



LIFE09 NAT/IT/000183 COORNATA

“Development of coordinated protection measures for
Apennine Chamois (*Rupicapra pyrenaica ornata*)”

Sviluppo di misure coordinate di protezione per il Camoscio Appenninico



www.camoscioappenninico.it

After-Life Conservation Plan

Project Life09NAT/IT/000183 COORNATA

**“Development of coordinated protection measures for
Apennine Chamois (*Rupicapra pyrenaica ornata*)”**

01/09/2010 - 30/09/2014

30/09/2014



Coordinatore beneficiario:



Beneficiari associati:



REGIONE ABRUZZO,
REGIONE LAZIO,
REGIONE MARCHE,
REGIONE MOLISE,
REGIONE UMBRIA

Sostenitori istituzionali

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SUMMARY

LIST OF ABBREVIATIONS	1
PREFACE.....	2
INTRODUCTION	3
THE APENNINE CHAMOIS AND ITS HISTORICAL RANGE.....	3
THE BIRTH OF THE ABRUZZO NATIONAL PARK AND THE FIRSTS RE-INTRODUCTIONS	4
2008 – THE FOURTH NUCLEUS IN THE MONTI SIBILLINI NATIONAL PARK	6
THE LIFE COORNATA PROJECT: HISTORY AND SITUATION ANALYSIS	6
POST LIFE – LA PROSECUZIONE DEL PROGRAMMA DI CONSERVAZIONE.....	13
ATTIVITÀ GENERALI POST - LIFE PER LA CONSERVAZIONE DEL CAMOSCIO APPENNINICO.....	13
AZIONI SPECIFICHE POST-LIFE PER OGNI AREA PROTETTA	14
<i>Piano post-Life: Parco Nazionale della Majella.....</i>	<i>14</i>
<i>Piano post-Life: Parco Nazionale d’Abruzzo, Lazio e Molise.....</i>	<i>16</i>
<i>Piano post-Life: Parco Nazionale del Gran Sasso e Monti della Laga.....</i>	<i>18</i>
<i>Piano post-Life: Parco Nazionale dei Monti Sibillini.....</i>	<i>21</i>
<i>Piano post-Life: Parco Regionale Sirente-Velino</i>	<i>23</i>
ANALISI DI FATTIBILITÀ DEL PIANO POST-LIFE E PROSPETTIVE DI FINANZIAMENTO.....	24
CONCLUSIONI.....	27

LIST OF ABBREVIATIONS

CITES –Convention on International Trade in Endangered Species of Wild Fauna and Flora.

ISPRA – Superior Institute for the Environmental Research and Protection (*Istituto Superiore per la Protezione e la Ricerca Ambientale*)

IUCN – International Union for Conservation of Nature.

MATTM – (Environmental Ministry for the Protection of the Territory and the Sea. (*Ministero dell’Ambiente e della Tutela del Territorio e del Mare*).

PAN – National Action Plan for the Apennine chamois (*Rupicapra pyrenaica ornata*).

PNALM –Abruzzo, Lazio e Molise National Park

PNGSL –Gran Sasso e Monti della Laga National Park

PNM –Majella National Park

PNMS –Monti Sibillini National Park

PRSV –Sirente Velino Natural Park.

PREFACE

This document has been realized during the Action E4 of the Life Coornata Project with the general aim to provide information on the prosecution of the activities during the after-Life period. Before the Life Coornata, several projects have been carried out to preserve the Apennine chamois. We are strongly convinced that without the knowledge of the pre-Life activities, it would be hard to understand both the work carried out during the Life Coornata and the activities programmed for the after-Life period. That's why we decided to write this Plan including a section dedicated to the most important pre-Life conservation activities, whose natural prosecution is represented by the Life Coornata and after-Life programmes. This document has been realized following the indications available in the Communication Tools section of the European Commission web site dedicated to the Life Programme. It has been also realized according to the specific Life and Natura 2000 requirements. In order to achieve a better comprehension of the activities carried out during the Life Coornata Project, we strongly recommend referring also to the Final Report and/or the Layman's report (available on the website www.coornata.eu or on the Project beneficiaries websites).

INTRODUCTION

The Apennine chamois and its historical range

The Apennine chamois or Abruzzo chamois (*Rupicapra pyrenaica ornata*, Neumann 1899) is considered a separated subspecies basing on genetic, morphology, palaeontology and ethology. It is a subspecies endemic of Italy, where it lives only in the Central Apennines. It is indicated as a priority species in the Annex II and IV of the Habitats Directive 92/43/CEE and it is included in the Annex II of the Bern Convention as a strictly protected fauna species. The Apennine chamois is also inserted in the IUCN Red List of Threatened Species where in 1996 was classified as “Endangered” while recently (2008), thanks to the conservation actions carried out, has been re-classified as “Vulnerable”. Finally, *Rupicapra pyrenaica ornata* is the only *taxon* of the genus *Rupicapra* included in the CITES (Appendix II) and is classified as a “particularly protected” species in the Italian laws (Law n. 157/92). The Apennine chamois, together with the subspecies *Rupicapra pyrenaica pyrenaica* and *Rupicapra pyrenaica parva*, living respectively on the Pyrenees and in Spain, belongs to the south-western chamois group. This group is different from the north-eastern chamois group, to which the 7 subspecies of the specie *Rupicapra rupicapra* belong (Figure 1). The presence of the south-western chamois (SWc) in Europe is witnessed since from the Riss glacial stage (250.000-150.000 years ago) while the presence of both the SWc and north-eastern chamois is documented only since the Würm glacial stage (80.000-60.000 years ago).

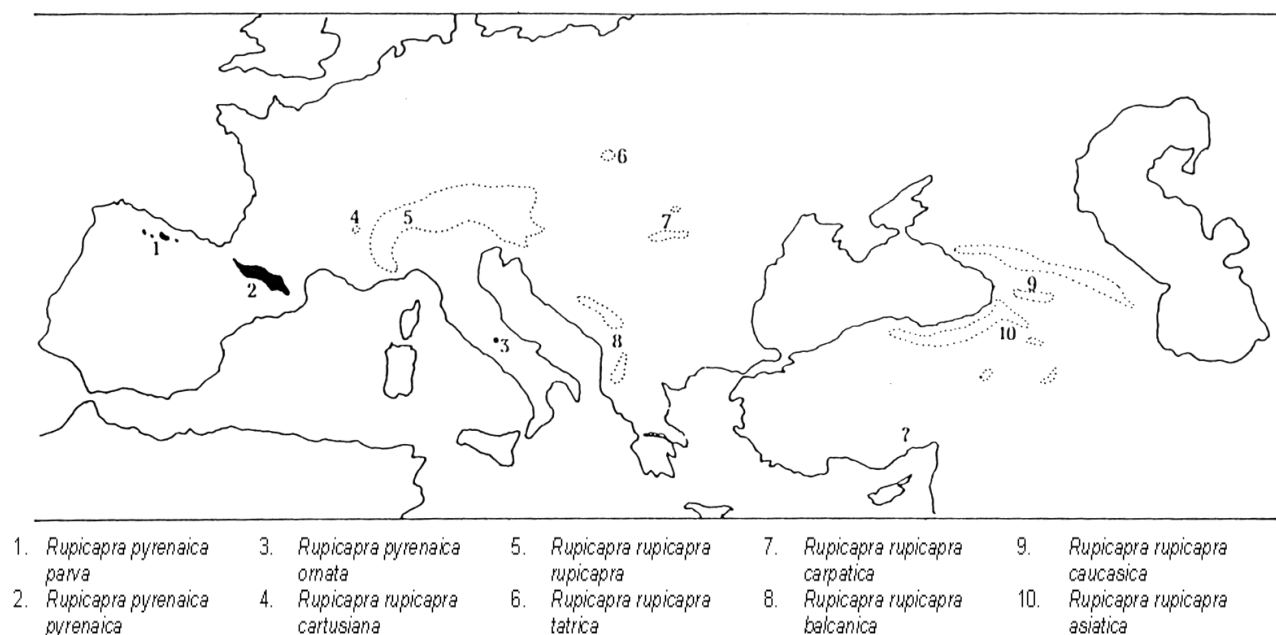


Figure 1. Distribution of the 10 subspecies of the genus *Rupicapra*. Number 1-3: South-western chamois group; number 4-10: North-eastern chamois group.

During the Holocene, the Apennine chamois was distributed on the mountainous areas in the Apennines between the Sibillini Mountains and the Pollino Mountain but, due to the human persecution, its range decreased more and more over the years. The presence of the Apennine chamois on the Sibillini Mountains is certified by the discovery of subfossils aged 10.000 years old. Furthermore, the presence of some historic quotes referring to “wild goats” suggests it was still present at the end of the XVIII century. On the Gran Sasso Mountain the last individual was shot at the end of the XIX century and in 1915, at the beginning of the World

War I, only a remnant 30 individuals Apennine chamois population was present on the “Costa Camosciara”, in the territory that would then become the Abruzzo National Park.

The birth of the Abruzzo National Park and the firsts Re-introductions

The area in which the Apennine chamois survived in a 30 individuals remnant population, became in 1922 the Abruzzo National Park (later enlarged and renamed Abruzzo, Lazio e Molise National Park), a protected area created also to specifically protect the last individuals of this endemic subspecies. Thanks to the conservation policies implemented, the population grew until reaching 100 individuals but, during the World War II, the population suffered a new numeric fall and only 40 individuals survived in 1949. Starting from that year, thanks to the strong conservation policy carried out by the Park during the seventies, the population experienced a new growth until reaching about 400 individuals at the beginning of the nineties (Figure 2).

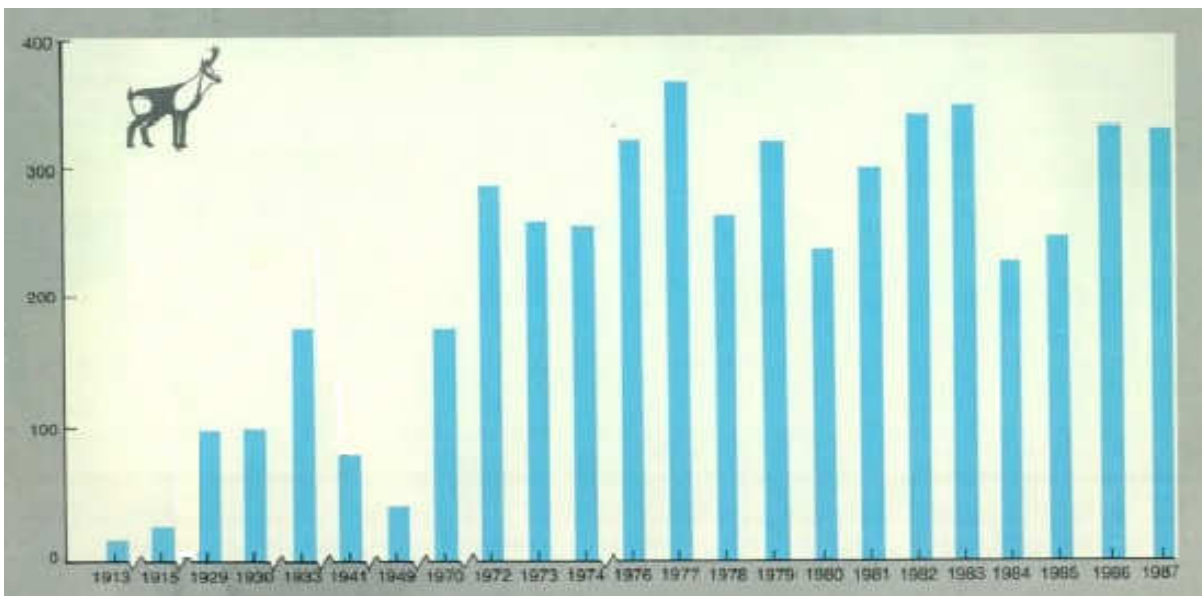


Figure 2. Minimum number of chamois present in the Abruzzo National Park from 1913 until the beginning of the nineties. From Lovari, 1989 “L’evoluzione del camoscio appenninico”, *Le Scienze* 247:46-55.

Despite the good results achieved, the presence of a sole remnant population with low genetic variability in a restricted area, strongly threatened this subspecies survival. The first proposal of a Re-introduction programme outside the Abruzzo National Park boundaries was elaborated in 1974 but only in 1991 it actually started with the “Operazione Camoscio”. The aim of these first re-introductions was to create new colonies on the Gran Sasso and Majella Massifs, two areas that would later become the Gran Sasso e Monti della Laga National Park and the Majella National Park (BOX 1). This programme was realized by the Abruzzo National Park in collaboration with the Italian Alpine Club (CAI) and the WWF Italia, also thanks to the Life Natura financing tool that sustained the whole conservation programme of the Apennine chamois (BOX 2).

BOX 1. The Apennine chamois: a Parks ambassador

The first Apennine chamois reintroductions have been realized on the Majella and Gran Sasso Massifs. The presence of this subspecies in the two areas gave an important input for the conservation of the Central Apennines and, actually, promoted the institution of the Majella National Park and the Gran Sasso e Monti della Laga National Park.

In the Majella National Park (PNM) in 1991, three nuclei have been released for a total of 22 individuals (7 males and 15 females). Later 11 individuals (4 males and 7 females) were released from the captive-breeding enclosure of Lama dei Peligni (CH) and 5 males were released during the Life Nature *Rupicapra II* (LIFE 02 NAT/IT/008538, see BOX 2).

BOX 2. The Life Nature tool & the Apennine chamois conservation

Since from the beginning, the Life Nature financing tool has been fundamental for the Apennine chamois conservation programme. Starting from 1992 11 Life projects have targeted this subspecies conservation: four consisted of actions aimed to release individuals and create new colonies (LIFE92 NAT/IT/013001, LIFE94 NAT/IT/000607, LIFE02 NAT/IT/008538, LIFE09 NAT/IT/000183), the remaining contributed directly or indirectly to improve its conservation status through the mitigation of limiting factors.

Code	Acronym	Year of financing	Coordinating Beneficiary Country	Type of beneficiary
LIFE 92 NAT/IT/013002	-	1992	ITALY	NGO
LIFE 92 NAT/IT/013001	MAMMIFERI	1992	ITALY	PARK/RESERVE
LIFE 94 NAT/IT/000575	-	1994	ITALY	NGO
LIFE 94 NAT/IT/000607	-	1994	ITALY	PARK/RESERVE
LIFE 95 NAT/IT/004800	-	1995	ITALY	PARK/RESERVE
LIFE 95 NAT/IT/005907	MAMMIFERI	1995	ITALY	NGO
LIFE 95 NAT/IT/004801	-	1995	ITALY	NGO
LIFE 97 NAT/IT/004143	RUPICAPRA	1997	ITALY	PARK/RESERVE
LIFE 02 NAT/IT/008538	RUPICAPRA II	2002	ITALY	PARK/RESERVE
LIFE 09 NAT/IT/000183	COORNATA	2009	ITALY	PARK/RESERVE
LIFE 11 NAT/IT/000234	PRATERIE	2011	ITALY	PARK/RESERVE

In the Gran Sasso e Monti della Laga National Park (PNGSL) 3 nuclei have been released between 1992 and 1994, for a total of 26 individuals (10 males and 16 females). Later 7 chamois (6 males and 1 female) have been released from 1998 to 2001 during the project Life Nature *Rupicapra* (LIFE 97 NAT/IT/004143, see BOX 2).

2008 – The fourth nucleus in the Monti Sibillini National Park

In 2001 the Italian Environmental Ministry published the *National Action Plan for the Apennine chamois conservation*, basing on the *Caprinae* action plan published in 1997 by the IUCN Caprinae Specialist Group. The general conservation objective was to have at least 1.000 individuals in 5 population geographically isolated and, thus, not subjected to pathogens transmission. Beyond the historic population of the Abruzzo National Park and the two new-born population of the PNM and PNGSL, two more populations needed to be created. In 1996, during the Project LIFE95 NAT/IT/005907, a study was conducted to evaluate the feasibility of re-introductions in the Monti Sibillini National Park (PNMS), the Sirente Velino Natural Park (PRSV) and the Pollino National Park. The PNMS and the PRSV were judged suitable to host chamois while in the Pollino National Park the suitable areas are too restricted to ensure the development and conservation of a vital population. The two new populations had, thus, to be created in the PNMS and the PRSV.

In September 2008 the programme wrote during the Project Life Nature 02NAT/IT/008538 was activated and the first releases of wild individuals captured in the PNALM were realized. During the first year 8 individuals (3 males and 5 females) captured in the PNALM were released and, later, more individuals captured in the captive breeding enclosures of PNM and PNGSL were released. All the released chamois were equipped with ear tags and GPS collars and were intensively monitored. In the first phase of the re-introduction programme two positive results were particularly important: the stable permanence of the females in the release area and the birth of 2 kids in 2009 and 4 in 2010. These positive results, together with the death of only 4 individuals (3 males and 1 female, dead for natural causes) confirmed the quality of the release area chosen and the methods applied.

Basing on the experience gained during the firsts re-introductions in the PNM and PNGSL, to maximize the success probability at least 30 individuals (founders) had to be released to create the two new populations. To reach the general objective pursued, additional individuals had to be released in the PNMS and the creation of the fifth population in the PRSV needed to be started.

THE LIFE COORNATA PROJECT: HISTORY AND ANALYSIS OF THE SITUATION

When the Life Coornata Project was written most of the Apennine chamois conservation actions had already been started and successfully carried out but the general objective of the PAN had not been achieved yet. The presence of limiting factors potentially able to frustrate the long term chamois conservation, encouraged the 5 Parks of the central Apennines to meet and prepare all together a new Life Nature Project, committing to Legambiente the coordination of the communication activities. Basing on the PAN, the Project was structured in order to counter the main threats to this subspecies conservation. However from the PAN publication (2001) until the Life Coornata drafting, several changes happened in the features of chamois populations and this fact necessarily determined a re-examination of the actions to be carried out. In the PAN, indeed, it was foreseen to capture wild individuals from the

PNALM both to be re-introduced in the PNMS and in the PRSV and to reinforce the two new populations of the PNM and PNGSL. When the Life Coornata was prepared the PNM and PNGSL populations had the size of about 500 and 300 individuals respectively and were in the phase of exponential growth so it was senseless to reinforce the populations with new releases. In the same time in the PNALM population, since that moment the only source population, started to emerge worrying data regarding the demographic trend and the population structure.

The programme foreseen in the PAN was thus modified and turned into the general programme of the Life Coornata Project. It aimed to act in two main directions:

- 1) To complete the re-introductions in the PNMS until reaching the established minimum number of releases (MVP, 30 founders released) and to start the re-introduction in the PRSV with animals coming from the captive breeding enclosures as well as wild individuals captured in the PNM and PNGSL;
- 2) To implement extraordinary measures for the conservation of the historic Apennine chamois population in the PNALM.

The Life Coornata Project has been the first in which all the Parks interested by the presence of the chamois worked together to preserve this subspecies. The concrete conservation actions have been thus accompanied by important actions aimed to coordinate the activities and share the methods, thanks to which it has been possible to develop a unique conservation strategy for all the existent populations.

BOX 4. Threats countered with the Life Coornata Project

The Life Coornata Project was aimed to contrast directly all the threats and limiting factors with “Very high” and “High” relevance and three of the main threats with “Medium” relevance, indicated in the National Action Plan for the Apennine chamois” (2001).

Threats and e limiting factors individuated	Relevance	Countered with the Life Coornata
Limited number of individuals	Very high	✓
Health risks connected to interactions with livestock	High	✓
Competition with livestock and other wild ungulates	Medium	✓
Low dispersal and colonization rate	Medium	✓
Free-ranging dogs	Medium	
Poaching	Medium	
Tourism disturbance	Medium	✓

During the Life Coornata, from 01/09/2010 to 30/09/2014, have been pursued and achieved the following 7 objectives considered as priorities in the Apennine chamois conservation:

1) *Coordinated management of all the Apennine chamois nuclei*

Despite the presence of several Parks involved in the Apennine chamois conservation, when the Life Coornata was prepared there wasn't any coordinating authority able to guarantee the implementation of a unique conservation strategy. With the Life Coornata it was created the *Comitato di Coordinamento Permanente* (CCP), a coordinating authority formed by the Project beneficiaries, the Environmental Ministry (MATTM) and ISPRA. The work of the CCP allowed a better development of the actions foreseen in the Project and allowed the implementation of a unique, coordinated and common strategy for the Apennine chamois conservation. Given the role assumed by the CCP, the MATTM decided to nominate it as the referring authority to draft the new Action Plan for this subspecies conservation to be published on 2015.

2) *Realization of wild chamois captures in the new source populations of PNM and PNGSL*

Being not possible to capture wild individuals in the PNALM, due to the worrying demographic trend of this population, to implement the re-introductions foreseen in the project it was programmed to realize wild chamois captures in the PNM and PNGSL. A total of 44 chamois were wild captured, 27 in the PNM and 17 in the PNGSL: 11 were released in the PNMS, surpassing the Project objective (10 wild chamois to be released); 13 were released in the PRSV, surpassing the Project objective (4 wild chamois to be released); 7 were released *in situ* in the PNM; 9 were released *in situ* in the PNGSL and 4 died during the capture.

In the PNM and PNGSL wild chamois captures were realized both using the teleinjection, the only method ever used in the PNALM, and mechanical multi-individual immobilization methods never experimented before for the Apennine chamois: box traps, modified box traps for caves, *up-net*[®].

The captures and the monitoring activities have been realized basing on specific protocols produced during the Project.

The success obtained in the wild chamois captures in the PNM and PNGSL has been a fundamental result not only for the achievement of the Project objectives, but also for the prosecution of the Apennine chamois conservation. The possibility to count on two source population, beyond the historic PNALM population, allows to implement the necessities and foreseen conservation measures otherwise not feasible.

3) *Conclusion of the releases to create the IV population in the Monti Sibillini National Park*

In the PNMS 18 individuals have been released (5 males, 13 females): 11 wild chamois captured in the PNM and PNGSL, surpassing the Project objective (10 wild chamois to be released); 7 animals coming from captive breeding enclosures, surpassing the Project objective (5 chamois to be released). With the release of the above-mentioned individuals (17 if we consider that one died within the 24 hours after the release) the objective of 30 founders released has been achieved and this should be enough to guarantee the long-term conservation of the PNMS population. The high fidelity of the individuals to the release area (Monte Bove North) and the increasing of births over the years, witness the quality of the choices made and the methods applied. In 2014 the PNMS chamois population reached 72 individuals and with the monitoring activity emerged the first evidences of a spatial expansion.

4) *Creation of the V population in the Sirente Velino Regional Park*

The creation of the 5th population in the PRSV has been realized passing through a preliminary phase and an operational phase. During the preliminary phase the existing suitability plan has been updated and improved, the release site has been individuated, a release programme has been drafted and several activities have been implemented to counter the possible impact of the limiting factors individuated. During the operational phase, started in July 2013, 17 individuals (8 males and 9 females) have been released, surpassing the Project objective (8 chamois to be released): 13 individuals were captured in the PNM and PNGSL (4 captures foreseen in the Project); 4 individuals were captured in the captive breeding enclosures. During the first birth season after the firsts releases (spring 2014) 5 kids were born and in 2014 twenty-one chamois were present (17+5-1 female that died 10 days after the release for predation). The fidelity to the release site and the birth of 5 kids from 6 females present during the mating season, in the first birth season after the firsts releases, witness the quality of the choices made and the methods applied. In the PRSV, in order to achieve the objective of 30 founders released, 13 chamois need to be released in the next years.

5) *Analysis and solving of the problems emerged in the PNALM population.*

The causes of the problems emerged regarding the demographic trend and the population structure, have been investigated with a multi-disciplinary approach in collaboration with university centres. In order to augment the efficiency of data collection and in order to gather the highest number of information, 20 chamois have been captured and monitored with the use of collars. Data collected have been thus analysed as follows:

- Necropsies and laboratory analysis on chamois carcasses (found incidentally or through the telemetry monitoring) and on other wild ungulates carcasses potentially able to transmit pathogens (red deer, roe deer, wild boar);
- Analysis of the spatial overlap between chamois and other wild ungulates (red deer and roe deer) and grazing livestock;
- Analysis of the dietary overlap between chamois and red deer;
- Analysis of the structure and estimation of the demographic parameters for each herd and for the whole population, with particular care to the reproductive index (number of kid/number of potentially reproductive females) and the kid survival to the first year of life (number of yearling_{x+1}/number of kid_x).

All the activities have been carried out basing on specific protocols produced during the Project. The data analysis allowed understanding that the situation in the PNALM is determined by multi-factorial causes and a specific Intervention Plan has been drafted to counter all the limiting factors emerged.

6) *Improvement of the health management of livestock grazing in chamois areas.*

The presence of grazing livestock can be a limiting factor for the Apennine chamois populations, not only because it's a potential spatial and trophic competitor but also because it's a potential vehicle of pathogens. The veterinary laws obligate the administration of treatments only to counter the diseases that could affect, directly or indirectly, the human being. No compulsory preventive measures exist, instead, to counter the pathogens potentially dangerous for wild animals, neither if the grazing activity is developed in a

protected area. For this reason during the Life Coornata Project, have been developed activities aimed to administrate specific treatments (against parasitic and vaccines) in the farm working inside the chamois areas. Additionally, a campaign has been developed aimed to raise awareness about the necessity of implementing such specific treatments, addressed both to farmers and health surveillance authorities. Even though the participation of farmers to the special programme carried out was entirely on a voluntary basis, with the Life Coornata Project until 100% of the potentially interested farms have been involved and 91% to 100% of the livestock heads potentially in contact with chamois have been treated.

7) Spreading of Project results and augmenting the knowledge about the species and its conservation issues

Despite the Apennine chamois is one of the *taxa* with the highest conservation value in Italy, the public poorly know it and its conservation issues and, often, confuse it with the Alpine chamois. For this reason during the Life Coornata a well-structured communication programme has been developed, addressed to different targets. A web site has been realized (www.camoscioappenninico.it) and it represented a reference Internet portal for the dissemination of news about the Project and newsletter about the chamois, for the sharing of Project results and for the dissemination of information about chamois history and biology. An environmental education programme has been realized for primary schools and a specific leaflet has been created for teachers, an educational documentary has been realized addressed to the public, leaflets and other dissemination material have been realized for Parks frequenters and, finally, a press tour has been realized to involve journalists and raise awareness. The analysis of questionnaires distributed at the beginning and the end of the Project, suggests that the communication programme carried out produced a considerable increase of the knowledge of chamois, confirming the quality of the communication actions developed.

At the end of the Project a final congress has been organized, the Chamois International Congress, during which for the first time data about all the 10 chamois subspecies existent have been presented.

Table 1. Main results and key challenges of the Life Coornata Project.

Main results	Key challenges
Conclusion of releases in the PNMS	Realization of wild chamois captures in the PNM and the PNGSL
Release of the first chamois nucleus in the PRSV (13 individuals released)	Successfully experimentation of mechanical immobilizing methods for multi-individual captures
Drafting and formal approval of the Intervention Plan in the PNALM	
Diffusion of best practices for the implementation of preventive measures for the health of livestock	

Main results	Key challenges
Raising awareness about the Apennine chamois and its conservation	
Coordinated management of the 5 chamois populations in the 5 Parks	

During the Life Coornata important results have been obtained and key challenges have been overcome (Table 1), both fundamental not only to achieve the Project objectives but also to continue the chamois conservation. At the end of the Life Coornata Project, the general objective of the PAN has been achieved as more than 2000 chamois are present in 5 populations geographically isolated. However the PRSV population is still in a critical phase and is thus necessary to continue the re-introduction activity until the release of 30 founders. In the same way in the PNALM the Intervention Plan has been drafted but it is necessary to actually implement all the conservation measures foreseen, with the planned time schedule (see Table 2).

Table 2. SWOT Analysis of the situation at the end of the Life Coornata Project

SWOT Analysis	
Strengths	Weakness
<p>More than 2000 individuals present; Present 5 populations geographically isolated; Present two source populations (PNM and PNGSL) beyond the historic population (PNALM); Experience gained in the use of mechanical immobilization methods and multi-individual wild capture methods; Already released 17 individuals in the PRSV out of 30 foreseen; Presence of positive signals of spatial and numeric increasing in the newest populations (PNMS e PRSV); Presence of an Intervention Plan for the PNALM population, formally approved and operating; Presence of an authority for the implementation of a unique and coordinated conservation strategy; Presence of a good level of awareness for the implementation of best practices for livestock health surveillance; Authorities show knowledge of the problems and willingness to continue the conservation actions.</p>	<p>Limited possibilities to have personnel additional to the civil servants already working in the Parks; Difficulties inherent the bureaucratic procedure to change the now-existing preventive measures adopted for livestock health surveillance; Possible reduction of the funds supplied by the State to the Protected areas, given the now-existing economic situation of the Country.</p>
Opportunities	Threats
<p>Possibilities to receive funds connected with Natura 2000; Possibilities to receive special funds from the Government Authority (MATTM) for the biodiversity conservation; Increasing interest showed by the public opinion and stakeholders.</p>	<p>Presence of a population (PNMS) still in an initial growth phase; Presence of a population (PRSV) still in the critical phase of establishment; Possibility that the actions foreseen in the Intervention Plan in the PNALM are not implemented with the methods and the time schedule planned.</p>

AFTER- LIFE: THE CONTINUATION OF THE CONSERVATION PROGRAMME

The after-Life plan will be realized following two main scopes: to improve the Apennine chamois conservation status and to counter the main threats and limiting factors still existent. During the Project drafting 6 actions to be continued in the after-Life period have been preventively individuated, basing on the evaluation of what would reasonably be the situation at the end of the Project itself. Basing on the SWOT analysis realized at the end of the Project (Table 2), being the objectives pursued actually achieved (and surpassed), the planning of the after-Life activities is consistent with the one preventively realized. The three main actions to be carried out are, in order of decreasing priority, the conclusions of the releases in the PRSV, the monitoring of the population in the PNMS and the implementation of the Intervention Plan in the PNALM. Beyond the above-mentioned priority technical actions, it is useful and appropriate also to continue the coordinated management of the 5 Apennine chamois populations, realized for the first time during the Life Coornata. The activities that will be implemented during the after-Life period can thus be divided into two groups: the first represented by general actions common to all the 5 central Apennines Parks interested by the presence of chamois; the second represented by the specific actions to be implemented in each protected area. The after-Life plan here presented as a duration of 5 years, thus all the activities described in the following paragraphs are supposed to last for 5 years unless diversely specified. All the activities will be carried out with the same methods applied during the Project, following the protocols drafted during the Project itself.

The prosecution of the communication activities is not presented in this document but is specified in the document "*Documento riepilogativo della strategia di conservazione adottata durante il Progetto e da proseguire nel periodo post-Life*" attached to the Life Coornata Final Report (Annex XIII).

General after-Life activities for the Apennine chamois conservation

During the Action A2 the coordinating authority *Comitato di Coordinamento Permanente* (CCP) for the Apennine chamois conservation has been instituted. This authority continued his work during the entire Project with the Action D1. The CCP activity, as foreseen during the Project preparation (see form B5), will be prosecuted during the after-Life period to guarantee the implementation of adequate and coordinated Apennine chamois long-term conservation measures. The Life Coornata beneficiaries during the Project drafting, committed to allocate some funds to the prosecution of this action in the 5 years after the Project end, for a total of 17.000 euros (Table 3).

Table 3. Funds allocated by the beneficiaries to the prosecution of the coordinating body activity.

Action to be prosecuted in the after-life period	PNM	PNALM	PNGSL	PNMS	PRSV
A2 e D1	€ 3.400,00	€ 3.400,00	€ 3.400,00	€ 3.400,00	€ 3.400,00

The National Action Plan for the Apennine chamois has been published in 2001 and needs now to be updated both because formally expired and because the Apennine chamois situation has actually deeply changed and, consequently, different actions with different priorities need to be implemented. The activities carried out with the Life Coornata Project and the protocols realized have been evaluated by MATTM and ISPRA as important starting

points to activate the drafting of the new action plan. The MATTM thus decided to charge the coordinating body Comitato di Coordinamento Permanente, enlarged to other institutional subjects involved in the Apennine chamois conservation, to manage the preparation of this new important document. The prosecution of CCP activity in the after-Life period will also include the drafting of the new action plan, whose publication is foreseen within 2015. The realization of this document, not foreseen (nor predictable) during the Project preparation, doesn't require extra-costs so the funds already allocated are enough to guarantee the correct development of all the activities.

Specific after-Life actions to be implemented in each protected area

Each protected area interested by the presence of the Apennine chamois has a specific role in the realization of the three priority conservation actions individuated both during the Project preparation and basing on the SWOT analysis (Table 2). These are the conclusion of the releases in the PRSV, the monitoring of the PNMS population and the implementation of the Intervention Plan in the PNALM. The implementation of the above-mentioned actions requires, to every beneficiary, the carrying out of both institutional activities and specific activities aimed to continue the Life Coornata Actions. At the moment of the Project drafting all the beneficiaries estimated the cost of the Actions prosecution in the 5 years after the Project end the amounts estimated were reported in the B5 form (see Table 9a). However this document is aimed to give a more complete description of each beneficiary commitment in realizing the necessary activities, thus it is here reported for each beneficiary the after-Life plan including the costs of both the institutional activities and the Project Actions prosecution activities. Here follows, for each beneficiary, the after-Life plan with the actions foreseen, the responsible of their implementation and the estimated cost.

After-Life plan: Majella National Park

In the PNM, in the 5 years after the Project end, will be implemented activities aimed to continue the Project Actions and, in general, aimed to preserve the Apennine chamois population (Table 4). The following objectives will be pursued: 1) to capture the animals to be released in the PRSV to conclude the re-introduction; 2) to collect data on the size and demographic structure of the herds from which individuals are captured in order to notice the raising of any possible problem; 3) to obtain 1-2 estimates per year of the population size; 4) to administrate at least 1 treatment/year at the farms with livestock grazing in the chamois range; 5) to implement the exchange of individuals foreseen in the captive breeding programme; 6) to implement specific conservation measures aimed to counter any possible criticality noticed.

Table 4. After-Life plan in the Majella National Park.

*** This field has three possible values: high, medium, low.**

N	Activity	Action	Responsible	Overall cost estimation (5 years)	State of the activity	Priority*
1	Prosecution of wild chamois captures to release individuals (n. 13) and reach the MVP in the PRSV	C1	Gestione Faunistica Office	€ 20.000,00	Programmed starting from spring 2015	High
2	Prosecution of the pre- and post-capture monitoring through the observations and the radio-telemetry of individuals captured and released <i>in loco</i>	C1	Gestione Faunistica Office	€ 15.000,00	Currently implemented	High
3	Prosecution of the health monitoring and management for the livestock grazing in the chamois range	C6	Veterinario e Zootecnia Office	€ 20.000,00	Programmed starting from spring 2015	High
4	Prosecution of the captive breeding activities, with the exchange of individuals between the different enclosures	Activity foreseen in the Project but not financed (C3)	Gestione Faunistica/ Veterinario e Zootecnia Offices	€ 10.500,00	Currently implemented	Medium
5	Realization of block censuses: one in summer and one in autumn	Activity not foreseen in the Project	Gestione Faunistica Office	€ 30.000,00	Currently implemented	Medium
6	Monitoring of the potential limiting factors and implementation of conservation measures	Activity not foreseen in the Project	Gestione Faunistica Office	€ 15.000,00	Currently implemented	High

Costs (see Table 4) have been estimated considering civil servants costs, travel costs and consumables costs. The cost estimated to continue the wild chamois captures (row n. 1, Table 4) includes the purchase of a second up-net[®] (10.000 euro), already processed at the moment of submission of this document. In the costs estimation has not been included the purchase of additional durable goods as the ones already purchased during the Project or already owned by the Park are considered enough. In case additional personnel (temporary contracts or

external assistance) will be necessary, additional funds will be allocated for the development of some actions.

After-Life plan: Abruzzo, Lazio e Molise National Park

In the PNALM the prosecution of the activities in the 5 years after the Life Project end is aimed mainly to the implementation of the actions foreseen in the Intervention Plan (Table 5) and, thus, to the improvement of the Apennine chamois conservation status. The pursued objectives will be: 1) to improve the management of grazing livestock; 2) to counter the limiting factors existing in the territory; 3) to collect data on herds structure and demographic parameters; 4) to realize 1-2 estimates per year of the population size; 5) to monitor the evolution of the possible competition between red deer and chamois; 6) to implement an active and a passive chamois health surveillance; 7) to make aware the public and the stakeholders; 8) to implement the actions foreseen in the captive breeding programme.

Table 5. After-Life plan in the Abruzzo, Lazio e Molise National Park.

* This field has three possible values: high, medium, low.

N	Activity	Action	Responsible	Overall cost estimation (5 years)	State of the activity	Priority*
1	Preparation of a regulation to manage livestock	C2	Servizio scientifico e veterinario	€ 5.000,00	Currently implemented	High
2	Gathering of the surveillance on: - areas closed to tourists; - free-ranging dogs - illegal grazing livestock	C2	Servizio scientifico e veterinario	€ 20.000,00	Currently implemented	High
3	Management by the Park of the grazing areas in the Lazio region (Meta Mount and Cavallaro Mount)	C2	Servizio scientifico e veterinario	€ 10.000,00	Currently implemented	High
4	Chamois population monitoring through: -block censuses; -observations; -radiotelemetry	C2	Servizio scientifico	€ 40.000,00	Currently implemented	High

N	Activity	Action	Responsible	Overall cost estimation (5 years)	State of the activity	Priority*
5	Monitoring of the spatial competition between red deer and chamois	C2	Servizio scientifico	€ 20.000,00	Programmed for the spring 2015 and replied with biennial frequency	High
6	Prosecution of the active and passive chamois health surveillance	C2	Servizio veterinario	€ 15.000,00	Passive surveillance currently implemented; active surveillance (captures) programmed in 2015 and replied with triennial frequency.	High
7	<ul style="list-style-type: none"> - Making aware of public administration bodies of the Plan importance - Making aware and involvement of farmers - Making aware of residents, tourists and photographers 	C2	Servizio scientifico, veterinario	€ 5.000,00	Currently implemented	Medium
8	Prosecution of health monitoring and management of the livestock grazing in the chamois range	C6	Servizio Veterinario	€ 10.000,00	Programmed starting from spring 2015	High
9	Prosecution of the captive breeding activities, with the exchange of individuals between the different enclosures	Activity foreseen in the Project but not financed (C3)	Servizio Veterinario	€ 18.000,00	Currently implemented	Medium

Costs have been estimated (see Table 5) including civil servants costs, consumables costs, travel costs and, for some activities (row 4 and 5 Table 5), considering the ideal scenario which consists of having additional personnel (temporary contracts or external assistance) for all the 5 years of the after-Life period. Recurring to extra-personnel could be difficult (see § Feasibility analysis) so, in case of unavailability of funds to be used to pay external persons, the work will be carried out by civil servants ensuring the achievement of the results foreseen. In this case the overall cost of the after-life plan would be lower than the amount here-presented. At the moment of the submission of this document, an announcement of selection has already been banned to employ two external persons, for a total of 24.000 euros, in the population monitoring and the red deer-chamois competition monitoring activity. These contracts will be effective until 30/11/2015 and have been realized in the context of a specific project financed by the MATTM. In the costs estimation the durable goods purchase has not been considered as the goods acquired during the Project as well as the ones already owned by the Park are considered enough.

In the PNALM the after-Life plan mainly coincides with the Intervention Plan "*Piano di Intervento Operativo per la gestione e la conservazione del camoscio appenninico nel Parco Nazionale d'Abruzzo, Lazio e Molise*" drafted during the Action C2. The Intervention Plan drafting has been completed at the end of the Action itself (30/09/2013) and it has been ratified with the President Resolution n.1/2014 in date 28/04/2014. Unlike the other beneficiaries, thus, in this Park the after-Life activities have been already implemented during 2014 and, particularly, when this document has been drafted the following activities have already been implemented (see Table 5):

- 1) Preparation of a regulation to manage livestock: the absence of the Park Plan, the presence of a confused administrative procedure to approve it, and the absence of the executive council "*Consiglio Direttivo*" make difficult the short-term preparation of a regulation to manage grazing livestock. During 2014 thanks to a specific financing, a pastures map of the Park, and particularly of the chamois range, has been realized in order to verify the status and quality of pastures and, consequently, the number of livestock heads they can sustain. In absence of a regulatory tool (i.e. the specific regulation required), the Park personnel is developing specific meetings with the local authorities and the farmers to obtain the drafting of a shared regulation of pastures use in all the Park territory. This action is foreseen also in the Life Arctos and in the Management Plan of the SCI IT7110205 and the SPA IT7120132. It has been necessary to include it also in the Intervention Plan drafted during the Action C2 to make object of the action all the chamois range, otherwise partly excluded because the SCI and the SPA are just a part of the whole Park and External Protection Area territories.
- 2) Gathering of the surveillance of areas closed to tourists, of free-ranging dogs and of illegal grazing livestock: even though the surveillance action is an institutional activity and even though the closure of some areas to tourism is established by the Park, the activities carried out during the summer are so onerous that made (and still make) it difficult to implement the required checks (particularly in 2014 because of surveys on fauna damages, tourists emergencies, confident bears, bear hair-snagging and count of bear females with cubs). There is, however, the consciousness that the surveillance improvement in the chamois range is more and more necessary. This will therefore be realized through the development of training and raising awareness meetings with the surveillance operators on the importance of the wild fauna (particularly bear and chamois) as well as through a more accurate planning of the institutional activities that will be implemented following standardized procedures. Starting from march 2015

several workshops will be realized to motivate and inform all the surveillance personnel (Park rangers and Forestry Service personnel), the environmental education personnel and the tourism operators. To counter the presence of free-ranging dogs, during 2014 a vaccination/registration campaign has been carried out with the help of the National Body for the Protection of Animals (ENPA): 323 dogs have been vaccinated and 226 dogs have been registered. This programme will be implemented in the next years, compatibly with the necessary authorizations.

3) Management by the Park of the grazing areas in the Lazio Region (Meta Mount and Cavallaro Mount): the Municipality of Picinisco gave the use of high elevation pastures to the farms working in its territory for the next 5 years and this will make difficult the implementation of this action at the short-term level. However to try to recovery the possibility to implement this action, the Park personnel is organizing meetings (some already realized) with the Picinisco Mayor in order to make the Municipality itself to prepare a shared Regulation to improve the management of the grazing areas.

4) Monitoring of the chamois population: in 2014 the chamois population monitoring has been continued through the radio-telemetric activity carried out for animals equipped with a still-functioning radio-collar (n.2, 1 VHF and 1 GPS), as well as through the realization of block censuses in summer and in autumn. In December, for the first time, has been realized the count of a nucleus of chamois originated by the escape, in 1996, of some individual from the captive breeding enclosure in Castel Nuovo a Volturno (IS) (a minimum of 30 individuals are now present). Block censuses results are encouraging (more than 630 chamois observed) and confirm that the population size fluctuations of the last years are typical of a mature population. In 2014, furthermore, thanks to a collaboration with the university *Università della Tuscia*, studies to deepen the knowledge of the high elevation pastures status have been implemented.

As already specified, during 2015 the monitoring activity will be implemented during a specific project financed by the MATTM.

5) Prosecution of the active and passive chamois health surveillance: the passive health monitoring of chamois found dead as well as of other wild ungulates recovered inside the chamois range has been carried out during 2014. Thirty-four carcasses have been recovered until now: 15 chamois, 3 roe deer, 13 red deer and 3 wild boar. Necropsies have been realized for all the recovered carcasses and even though the collaboration with the University of Turin is finished, samples have been taken in agreement with the Prof. Luca Rossi.

During the monitoring activities an individual with a possible ocular lesion has been observed. In order to exclude the presence of the kerato-conjunctivitis several observations have been carried out and a bait site with a camera-trap has been activated in order to : a) individuate the subject with the lesion e capture it; b) verify if the lesion was present also in other individuals in the same area. The subject with the lesion has never been observed and, in any case, none of the 30 individuals observed during each session showed the above mentioned health problems.

The active health monitoring will be started again from spring 2015 (see Table 5).

After-Life plan: Gran Sasso e Monti della Laga National Park

The role of the PNGSL in the activities to be implemented in the 5 years after the Project end will be comparable to the one of the PNM, life during the Life Coornata. In this protected area too the activities will thus be aimed to continue specific Project Action as well as to preserve in general the chamois population (Table 6). The same objectives already described for the PNM will be pursued: 1) to capture the animals to be released in the PRSV to conclude the re-

introduction; 2) to collect data on the size and demographic structure of the herds from which individuals are captured in order to notice the raising of any possible problem; 3) to obtain 1-2 estimates per year of the population size; 4) to administrate at least 1 treatment/year at the farms with livestock grazing in the chamois range; 5) to implement the exchange of individuals foreseen in the captive breeding programme; 6) to implement specific conservation measures aimed to counter any possible criticality noticed.

Table 6. After-Life plan in the Gran Sasso e Monti della Laga National Park.

* This field has three possible values: high, medium, low.

N	Activity	Action	Responsible	Overall cost estimation (5 years)	State of the activity	Priority*
1	Prosecution of wild chamois captures to release individuals (n. 13) and reach the MVP in the PRSV	C1	Servizio Scientifico	€ 6.700,00	Programmed starting from spring 2015	High
2	Prosecution of the pre- and post-capture monitoring through the observations and the radio-telemetry of individuals captured and released <i>in loco</i>	C1	Servizio Scientifico	€ 10.000,00	Currently implemented	High
3	Prosecution of the health monitoring and management for the livestock grazing in the chamois range	C6	Servizio Scientifico	€ 4.300,00	Programmed starting from spring 2015	High
4	Prosecution of the captive breeding activities, with the exchange of individuals between the different enclosures	Activity foreseen in the Project but not financed (C3)	Servizio Scientifico	€ 10.500,00	Currently implemented	Medium
5	Realization of block censuses: one in summer and one in autumn	Activity not foreseen in the Project	Servizio Scientifico	€ 25.000,00	Currently implemented	Medium

N	Activity	Action	Responsible	Overall cost estimation (5 years)	State of the activity	Priority*
6	Monitoring of the potential limiting factors and implementation of conservation measures	Activity not foreseen in the Project	Servizio Scientifico	€ 20.000,00	Currently implemented	High

Costs have been estimated (see Table 6) considering the civil servants, travel and consumable costs. The purchase of durable goods has not been included in the estimate because the ones purchased during the Life Project as well as the ones already owned by the Park are considered enough. In the same way costs for additional external personnel have not been included in the estimate as this is, at the moment, not considered necessary. In case additional personnel (temporary contracts or external assistance) will be necessary, additional funds will be allocated for the development of some actions.

After-Life plan: Monti Sibillini National Park

In the PNMS the activities to be carried out in the 5 years after the Project end will be aimed to favour the best conditions to make the population increase and to counter the limiting factors already individuated as well as the ones that possibly will emerge (Table 7). The following objectives will be pursued: 1) to administrate 1 treatment/year at farms with livestock grazing in the chamois range; 2) to implement the actions foreseen in the captive breeding programme; 3) to realize 1-2 estimates/year of the population size; 4) monitoring the formation of new herds and to implement specific conservation measures; 5) prepare a feasibility plan to capture chamois in the future; 6) to implement specific conservation measures aimed to counter any possible criticality emerged.

Table 7. After-Life plan in the Monti Sibillini National Park.

* This field has three possible values: high, medium, low.

N	Activity	Action	Responsible	Overall cost estimation (5 years)	State of the activity	Priority*
1	Prosecution of the health monitoring and health management of the livestock grazing in the chamois range	C6	Sviluppo Sostenibile Office	€ 72.000,00	Programmed starting from spring 2015	High

N	Activity	Action	Responsible	Overall cost estimation (5 years)	State of the activity	Priority*
2	Prosecution of the captive breeding activities with individuals exchange between the different enclosures including the captive breeding enclosure management and all the activities connected to it	Activity foreseen in the Project but not financed (C3)	Sviluppo Sostenibile Office	€ 115.000,00	Currently implemented	Medium
3	Population monitoring including censuses in summer and autumn; preparation of a feasibility plan to capture chamois and equip them with radio-collars	C4 + Activity not foreseen in the Project	Sviluppo Sostenibile Office	€ 275.500	Currently implemented	High
4	Monitoring of the potential limiting factors and implementation of population conservation measures	Activity not foreseen in the Project	Sviluppo Sostenibile Office	€ 29.000,00	Currently implemented	High

Costs have been estimated (Table 7) considering civil servants, travel, consumables costs and, for some activities (row 3 Table 7), considering that the external personnel will be necessary during the whole after-Life period (2 persons for 5 years). Thus it is here presented the most expensive scenario as the actual necessity to recur to external personnel will be evaluated during the next years. At the moment an announcement of selection has already been banned to continue the monitoring activity until 25/11/2015, for a total amount of 42.000 euros. The prosecution of the activities until the end of 2015 and in 2016 will be programme basing on the results achieved at that date and, if necessary, additional 25.000 euros are available to be used for that purpose. For the years after 2016, the need and possibility to allocate additional funds will be later evaluated. In case in the years after 2016 there will not be the need of external personnel, the overall cost of the plan will be lower than the total amount here presented. The cost to implement the captive breeding programme is determined by the fact that the captive breeding enclosure is managed by an external cooperative that cares also the didactic/divulgate activities. At the moment the contract with the cooperative is effective until the end of 2017 and, until now, the contract renewing is not yet foreseen. The cost here

reported for this action can thus vary according to what will be the captive breeding enclosure management strategy after 2017.

In the costs estimate the purchase of durable goods has not been included as the ones bought during the Life Project as well as the ones already owned by the Park, are considered enough.

After-Life plan: Sirente Velino Natural Park

In the PRSV the activities to be implemented in the 5 years after the Project end are aimed to guarantee a good exit of the re-introduction action carried out (Table 8). The following objectives are pursued: 1) to finish the re-introduction through the release of the number of individuals established; 2) monitoring of released individuals; 3) to administrate 1 treatment/year at farms with livestock potentially interested by the overlap with the chamois; 4) to implement the activities foreseen in the captive breeding programme; 5) to start the realization of annual estimates of the population size; 6) to collect data on the demographic trend of the population; 7) to implement specific conservation measures to counter any possible limiting factor emerged.

Table 8. After-Life plan in the Sirente Velino Regional Park.

* This field has three possible values: high, medium, low.

N	Activity	Action	Responsible	Overall cost estimation (5 years)	State of the activity	Priority*
1	Prosecution of the releases of individuals (n.13) to reach the MVP in the PRSV and monitoring of released animals according to the drafted protocols; monitoring of the neo-constituted population (winter survival, birth rate); start of the standardized censuses	C5	Scientifico Naturalistico Office	€ 75.000,00	Release of individuals programmed starting from spring 2015; monitoring activity currently implemented	High
2	Prosecution of the health monitoring and management of the livestock grazing in the chamois range	C6	Scientifico Naturalistico Office	€ 4.300,00	Programmed starting from spring 2015	High

N	Activity	Action	Responsible	Overall cost estimation (5 years)	State of the activity	Priority*
3	Prosecution of the captive breeding activities with individuals exchange between the different enclosures	Activity foreseen in the Project but not financed (C3)	Scientifico Naturalistico Office	€ 4.600,00	Currently implemented	Medium
4	Monitoring of the potential limiting factors and implementation of population conservation measures	Activity not foreseen in the Project	Scientifico Naturalistico Office	€ 10.000,00	Currently implemented	High

Costs have been estimate (see Table 8) considering civil servants, consumables, durables, travel costs and, for some activities (row 1 Table 8), considering the employment of external personnel. The release of individuals and monitoring activities cost estimation includes, thus, the purchase of durable goods (radio-collars) for which fund have already been allocated and partly spent (about 5.000 euros) at the moment of the submission of this document. To employ external personnel 14.000 euros have already been allocated for the development of the activities in 2015. For the years after 2015 it is foreseen to allocate the same amount/year (14.000 euros per year) until the end of the after-Life period. When this document has been submitted, while waiting for the contracts to be executives, the monitoring activity is carried out by the civil servants. This is possible during the winter because the field work is reduced due to the inaccessibility of the area and the activity is developed mainly through the remote-monitoring of individual survival (VHF signal) and through the GPS collar monitoring.

Feasibility analysis of the after-Life plan and financing perspectives

The feasibility of the elaborated after-Life plan depends on three variables: 1) the possession of the necessary expertise; 2) personnel availability; 3) economic resources availability. Here follows a discussion of the three above-mentioned aspects, assigning to each of them one of four degrees of criticality: null, low, medium, high.

1) Possession of the necessary expertise: null criticality.

The personnel working in the Parks interested by the Apennine chamois conservation owns the expertise necessary to realize all the activities planned for the after-Life period. Particularly, thanks to the activities developed with the Life Coornata, the PNM and PNGSL staff could acquire and gain the expertise necessary to realize wild chamois captures, an activity never developed before 2009 and necessary for the development of both the Project and the after-Life period. Moreover, during the Life Coornata several protocols have been written to capture wild chamois as well as to develop the monitoring activities. We thus believe that, regarding the expertise possession issue, there isn't any factor that can threat or limit the development and the good exit of the after-Life activities.

2) Personnel availability: medium criticality.

During the Life Coornata the Parks involved could count on the support of specific extra-personnel to develop all the Actions that are supposed to continue during the after-Life period. Currently the funds availability and the national regulation make very difficult to stipulate contracts with extra-personnel, both for direct personnel and external assistance. This aspect is critical because several of the activities to be carried out during the after-Life period require a considerable effort and a total dedication, both unlikely compatible with the civil servant workload. However the activities developed during the Life Coornata allowed to create a base situation whose maintenance surely requires less effort than the one needed during the Project. For example the phase of activation and experimentation of wild chamois captures in the PNM and PNGSL required a notable effort but now that the activity has been launched, the effort needed to realize captures is considerably lower. For this reason we believe that the personnel availability is not an high but a medium criticality that ,anyway, has to be accounted for. The beneficiaries most interested by the need of extra-personnel to support the civil servants, already started to work to contrast this criticality: in the PNALM collaboration contracts have been activated (for a total of 24.000 euros) for the prosecution of the chamois population monitoring in 2015; in the PNMS external assistance contracts have been activated (for a total of 42.000 euros) to continue the monitoring activity in 2015 and, moreover, additional funds can be considered (25.000 euros) to possibly continue the recur to extra-personnel until 2016; in the PRSV funds have already been allocated (14.000 euros) to activate specific collaborations in 2015 and, for the years after 2015, an amount of 14.000 euros/year will be available.

We thus believe that this criticality can be contrasted programming the extra-personnel collaboration requests basing on the actual and specific needs of each partner, optimizing in this manner the available and usable economic resources.

3) Economic resources availability: medium criticality.

All the Parks, including the one in which the Apennine chamois has recently been re-introduced, develop the basic activities connected to this subspecies preservation using ordinary funds that each Body allocates for the purpose. All the institutional activities (base monitoring, censuses, captive breeding enclosures ordinary management, etc.) described in the after-Life plans of the beneficiaries (Tables 4-8) will thus be developed using ordinary funds, as already foreseen in every Park. Some of the activities described in the after-Life plans (Tables 4-8) are, indeed, the prosecution of the Life Project Actions and for these additional ordinary funds will be allocated beyond the ones used for the implementation of the institutional activities. When drafting the Life Coornata Project, all the beneficiaries decided to allocate additional ordinary funds to the prosecution of Project Actions, thus specific actions different form the ones institutionally carried out, as reported in the form B5 (Table 9a).

Table 9. Funds that each beneficiary decided to allocate for the prosecution of specific Actions during the Project drafting (a) and analysis of the difference between the amount reported in the form B5 and the actual cost that the beneficiaries will sustain (b).

Action prosecution	PNM €	PNALM €	PNGSL €	PNMS €	PRSV €
D1	3.400	3.400	3.400	3.400	3.400
C1	16.700	-	16.700	-	-
C2	-	70.000	-	-	-

Action prosecution	PNM €	PNALM €	PNGSL €	PNMS €	PRSV €
C3	10.500	18.000	10.500	4.600	4.600
C5	-	-	-	-	60.000
C6	4.300	4.300	4.300	17.800	4.300
Total	34.900	95.700	34.900	25.800	72.300

a.

Beneficiary	Amount foreseen for the prosecution of the Life Actions €	Estimated amount needed to develop the after-Life plan (both to develop the institutional activities and to continue the Life Actions) €	Difference €
PNM	34.900	113.900	79.000
PNALM	95.700	146.400	50.700
PNGSL	34.900	79.900	45.000
PNMS	25.800	494.900	469.100
PRSV	72.300	97.300	25.000

b.

At the end of the Project a new estimation of the cost needed to continue the Project Actions has been made and, considering both the funds needed for the institutional activities to be developed during the after-Life period and the funds needed to continue the Project Actions, the actual cost of each beneficiary after-Life plan has been calculated that is, obviously, higher than the one reported in the form B5 (Table 9b). The difference between the costs reported in this plan and the ones reported in the form B5 is, thus, due to the addition of the costs institutional activities to be implemented in the after-Life period and, in some cases, to a more accurate evaluation of the Project Actions prosecution costs. The major difference emerges for the PNMS (Table 9b) and this is due to the following reasons:

- in the form B5, because of an error, the estimated costs to continue the Action C4 have not been reported. In this document, indeed, the prosecution of the Action C4 has been included and costs have been estimated considering the most expensive scenario possible (see After-Life plan: Monti Sibillini National Park). For these reasons the difference emerged for this beneficiary seems to be disproportionate compared to other beneficiaries. Additionally the cost of the plan for the PNMS is much higher than the other beneficiaries because the captive breeding activity as an high cost due to the high costs for maintaining the captive breeding enclosure, activity committed to an external cooperative.

The finding of the estimated funds is not a critical issue because the plans costs are, mainly, civil servants costs and the activities to be implemented are mainly institutional or activities for which the Parks will allocate the needed ordinary funds. The most important exception is represented, for some Park, by the need to find funds for extra-personnel (see section number 1). This need is a medium criticality because the beneficiaries that have an high need to recur to external personnel and/or for which the extra-personnel cost is a considerable part of the overall cost (e.g. PNALM and PNMS), have already found the necessary funds for the firsts

years (see section number 1 and the specific plans of each beneficiary). In the next years the actual need to employ external personnel will be re-evaluated according to the technical needs and, eventually, the needed fund will be found. At the moment we believe that there are three main possibilities to find additional funds: the allocation of additional ordinary funds; the use of EU funds for the SCIs management; the use of funds dispensed by the MATTM for the biodiversity conservation.

A factor to account for in the feasibility analysis of the after-Life plan is the possible reduction of the funds ordinarily dispensed by the State to the Protected Areas (see SWOT analysis, Table 2): considering the economic situation of the Country, it is possible that in the next years the funds allocated for Protected Areas will be drastically reduced. The economic feasibility analysis here reported is based on the assumption that the funds received by the Parks in the next years will be equal (or higher) to the funds currently dispensed. In case of decrease of the funds received it will be evaluated the possibility to recur again to the Life financing tool.

Conclusions

The results obtained with the Life Coornata Project allowed the achievement of a good advance in the Apennine chamois conservation programme. For this reason the activities to be continued during the after-Life period require lower amount of both human and economic resources than the ones required before the Life Coornata starting. The implementation of the after-Life plan doesn't require the acquisition of new expertise and the necessary economic and human resources, are not unsustainable for the Parks involved. We thus believe that the after-Life plan here presented will be implemented without difficulties using mainly the ordinary funds that each beneficiary will allocate for the purpose and recurring, when necessary, to dedicated extra-personnel. Any possible critical situation will be analysed in order to guarantee the prompt problems solution and, consequently, to avoid negative repercussions on the objectives achievement. The coordinating body will be a support and a constant reference point for all the Parks and this will maximize the probability of a success of the after-Life programme.