



LAYMAN'S REPORT

WOLFnet

www.lifewolf.net

Development of coordinated protection measures for Wolf in Apennines. LIFE08 NAT/IT/000325





CONTENT

The life WOLFnet project	Pag. 2
INTRODUCTION	Pag. 3
OBJECTIVES of the project	Pag. 5
RESULTS	Pag. 7
CONCLUSIONS	Pag. 12
ACKNOWLEDGEMENTS	Pag. 13
PROJECT team	Pag. 14





The life WOLFnet project

The **LIFE08NAT/IT/000325 "WOLFNET"** is a Life Nature Project cofinanced by the European Commission and promoted by the Majella National Park (PNM), Pollino National Park (PNP), Foreste Casentinesi, Monte Falterona e Campigna National Park (PNFC), Province of L'Aquila (PA), Istituto Zooprofilattico Sperimentale di Lazio e Toscana (IZSLT), and Legambiente (LA).

Eight public entities such as natural reserves, national and regional parks and Apennine provinces co-financed the Project: Comunità Montana Esino Frasassi, Ente parco nazionale dei Monti Sibillini, Provincia di Salerno, Provincia di Genova, Ente parco regionale della Maremma, Parco naturale regionale Sirente Velino, Parco naturale regionale dei Monti Lucretili, Ente parco nazionale del Cilento e Vallo di Diano.

All the Public Authorities interested by the Project activities declared their formal support to the Wolfnet actions: Ministero dell'Ambiente e della Tutela del Territorio e del Mare - Direzione per la Protezione della Natura, ISPRA (Istituto Superiore per la Protezione e la Ricerca Ambientale), Regione Abruzzo, Regione Emilia Romagna, Regione Lazio.

The Life Wolfnet Project is a LIFE+ Nature project. *"Best practice and/or demonstration project contributing to the implementation of the objectives of the EU Birds and Habitats Directives (Council Directives 79/409 EEC and 92/43/EEC)"*

Total budget: € 1.597.982

Cofinanced by European Commission: € 1.052.271 (65,85%)

Support from other national cofinanciers: € 80.000,00

Project duration: 01/01/2010 – 31/12/2013

Project area: PNM 74.095 ha; PNP 184.000 ha; PNFC 36.846 ha; PA 503.500 ha.

Most of project actions have been shared within the Institutional Network in the Apennine context, in order to improve the wolf population conservation and management level on the entire national territory.

Project homepage: www.lifewolf.net

E mail: lifewolfnet@parcomajella.it





The Life Wolfnet Project (2010-2013) represents the first major attempt to coordinate the conservation and management of the wolf in the Apennines. The Project, funded by the European Community and promoted by the Majella National Park (PNM), saw the participation of three national protected areas (National Park of Casentinesi Forests, Pollino National Park and the Majella National Park) that are among the most important in terms of the history and the presence of wolves in the territory, of the Province of L'Aquila, which is characterized by an almost total prevalence of mountainous territory, the National Center for Veterinary Forensic Medicine of the Istituto Zooprofilattico Sperimentale di Lazio e Toscana, a highly qualified technical organization for the health and legal-medical aspects, and of a non-profit association - Legambiente - which has been operating throughout the country by promoting coordinated and innovative forms of environmental management and sustainable patterns of development.



Life WOLFNET Project area in Italian peninsula.

In Italy, after a period of drastic decline mainly due to direct and indirect human persecution, in recent decades there has been an increase in the number and distribution range of the wolf, both through the gradual reoccupation of the previously used areas and the colonization of new areas, such as the Alps. In addition to the status of legal protection that it has enjoyed since the early 70s, the process of expansion of the species in Italy is the result of a number of factors of a historical, ecological and conservational nature that have characterized the Italian environmental context in recent decades, and to which the wolf has easily adapted. However, in spite of this seemingly reassuring situation for the conservation of the species, the presence of wolves still causes some trouble and hostility in the local communities; in particular, the conflict with the livestock sector is a very real problem.



The Project therefore started at a delicate stage in the history of the conservation of the wolf in Italy. The context of the Apennines is characterized by a progressive abandonment of mountain areas, vby the decline but also by the remodeling and requalification of livestock activities in the mountains, and by a substantial expansion of the Wolf over the entire chain of the Apennines, supported by a gradual increase in

the availability of wild prey. The wolf-human interface in this scenario is continuously evolving and needs to be monitored and managed to guarantee that the initiatives undertaken to promote coexistence between carnivores and human presence are appropriate, effective and adapted to the specific ecological and socio-cultural context.



The heterogeneity of the management systems of the problems related to the presence of the wolf in the Apennines is still evident in many cases, and contributes to the maintenance or, worse, to the amplification of critical elements of conflict. Paradoxically, even after 40 years of regulatory protection of the wolf in Italy, a climate has been recreated that is not always advantageous to the conservation of the species.





OBJECTIVES of the project

The activities of Wolfnet Project have been defined and implemented to contrast those which, in the context of the Apennines and in Italy in general are believed to be the most significant threats to the future of wolf conservation. Listed below are the main risk factors for the species that Wolfnet Project has tried to reduce or eliminate:

Reduce wolf-livestock conflict through the standardization, the coordination and the implementation of the damage-compensation-prevention-mitigation assessment system based on the specific environmental realities.

The assessment procedures and the compensation for damage to livestock by wolves in the Apennines were often disparate and inappropriate. In many cases, the procedures followed were not standardized and/or accurate, were too complex and expensive for the farmer concerned, and not adequate in economic terms and in the time required for disbursement of funds. They were also heterogeneous and poorly coordinated in the different management areas. The problem is all the more noticeable in consideration of the fact that the interested areas, although with similar ecological and operational characteristics and needs, from an administrative point of view are characterized by different administrative competences. This context is typical for areas of the Apennines, where the national parks manage the issue of damages to livestock pursuant to Law 394/91, the protected regional areas according to legislation assigned by various regional regulations, while the areas that are not included in the perimeters of the parks deal with the problem on the basis of regional laws that provide for the intervention of the competent offices of the provinces. The heterogeneity of procedures and rules, as well as an inappropriate assessment of damages, inevitably lead to the acquisition of unrealistic data and therefore to a distorted perception of the phenomenon of damages to livestock caused by wolves, followed by the incorrect payment of compensation, and to inadequate and therefore inconclusive methods of prevention.

Moreover, the functionality and therefore the efficiency of preventive measures varies depending on the specific ecological context, the type and conditions of farming activities, etc. In addition, due to the continuously developing of human-wolf interface, farmers are sometimes faced with the phenomenon of Wolf attacks in situations of vulnerability that are constantly changing and often unexpected. The implementation of generalized preventive measures alone, planned on a large scale and not adequately related to the local characteristics of the phenomenon, is not likely to generate specific effects on the reduction of damages and can contribute to the development of a widespread distrust towards both the effectiveness of the means of prevention and the entities that manage the conservation policies. This situation inhibits the development of a socio-cultural context favourable to conservation and often results in an increase in illegal practices for advising against a claim for damages and in an intensification of the direct persecution of the species.

Fight back the phenomenon of illegal mortalities by means of actions aimed at the reduction and/or the suppression of direct persecution on wolves.

Despite the legal protection of the species, poaching and illegal mortality through the use of snares, firearms and poisons are still one of the most common causes of mortality even in the areas covered by the Project. The management agencies have difficulty in curbing such illegal activities due to the lack of human resources, bureaucratic complexities, and a lack of widespread expertise in the field of criminal and forensic investigations.

Reduce the sanitary risks able to affect negatively the Wolf population dynamics.

The lack of minimum levels of health supervision and management throughout the area (necropsy, samples for serological investigation, standardized surveillance protocols etc.) leads to the persistence of health risks for the wolf populations and can adversely affect their dynamics. In most of the areas covered by the Project, the areas frequented by wolves are characterized by the presence of stray dog populations that may directly or indirectly represent a source of health risk, especially for certain diseases worthy of consideration from a conservational point of view (e.g. canine parvovirus, canine distemper). All this is made even more complex by the fragmentation of institutional responsibilities (municipalities, health departments), which results in a low capacity of intervention by the agency responsible for the protection of the wolf.

Minimize the impact of human activities that can cause disturbance at the reproductive sites, during the reproductive periods and in the other phases of the wolf biological cycle.

Human interference in Italy is potentially the most important factor in regulating the density of the local populations of wolves. Continuous disturbance can endanger the presence of viable nuclei of wolves. If wolves are tolerated they seem to be able to coexist nearer to humans than was assumed in the past. Even so, wolves continue to be more preferably present in areas with a low human presence, while the dispersed and marginalized individuals of the pack are most frequently forced to occupy marginal habitats that are less suitable. Human activities such as forestry operations, sports and intensive tourist usage, infrastructural interventions, etc. can be important factors of disturbance to wolves when carried out in areas during critical periods that may adversely affect successful reproduction and the survival of the species. The period between April and October that coincides with the birth and the care of puppies and the use of dens and rendezvous, is undoubtedly the most critical stage of the year, while in terms of geographical areas the most suitable sites, including the breeding areas (dens and rendezvous), are those most critical for the survival and reproduction of the resident packs.

Export a management model, long-term sustainable and adapted to the local, ecological and social-economical characteristics, to other protected areas and/or none-protected territories of the APE (Apennine Park of Europe) Network.

The various activities foreseen in the Wolfnet partnership are innovative and of great managerial interest. They assume an even greater significance when placed in a constant, effective interchange initiated through an Institutional Network between project partners, co-financiers and supporting authorities. An important aim of the Project is the development of a new cooperation stable system between national administrations involved in Wolf conservation, in order to arouse the constitution of the Italian Committee for Wolf Conservation.



The activities carried out within the Wolfnet Project were aimed at contrasting the most relevant threats for the future of wolf conservation in Italy through the testing of effective instruments for the reduction of the wolf-livestock conflict, the prevention of damage by wolves to livestock, health surveillance and investigation-prevention-repression of illegal wolf mortality.

The setting up of a network for sharing practices and uniform management approaches has allowed for the implementation of coordinated actions that bypass the difficulties related to a fragmented administration.

The following section describes in greater detail the main actions undertaken and the results achieved by the Project relative to the major risk factors listed above:

Threat 1)

Increase of conflict towards wolves as a result of inappropriate regulatory systems and procedures for the compensation of damages

Thanks to Life Wolfnet all the Project partners have undertaken to adopt a standard protocol for the assessment of damages, based on expert medical and legal investigation and on a substantial simplification and acceleration of the compensation procedure.

The associated beneficiaries (PNP, PNFC and PA) have reformulated the regulation / disciplinary for compensation by codifying the procedure and basing it on an accurate and objective complete medical and legal assessment for the protected areas carried out by a veterinarian.

The procedure for the disbursement of funds for damage by wolves has been reformulated by promoting, also through the adoption of a special software previously developed and then further improved by the Majella National Park, a faster and more appropriate compensation.

The compensation procedures adopted in the Project areas have substantially changed the methodological approach to the issue of damages caused by wolves.

Not only has there been a significant reduction in the time of compensation , but also and above all a decrease in the conflict generated by the local stakeholders, thanks to a greater attention on the part of the Institutions to analyzing the problem and understanding the specific vulnerabilities of the farming activities affected .



Threat 2)

Persistence of hostility towards wolves by farmers and local communities on account of inappropriate measures for prevention and mitigation of the conflict

In the Project areas specific prevention measures have been developed that are tailored to the individual territorial situations, suited to the commonly used management systems of farming, and that take into consideration the specific local ecological conditions relative to the predator. A document was drawn up ("Guidelines for the prevention of predation by wolves and mitigation of conflict with livestock activities within the Apennine") that represents a codification of the criteria for the identification of correct prevention systems that provide a greater guarantee of applicability and effectiveness in reducing attacks by wolves, also in very different operational contexts.

The launch of the "Program for the restitution of the sheep" by the PNM and the PNP is a concrete attempt to help the protection of wolves through an effective limitation of the impact that they may have on human activities, by trying out a new way of compensation for damage. In cases of confirmed wolf predation, the farmer receives directly at his farm the same number of head of livestock as those dead or missing as a result of predation. With the establishment of the "Park flock", the PNM and PNP, under an agreement with the farmers and / or in a specific livestock center created by the Park, keeps a number of animals of indigenous breed that are transferred when necessary to the farmers who claim damages.

Of great importance is the constant dialogue with stakeholders, especially the periodic meetings with the farmers that have enabled the monitoring and reshaping of the interventions for mitigating the conflict so that they are most suited to the specific local situation.



Threat 3)

Illegal mortality

To combat illegal wolf mortality, the project has received an invaluable availability of the State Forestry Department and Provincial Police to test a new operational model (GOS, Specialist Operational Groups), focusing on the operations of a staff composed of individuals with different skills (Police, veterinary, biological, etc.). In compliance with the current industry regulations and Police procedure, this is able to promote a more accurate analysis of the case and, consequently, a more comprehensive investigation and repression of the crime.

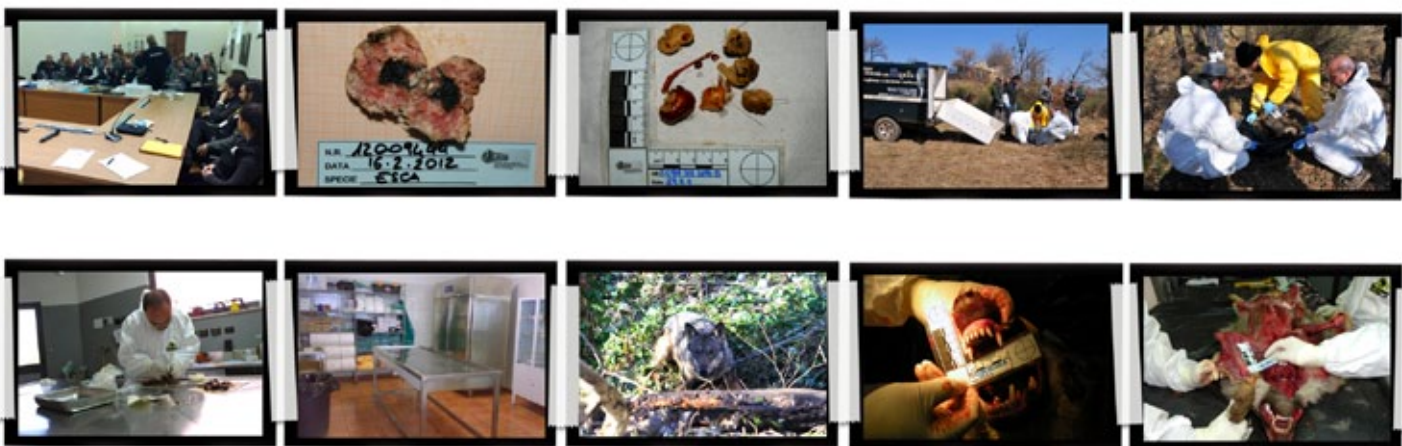
The creation of Specialist Operational Groups consisting of purposely trained staff probably represents the highest level of operational and technical- organizational innovation, which has also attracted the interest of several managing entities external to the project.

The preparatory technical and training seminars for the establishment of the GOS, the active dialogue between the park authorities and technical staff of the CFS, the involvement of the public prosecutors responsible for the territory, have all created the foundations for a new efficiency that could provide a model for an ideal

management to contrast the mortalities caused by the direct persecution of wolves.

The experience of the Wolfnet partnership, and particularly the functionality experienced by the CFS staff have provided significant results, giving rise to effective and efficient functional units. Constant surveillance activities have been particularly concentrated in the most sensitive areas, such as breeding sites and the areas most frequented by wolves during the year.

Lastly, emphasis should be placed on the importance of telemetry data for planning surveillance, and in the prevention and investigation activities.



Threat 4)

Persistence of risk or development of new health difficulties for the wolf population

As part of the Wolfnet Project specific operational protocols for the assessment of health risks for the wolf in the areas affected by the presence of syntopic canine populations have been prepared. In the PNM, as a result of a thorough study of the stray dog population in this territory, activities were initiated aimed at reducing the health risk for wolves through an area - specific assessment of the presence and prevalence of certain infectious diseases of carnivores (serological and necropsy) and targeted captures of stray dogs.



These interventions were previously agreed upon with the local authorities, health authorities and the municipalities.

The Wolfnet approach and experience, by paying particular attention to the problem of stray dogs and testing a new way of managing the phenomenon in critical areas, has outlined a possible model for an inter-institutional agreement between Parks, veterinary healthcare services and municipalities (each respectively responsible for the protection of the wolf, healthcare control and management, and the health authority) that can be raised to a higher institutional level, stimulating the Ministry of Health and Ministry of Environment to work together.

Threat 5)

Direct or indirect disturbance to the wolf on the reproductive sites, during periods of reproduction, and during the different stages of the biological cycle

As part of the Project activities have been carried out aimed at reducing direct or indirect disturbance to wolves. Particular attention has been paid to the protection of reproductive nuclei through the preparation and implementation of a comprehensive system of surveillance and early detection of risks and critical situations for the species, based on the analysis of information obtained from routine monitoring of the wolf population (wolf- howling, snow- tracking, photo - videotraps) and especially by GPS telemetry: 9 wolves were captured and radiocollared in PNM, and 2 in PNFC. This data has provided valuable information regarding:



- 1) the dynamics of the presence of wolves in the vicinity of farm animals and grazing land, consequently allowing for appropriate choices for the prevention and management of conflict;
- 2) wolf presence at the sites and areas considered particularly critical in relation to interaction with legal and illegal human activities;
- 3) spatial, behavioral and health interaction with the sympatric dog population;
- 4) sites of dens, rendezvous, pack dynamics, etc. to enable timely planning of activities to protect critical areas.



The Wolfnet experience has shown that intensive monitoring conducted systematically and in accordance with specific protocols, focusing primarily on the areas that appear to be most critical for the coexistence with human activities, is essential in order to obtain information of great importance in relation to the management skills for the protection of the species and the prevention of conflicts.

Given that a practical strategy for the conservation and management of wolves cannot exist without the correct acquisition of objective, reliable and comparable information collected locally and shared on a wide scale, it is hoped that a standardized and systematic monitoring and management system such as that experimented in the areas of the Project, can be shared between the various organizations and institutions that deal with the management and conservation of the species, and collected in a single national database; also, that the information obtained can be used to achieve the best working strategies in terms of monitoring and management, more adapted to the ecological dynamics of the species and to the human factors with which it interacts. The various activities undertaken in the Wolfnet are innovative and of great managerial interest. They assume an even greater significance when placed in a constant, effective interchange initiated through an Institutional Network between project partners, co-financiers and supporting authorities.

The activities of communication and sharing of management measures with stakeholders have been constantly developed by the partnership, especially with the contribution of Legambiente. For schools was carried out the ideas competition "Lupus in aula". In the three year of the project, a total of 17 schools, for 34 classes participated to this project, with about 460 students, from the province of Potenza, Ancona, L'Aquila, Arezzo, Crotone, Pescara, Forlì-Cesena, Chieti, Verona, Roma, Rieti, Salerno. Regarding the stakeholders they were constantly informed with meetings held at least once a year for each of the project partners, addressed to farmers, hunters, tourism operators, hikers etc..

It was also opened the website www.lifewolf.net containing all downloadable protocols and technical documents, as well as a forum for discussion and update on the activities of the project.

At the conclusion of the project, the partnership of the project, within the Institutional Network, along with numerous relevant institutions, has signed a document to address the conservation of wolf in the Apennines, which was made available to the Ministry of Environment and ISPRA (Italian Institute for Environmental Research) for the preparation of the next Action Plan of the wolf in Italy.

The technological and scientific results of the project were instead exposed and shared in the International Wolf Congress, which brought together more than 300 attendees and over 35 speakers arrived from 13 different Countries. The model tested by Wolfnet in sharing experiences and the joint elaboration of strategies and measures for the protection of wolves, allows the project activities to be exported and adapted to different national and international contexts, above all that of the APE system (Apennines Park of Europe).





CONCLUSION

The LIFE WOLFNET project can be considered an innovative and concrete attempt to implement conservation and management measures for the wolf in a coordinated way throughout the Apennines, Notwithstanding an apparently reassuring situation, over 40 years after the first wolf protection law in Italy, new scientific and socio-cultural issues are rising, in terms of man-wolf interaction: in this context, the LIFE WOLFNET Project can be considered as a place where to experiment coordinated conservation initiatives addressed to fill the existing gaps and to harmonize the procedures adopted by the several Authorities (Parks, Provinces, Regions) in charge of the management of the species, whose current lack of uniformity could increase the elements of conflict and establish an unfavourable attitude towards the wolf in spite of the many years of protection.

The coordination of these activities can undoubtedly create favourable conditions for protection of other endangered species in the Italian Peninsula.

It's important also to highlight that with the Life Wolfnet Project, for the first time in Italy the staff of national parks have developed activities of capturing and radiocollaring wolves, and sanitary surveillance, with their own technical stable personnel (wildlife biologist and vet), and not outsourcing these activities to researchers with occasional collaborations: this should be a very interesting issue and a model to develop in the future planning of protected areas, because it should ensure a more concrete and efficient application of conservation and management measures directly obtained from the field experiences and immediately oriented on particular needs of the territory and of the public body. This also can guarantee an application of Life results and approach beyond the Project deadline.

With the activities focused on wolf/dog interactions (A.8 – C.4) made mainly in order to investigate and manage sanitary risks for wolf potentially deriving from sympatric free ranging dogs population, the project activities developing is going to involve another central and very relevant issue for wolf conservation in Italy: the hybridisation with domestic dogs. The activities developed by PNM in the monitored area in urban, rural and wild zones, is included in territories of wolves monitored by GPS-collars and/or of wolves we have planned to capture, and this will be create a good opportunity to study and obtain management data about dog-wolves interactions, also concerning the risk of hybridisation or pathological (sanitary, eco-ethological, and genetic) interactions.

Life Wolfnet initiatives lead in many cases to an involvement of public authorities and to a developing or new synergies: for example, the framework and the approach of the assessment and compensation of the damage, as described in C.1, the investigation and management of animal carcasses, as C.3 procedures indicate, and the capture and removal activities of stray dogs, as foreseen in C.4, perforce carry out a renewed dialog with between Parks administrations and Public Health Veterinary Service (AASSLL).

The programme of "sheep restitution", as planned in C.2, could really portray a new model of management

of coexistence between wolves and farmers in protected areas, and several representatives of stakeholders showed keen interest for this experimental action that could lead to a long term compensation “win-win” system, without any cost for the public body, as well as a complete and concrete compensation of damage for the farmer, or even an improvement in breeding, consequent to a wolf attack.

Finally, it's quite relevant the positive expressions of interest we had in this first half of the Project about the approach, completely new for wildlife management in Italy, in crime scene investigation and anti-poaching strategies. Many co-financiers administrations are requesting specific meetings or seminars to evaluate how this framework can be applied to their particular management needs and how the GOS (Specialist Operational Groups) operation and the technical capability of the Reference Centre for Forensic Veterinary Medicine of IZSLT could be replicate in their contexts.

ACKNOWLEDGEMENT

Realising the Wolfnet project was only possible with the active support and participation of local people, farmers, stakeholders, students and organisations. Instead of a long list of names, we would like to take this opportunity for thanking everyone who gave and are giving their professional, financial or personal support to the conservation work for protecting the wolf in Apennine and for improve the wolf coexistence with human activities.

Our gratitude is also due to the Forestry Corp personnel in the National Park involved in the Project and to the Provincial Police of L'Aquila, for their great contribution to the institution of the GOS (Specialist Operational Groups).



Project Coordinator

■ Nicola Cimini; Oremo Di Nino *(Directors of Majella National Park)*

Project Manager

■ Teodoro Andrisano

PNM STAFF

■ Simone Angelucci *(Wildlife veterinarian)*
 ■ Antonio Antonucci *(Wildlife biologist)*
 ■ Marco Carafa *(Wildlife biologist)*
 ■ Luca Madonna *(Wildlife technician)*
 ■ Colomba Macino *(Wildlife technician)*
 ■ Giuseppe Marcantonio *(Agronomist)*
 ■ Marta Gandolfi *(Temporary contract, graduate wildlife technician)*
 ■ Sabrina Manchi *(Temporary contract, graduate wildlife technician)*
 ■ Lorenzo Petrizzelli *(Temporary contract, graduate wildlife technician)*
 ■ Marco Liberatore *(Financial Manager)*
 ■ Massimo Tudini *(Financial Coordinator)*
 ■ Angelina Di Martino *(Financial Assistant)*
 ■ Rosalba Di Mascio *(Financial Assistant)*
 ■ Massimiliano Rosignoli *(External Financial Auditor)*

PNP STAFF

■ Vincenzo Aversa *(Agronomist)*
 ■ Ester Del Bove *(Graduate wildlife technician)*
 ■ Pietro Serroni *(Graduate wildlife technician)*
 ■ Francesco Rotondaro *(Graduate wildlife technician)*
 ■ Silvano De Franco *(Graduate financial-administrative)*
 ■ Antonio Calli *(Graduate financial-administrative)*
 ■ Rocco P. Di Giorno *(Wildlife technician)*
 ■ Giuseppina Grillo *(Wildlife technician)*
 ■ Carmine Suanno *(Wildlife veterinarian, external assistance)*

PNFC STAFF

■ Andrea Gennai *(Graduate wildlife technician)*
 ■ Roberta Ricci *(Graduate financial-administrative)*
 ■ Carlo Pedrazzoli *(Graduate wildlife technician)*
 ■ Juanito Grigioni *(Wildlife veterinarian, temporary contract)*
 ■ Alessandro Fani *(Graduate wildlife technician)*
 ■ Andrea Boscherini *(Degree thesis, student)*

PA STAFF

■ Marina Tucceri *(Graduate wildlife technician)*
 ■ Iacoboni Simona *(Graduate financial-administrative)*
 ■ Mirco Masciovecchio *(Temporary contract, graduate wildlife technician)*

IZSLT STAFF

■ Rosario Fico *(Wildlife veterinarian)*
 ■ Rita Lorenzini *(Geneticist biologist)*
 ■ Erika Ciarrocca *(Wildlife veterinarian, temporary contract)*

LA STAFF

■ Antonio Nicoletti *(Graduate wildlife technician)*
 ■ Liana Costanzi *(Graduate financial-administrative)*
 ■ Stefano Raimondi *(Graduate wildlife technician)*
 ■ Sandro Luchetti *(Graduate financial-administrative)*

