



Layman's Report

ONE
DEER



TWO
ISLANDS

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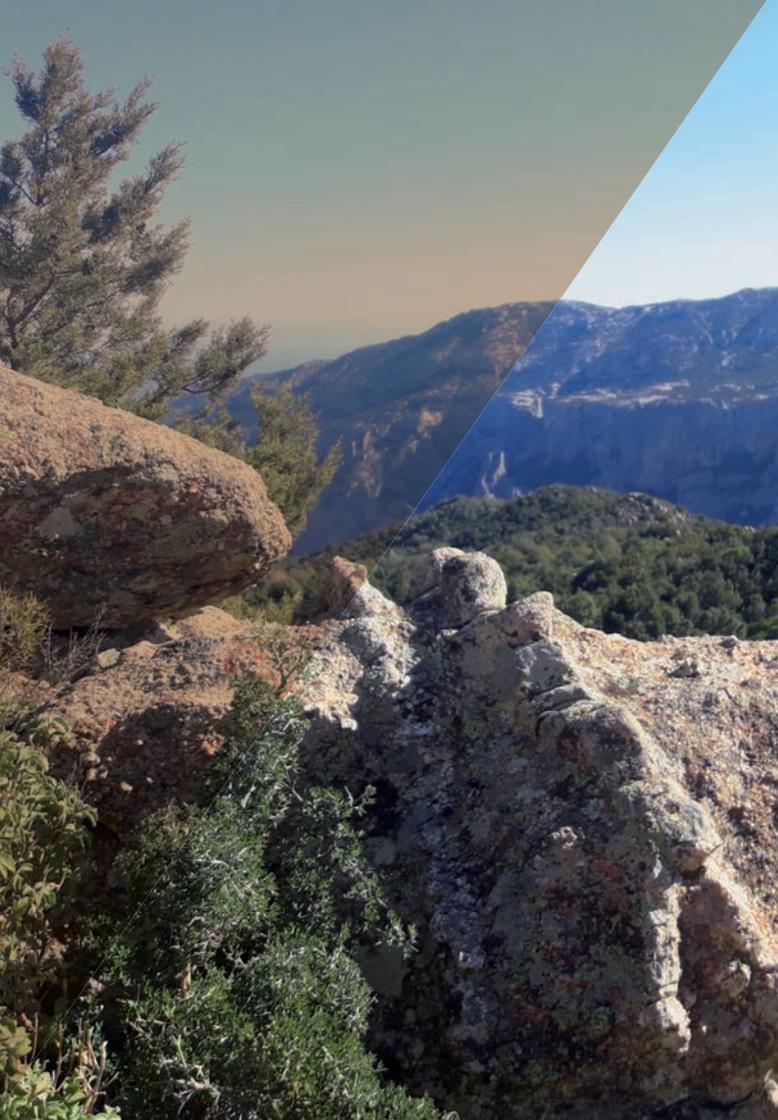


Conservation of *Cervus elaphus corsicanus* in **Sardinia and Corsica**

Project LIFE11 NAT / IT / 00210

One deer two islands is a project funded by the European Union under the LIFE + Nature Program





Un cervo, due isole

Partner:

Province of Southern Sardinia, Province of Nuoro,
Supreme Institute for Environmental Protection and Research (ISPRA),
Regional Forestry Agency for the Development of the Territory and Environment of Sardinia (Forestas),
Parc Naturel Régional de Corse.

Duration: 78 months

Cost of the project: € 2.006.110

European Union contribution: € 1,495,090

The species

The deer found in Sardinia and Corsica (*Cervus elaphus corsicanus* Erxleben, 1777) constitutes the endemic Sardinian-Corsican subspecies of the European deer (*Cervus elaphus*, L.1758).

The deer was already present in Sardinia in the Nuragic era, as evidenced by the bronze statues of Sardinia dating back to around 1500 BC, where the bow of many ships depicted a stag's head with the stage.

Until the nineteenth century, this species were described as "common and abundant" both in Sardinia and in Corsica. Consequently to the drastic deforestation of the territory,



the fires, the indiscriminate hunting as well as the conflict in the use of natural resources with farmers and breeders, the population was drastically reduced. Since 1969 in Corsica the deer had completely disappeared, while in Sardinia in the same period the population was estimated at around 80-100 animals.

The risk of its complete extinction was so close that at the end of the 1960s it was included in the IUCN Red List among the most endangered species.

Following important protection actions, carried out in Sardinia, currently it is estimated a population of over 9,000 heads. In Corsica, after a series of reintroduction operations starting from the 80s with deer coming from Sardinia, their number has reached over 1500 specimens.

The Sardinian-Corsican deer is among the protected species at national level (L. 157/92) and regional (L. 23/98) and cannot be hunted on the two islands. It is also included as a priority species in Annex II and IV of the Habitats Directive 92/43 / EEC among the species of Community interest which require the designation of conservation areas and strict protection.





Threats

The main causes leading to the collapse of the Sardinian-Corsican deer population in the two islands were of anthropogenic origin:

- **The indiscriminate logging of forests**
- **Excessive hunting**
- **Fires and the spread of domestic animal breeding.**

All this has led to two particularly dangerous conditions for the conservation of the species:

- **The fragmentation of the suitable habitat and the isolation of individuals in sub-populations.**
- **Reduction of the consistency of sub-populations with possible genetic problems.**

The anthropization of the territory, modified by agriculture and breeding, and forest fires have reduced and significantly fragmented the habitat in which this ruminant lived, limiting the areas where the species could find shelter, protection and food. At the end of the 1970s only 3 sub-populations survived in southern Sardinia (Sulcis, Sarrabus, Arburese), physically separated from each other, without the possibility of interchanges.



Objectives of the project

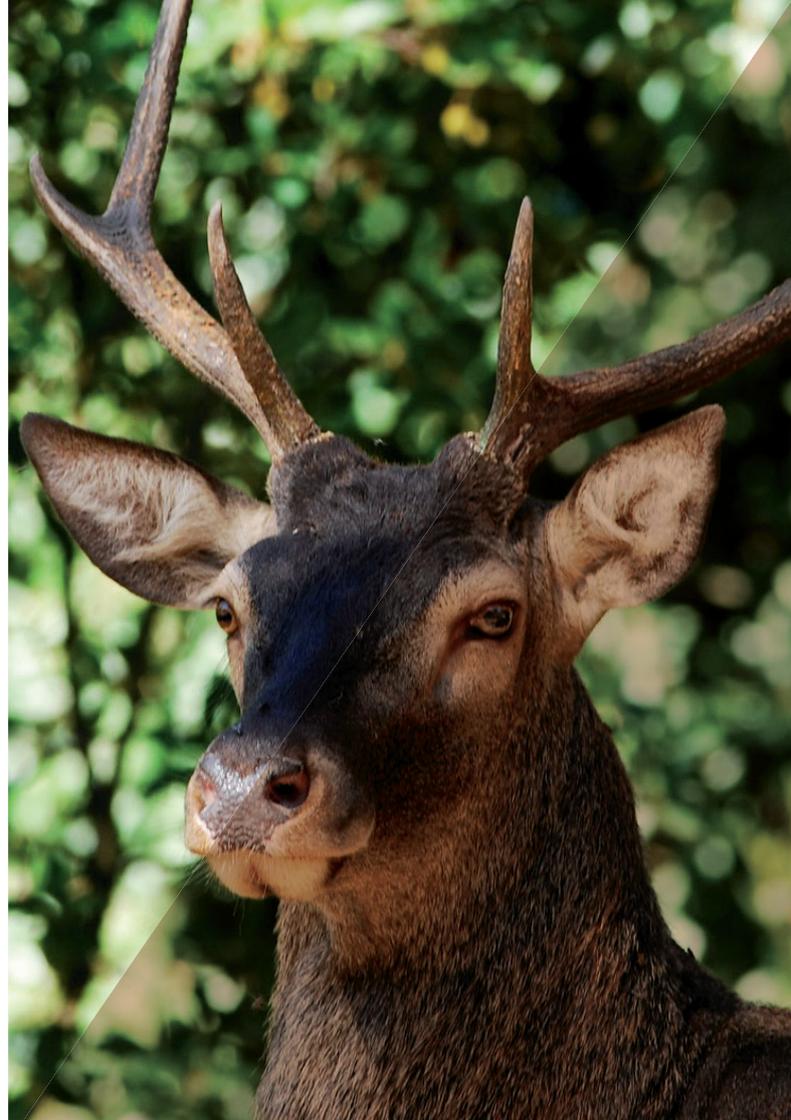
The main objective of the project was to ensure the long-term protection of *Cervus elaphus corsicanus*.

The second was the realization of the actions to allow the coexistence between human activities (agriculture and breeding) and species in the same territories.

The third objective was to enhance the areas in which the species is present, favoring the knowledge of the same species in the Natura 2000 areas.

More specifically, the project objectives focused on:

1. Improvement of the conservation status of the Sardinian-Corsican deer
2. The creation of four new deer populations within Natura 2000 areas
3. Reduce inbreeding in the Sardinian-Corsican deer, originated from the few individuals reintroduced in the 80s
4. Improve the knowledge on land use and habitat use by the species
5. Promote cooperation between local institutions involved in deer management
6. Allow the exchange of good practices on species management and mitigation of conflicts with human activities
7. Increase awareness among the different stakeholders involved in wildlife management, relative to the ecological and economic value of the species
8. Increase the population of deer, and therefore of wild animals, the availability of food for vultures

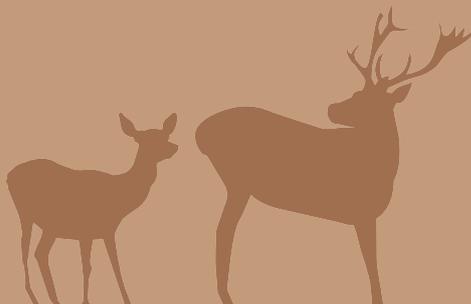


THE AREAS OF THE PROJECT

The One deer two islands project was presented with the aim of safeguarding the Sardinian-Corsican deer from multiple factors that threaten their existence.

In July 2012 the European Commission has approved and financed the project proposal for the protection of the species, presented by Province of Medio Campidano (now South Sardinia) leader of a group of beneficiaries established by the Higher Institute for Protection and Environmental Research (ISPRA), the Province of Ogliastra (now Province of Nuoro), the Institution Forests of Sardinia (now Forestas) and the Park Regional Natural of Corsica.

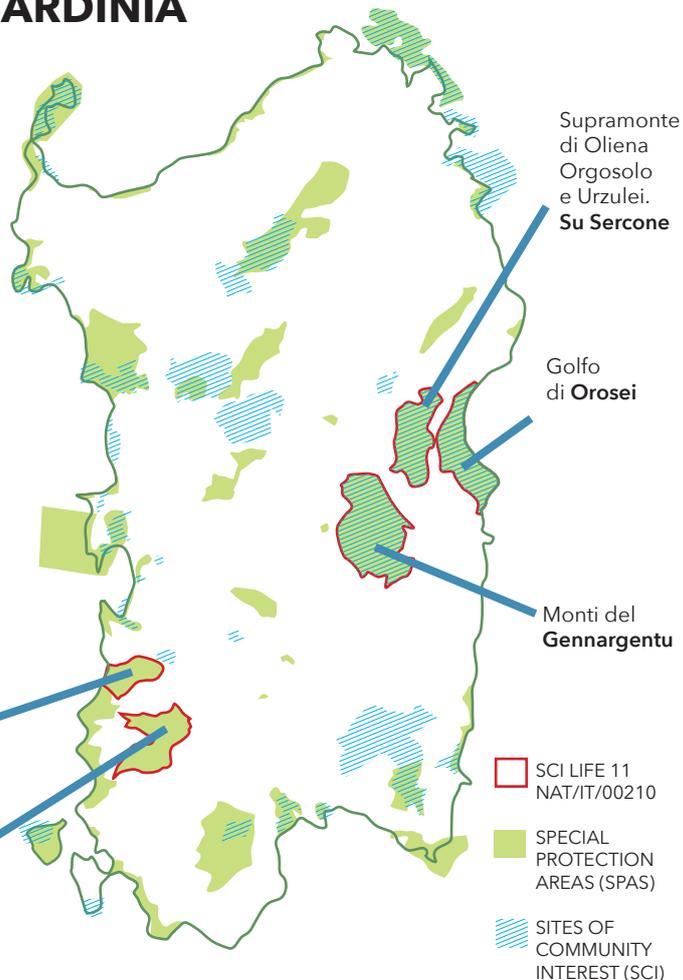
The project, which lasted 78 months, started in September 2012, and had a loan of € 2.006.110, of which 75% financed by the EU and the remaining portion, amounting to approximately € 511,000, to be paid by the beneficiary partners.



Monte **Arcuentu**
e Rio Piscinas

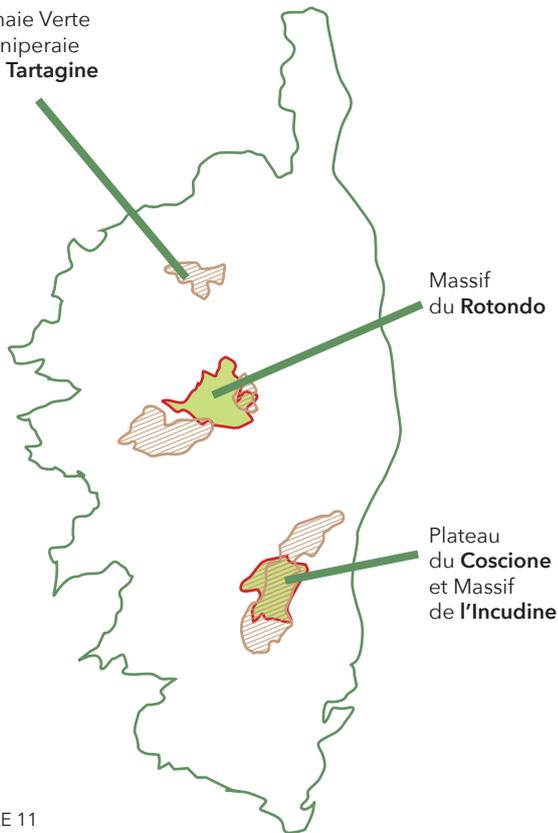
Monte **Linas**
Marganai

SARDINIA



CORSICA

Chenaie Verte
et Juniperaie
de la Tartagine



Massif
du **Rotondo**

Plateau
du **Coscione**
et Massif
de **l'Incudine**

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DISTRIBUTION

Eight Sites of Community Interest (S.C.I.) were involved, of which three in Corsica and five in Sardinia:

1. Massif de l'Incudine FR9400582
2. Massif du Rotondo FR9400578
3. Chénaie verte et juniperaie de la Tartagine FR9402004
4. Supramonte of Oliena, Orgosolo and Urzulei - Su Suercone ITB022212
5. Gulf of Orosei ITB020014
7. Monti del Gennargentu ITB021103
7. Monte Arcuentu and Rio Piscinas ITB040031
8. Monte Linas Marganai ITB041111

The project involved the reintroduction in Ogliastra of eighty specimens captured in Sardinia in the source area of the Costa Verde Oasis (Arbus) - Site of Community Interest Monte Arcuentu and Rio Piscinas - in order to repopulate a territory that in the past housed a large number of them.

Furthermore, since the deer population presently living in Corsica dates back to the 1980s introductions of only 14 deer, with the strong risk of inbreeding, the project envisaged the introduction of genetically differentiated animals coming from distant areas with the aim of improving the genetic richness.

For this reason, fifteen deer, also captured in the SCI Monte Arcuentu and Rio Piscinas, were transferred from Sardinia to Corsica.



Results

The project involved the construction of infrastructures read and fences. In fact, three capture enclosures have been built in the deer catching area, two parking fences in the release areas in Sardinia and two mobile capture pads for the release areas of Corsica.

Before performing capture and transfer operations, very complex and delicate operations have been carried out preliminary studies to identify capture sites, a preliminary examination of the health status of deer population of the source areas as well as careful planning and organization of catches and transfers.

The catches were performed in the free population of the SCI Monte Arcuento and Rio Piscinas Permanent protection oasis Montevecchio-Costa Verde wildlife; some specimens have been captured in the faunistic enclosure of the Settefratelli and others in the enclosure of Silana - Urzulei.

The deer were attracted to the catch enclosures with the administration of natural foods that are palatable to the species and thanks to the use of photo-traps it was possible to proceed to catches that have been carried out with a widely used method experimented for catching Sardinian- Corsican deer, or telenarcosis, remote administration of anesthetic drugs. The necessary checks are carried out on the captured animals and a catch sheet is filled out.

- > The capture fence near Urzulei (Nuoro)
- > Identification, biometric measurements, weight and application of radio collar with a Sardinian deer

After capture, completed all health checks, animals results suitable for transfer and release have been transferred from parking boxes to transport boxes, to be transported to the liberation sites and finally released.

Deer transfer to Sardinia and Corsica.

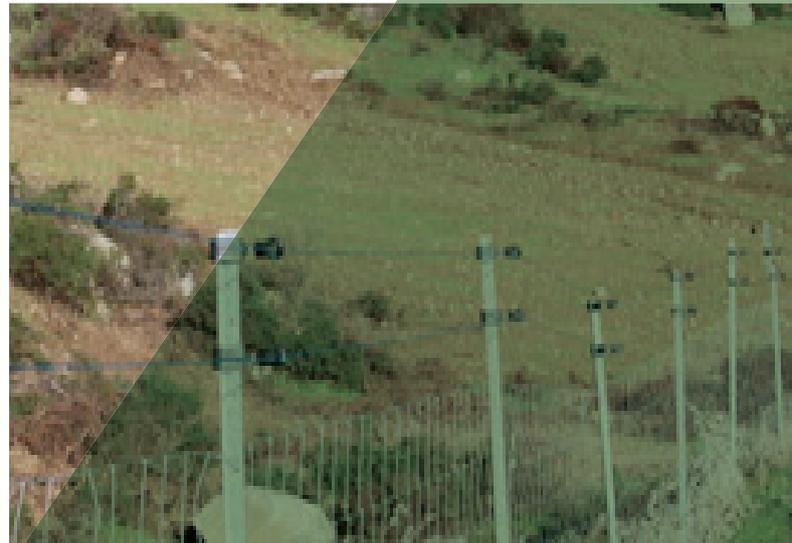
80 original specimens have been transferred for repopulation of the Costa Verde (SCI Arcuentu and Rio Piscinas) towards the territory of Ogliastra in the SCI Gulf of Orosei Monti release sites and of the Gennargentu, of which 30 equipped with radio collars. Always from the coast Green 15 specimens were transferred to 3 SCI areas of the Corsica, Chenaie Verte and Juniperaie de la Tartagine, Massif du Rotondo, SCI Plateau of the Coscione and Massif of the Anvil.

In addition, another 55 deer have been moved to Corsica. Currently the deer of which it is possible to verify the movements within Corsica thanks to the radiocollar are 26.

Fences

Fences with path wires have been placed on private land from low voltage electricity, to prevent access to deer to cultivated areas to protect crops. 59 km of wires were delivered for the construction of electrified networks, 45 km of which are installed on the SCI Monte Arcuentu and Rio Piscinas, 3 km in Ogliastra and 11 km in Corsica.

- > Liberation of deer in Rio Nuxi (Seui - Nu)
- > Electric fences in the territory of Arbus.





Ecological corridors

Ecological corridors have been set up by the construction of pastures and herbaceous meadows to feed the deer in the southern Sardinia province for 80 hectares and in the former province of Ogliastra. The pasture meadows keep deer away from crops intended for domestic livestock, both to induce them to migrate to less populated areas. Furthermore, lawns have been built and arable land for a total of 40 hectares in the province of South Sardinia and 40 hectares in the former province of Ogliastra.

Watering points

In order to increase the availability of water for the especially in dry years, 32 watering and restoration points were created. Four of the water troughs were placed on the SCI Monte Arcuentu and Rio Piscinas, 12 in the SCI Monte Linas Marganai, 14 in the SCI Monti del Gennargentu and 2 in the SCI Gulf of Orsei.

Valorisation interventions of the species

Local populations were sensitized with meetings on the territory and with environmental education activities in schools. Both the Forestas Agency and the Regional Park of Corsica have carried out environmental education activities in numerous classes of territories affected by the project within their institutional activities. In particular, the Forestas Agency has created an educational workshop on the Deer that it has been proposed in many schools in Sardinia.

- > Watering points
- > Environmental education in schools



The province of South Sardinia, with a project on the Deer, involved 350 primary and secondary school children.

Deerwatching houses

4 houses were built for deer watching, of which 3 made in Corsica and precisely in the SCI Massif du Rotondu, Chénaie Verte et Juniperaie de la Tartagine and at the SCI Cuscionu-Alcudina and one built in Sardinia at the forest of Crocorigas (Montevecchio - Guspini).

Trails of the Deer

6 dedicated paths have been created in the presence areas of the deer, to facilitate the sighting of animals in the wild in Sardinia in the SCI Arcuentu and Rio Piscinas, SCI Monti di Gennargentu and SIC Golfo di Orosei, and in Corsica in the SIC Chénaie Verte et Juniperaie de la Tartagine, SIC Massif de l'Incudine and SIC Massif du Rotondo.

Road bollards

In order to reduce accidents in some parts of the road where it is particularly high density of the deer, systems have been installed anti-collision with cars. In particular, the following have been installed:

- 395 margin delineators
- 530 anti-roughing optical bollards
- 4 triangular signs of danger "wandering wild animals" with LEDs bright

The stretches of road concerned are altogether 5 kilometers long: 2 along the state road 126 and 3 along the provincial road 66, within SIC areas of Sardinia.

- > Deerwatching house located in Crocorigas (Guspini)
- > Road signs and bollards





Information and educational panels

They were installed in the project areas in Sardinia:

10 didactic panels

20 explanatory panels of the project

In Corsica they have been installed:

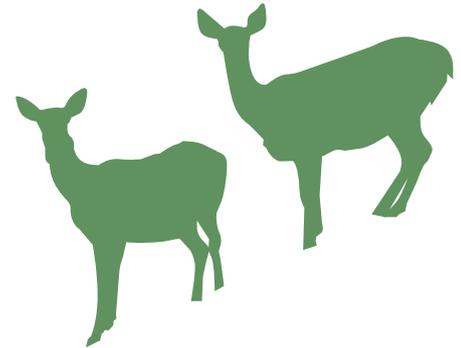
21 information panels on the deer trails in the three SIC affected by the project

Brochures and leaflets

They were produced:

-47,000 brochures on the project in 4 languages about sustainable development and on the Sardinian-Corsican deer

-24,700 booklets for schools.



> Information panels at the Montarbu Forest (Seui)

> Brochure for starting the project.





With the Life + project on the Sardinian-Corsican Deer were produced:

- The Plan for the enhancement of the Sardinian-Corsican Deer
- A study on the legal status of the Sardinian-Corsican Deer Course in Corsica
- An Action Plan for the management of *Cervus elaphus corsicanus*.

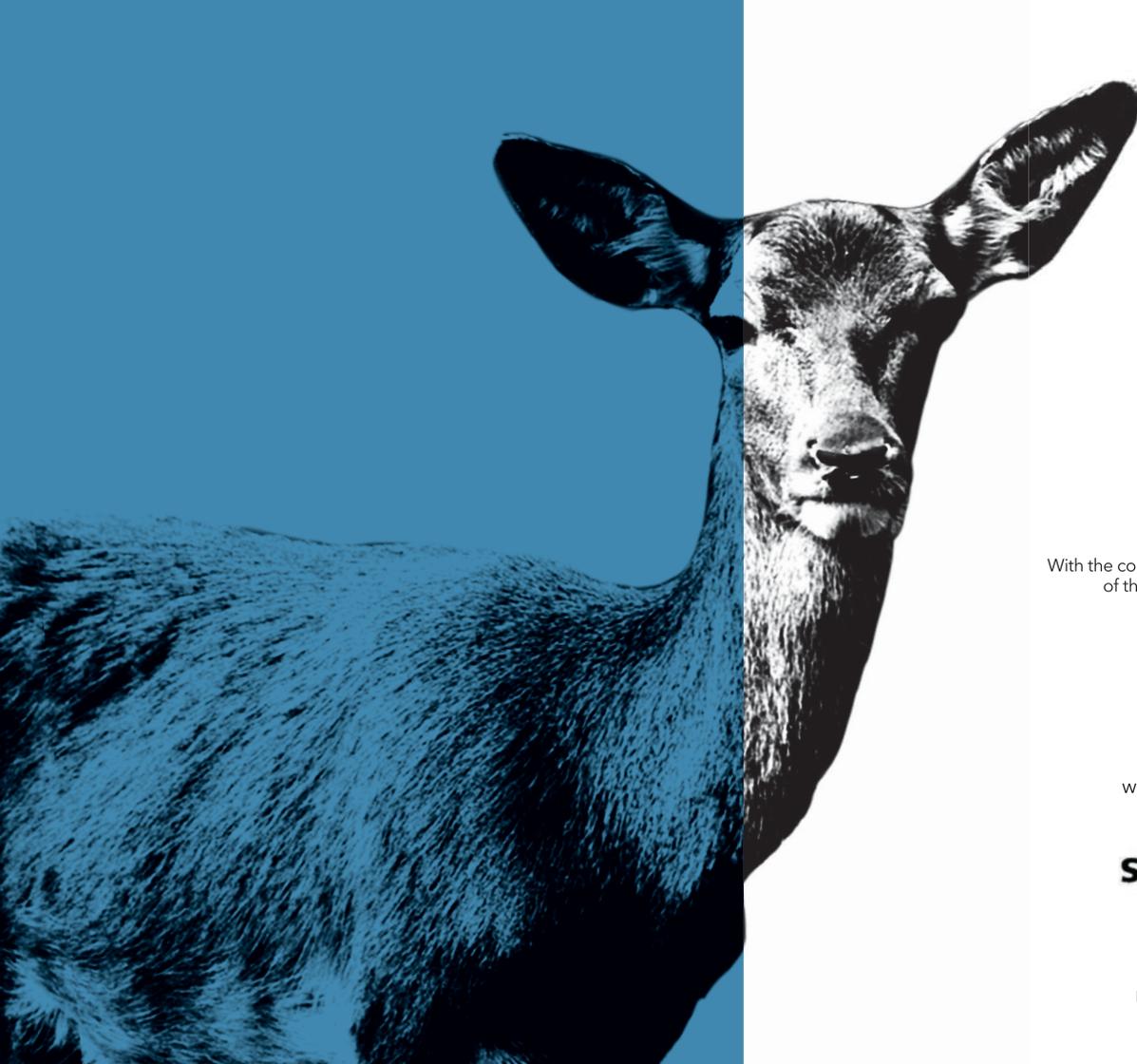
The post-Life plan

A post-Life plan has been created for the following actions for at least another 5 years, after the end of the project:

1. Annual censuses, in Corsica and Sardinia, in order to be able to evaluate the trend and dynamics of the population of the species both in the source area and in those of new reintroduction;
2. Annual verification of the effectiveness of the optical deterrent systems installed in the streets with the highest risk of crossing deer and cleaning of the surrounding vegetation;
3. Care for injured and sick deer found in nature;
4. Maintenance of the infrastructures realized;
5. Awareness raising in schools and the population;
6. Forest interventions to promote the improvement of the ecological conditions necessary for the species;
7. Adjustment of the legal status of deer in Corsica, in particular for the management of agricultural damage resulting from the presence of the species.







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