status of the project area:

The project area encompasses the entire Italian territory of the Alps (Western, Central and Eastern Alps) covering about 1200 km in length and occupying an area of about 51 941 km² equal to about 27% of the total area of the Alps. The project area extends into seven regions, whose mountainous component varies from 100% of Valle d'Aosta to 29% of Veneto. The main land use in the project area is forest (approx. 45% of total coverage), found below pastures and rocks. Human settlements are mainly concentrated in the valley bottoms and locally in the high-altitude tourist centres such as ski areas. Forestry takes up an important part of land-use, with agriculture, livestock and tourism. Tourism is especially sport orientated, with skiing, hiking and cycling. Livestock is locally developed and differentiated (sheep, goats or cows). Pastures are not owned by shepherds, but usually leased. About 60-70% of the territory is publicly owned, mostly municipal.

Scientific description of project area:

Altitude ranges from about 200 m (pre-alpine area) up to 4810 m (Mt. Bianco). Moving from the Western to the Eastern Italian Alps and from the valley bottom up to the peaks we find different zones, each with its own geological and vegetational characteristics where altitude, temperature, aspect of the mountain side and soil features (acid or basic pH) influence the flora and fauna locally creating different types of vegetation associations and ecosystems. In general, five climatic zones are present in the project area, each one with different ecological features and transitional ecotones. The sub-Montane zone between 400 and 800 m is dominated by thermophilous and heliophilous broad-leaved trees (es. *Quercus pubescens*). The Montane zone extends from 800 to 1700 m with broad-leaved forests: at low altitude European chestnut (*Castanea sativa*), oaks (genere *Quercus*) and white hornbeam (*Carpinus betulus*) which at higher altitudes give way to alpine beech forests, where the main and predominating tree species is beech (*Fagus sylvatica*) sometimes associated with European silver fir (*Picea alba*) in mixed broadleaved-coniferous forests. The sub-Alpine zone extends from 1600 to 2400 m, where coniferous forests are predominant with larch (*Larix decidua*), Norway spruce (*Picea abies*), European silver fir (*Picea alba*) and different species of pine depending on the geographical zone of the study area (*Pinus cembra*, *Pinus mugo*). The Alpine zone, extending from upper limit of forest/tree line ecotone to snow line (about 3000 m) is dominated at low elevation by shrub associations - typical is Rodoretum-vaccinietum association with Rhododendron (*Rhododendron ferrugineum*), Bilberry (*Vaccinium myrtillus*, *Vaccinium vitis-idaea*), False Bilberry (*Vaccinium uliginosum*) and the Bearberry (*Arctostaphylos uva-ursi*), belonging to the Ericaceae family - and sparse Mountain Pine then gradually replaced by Mountain pastures (fescue and mat-grass grasslands,

or large areas covered by sedges). The Glacial zone, which covers upper areas of the mountain from 3000 m, is characterized by discontinuous grassland below 3600 m then replaced by rock with moss and lichens. Climatic conditions show variances within the same zones with different altitude limits of the various types of vegetation from West to East of the study area. The alpine zone, which marks the upper limit of the forest, is about 1440-2400 m in the Western part of the study area and 1500-2000 m in Eastern part.

The wetter areas that receive high precipitation experience periodic flooding from rapid snow melt and runoff. The mean precipitation in the Alps ranges from a low of 2600 mm (100 in) per year to 3600 mm (140 in) per year, with the higher levels occurring at high altitudes. At altitudes between 1000 and 3000 m, snowfall begins in November and accumulates through to April or May when the melt begins. Snow lines vary from 2 400 to 3 000 m above which the snow is permanent and the temperatures hover around the freezing point even during July and August. High-water levels in streams and rivers peak in June and July when the snow is still melting at the higher altitudes.

The fauna biodiversity is high with all typical alpine species of insects, fish, amphibians, reptiles, birds. Mammals are well represented although some of them are only present in parts of the study area. In particular all Alpine ungulates [roe deer (*Capreolus capreolus*), chamois (*Rupicapra rupicapra*), red deer (*Cervus elaphus*), ibex (*Capra ibex*) and wild boar (*Sus scrofa*)] are present and well distributed like several alpine small carnivores [mouse weasels (*Mustela nivalis*), ermine (*Mustela erminea*), polecat (*Mustela putorius*), pine marten (*Martes martes*), stone marten (*Martes foina*), badger (*Meles meles*), fox (*Vulpes vulpes*)]. Otter (*Lutra lutra*) and golden jackal (*Canis aureus*) are documented sporadically in a few areas on the border with Austria and Slovenia. Among the large carnivores, wolf (*Canis lupus*) is widespread in the western part of the study area and its colonization is spreading also towards the east, while brown bear (*Ursus arctos*) and lynx (*Lynx lynx*) are locally present with few individuals only in the Central and Eastern part of the project area. Among the bird species it is important mentioning the eagle owl (*Bubo bubo*), golden eagle (*Aquila chrysaetos*), and the bearded vulture (*Gyps barbatus*).

Importance of the project area for biodiversity and/or for the conservation of the species /habitat types targeted at regional, national and EU level (give quantitative information if possible):

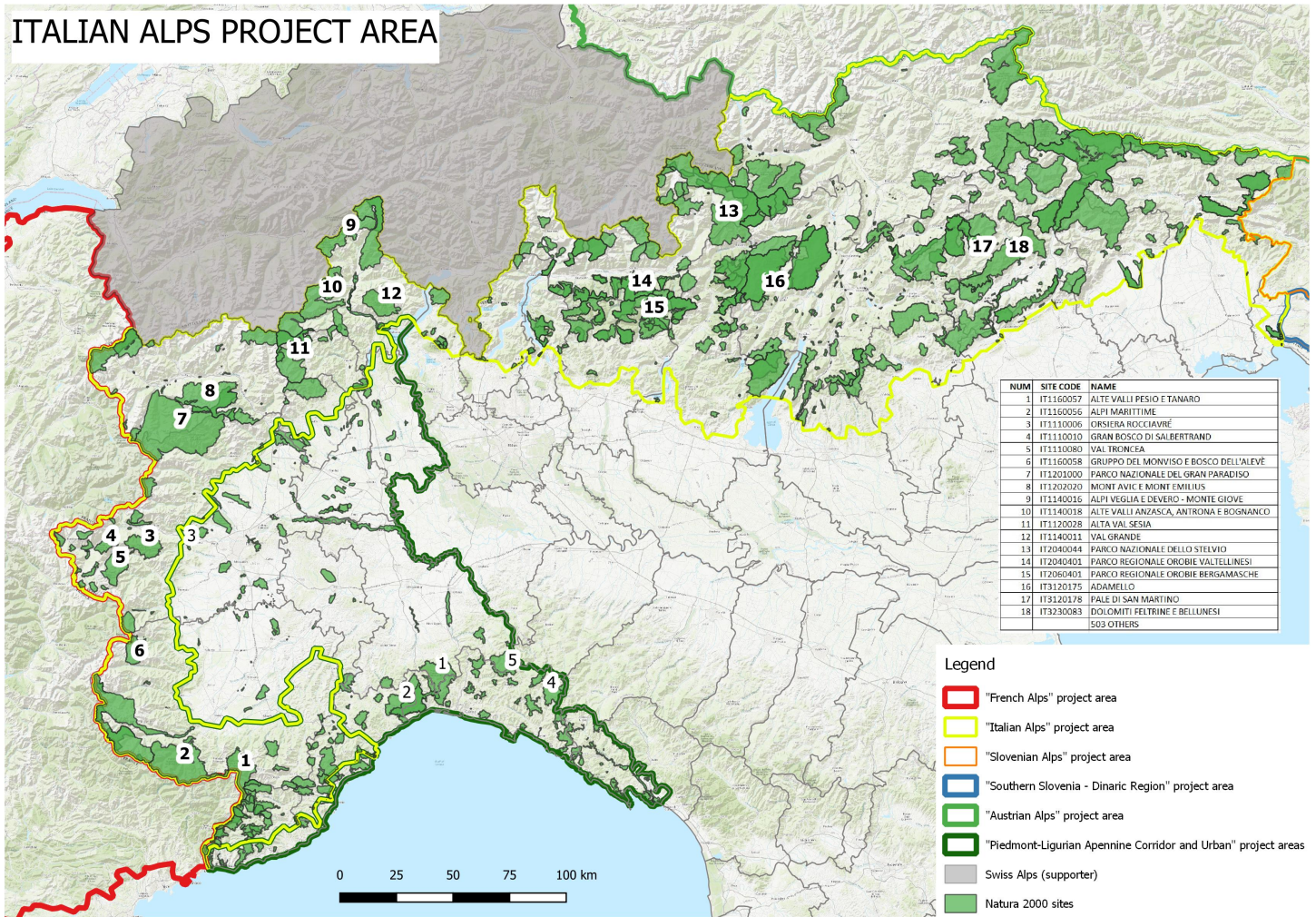
Natura 2000 sites in the Regions of the Italian Alps are managed based on special conservation measures and management plans, following guidelines of the "Ministero dell'Ambiente e della Tutela del Territorio" with the aim to maintain biodiversity taking into account economic, social and cultural requirements and regional and local characteristics as indicated by art. 2 of Directive 92/43 / EEC "Habitat". The Programme of management of Natura 2000 sites is based on Habitat Directive and is implemented to reach one of the goals of the European union, i.e. to ensure the conservation of important species on EU level. With the implementations of this programme, the regional governments will contribute to the achievement of the objectives of sustainable development. The programme includes specific conservation measures for wolf population for Natura 2000 sites in several regions, in particular in the Piemonte region. In fact, within the previous LIFE WolfAlps, the species-specific conservation measures for wolves have been developed in the Piemonte region, taking into account the special needs of the species, and officially adopted within the Site Conservation Measures of Natura 2000 sites in the alpine areas of Piemonte. Hence, the Natura 2000 network is fundamental for wolf conservation in the Italian Alps, as well as for other countries, and the LIFE WolfAlps EU will coordinate with this Italian alpine network of 507 sites to replicate as far as possible the results of the project. Moreover, the Italian Alps has a rich wildlife distributed over the all territories, which vary in species and distribution from the lowest altitude to highest peak where some species have adapted to rugged terrain and extreme altitudes. The Italian Alps are at the same time an urbanized mountain area still rich in biodiversity. Some species, constrained by the pressure exerted by humans on their biotopes of origin, need urgent conservation strategies to preserve their status and to permit the natural colonization in new settlement areas, so important for population expansion.

Wolf is a species present in the Appendix II to the European Habitat Directive, which requires European Member States to designate habitats of the species in sites of Community importance and is also included in the Natura 2000 ecological network. Considering the Italian national level, wolf is strictly protected under 157/1992 Law. The decline of the wolf population in Italy was caused by continuous human persecution leading to the species' disappearance from the Alps and its persistence in the 70s in central and southern Italy only. A natural recovery of the wolf was observed in the western Alps where in 1996-97 the first packs were documented in the western Alps of Italy and France. The first settled packs in the Alps already had transboundary territories. Although human oppression is still present in some areas and locally problematic to wolf survival, a different trend developed over the last twenty years in the Alps. In 2012, the wolf was present in the Western Alps of Piedmont with 15 breeding packs, while the first signs of presence of solitary individuals and stable pairs were

documented in the Central and Eastern Alps with wolves coming through natural dispersion from the Italian and Dinaric populations. The Italian alpine wolf population at the beginning grew slowly until 2012, after rapidly expanding it reached in 2017-2018 at least 46 packs, 5 pairs and 1 stable solitary individual, for a total of 51 stable wolf territories and for a minimum of 293 wolves, most of which are present in Western Alps of Italy (Marucco et. al. 2018). A systematic monitoring on the entire Alpine region to estimate wolf population trends is now essential and it must be done with other Alpine countries to estimate a realistic status of the entire Alpine Population, breaking down national borders, collecting objective data, critical for any management decision with a common population conservation approach. The importance of the Italian alpine area as the place for reuniting the Italian Apennine population and the one from the Dinaric Mountains is high, as it was documented in the previous LIFE WOLFALPS. Today, the Italian Alps will be the essential area where the alpine wolf population can stabilize and allow the full recolonization of the Alps. However, wolf recovery takes place in mountain areas where there is livestock activity to a greater or lesser degree. This resulted in strong interactions between wolf presence and sheep breeding activities. It is still of paramount importance to locally invest on livestock preventive systems against attacks and to promote the coexistence between wolves and humans through the dissemination of knowledge of the main ecological aspects of wolf recovery.

Name of the picture: Italian Alps Project Area

ITALIAN ALPS PROJECT AREA



GENERAL DESCRIPTION OF THE AREA / SITE(S) TARGETED BY THE PROJECT

Name of the project area:

"Austrian Alps" Project Area

Surface area (ha):

5,364,131.000

Surface description:

EU protection status:

SPA ☒ **NATURA 2000 Code** AT2209000, AT3210001, AT3304000, AT3301000 and others 148 SPA and/or SCI

pSCI ☒ **NATURA 2000 Code** AT2209000, AT3210001, AT3304000, AT3301000 and others 148 SPA and/or SCI

Other protection status according to national or regional legislation:

One wilderness area (Dürrenstein Wilderness area) and seven national parks (Hohe Tauern – with parts in Carinthia, Salzburg and Tyrol, Kalkalpen, Gesäuse, Thayatal and Donau-Auen).

Main land uses and ownership status of the project area:

In Austria, the Northern Limestone Alps, the Central Alps and the Southern Limestone Alps run west to east through the country and make up about 62% of the country area. In this area forestry dominates the use of the land, whereas settlements and agriculture are mostly found on the bottom of the valleys. An important land use is alpine pastures, which spread out on about 340000ha. Their number is declining over the last years, as is the number of livestock grazing on those pastures. Landownership is mostly private; the Austrian State forests own 10% of the total country.

The rest of the country consists of Alpine Foreland north and east of the Alps, which includes the Danube Valley and the lowlands and hilly regions in north-eastern and eastern Austria including the Danube Basin. Here agriculture and settlements dominate the land use. North of the Danube Valley the granite massif of the Bohemian Forest is home to the three currently known wolf packs of Austria.

Scientific description of project area:

Austria may be divided into three unequal geographical areas. The largest part of Austria (62%) is occupied by the Alps with the Großglockner being the highest point of Austria (3,797 m a.s.l.). In the east, these give way to a part of the Pannonian plain where the lowest point of Austria lies (Hedwighof in the municipality of Apetlon at 114m a.s.l.). North of the Danube River lies the Bohemian Forest, a lower, granite mountain range with bare plateaus and a harsh climate, which reaches heights up to 1,378 m a.s.l (Plöckenstein in Upper Austria).

The Central Alps, which consist largely of a granite base, are the largest and highest ranges in the Austrian Alps. The Central Alps run from Tyrol to approximately the Styria-Lower Austria border and include areas that are permanently glaciated in the Ötztal Alps on the Tyrolean-Italian border and the High Tauern in East Tyrol and Carinthia. The Northern Limestone Alps, which run from Vorarlberg through Tyrol into Salzburg along the German border and through Upper Austria and Lower Austria toward Vienna, and the Southern Calcareous Alps, on the Carinthia-Slovenia and Carinthia-Italy border, are predominantly limestone and dolomite. As a general rule, the farther east the Northern and Central Alps run, the lower they become. The altitude of the mountains also drops north and south of the central ranges.

The Alps serve as a watershed for Europe's three major kinds of weather systems that influence Austrian weather. The Atlantic maritime climate from the northwest is characterized by low-pressure fronts, mild air from the Gulf Stream, and precipitation. It has the greatest influence on the northern slopes of the Alps, the Northern Alpine Foreland, and the Danube valley. Here high annual precipitation means reach around 2000mm. The continental climate is characterized by low pressure fronts with

precipitation in summer and high pressure systems with cold and dry air in winter. It affects mainly eastern Austria, where annual precipitation means are usually beneath 600mm. Mediterranean high-pressure systems from the south are characterized by few clouds and warm air, and they influence the weather of the southern slopes of the Alps and that of the South-eastern Alpine Foreland, making them the most temperate part of Austria.

Austria is home to more than 3000 plant and 45000 animal species, where 98.6% of the latter are invertebrates. Due to the high diversity of topographical and climatic conditions diversity of flora and fauna is not only numerous, but also adapted to very different habitats.

Austria is one of the most heavily wooded countries in Europe. Alpine woods naturally consist mostly of mixed forest with beech, spruce and fir being the dominant tree species. Above 1500m a.s.l spruce, fir and stone pine form the natural vegetation. In dry slopes Scots pine may dominate and at the eastern hills of the Alps black pine stands are common. In the Bohemian forests North Norwegian spruce forms most of the stands, but in lower altitudes also oak and beech occur.

East of the Alps and the Bohemian Forest the landscape is very open with low forest cover. Agriculture and industrial areas determine the picture of the landscape. These are very human dominated landscapes. At the Hungarian border there is the most western steppe lake in Eurasia and the largest endorheic lake (lake without water exit) in Central Europe with a unique salt steppe flora in the area around.

The most obvious mammal species are red deer, wild boar, chamois, ibex, roe deer and the large carnivore species (brown bear, wolf and lynx). However, the latter occur only in very low numbers. Prominent bird species are Golden Eagle and grouse (capercaillie, black and hazel grouse and ptarmigan) in the Alps, and White-tailed and Imperial Eagle and Great Bustard in the lowlands.

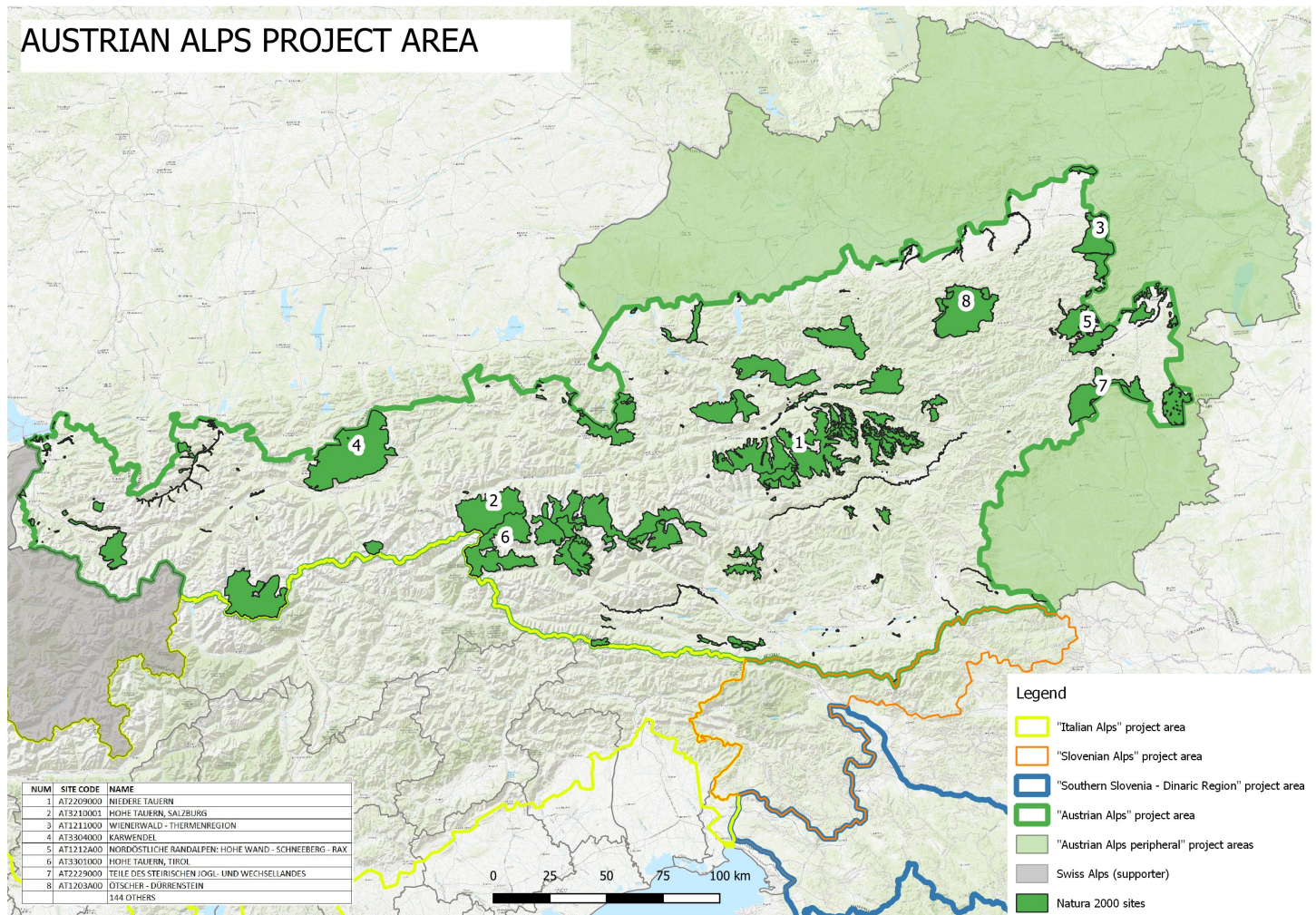
Importance of the project area for biodiversity and/or for the conservation of the species /habitat types targeted at regional, national and EU level (give quantitative information if possible):

With an area of 52.000 km² Austria represents more than a quarter of the Alpine territory. Located in the Northeast and therefore in areas with lower mountains and less areas above the timber line, Austria provides excellent habitat for forest dwelling species as large carnivores. Additionally Austria inhabits the highest ungulate densities worldwide, according to hunting records. Despite these good natural conditions, large carnivores occur only in low numbers and are highly endangered.

Regarding wolves Austria lies in between the Alpine wolf population in the Western Alps, the Dinaric population in the Southeast, the Carpathian population in the Northeast and the Central European lowland population in the North. In the future Austria may be a melting pot for these four populations. As far as we know, the three packs that are currently found in Austria all originate from the Central European lowland population, but two of the six parent wolves are not genetically determined yet. These first Austrian packs are present outside the Alps, in the peripheral area. The project will extend actions to this area where wolf packs are present, considering them an important source for wolves recolonizing the Alps.

Due to this special geographic location Austria is of high importance for a wolf population covering Central Europe and the gene flow between the existing populations. Nevertheless, the attitude of important stakeholders as hunters and sheep farmers is not in favour of the return of the wolves. Therefore it is of crucial importance to work on the improvement of the co-existence of wolf and human in the rural landscapes of Austria.

Name of the picture: Austrian Alps Project Area



GENERAL DESCRIPTION OF THE AREA / SITE(S) TARGETED BY THE PROJECT

Name of the project area:

"Southern Slovenia - Dinaric Region" Project Area

Surface area (ha):

605,414.000

Surface description:

EU protection status:

SPA ☒ **NATURA 2000 Code** SI3000232, SI3000256, SI3000263, SI3000231, and 85 otherspSCI ☒ **NATURA 2000 Code** SI3000255, SI3000256, SI3000263, SI3000231, and 85 others**Other protection status according to national or regional legislation:**

Part of the project area (Cerknica Lake, Menišija plateau, Krim Hills, Javorniki Mts.) has a status of a regional park – Notranjska Regional Park. Part of Snežnik plateau, including the peak Veliki Snežnik, is designated as a botanical reserve. The project area also contains a number of forest reserves, as well as several well-preserved virgin forests stands. There are plans for another part of the region to become a regional park, Regional park Kočevska.

Main land uses and ownership status of the project area:

The main land use in the project area is forest (app. 70% of land use). There are also small-scaled agriculture areas, mostly of extensive use. In the past, livestock breeding was not common, but in the recent years the number of livestock, especially sheep, is growing. Settlements are mostly small and located in the lowlands. Approximately half of the forests in the project area are privately owned. Most of the other forests are owned by the state, and less than 1 % by municipalities. The average size of a private parcel is approximately 3 ha.

Scientific description of project area:

The study area is located in the northern part of Dinaric Mountains in Southern Slovenia. It covers the entire Dinaric region of Slovenia. The highest elevation point is Mount Snežnik at 1796 meters. Most of the area is located between 600 and 1200 m. Surface is hilly and characterized by a very rugged terrain. Limestone and dolomite prevail in the area, and the relief shows numerous karst phenomena, such as dolines, collapse dolines, uvalas, horizontal caves, vertical shafts, steep canyons, poljes etc. Surface water is rare as water run off is largely underground. Several ephemeral lakes are present in the area. The climate is a mix of influences from the Alps, the Mediterranean Sea and the Pannonia basin with annual temperatures averaging 5-8°C, ranging from an average maximum of 32 °C to a minimum of -20 °C, and average annual precipitation of 1400-3500 mm. Most of the area is covered by a fir-beech association (*Abieti-Fagetum dinaricum*), with four dominant tree species: the common beech (*Fagus sylvatica*), silver fir (*Abies alba*), Norway spruce (*Picea abies*), and sycamore maple (*Acer pseudoplatanus*). Larger settlements include Postojna, Kočevje, Cerknica and Ilirska Bistrica. Area is easily accessible due to a dense network of local and forest roads. Accessibility becomes more difficult during snow cover, when many forest roads become impassable.

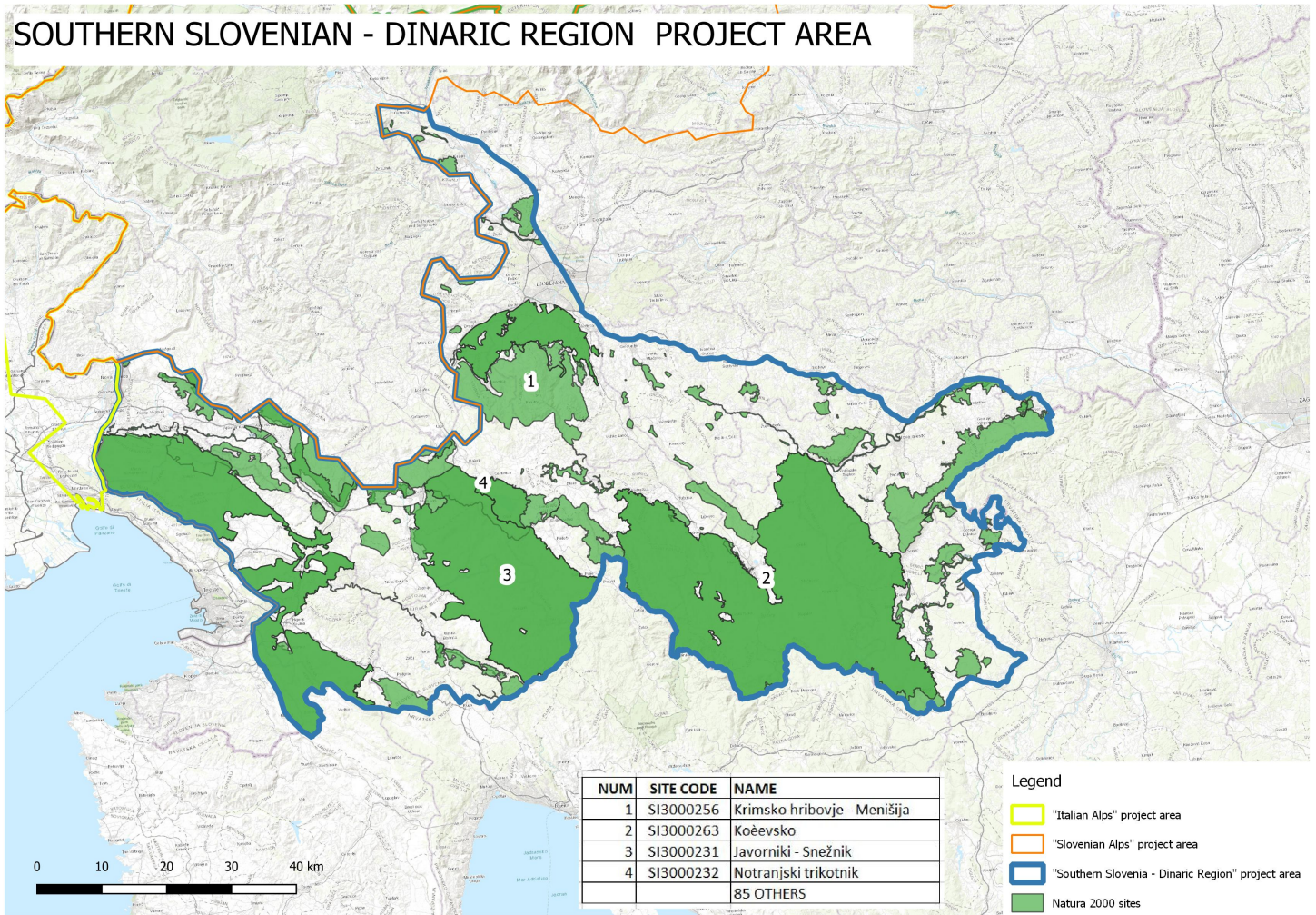
Importance of the project area for biodiversity and/or for the conservation of the species /habitat types targeted at regional, national and EU level (give quantitative information if possible):

The project area covers the entire area of Slovenia with regular wolf presence, and we aim for the project to target the entire population of wolves in Slovenia, and this area is particularly important because it represents the source wolf area that is providing dispersals animals towards the Eastern Alps of Slovenia, Italy and Austria. Wolves from this project area are naturally recolonizing the Eastern Alps, and are reconnecting with the Italian wolf population in the Central-Eastern part of the Alps.

Therefore, it is key to include this area in the overall project, which is focused on the wolf alpine population. This is also one of the most well-preserved forest areas in the country and in Europe. The Dinaric range in Slovenia is one of the European biodiversity hot-spots. Together with neighbouring Gorski Kotar in Croatia it is a part of the largest unfragmented forest complex in Central Europe. A large part of the area is covered with Illyrian *Fagus sylvatica* forests (Aremonio-Fagion). It also includes most of brown bears (*Ursus arctos*) and Eurasian lynx (*Lynx lynx*) in Slovenia. This area is one of the few regions in Europe where three species of large carnivores still coexists in well preserved environment, resulting in complex interspecific interactions. With 6 pairs / km² the area boasts the highest densities of the Ural owl (*Strix uralensis*) in Europe. Bird species also living here include rarities such as white-backed woodpecker (*Dendrocopos leucotos*) and red-breasted flycatcher (*Ficedula parva*). Classification species for Natura 2000 include barbastelle bat (*Barbastella barbastellus*), tengmalm's owl (*Aegolius funereus*), hazel grouse (*Bonasa bonasia*), grey-headed woodpecker (*Picus canus*), jersey tiger moth (*Callimorpha quadripunctaria*), rosalia longicorn (*Rosalia alpina*), narrow-mouthed whorl snail (*Vertigo angustior*), etc. In the region there are also numerous species protected by national legislation, including several endemics (e.g. *Iberolacerta horvathi*, *Proteus anguinus*, *Leptodirus hochenwartii*, *Dimorpochoris saulii*). Large number of species living in this area is also listed on IUCN Red List and on Bern Convention Appendices.

Name of the picture: Southern Slovenia - Dinaric Region Project Area

SOUTHERN SLOVENIAN - DINARIC REGION PROJECT AREA



GENERAL DESCRIPTION OF THE AREA / SITE(S) TARGETED BY THE PROJECT

Name of the project area:

"French Alps" Project Area

Surface area (ha): 4,151,100.000

Surface description:

EU protection status:

SPA ☒ **NATURA 2000 Code** FR9310035, FR8212005, FR8212019, FR8210017, FR9312002, and 176 otherspSCI ☒ **NATURA 2000 Code** FR9310035, FR8212005, FR8212019, FR8210017, FR9312002, and 176 others**Other protection status according to national or regional legislation:**

Overall project area encompasses the French Alps, which are the portion of the Alps Mountain that is located in France. It is expanding in two large Regions – Auvergne-Rhone-Alpes (AURA) and Provence-Alpes-Cote d’Azur (PACA) Regions. The French Alps holds three national parks (Mercantour NP, Ecrins NP and Vanoise NP), several regional parks (Bauges, Vercors, Chartreuse, Queyras, Prealps, Verdon, Luberon) and nature reserves. Some sites are also classified in Natura 2000 zones.

Main land uses and ownership status of the project area:

The project area land use is highly diversified from urbanized centers, rural and mountainous landscapes. Auvergne-Rhône-Alpes is the third largest forest of France with 35% of the territory covered by the forest. In much of the Alps, traditional agricultural and pastoral activities, especially sheep and goats, have shaped the cultivated landscape and play an important role in maintaining biodiversity. The French Alps are within two large Regions – Auvergne-Rhone-Alpes (AURA) and Provence-Alpes-Cote d’Azur (PACA) Regions and 9 departments: Savoy and Haute-Savoie, Isère, Hautes-Alpes, Alpes-de-Haute-Provence, Drome, Vaucluse, Var and Alpes-Maritimes. The protection status of the lands is described above.

Scientific description of project area:

While some of the mountain ranges in the French Alps are entirely in France, others, such as the Mont Blanc massif (4,809 meters), are shared with Switzerland and / or Italy. The departments of Drôme, Isère, Savoie and Haute-Savoie are partly located in the Northern Alps. Very numerous massifs compose this territory. From north to south, the Chablais, the Aiguilles Rouges, the Aravis range, the Bauges, the Chartreuse massif, the Mont-Blanc massif, the Vanoise massif, the Écrins massif, the Vercors and a part of Dévoluy. The PACA region is bathed in the south by the Mediterranean Sea and bordering on the eastern Italian regions of Liguria and Piedmont. Its territory covers a large part of the Southern Alps. The Prealps form the middle and upper Provence: Ventoux, Lure mountain, prey of Digne and Castellane, Valensole plateau, plan Canjuers (Verdon), plan Caussols. Further south are the reliefs of Luberon, Alpilles, Sainte-Victoire Mountain and Sainte-Baume. To the east, the Prealps end near the sea, towards Nice and Menton. Finally, the region includes several areas of medium and high mountain: the Mercantour in the east, the massif of Ecrins to the north, and the less extensive massifs of Dévoluy, Queyras and Ceres.

The region encompasses a wide range of landscapes and climate. It is characterized by a mountain climate that declines to the cold depending on altitude, inland climate, and to the South the Mediterranean climate, which is found in the preAlps. The winters are cold, even rough and snowy in mountains, but mild on the coast, especially on the Côte d'Azur. The Rhone Valley and part of the coast undergo the mistral, cold wind and strong north blowing.

Importance of the project area for biodiversity and/or for the conservation of the species /habitat types targeted at regional, national and EU level (give quantitative information if possible):

The French Alps are home to a diverse and varied wildlife that has adapted to rugged terrain and extreme altitudes. From the foot of the Alps to its highest peak, Mont-Blanc, wildlife varies with altitude. This mountain range, in the heart of Europe, is the most important mountainous massif the most urbanized in the world, it is nevertheless still rich in biodiversity. Some species are subservient to highland environments, others have been constrained by the pressure exerted by man on their biotopes of origin.

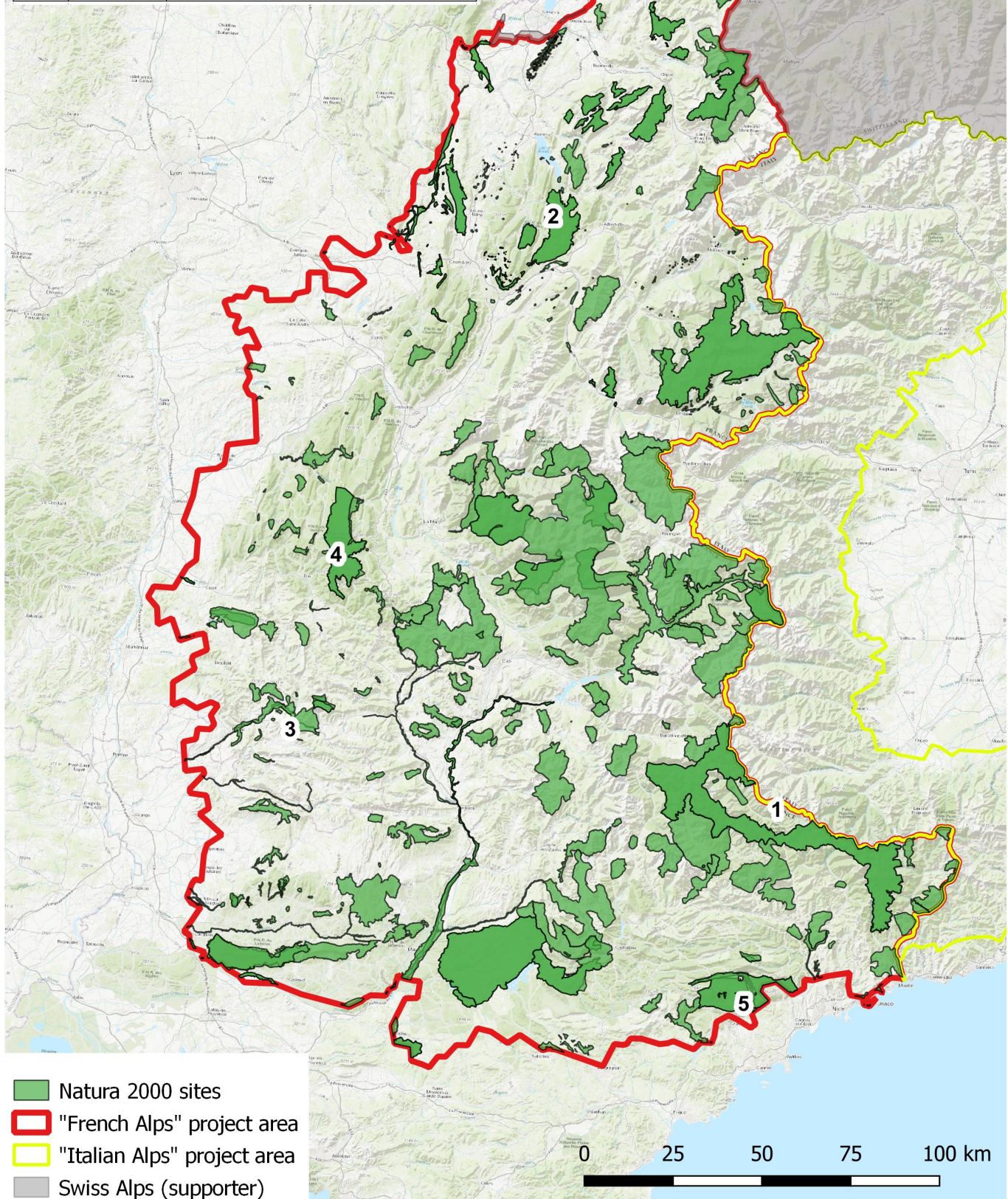
In France, the wolf is present in the Appendix II to the fauna-flora Habitat Directive, which requires Member States to designate habitats of the species in sites of Community importance and included in the Natura 2000 network. The wolf is also present on Appendix IV, and its legal removal is strictly determined by Article 16.1 of the Directive, by Derogations. The wolf recovery in France dates back to 1992, following the natural range expansion of the remaining Italian population since the late 1960's. Non-invasive genetics have suggested a unidirectional gene flow from the Apennines to the Alps with a small number of founders, explaining the actual genetic diversity of the alpine population (Fabbri et al., 2007). The species then spread outside the Alpine mountains to reach the Pyrenees and Massif Central first in 1999, and the Vosges Mountains northward from 2011. Until now, reproductive packs remain only established in the Alpine area, and seem to fill up interstices between existing packs. Last estimate The last estimate of 2017-2018 to indicates the presence of 72 wolf packs (ONCFS - Lynx-Wolf Network - Data collected from 01/05/2018 to 31/10/2018)

Wolf recovery in France takes place in an area of intensive agricultural activity with large flocks of sheep grazing in summer pastures. This resulted in strong interactions between wolf presence and sheep breeding activities.

Name of the picture: French Alps Project Area

FRENCH ALPS PROJECT AREA

NUM	SITE CODE	NAME
1	FR9310035	LE MERCANTOUR
2	FR8212005	PARTIE ORIENTALE DU MASSIF DES BAUGES
3	FR8212019	BARONNIES - GORGES DE L'EYGUES
4	FR8210017	HAUTS PLATEAUX DU VERCORS
5	FR9312002	PREALPES DE GRASSE
		176 OTHERS



GENERAL DESCRIPTION OF THE AREA / SITE(S) TARGETED BY THE PROJECT

Name of the project area:

"Slovenian Alps" Project Area

Surface area (ha):

417,328.000

Surface description:

EU protection status:

SPA ☒ **NATURA 2000 Code** SI3000253, SI3000255, SI3000278, SI3000133, others 105 SPA and/or SCI in the project area

pSCI ☒ **NATURA 2000 Code** SI3000253, SI3000255, SI3000278, SI3000133, others 105 SPA and/or SCI in the project area

Other protection status according to national or regional legislation:

Triglav National Park

Main land uses and ownership status of the project area:

The area encompasses parts of the Julian and Carnic Alps, Prealpine area, and the Caravanche at the border region of Italy and Slovenia. It is the most south-eastern part of the Alps that makes the connection with Dinaric Mountains. The main land use in the project area is forest (app. 70% of land use). Forestry takes a major part of the land-use, besides agriculture, tourism and sports. In the past (last 60 years), livestock breeding was strongly decreasing, but recently livestock, especially sheep, is growing. Settlements are mostly small and located in the lowlands. Half of the forests on Slovenian Alps are privately owned. The average size of a private parcel is 3 ha.

Scientific description of project area:

Altitude ranges from 180 m [Tolminka valley] up to 2846 m [Mt. Triglav]. The geologic and tectonic situation of the project core area is strongly characterized by the alpine orogeny: The main part of the area is largely formed of sedimentary rocks, especially limestone and dolomite. The development of these sediments took place throughout the Mesozoic Era (Triassic, Jurassic, Cretaceous) and was followed by a period of vertical uplift in Early Tertiary as well as in the Pliocene and Pleistocene periods (Kunaver 2004a). The present-day relief is a combination of tectonic forces (folding, faulting, thrusting and vertical movements of bedrock) and different exogenous processes (erosion through water and glaciers, physical and chemical weathering). With regard to the prevailing limestone in the area, chemical weathering is of particular importance: part of the area's surface is characterised by karst processes (Kunaver 2004 b).

The climate of the south-eastern Alps is influenced by the interaction of three climate systems: Alpine, Continental and Sub-Mediterranean. The major influence is Alpine, however there is also a strong Sub-Mediterranean influence in the south-western parts of the area, especially in the valleys (European Environment Agency 2009). These interactions, combined with the complex mountain terrain, contribute to highly diverse climate conditions resulting in also a high variability in the spatial and temporal distribution of precipitation. Regions with an annual precipitation mean extending 3500 mm in the south-western parts of Triglav National Park are accompanied with areas hardly reaching 2000 mm in the northern areas (Alpine Convention 2009). The high variability in altitude makes the climate system even more diverse, and like in all mountain ranges, altitude is a main factor influencing mean annual temperatures. In Triglav National Park, this is e.g. expressed by an average lapse rate of 0,53° C / 100 m .

The flora of the core area is a diverse mixture of various floral elements, as Alpine, Central European, Illyrian and Sub-Mediterranean floral elements are interwoven. The montane belt of the Slovenian Alps (600/700 m-1500/1600 m a.s.l.) is characterized by Alpine beech forests (Anemone trifoliata-Fagetum), where the main and predominating tree species is beech (*Fagus sylvatica*) and the understorey is

dominated by three-leaved anemone (*Anemone trifolia*). The subalpine belt (1600 m – 2000 m a.s.l.) is dominated by larch (*Larix decidua*) and Mountain pine (*Pinus mugo*). Mountain pastures and mat-grass associations (*Nardetum strictae*) as well as herb stands of high-stemmed plants in the Blue Sow-thistle association (*Cicerbitum alpinae*) are common, too. At the forest-/treeline ecotone, shrub associations of Mountain pine (*Rhodothamno-Pinetum mugo*) with Mountain Pine (*Pinus mugo*), *Rhodothamnus* (*Rhodothamnus chamaecistus*) and Hairy rhododendron (*Rhododendron hirsutum*) replace closed tree communities.

Above this mountain pine belt, in the alpine zone (2000 m – 2400 m a.s.l.), herbal plants predominate, but woody plants also exist as ground hugging shrubs. On dry and sunny slopes where the soil layer is relatively thick, high mountain grasslands of the association of evergreen sedge (*Sesleria albicantis-Caricetum sempervicaertis*) with evergreen sedge (*Carex sempervirens*), blue moor-grass (*Sesleria caerulea*) and other typical species like black vanilla orchid (*Nigritella lithopolitana*), trumpet gentian (*Gentiana clusii*), edelweiss (*Leontopodium alpinum*), alpine aster (*Aster alpinus*), etc. are common.

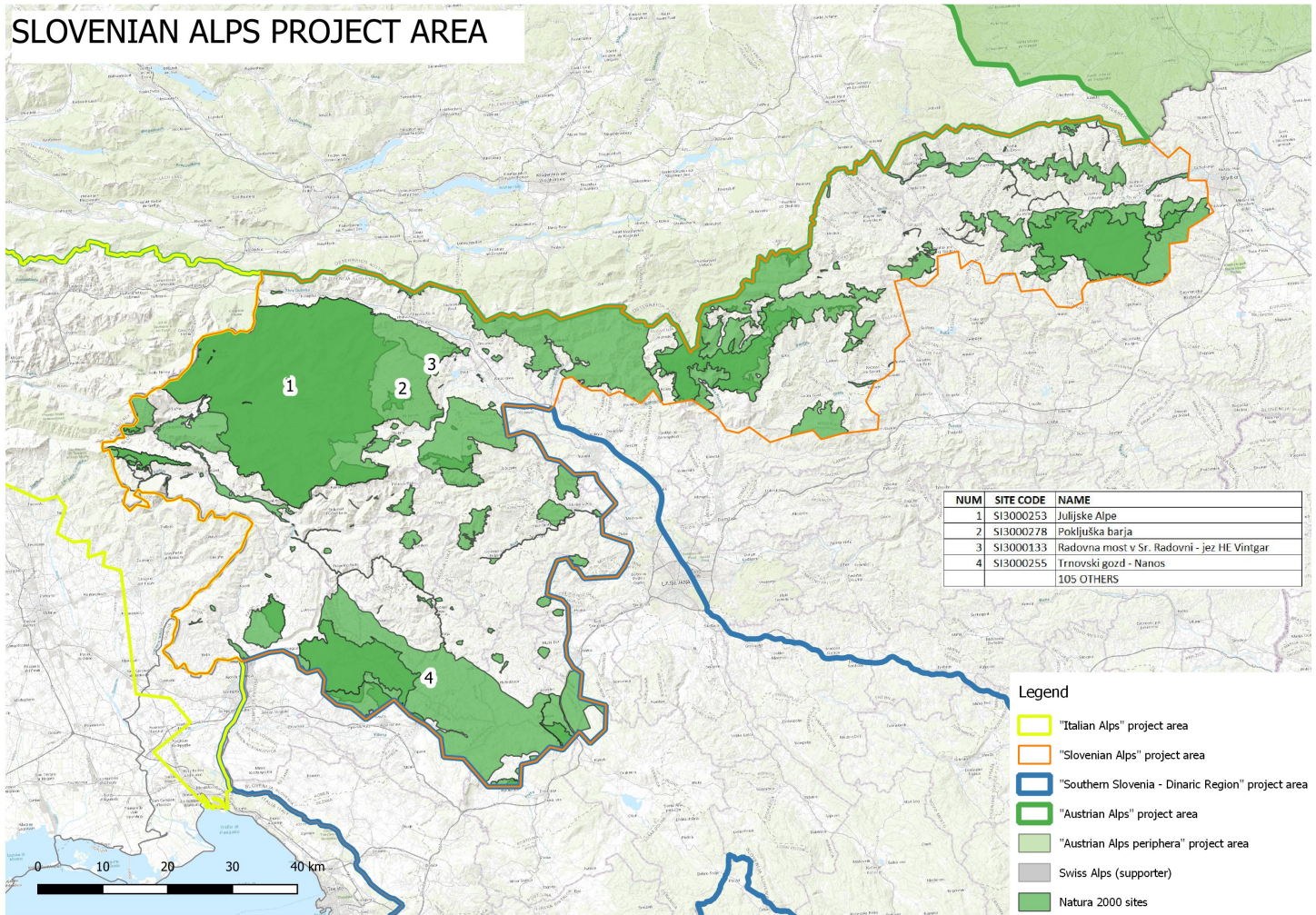
The faunal biodiversity is high. All typical alpine species of insects, fish, amphibians, reptiles and birds are present. Together with all Alpine ungulates roe deer (*Capreolus capreolus*), chamois (*Rupicapra rupicapra*), red deer (*Cervus elaphus*), ibex (*Capra ibex*) and wild boar (*Sus scrofa*), all small carnivores [mouse weasels (*Mustela nivalis*), ermine (*Mustela erminea*), polecat (*Mustela putorius*), pine marten (*Martes martes*), stone marten (*Martes foina*), badger (*Meles meles*), otter (*Lutra lutra*), fox (*Vulpes vulpes*), golden jackal (*Canis aureus*) and wild cats (*Felis silvestris*)] are present. Besides, although in different quantities, the three large carnivores brown bear (*Ursus arctos*), lynx (*Lynx lynx*) and wolf (*Canis lupus*). Among the bird species it is worth mentioning the eagle owl (*Bubo bubo*), golden eagle (*Aquila chrysaetos*), griffon vulture (*Gyps fulvus*) and the bearded vulture (*Gyps barbatus*). The presence of all these species substantiates the fact that the food chain is intact until the top of the pyramid. The expansion/immigration of new species such as e.g. the ural owl (*Strix uralensis*), the golden jackal or the raccoon dog (*Nyctereutes procyonoides*) demonstrates the importance of the area as migration corridor.

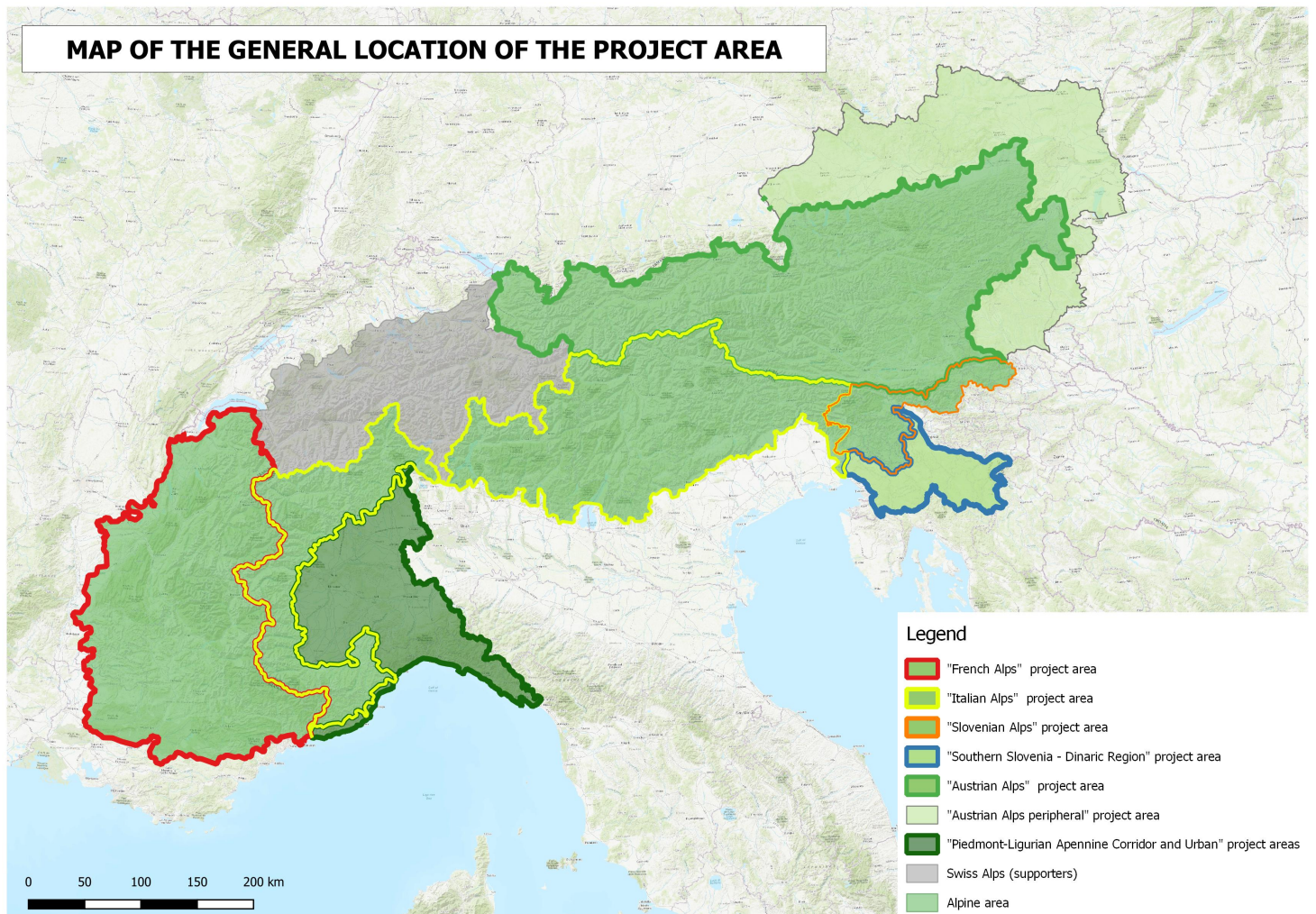
Importance of the project area for biodiversity and/or for the conservation of the species /habitat types targeted at regional, national and EU level (give quantitative information if possible):

The importance of the area as a migration corridor from the Dinaric Mountains to the Alps has been outlined above. This corridor has been used previously by red deer, brown bear and lynx. Wolf has only recently recolonized the southern parts of the project area. In the core area – there have been solitary wolves detected since mid 1990`s, however in the south-eastern part of the area, Nanos and Trnovski gozd one to two wolf packs have been present since 2009. In 2011 and 2012 litters have been detected with howling tests in the area. These packs represent direct connection to wolf packs in Dinaric Mountains and are very important nucleus for further colonization of the Eastern Alps as well as dispersion route toward central western Alps. However, due to high wild ungulate biomass, this area is not only important as a corridor, but has a great potential as favourable wolf habitat. The high suitability of the area has been confirmed recently within the ECONNECT project (Marucco 2011). As livestock is rare, the conflict potential between agriculture and wolves is lower than in other parts of the Alps. In the southern part of the area wolves co-occur with brown bears and lynx. This is so far the only area where all three species of large carnivores are present in all the Alps. Positive public climate towards wolves in the TNP is crucial as this is the only possible route for the wolves from the Dinaric-Balkan population to recolonize the Eastern Alps. From that prospective, participation of TNP is crucial in the project.

Name of the picture: Slovenian Alps Project Area

SLOVENIAN ALPS PROJECT AREA





Description of species / habitats / biodiversity issues targeted by the project:

Wolves (*Canis lupus*)* were deliberately extirpated in the Alps during the 20th century; one of the last wolves documented in the Alps dates back to 1921, it was killed in the Maritime Alps. Notwithstanding, wolf populations have survived in the Apennines in central Italy, in the Dinaric Alps, and in the Carpathian mountains. Even in these areas wolf populations have suffered sharp declines due to hard ecological conditions characterized by the reduction of their natural prey species, deforestation, and human persecution. By the 1970s the importance of the wolf as part of a naturally functioning ecosystem became evident. Hence, the wolf was legally protected in European countries by the end of the Seventies: it has been listed in Annex 2 of the Berne Convention of 19 September 1979 concerning the strictly protected fauna species in Europe, and was considered a priority species requiring strict protection according to the Habitats Directive 92/43/EEC, Annex 2 and 4. In every alpine country, additional national laws protected the species.

In the past decades, ecological conditions in Western Europe improved and both wild ungulate and wolf populations increased. The range of wolves along the Dinaric and Apennines mountains increased over the years, and finally wolves began naturally recolonizing first the southwestern Alps of Italy and France at the beginning of 1990s through natural dispersal from the north Apennine wolf population. The excellent dispersal capacity of wolves and the recovery of natural habitats in the mountains, a consequence of their progressive abandonment, together with the consequent recovery of the wild ungulate populations, are the main reasons for the natural return of the wolf in the Alps. When the first semi-isolated packs and individuals appeared progressively further from source wolf populations, questions arose regarding wolf numbers, current distribution, and the origin of the animals. In fact, the return of the wolf in the Alps after about 100 years of absence showed on one side the ecological rehabilitation of the alpine ecosystem, on the other it had important social, economic and cultural implications, especially concerning conflicts with livestock in areas where preventive traditions had been lost.

The excellent dispersal capacity of wolves means that this predator can reach new areas, even at a considerable distance from sedentary packs. These dispersing wolves usually have a high mortality rate, because they are loners who wander into unknown territories, and should not be considered the return of the species, until a breeding wolf pack forms. Wolves are in fact organized in packs, which establish a permanent territory and defend it from trespassing wolves. Packs are formed when a male and a female wolf develop a pair bond, breed and produce pups. The pack typically consists of this social dominant breeding pair (alpha), their offspring from the previous year, and new pups. The wolf pack is a complex social structure that occupies and defends its territory and cooperatively hunts, travels, feeds, and shares pup-rearing responsibilities. In the Alps, the average pack size is 5 individuals, with packs' territories ranging between 100 and 400 km². Breeding occurs once a year, and only between the dominant couple in a pack. This factor proves crucial as it represents a self-regulating mechanism of the size of the packs, and of the population. The average litter consists of 3-4 pups, which generally remain within the pack until 1-2 years of age when they disperse. Mortality rate of young wolves is very high and generally due to human causes (poaching, car accidents, etc.). Wolves disperse in search of a free territory to occupy and of a wolf of the opposite sex to form a new pack. In this way wolves naturally recolonized first the Western Alps from the 1990s, and now they are approaching the Central-Eastern Alps. In areas of recent wolf recolonization the first issue is still the particularly acute livestock-wolf conflict due to the lack of preventive measures.

This return has been followed and documented from the start, also in many scientific publications. A moderate bottleneck occurred during the recolonization process, and gene flow between the Apennines and the Alps was moderate. So far the genetic diversity of the alpine population showed a separation of the Italian haplotype from the other subpopulations of eastern Europe and Caucasus area. Therefore, the levels of genetic diversity in the current expanding alpine wolf population may depend on future successful migrants from the Apennines, as well as those coming from the Dinaric, Carpathian and Central-European wolf populations. However, these dispersals are now bringing hybrids as well, since the North Apennine wolf population is now considered a highly introgressed area, which needs to be carefully managed.

Following the "Guidelines for Population Level Management Plans for Large Carnivores" (GPMP) produced by EU DG ENV in 2008, the wolf population in the Alps has been identified as a unique population segment. Although it is genetically connected to the Italian wolf population in the Apennines, the Alpine population segment is functionally autonomous enough as a demographic entity to produce a numerical increase. The level of habitat suitability in the Alps as well as the single narrow corridor allowing wolves to disperse from the Apennines to the Alps (and reciprocally) is a component to define the two different population segments as well as the ecological and socio-economic contexts that strongly differ between the two regions. Because wolves live at low density over large territories

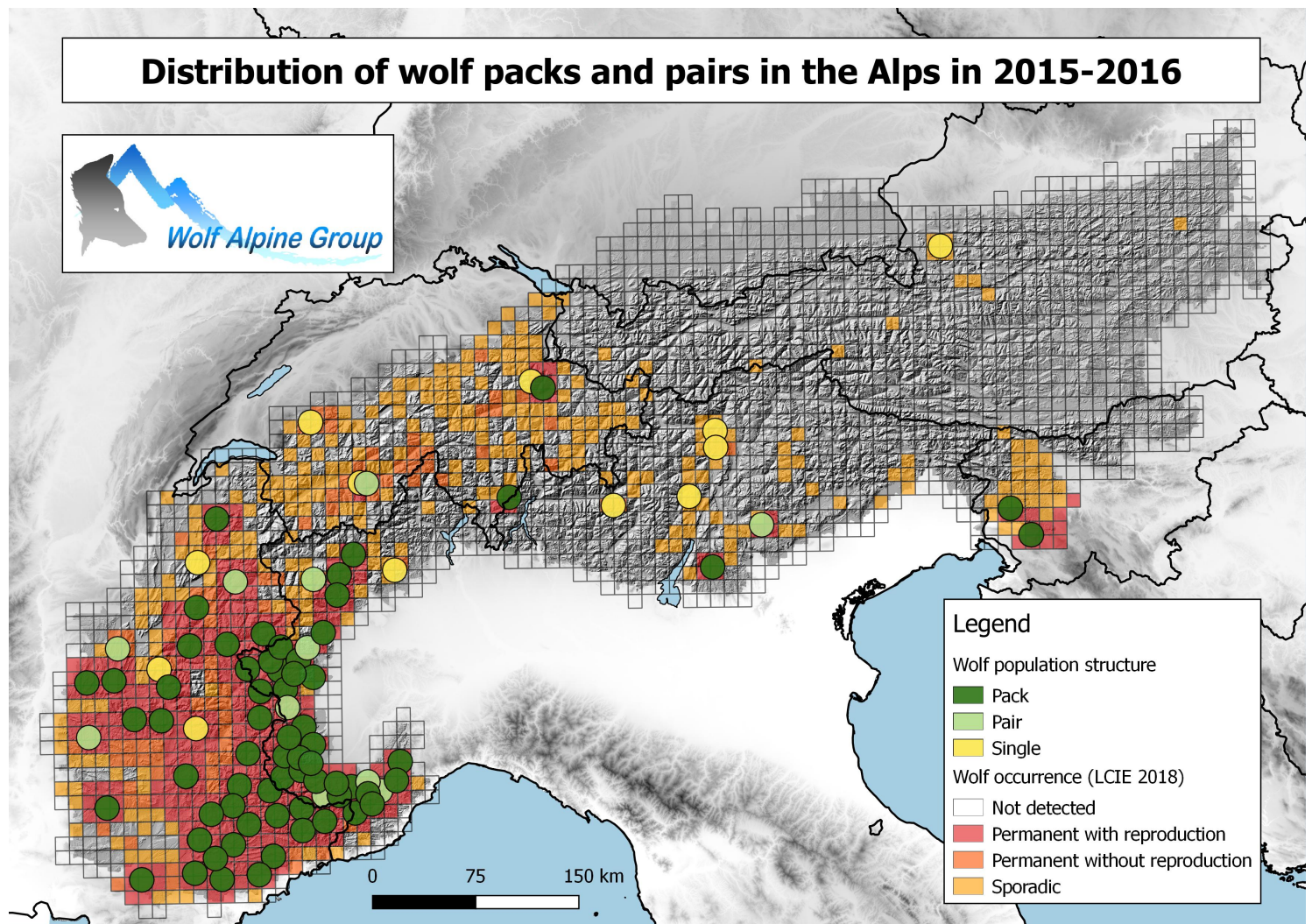
of about several hundred square km, packs may extend beyond administrative borders, and dispersers are able to move over hundred kilometres. So, the need for standardized monitoring techniques and coordinated conservation approaches among countries is clearly necessary to monitor and manage wolves at population level in the Alps.

The last total population update was produced by the Wolf alpine Group (WAG) in 2015-2016 (Figure 1), and it shows that the wolf alpine population has started expanding into the Central-Eastern part, however the great majority of wolf packs are located in the Western part between Italy and France, where the population has increased in density. In those areas wolves have reached hills and expanded beyond the alpine chain, creating the first conflicts in highly urbanized areas. At the same time the Dinaric population has expanded northward, towards the Eastern Alps, and the two populations connected again for the first time in 2014, forming the Lessinia pack in Veneto (Italy). A positive trend of the number of wolf packs is documented over the years showing an additional increment in 2015-2016, **when 65 wolf packs and 12 pairs have been recorded over the Alps**. In particular, in Italy 27 packs, 8 pairs and 5 single wolves were documented; in France 31 packs, 3 pairs and 3 single wolves; in Switzerland 1 pack, 1 pair and 3 single wolves; in Slovenia 2 packs and in Austria the first single resident wolf. Of those, 3 transboundary packs between France and Italy and 1 between Switzerland and Italy have been documented. The map of Figure 1 shows the international dimension of the alpine wolf population.

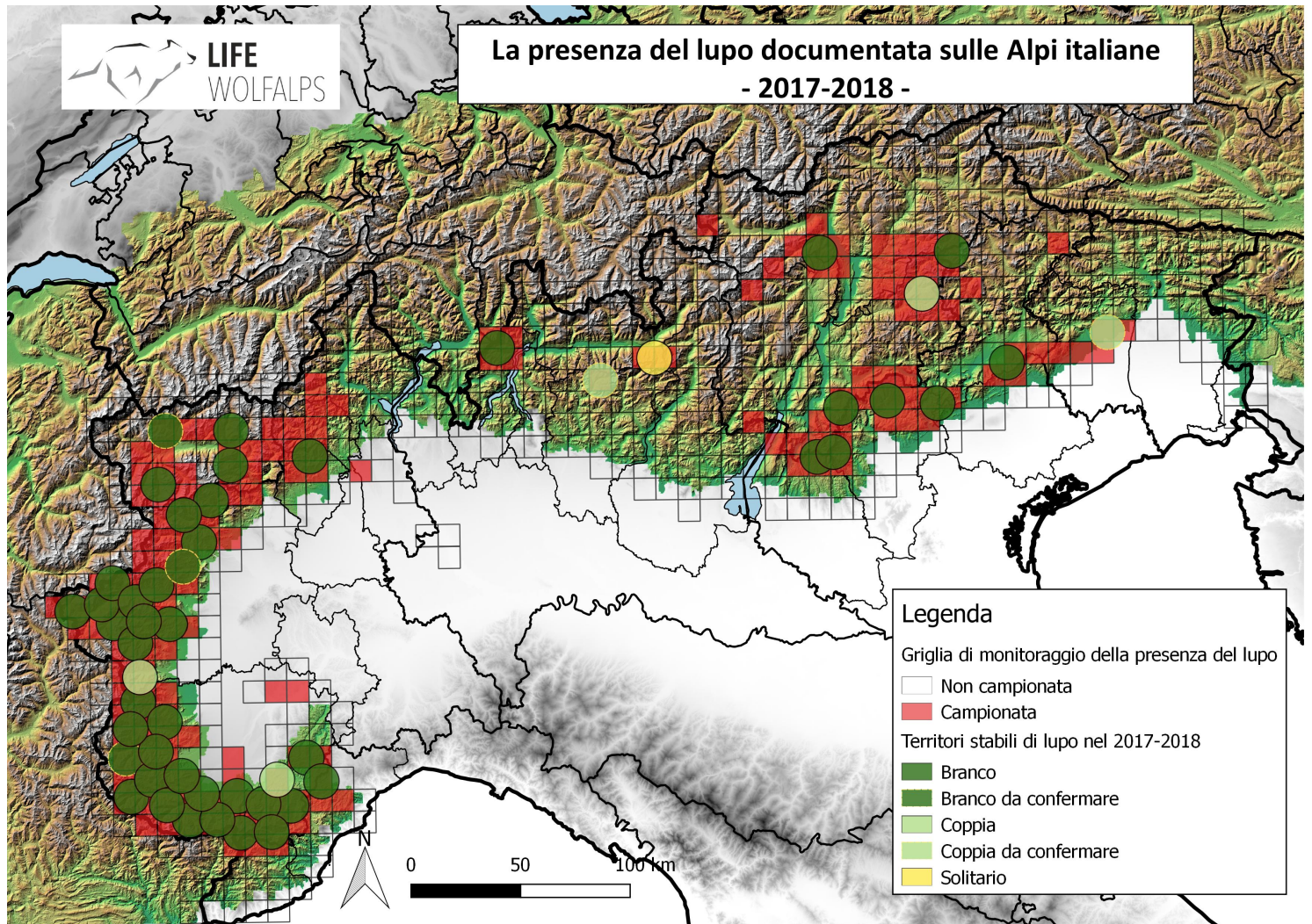
Hence, the alpine wolf population is now expanding to the Central-Eastern part where large tracts of the territory are still free. Long distance movements documented the first signs of reconnection between the three European populations (Italian, Dinaric, Carpathians) in the Central-Eastern Alps. Indeed the DNA investigations in Austria and East of Italy documented the presence of different haplotypes previously known as region-dependent within the same area, which may consequently improve the genetic diversity of the alpine population segment over time. For France and Italy population size estimations using “capture recapture” models based on non-invasive genetic samples have been conducted. However, this approach is not yet applicable to the entire population due to incongruities in datasets and methodological constraints of genetic procedures between labs, and an accurate estimate of the wolf population status and its parameters at the alpine level are still missing. Only the rough 2015-16 Figure 1 on number of packs is available now at the population level. Instead accurate country estimate are present. For example, **in the Italian Alps, the last estimate available is from 2017-18, developed by LIFE WOLFALPS, with 46 packs and 5 pairs, and a high level of inbreeding has been detected in the Central Alps** (at least 50% of the alphas are inbred in the area) (Figure 2).

In the most recent EC assessment (Kaczensky et al. 2013), the wolf population in the Alps is listed as not favourable yet, even if it is showed to be increasing demographically and spatially, particularly when we consider all the territory still available at the alpine level, the consistency of the packs, and the still fragile connection among the Dinaric and Apennine populations. In fact, wolves are not present yet in more than 60% of the Alps. However, in Art.17 assessment, single countries within the Alps considered wolves at an unfavourable level (in Slovenia and Austria), while France and Italy considered it favourable. However, a specific assessment of the “entire alpine population” has not been done yet, although it was suggested in the GPMP. The present project aims to tackle this. The recent population increment created local conflicts and misperceptions about the actual fragility of the population. In the Eastern Alps we are documenting the first contact between the Apennine, Dinaric and Central-European populations originally connected, however wolves have not settled successfully yet in this area. Hence, the population has a high European strategic importance and should be managed as a unique population, principal aim of the project.

Name of the picture: Figure 1_Wolf packs distribution in the Alps in 2015-2016



Name of the picture: Figure 2_Italian Alps wolf packs presence in 2017-2018-from project LIFE WolfAlps



Stakeholders involved and target audience of the project:

Key Stakeholdersinvolved:

Hunters: Hunters often perceive wolves as a competitor for shared prey species (large mammals) and blame the predators for reducing the game abundance and availability: this might be a cause for widespread conflict between wolves and hunters in the Alps. In the first Project LIFE WOLFALPS this stakeholder category was not effectively addressed, however after the interviews conducted in LIFE WOLFAPS, hunters asked openly to be partners in monitoring this impact and understand quantitavly the process behind predator prey relationships. Moreover, Human Dimension study in previous LIFE WOLFAPS project demonstrated that, among impacted stakeholders, hunters are the category more likely to change attitude becoming more supportive towards wolf conservation. To encourage this positive shift, hunters will be directly involved in LIFE WOLFALPS EU, playing active roles in a host of project activities, in particular in Actions A4, A5, C3, C4, E1.2, E2.1, E3, E4. In details, in the framework of a full participatory approach hunters will be involved in the development of the knowledge predator-prey-hunter relationship (Actions A4 and C3), in wolf monitoring (Actions A5 and C4) and they will be engaged through to the activity of the Stewardship Office (E2.1) in platforms and local meetings (Action E3) where their needs and suggestions in any management strategy will be considered and discussed. Hunters are indispensable "insiders" who have a strong understanding of local communities and politics and their active involvement will lead to two main positive results: an increase in wolf knowledge and conservation support, an improvement of game management and a more positive attitude toward wolves and the project in hunting magazines. An informative publication on predator-prey dynamics will be published and gadgets specifically designed for hunters will be produced in Action E1.2. Finally, hunters will be invited to talk to schoolchildren together with other stakeholders (farmers, foresters, ...) as experts in order to bring their own view point about wolves to schools, too (Action E4). The basis for the work will be given by the Alpine Hunting Districts' support to the project.

Livestock Breeders: Damage to livestock is one of the most important causes of wolf-human conflict, which makes prevention and livestock breeders' involvement crucial in solving problems. This conflict is more important where preventive measures are not correctly implemented, i.e. in recently recolonized areas, in areas where wolf presence is still problematic as habitual depredations occur. The negative attitude of local farmer towards wolf presence is often due to two main factors: the lack of preventive measures and the lack of timely, effective assistance from local authorities. Experience from other projects has shown that the presence of project staff in assisting farmers in using prevention systems and in taking prompt action in case of attacks is fundamental so that livestock breeders should not feel abandoned. Actions A2 and C1 will offer concrete and effective answers to both these needs with the creation of the new first-aid wolf prevention emergency teams, to be implemented in each country. The context study (Action A2) will permit the project to strengthen links with farmers, where they already exist, and to lay the foundations for new collaborations in those areas where there is not yet a consolidated collaborative relationship. Ad hoc information material for farmers about wolf intervention teams will be created within Action E1.2 .Contacts and relationship with livestock breeders and with agricultural associations will be taken and kept for the duration of the project thanks to the activity of the Stewardship office (E2.1). Breeders are the stakeholder category that in the past has proved to be the least willing to change their attitude towards the wolf: only concrete answers could effectively affect their negative attitude. Moreover they will be involved in platforms and local meetings (Action E3) to exchange experiences, and to discuss project results and actions dedicated to farmers together in order to make them even more effective and better integrated with RDP measures. Finally, livestock breeders will be invited to talk to schoolchildren together with other stakeholders (hunters, foresters, ...) as experts in order to bring their own view point about wolves to schools, too (Action E4). The basis for this last work will be given by the positive pilot educational experiences collected in LIFE WOLFALPS experience.

Decision-makers: Key decision-makers for the project are regional authorities and ministries of the 4 participating countries that are responsible for nature conservation. All 4 ministries have provided letters of support and the project results and data will be made available to governments to be implemented in the respective wolf management plans. Moreover, within Action A8 we will develop a "Summary of best practices for wolf Alpine population management". As a part of Action C6 we will realize 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 Natura 2000 sites, and in particular in the Sites directly involved in the project. The handbook will be produced in English/Italian to be used by decision makers in future spatial planning at the Alpine level, as a measure to prevent further fragmentation and habitat loss.

Environmentalists: We want to increase knowledge and support about wolves and the project among

conservation NGOs. They will be contacted and involved by the Stewardship Office (Action A2.1) and they will be invited to participate at workshops and platforms (Action E3). In Italy it would be of crucial importance to implement a participatory approach to discuss “burning issues” together related to the national wolf management plan and not only hybrid detection and control, management of bold wolves and best practices to be implemented in areas where the first urban wolves are present. According to the “shared interests” or “ownership” basic concepts of the project Communication and Engagement Strategy (Action E1.1) we will establish a durable stewardship with environmentalist NGOs in order to expand the project impact area and dissemination potentials thanks to a win-win engagement process: the project will share with NGO’s scientific contents, data and information materials and will support their initiatives that fit with the project Communication and Engagement Strategy. In return, we will ask the NGOs to co-produce and spread the project messages, contents and services to their audiences.

Target groups:

Journalists and influencers: Journalists and social influencers will be two important channels for dissemination of information about the project activities and about all the issues related to wolf conservation and wolf-human coexistence in the Alps. We will target both general local and national media, and thematic media, especially related to game management, agriculture and nature conservation. We will regularly provide them with well-prepared information that will carry key messages in accordance with the project Communication and Engagement Strategy (Action E1.1). Press releases and press conferences will mark the most important project achievements. Furthermore, we will actively engage journalists by organizing workshops recognized by journalists organizations (Action E2.1). Besides the above mentioned planned activities, project team members will be at journalists’ disposal for interviews through the media office. Finally the media office will prepare an online “media toolkit” to be progressively updated providing main information and some photos about the project and the wolf in the Alps to be used by partners when asked by journalists.

Local communities: Local communities will be informed about the project activities and provided with updated information about wolf thanks to dissemination events organized on a local scale.

School children and University students: School children, as “tomorrow's decision makers” will be reached through several targeted educational activities ranging from nursery school to university (Action E4). They will be provided with the most recent, complete and objective information about wolf and wolf-human coexistence in the Alps presented in the form best suited to their age. Thanks to the strong partnership built by the Stewardship Office (Action E2.1), key stakeholders such as hunters, livestock breeders and environmentalists will present their respective points of view about wolves during special experts’ conferences at school. School children of local schools will be involved in special activities (Action C7) and will take an active role in the project, building lasting support for wolf conservation capable of permeating local communities.

Teachers: Teachers have a fundamental role in providing children with environmental education and outdoor learning and LIFE WOLFALPS ambassador teachers proved to be an effective, durable and powerful dissemination tool. Thus, new ambassador teachers will be trained through summer schools and training for teachers (Action E4). Online educational resources will be also available in order to be available to a larger number of teachers than those directly contacted by the project.

Tourism professionals: Action C7 is dedicated to this target group. In order to enhance capacities for the correct use of wolves in ecotourism offers, we will organize workshops for nature guides, mountain facilities managers and other tourism professionals. In the seminars we will provide information on the interpretation of the species, guidelines to responsible wolf ecotourism and correct best practice advice for hikers where wolves are present. We will also develop and present to them sample touristic packages and new wolf-friendly products they will be encouraged to use and promote.

Tourists: Potential and current visitors to wolf areas will be addressed mainly through online based media. In particular the ecotourism portal developed in LIFE DINALP BEAR project will be updated with information and offers relevant to wolf conservation. Current visitors will also be reached via printed material about good practices for hiking areas where wolves are present.

General public: In order to achieve general publicity of the project we will disseminate knowledge through various materials prepared during the project within Action E1.2 (videos, website, Facebook profile, brochures, leaflets, posters etc.), public presentations, school programmes, information boards, as well as through intensive work with media (including press conferences and press releases).

Wolf conservation professionals from other countries: Wolf conservation professionals from other countries will be addressed mainly through targeted networking events and activities, such as workshops, thematic project conferences, experience exchange visits and scientific publications.



LIFE18 NAT/IT/000972

TECHNICAL APPLICATION FORMS

**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

TIMETABLE

Action		2019				2020				2021				2022				2023				2024			
Action number	Name of the action	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
A. Preparatory actions, elaboration of management plans and/or of action plans																									
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. Purchase/lease of land and/or compensation payments for use rights																									
C. Conservation actions																									
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						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

[illegible]



LIFE18 NAT/IT/000972

FINANCIAL APPLICATION FORMS

Part F – financial information

Budget breakdown cost categories	Total cost in €	Eligible Cost in €	% of total eligible costs
1. Personnel	5,601,762	5,601,762	46.92%
2. Travel and subsistence	524,774	524,774	4.40%
3. External assistance	3,097,814	3,097,814	25.95%
4. Durable goods			
Infrastructure	0	0	0.00%
Equipment	1,080,820	1,080,820	9.05%
Prototype	0	0	0.00%
5. Land	0	0	0.00%
6. Consumables	234,249	234,249	1.96%
7. Other costs	619,197	619,197	5.19%
8. Overheads	781,077	781,077	6.54%
Total	11,939,693	11,939,693	100.00%

Contribution breakdown	In €	% of total	% of total eligible costs
EU contribution requested	7,029,000	58.87%	58.87%
Coordinating Beneficiary's contribution	446,618	3.74%	
Associated Beneficiaries' contribution	3,400,962	28.48%	
Co-financers contribution	1,063,113	8.90%	
Total	11,939,693	100.00%	

Cost category in Euro										
Project action	Personnel (Days)	Travel	External assistance	Infrastructure	Equipment	Prototype	Land	Consumables	Other	Total
A1 Transboundary cooperation and coordination: establish the international Alpine wolf population working groups	40,467 (233)	20,340	6,000	0	0	0	0	0	1,850	68,657
A2 Establishment and training of the wolf prevention emergency teams, evaluation of the initial situation and operations strategy	292,225 (1,431)	54,628	195,900	0	25,150	0	0	12,750	44,970	625,623
A3 Training of new anti-poisoning dog units and coordination of international and national environmental judicial policy - definition of the overall strategy	26,409 (147)	10,900	34,100	0	1,500	0	0	2,600	3,600	79,109
A4 Active involvement of hunting organizations in wolf population management and development of strategy for a predator-prey-hunters relationship evaluation	58,257 (296)	2,962	15,350	0	326,650	0	0	0	800	404,019
A5 Optimization of an integrated surveillance of the wolf status at the international alpine population level	132,371 (870)	15,850	47,150	0	9,800	0	0	16,700	4,500	226,371
A6 Hybridization in the alpine population and connection corridor: define protocols, management actions, and teams of interventions	19,565 (108)	4,250	15,750	0	10,000	0	0	600	4,500	54,665
A7 Dealing with urban wolves: develop specific protocols for prevention, surveillance, and eventually managing bold wolves	15,831 (88)	2,580	2,900	0	0	0	0	200	0	21,511
A8 Summary of Best Practices for wolf population management and Slovenia Management plan	36,849 (191)	900	0	0	0	0	0	0	3,100	40,849
C1 Wolf prevention emergency teams: damage inspections, preventive methods, moderation, wolf control, conflict mitigation in hot spot areas	899,550 (5,489)	66,023	591,384	0	233,400	0	0	81,274	63,200	1,934,831

C2 Measures against illegal wolf killing and control of poison baits and coordination of international and national environmental judicial policy	303,881 (1,627)	78,370	36,050	0	227,900	0	0	4,960	27,300	678,461
C3 Building strong partnership: involving hunters in wolf-prey ecosystem functioning understanding	596,167 (3,276)	20,236	152,400	0	125,200	0	0	24,100	23,090	941,193
C4 Establishment of an integrated surveillance of the wolf status at the Alpine population level	456,966 (3,870)	34,677	540,430	0	77,220	0	0	88,065	17,200	1,214,558
C5 Wolf-dog hybridization and injured wolves: detection and control in the Apennine ecological corridor and in the Alps	49,836 (361)	1,750	58,300	0	15,000	0	0	0	8,000	132,886
C6 Decrease Habitat fragmentation and wolf traffic mortality through recovery of identified sink areas	12,396 (64)	1,000	77,000	0	0	0	0	0	500	90,896
C7 Economic benefits with wolf-friendly protective ecotourism packages and products	81,721 (466)	5,341	152,900	0	0	0	0	1,700	42,400	284,062
C8 The first special Life Alpine Young Ranger Wolf Program: in the field implementation over the boundaries to involve new generations in wolf conservation	67,811 (390)	3,649	109,750	0	0	0	0	0	48,500	229,710
D1 Assessment of attitudes and perceptions about wolves among general public and key stakeholder groups	110,998 (1,459)	18,918	47,000	0	2,000	0	0	700	9,000	188,616
D2 Assessment of socio-economic impact of the project and ecosystem functions	140,198 (641)	13,000	27,500	0	0	0	0	0	0	180,698
D3 Evaluation of effectiveness of mitigation measures implemented to prevent traffic related wolf mortality in sink areas	0 (35)	200	0	0	0	0	0	0	0	200
E1 Dissemination planning and execution	412,053 (2,626)	25,445	230,630	0	0	0	0	0	161,887	830,015
E2 Stewardship and Media Office to Enhance Engagement, Replication and Multiplication of the Project Impact	86,419 (453)	3,370	103,520	0	0	0	0	100	16,500	209,909
E3 Developing participatory approach and regional stakeholders' platforms	161,537 (839)	22,776	49,050	0	0	0	0	0	12,000	245,363
E4 Education to train the stewards of tomorrow	82,571 (422)	3,780	128,250	0	0	0	0	0	58,960	273,561

E5 Creativity for conservation: innovative dissemination campaigns	28,465 (134)	2,500	196,500	0	0	0	0	0	8,000	235,465
E6 Touring thematic conferences	75,315 (413)	44,133	76,000	0	0	0	0	0	44,000	239,448
F1 Coordination, management and administration of the project by the project steering groups	1,401,346 (8,285)	67,196	204,000	0	27,000	0	0	500	15,340	1,715,382
F2 After LIFE conservation plan	12,558 (66)	0	0	0	0	0	0	0	0	12,558
Overheads										781,077
Total	5,601,762 (34,280)	524,774	3,097,814	0	1,080,820	0	0	234,249	619,197	11,939,693

Costs per Beneficiary

Short name	Personnel (Days)	Travel	External assistance	Infrastructure	Equipment	Prototype	Land	Consumables	Other	Overheads	EU contrib.	Total eligible costs	% of total eligible costs
APAM	1,092,618 (7,273)	28,690	687,100	0	93,500	0	0	69,993	64,000	142,513	1,131,796	2,178,414	18.25%
APAC	87,882 (1,972)	6,240	172,200	0	40,200	0	0	3,200	64,110	26,168	248,000	400,000	3.35%
APAP	135,337 (839)	13,460	78,500	0	16,000	0	0	1,850	24,853	18,900	179,118	288,900	2.42%
APOS	38,753 (291)	6,094	54,800	0	0	0	0	33,000	10,500	10,020	94,963	153,167	1.28%
AREC	271,595 (985)	30,000	0	0	42,100	0	0	7,000	9,000	25,178	107,846	384,873	3.22%
CUFA	218,580 (1,226)	65,200	0	0	179,400	0	0	10,000	12,000	33,962	296,190	519,142	4.35%
ERSAF	218,046 (1,446)	46,190	195,000	0	15,000	0	0	2,000	15,300	34,407	186,885	525,943	4.40%
EURAC	226,100 (1,026)	31,200	12,500	0	0	0	0	0	20,000	20,286	192,253	310,086	2.60%
METO	222,619 (2,338)	26,987	127,450	0	19,100	0	0	1,760	13,300	28,784	272,800	440,000	3.69%
MUSE	293,370 (1,710)	14,000	262,250	0	0	0	0	0	45,600	43,065	460,800	658,285	5.51%
ONCFS	995,024 (5,633)	25,188	107,790	0	349,300	0	0	4,500	26,500	105,581	1,000,607	1,613,883	13.52%
PNDB	0 (480)	0	119,050	0	98,250	0	0	5,000	12,700	16,450	155,899	251,450	2.11%

PNM	193,600 (1,177)	6,305	236,684	0	2,500	0	0	0	27,440	32,657	309,495	499,186	4.18%
RAVA	89,925 (441)	42,150	210,750	0	40,150	0	0	49,646	20,000	31,683	300,268	484,304	4.06%
RELI	348,522 (1,904)	14,690	195,700	0	35,380	0	0	0	8,584	42,201	399,947	645,077	5.40%
RELO	64,691 (329)	14,220	413,500	0	30,000	0	0	20,000	169,400	49,826	351,042	761,637	6.38%
SFS	508,895 (2,717)	84,074	87,100	0	92,900	0	0	0	43,970	57,166	611,873	874,105	7.32%
UL	305,845 (1,545)	32,861	71,790	0	25,040	0	0	26,300	20,840	33,787	361,524	516,463	4.33%
VUW	290,360 (948)	37,225	65,650	0	2,000	0	0	0	11,100	28,443	367,694	434,778	3.64%
Total	5,601,762 (34,280)	524,774	3,097,814	0	1,080,820	0	0	234,249	619,197	781,077	7,029,000	11,939,693	100.00%
Share of total eligible costs	46.92%	4.40%	25.95%	0.00%	9.05%	0.00%	0.00%	1.96%	5.19%	6.54%	58.87%	100.00%	

Coordinating Beneficiary's contribution

Country code	Beneficiary short name	Total costs of the actions in € (including overheads)	Beneficiary's own contribution in €	Amount of EU contribution requested in €
IT	APAM	2,178,414	446,618	1,131,796

Associated Beneficiaries' contribution

Country code	Beneficiary short name	Total costs of the actions in € (including overheads)	Associated beneficiary's own contribution in €	Amount of EU contribution requested in €
IT	APAC	400,000	152,000	248,000
IT	APAP	288,900	109,782	179,118
IT	APOS	153,167	58,204	94,963
AT	AREC	384,873	277,027	107,846
IT	CUFA	519,142	222,952	296,190
IT	ERSAF	525,943	339,058	186,885
IT	EURAC	310,086	117,833	192,253
IT	METO	440,000	167,200	272,800
IT	MUSE	658,285	197,485	460,800
FR	ONCFS	1,613,883	453,276	1,000,607
IT	PNDDB	251,450	95,551	155,899
FR	PNM	499,186	189,691	309,495
IT	RAVA	484,304	184,036	300,268
IT	RELI	645,077	245,130	399,947
IT	RELO	761,637	410,595	351,042
SI	SFS	874,105	87,411	611,873
SI	UL	516,463	51,647	361,524
AT	VUW	434,778	42,084	367,694
TOTAL Associated Beneficiaries		9,761,279	3,400,962	5,897,204

TOTAL All Beneficiaries	11,939,693	3,847,580	7,029,000
--------------------------------	-------------------	------------------	------------------

Co-financers contribution

Co-financer's name	Amount of co-financing in €
BMNT	25,000
DREALaura	10,000
FCAPELLINO	600,000
FFS	150,000
MOP	103,292
MOP	174,821
TOTAL	1,063,113