



With the contribution of the LIFE financial instrument of the EC

LIFE EREMITA

AFTER-LIFE PLAN

2022-2027



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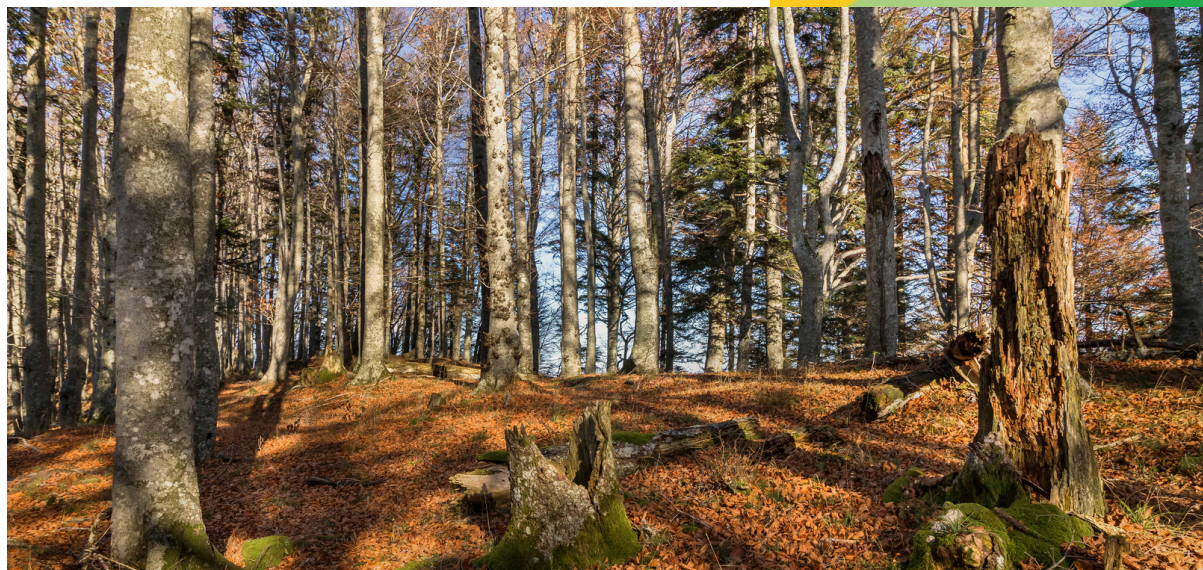
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THE PROJECT



Life Eremita (LIFE 14 NAT/IT/000209), inspired by the species *Osmoderma eremita* (Hermit beetle), a beetle whose name expresses the conditions of isolation and rarity that also characterise the other three target species, *Rosalia alpina* (Rosalia longicorn), *Graphoderus bilineatus* (Dytiscid water beetle) and *Coenagrion castellani* (Southern Damselfly), is a project financed by the European Union's LIFE programme that has contributed to the improvement of the conservation conditions of the four target species by carrying out a series of concrete actions, such as monitoring, necessary to increase knowledge on the presence/absence and distribution of the species and to plan targeted interventions; habitat improvement; controlled reproduction for the Hermit beetle; release into the wild of specimens taken from source populations or from prearranged breeding centres; raising public awareness of the ecological value of these species, with particular attention to the world of schooling, and finally the involvement of volunteers.



**Duration**

1° gennaio 2016 – 30 giugno 2022

Total budget

2.126.987 €

European contribute

1.268.863 € pari al 59.66% del budget totale

Regional contribute

774.862.00 €

Coordinator

Regione Emilia-Romagna

Associated beneficiares

Parco Nazionale dell'Appennino Tosco-Emiliano, Parco Nazionale delle Foreste Casentinesi, Monte Falterona e Campigna, Ente di gestione per i Parchi e la Biodiversità Emilia Occidentale, Ente di gestione per i Parchi e la Biodiversità Emilia Centrale, Ente di gestione per i Parchi e la Biodiversità Emilia Orientale, Ente di gestione per i Parchi e la Biodiversità Romagna.

Natura 2000 Network sites involved

78



AREAS OF INTERVENTION

The project was carried out throughout Emilia-Romagna region, to promote the development of the natural habitat of four umbrella species and, consequently, of other insect species. In particular, the areas most affected are:

Parco nazionale delle Foreste Casentinesi: one of the 2 National Parks straddling the regions of Emilia-Romagna and Tuscany. The protected area protects and conserves the Casentino Biogenetic Reserves and the Sasso Fratino Integral Reserve, the first integral reserve established in Italy. The territory thus includes some of the best preserved forest environments in Italy and Europe.

Macro Area Emilia Orientale includes several Natura 2000 Network sites of considerable importance for the conservation of some project target species as *Osmoderma eremita* and *Rosalia alpina*.

Parco nazionale dell'Appennino tosco-emiliano that includes some of the most significant areas of the northern Apennine ridge. The park area is characterised by a high diversity of environments typical of the Apennine mountain and sub-mountain area. This extraordinary diversity of environments corresponds to an extraordinary richness in terms of species, infact this area can be considered a hotspot of Italian biodiversity.



Macro Area Emilia Occidentale is located between Continental and Mediterranean biogeographical regions and on the migratory route of a large number of species of the avifauna, which find in the 37 Natura 2000 Network sites resting, refuge and reproduction areas of considerable importance.

Macroarea Romagna encompasses Natura 2000 Network sites of great importance for the conservation of 2 target species of the Life Eremita Project (*Coenagrion castellani* and *Osmoderma eremita*) and, in general, has a high degree of global biodiversity for both entomofauna and vertebrates and plants.

Macro Area Emilia Centrale is home to the most important sites nationally and for southern Europe for the conservation of the aquatic beetle *Graphoderus bilineatus*; however, various threats loom and the species is in critical danger of extinction in Italy.

Monitored Macro-areas
and breeding centres.





AFTER-LIFE PLAN

WHAT IS IT?

The **After-Life Conservation Plan** includes a list of activities showing how the actions initiated in the Life project will be continued and developed in the years following the end of the project. This set of activities makes it possible to identify how the long-term management of project sites, habitats and target species will be ensured, both in terms of activities to be promoted and implemented, and in terms of resources to be invested and mobilised.

The After-Life Plan is an obligation that is binding on the beneficiaries of European funding from the earliest application stages and is a compulsory document to be drawn up before the project is completed..

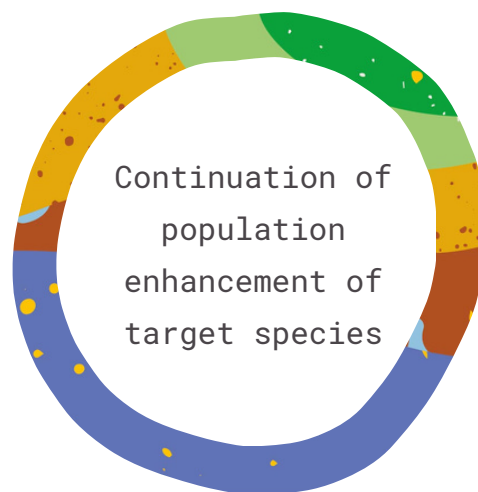


OBJECTIVES

This plan establishes how safeguarding of four target species, initiated during the Life Eremita project, have to continue and develop in the following five years beyond the formal closure of the project.

In addition to the good practices developed, the After-Life activities will be reinforced not only by the **Specific Conservation Measures**, approved by the Region, which represent the reference standard for the safeguard of the target species in thirty-seven Natura 2000 sites in Emilia-Romagna, but also by the joint commitment of all the LIFE Eremita project partners.

Two main objectives:



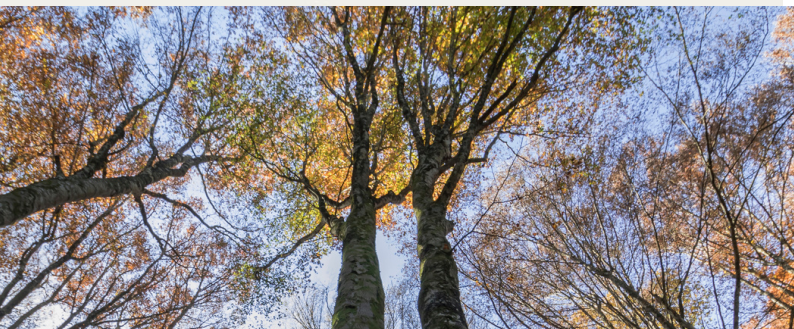


The Life Eremita project saw the implementation of **silvicultural interventions** aimed at artificially 'ageing' the forest with the creation of woody necromasses on the ground or standing, the effectiveness of which with respect to the objective of increasing the availability of suitable habitats can only be fully assessed in the coming years.

The same applies to **forestry operations** carried out in order to maintain the old fruit chestnut trees rich in cavities, which are the habitats of choice for *Osmoderma eremita*.

For the **wetlands**, the attention paid to many facets of their management with the aim of conserving and possibly increasing biodiversity, starting with the target species, has once again highlighted the fragility of these ecosystems, but also the necessary insights and distinctions that need to be made when dealing with their maintenance, which go beyond simply controlling the vegetation or not.

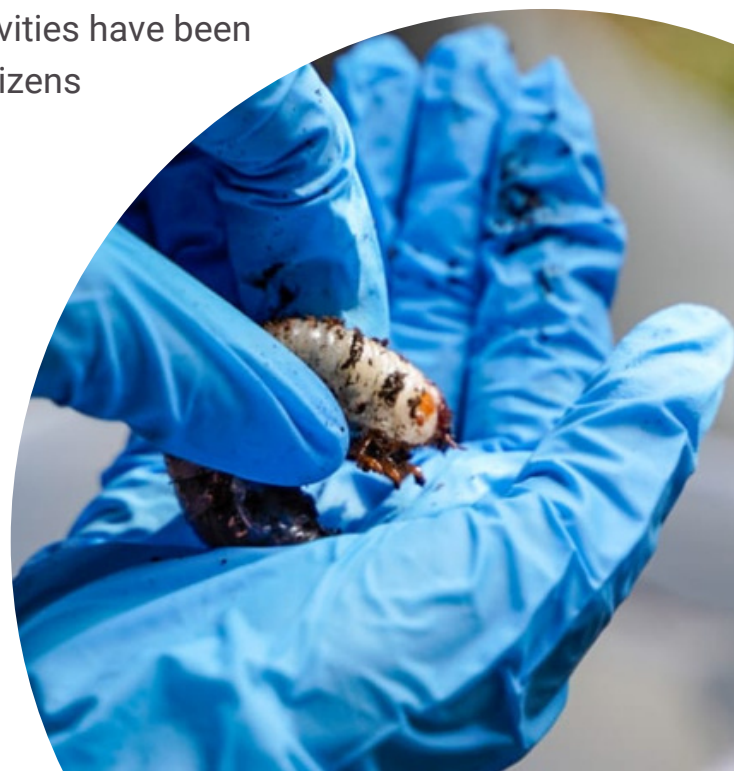
All the interventions carried out also represent practices with a high exemplification value and the awareness-raising and information activities aimed at local authorities, owners and the productive world were also aimed at their replicability.





AFTER-LIFE PLAN INTERVENTIONS

To facilitate the understanding of the following plan, the interventions implemented during the post-Life period have been divided by target species. Therefore, for each species, conservation and monitoring actions have been designed, the resources and funds from which will be drawn for the implementation of the interventions, and also the reference bodies that will deal. The Natura 2000 Network sites selected are part of the areas already included in the Life Eremita project where the interventions will take place, while other sites were selected and added to improve the knowledge framework on the species. At the end of all the interventions, information, communication and dissemination activities have been designed of the results for students, citizens and technicians, as well as networking activities and travelling events.



Osmoderma eremita (Scopoli, 1763)



RESPONSIBLE BODIES

RER, MAR, MEOC, MEC, MEOR, PNATE, PNFC

CONSERVATION

- Management of Action C1 and C3 intervention areas: maintenance and control of WMBs; creation of new "habitat trees"; creation of new stations suitable for the species, also by laying new WMBs;
- Population reinforcement through the introduction into the WMB of specimens obtained by breeding; breeding at the 3 Centres (PNATE; PNFC; MAR) and the introduction of about 80 individuals per year are envisaged;
- Continuation of ex situ breeding of *Osmoderma eremita* by producing a minimum number of larvae and adults each year (around 80-100 specimens) to be placed in the WMB or in tree cavities to reinforce populations;
- Updating and maintenance of the database.

MONITORING

- Monitoring in the LIFE project implementation areas and in other areas to improve the knowledge framework on the species;
- Surveys to integrate knowledge on the species to other regional areas, also on the Tuscan side to improve knowledge on distribution and abundance.

FOUNDS

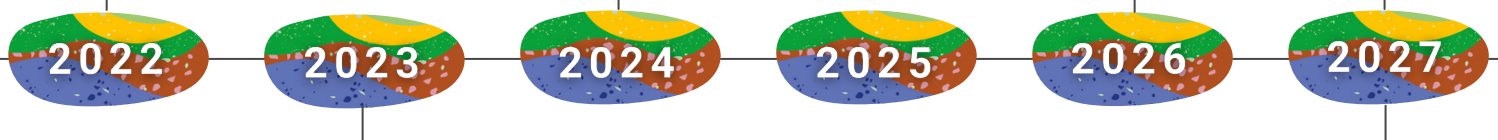
Authority budget funds, MiTE Parks for Climate funds, regional, national, EU funding sources.

NATURA 2000 NETWORK SITES

IT4030002, IT4030003, IT4030005, IT4080003, IT4080002, IT4070011, IT4050004, IT4070016, IT4090001, IT4050001, IT4050002, IT4050003, IT4050016, IT4050020, IT4040001, IT4040002, IT4040003, IT4040004, IT4020001, IT4020003, IT4020026, IT4020021, IT4020020, IT4020017 (As Life Eremita project); IT4080003, IT4080002, IT5180001, IT5180002, IT5180018, IT5180005, IT5180101, IT5140005 (Other regional areas and the Tuscan side).

BREEDING AND REINFORCEMENT OF POPULATIONS

INTERVENTION AREA MANAGEMENT



MONITORING IN PROJECT AREAS AND START OF INVESTIGATIONS IN OTHER REGIONAL AREAS AND ON THE TUSCAN SIDE



SUMMARY OF INTERVENTIONS

Type of activity	Actions/interventions/activities (brief description)	Nature 2000 Site	Locality	Responsible entity	Participating entities	Period	Funds	Project action	Priority
Conservation	Management of the intervention areas of actions C1 and C3: maintenance and monitoring of the WMBs; creation of new "habitat trees"; creation of new stations suitable for the species, possibly through the setting up of new WMBs	IT4030002, IT4030003, IT4030005, IT4080003, IT4080002, IT4070011, IT4050004, IT4070016, IT4090001, IT4050003, IT4050002, IT4050003, IT4050016, IT4050020, IT4040001, IT4040002, IT4040003, IT4040004, IT4020001, IT4020003, IT4020026, IT4020021, IT4020020, IT4020017	Intervention sites of actions C1 and C3 and new interventions in various localities to be defined	MAR, MEOC, MEC, MEOR, PNATE, PNFC	MAR, MEOC, MEC, MEOR, PNATE, PNFC	2024-2027	Funds of the entities, other regional/national/EU funding resources, MITE Parks for Climate funds	C1, C3	High
Conservation	Strengthening of the populations through the introduction of the WMBs of individuals from the breeding activity of the project; breeding at the premises of the 3 centres set up within the project (PNATE; PNFC; MAR) and expected introduction of ca. 80 individuals per year (larvae and adults)	IT4030002, IT4030003, IT4030005, IT4080003, IT4080002, IT4070011, IT4050004, IT4070016, IT4090001, IT4050003, IT4050002, IT4050003, IT4050016, IT4050020, IT4040001, IT4040002, IT4040003, IT4040004, IT4020001, IT4020003, IT4020026, IT4020021, IT4020020, IT4020017	Intervention areas of action C3 and other localities, potentially also Nature 2000 sites, where WMBs are available	MAR, MEOC, MEC, MEOR, PNATE, PNFC	MAR, MEOC, MEC, MEOR, PNATE, PNFC	2022-2026	Funds of the entities, other regional/national/EU funding resources, MITE Parks for Climate funds	C3 - C4 - C5	High
Conservation	Continuation of the ex situ breeding of <i>Osmoderma eremita</i> , producing every year a minimum number of larvae and adults (for a total of ca. 80-100 individuals) to be inserted in the WMBs or in tree cavities to strengthen the		3 breeding centres	PNATE, PNFC, MAR	PNATE	2022-2026	Funds of the entities, other regional/national/EU funding resources, MITE Parks for Climate funds	C4	Medium
Monitoring	Monitoring in the implementation areas of the LIFE project and in other areas to improve the knowledge framework on the species	IT4030002; IT4030003; IT4030005; IT4080003; IT4080002; IT4070011; IT4050004; IT4070016; IT4090001; IT4050003; IT4050002; IT4050003; IT4050016; IT4050020; IT4040001; IT4040002; IT4040003; IT4040004; IT4020001; IT4020003; IT4020026	Intervention areas of action C1 and other potentially interesting localities, possibly also in Nature 2000 sites that are potentially suitable	MAR, MEOC, MEC, MEOR, PNATE, PNFC	MAR, MEOC, MEC, MEOR, PNATE, PNFC	2023-2027	Funds of the entities, and other regional/national/EU funding resources	D4	High
Monitoring	Investigations to integrate the knowledge on the species in other areas of the Park, including the Tuscan border, to improve the knowledge framework on the distribution and presence also in other areas that have not been investigated during the project	IT4080003, IT4080002, IT5180001, IT5180002, IT5180018, IT5180005, IT5180101, IT5140005	Various localities to be defined with the Park, including the Tuscan border	PNFC	PNFC	2023-2027	Funds of the entities, and other regional/national/EU funding resources	D4	High

Rosalia alpina (Linnaeus, 1758)



RESPONSIBLE BODIES

MEOR, MEC, PNATE, PNFC, RER, MEOC

CONSERVATION

- Management of Action C1 areas: creation of new 'habitat trees'; creation of new stations suitable for the species in potentially suitable areas;
- Updating and maintenance of Database.

MONITORING

- Monitoring in the LIFE project implementation areas and in other areas to improve the knowledge of the species and the effectiveness of action C1;
- Population monitoring also through Citizen Science;

- Monitoring on LIFE transects (two per year on a rotational basis) and integration of knowledge on the species to other regional areas, also on the Tuscan side to improve the knowledge framework on distribution and abundance also in areas never investigated during the project.

FOUNDS

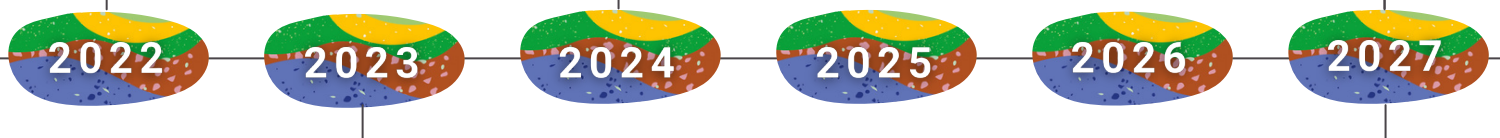
Authority budget funds, MiTE Parks for Climate funds, regional, national, EU funding sources.

NATURA 2000 NETWORK SITES

IT4080003, IT4080002, IT4030003, IT4030004, IT4030005, IT4040001, IT4040002, IT4050002; IT5180001, IT5180002, IT5180018, IT5180005, IT5180101, IT5140005.

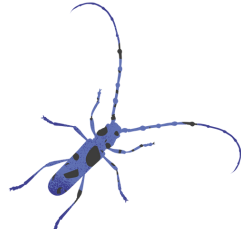
MONITORING THROUGH CITIZEN SCIENCE

INTERVENTION AREA MANAGEMENT



MONITORING IN PROJECT AREAS AND START OF INVESTIGATIONS IN OTHER AREAS AND ON THE TUSCAN SIDE

SUMMARY OF INTERVENTIONS



Type of activity	Actions/interventions/activities (brief description)	Nature 2000 Site	Locality	Responsible entity	Participating entities	Period	Funds	Project action	Priority
Conservation	Management of the intervention areas of Action C1: creation of new "habitat trees"; creation of new stations suitable for the species in potentially suitable areas	IT4080003, IT4080002, IT4030003, IT4030004, IT4030005, IT4040001, IT4040002, IT4050002	Intervention areas of action C1, other potentially interesting localities and potentially suitable Nature 2000	MEOR, MEC, PNATE, PNFC	MEOR, MEC, PNATE, PNFC	2024-2027	Funds of the entities, other regional/national/EU funding resources, MITE Parks for Climate funds	C1	High
Monitoring	Monitoring of the LIFE project implementation areas and in other areas to improve the knowledge framework on the species and the efficacy of the interventions carried out within action C1	IT4050002	Intervention areas of action C1, other potentially interesting localities and potentially suitable Nature 2000	MEOR, MEC, PNATE, PNFC	MEOR, MEC, PNATE, PNFC	2024-2027	Funds of the entities, other regional/national/EU funding resources, MITE Parks for Climate funds	D4	Medium
Monitoring	Monitoring of the population of <i>Rosalia alpina</i> , also through Citizen science	Nature 2000 regional sites		RER	MEOC	2022 -2027	Funds of the Entity	A2, D4	Medium
Monitoring	Monitoring on the LIFE transects (two per year on rotation) and integration of the knowledge on the species with other areas of the Park, including the Tuscan border, to improve the knowledge framework on the distribution and presence in areas that have not been investigated during the project	IT4080003, IT4080002, IT5180001, IT5180002, IT5180018, IT5180005, IT5180101, IT5140005	Various localities to be defined by the Park, also in the Tuscan border	PNFC	PNFC	2024-2027	Funds of the entities, and other regional/national/EU funding resources	D4	High

Coenagrion castellani Roberts, 1948



ERESPONSIBLE ENTITIES

MAR, RER

CONSERVATION

- Mowing to contain the shrub and tree vegetation in watercourses populated by the species in several Rii;
- Updating and maintenance Database.

MONITORING

- Population monitoring in different Rii.

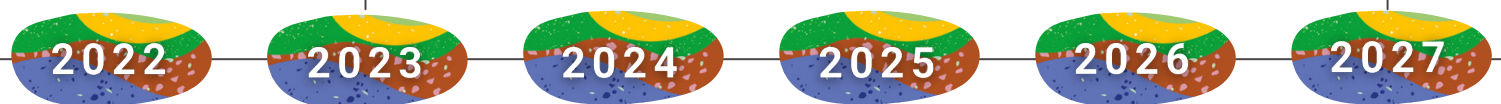
FUNDS

MAR budget funds, other regional, national and EU funding sources.

Natura 2000 network sites

IT4070011, IT4090002.

INTERVENTION AREA MANAGEMENT



POPULATION MONITORING

Graphoderus bilineatus (De Geer, 1774)



RESPONSIBLE BODIES

PNATE, MEC, RER

CONSERVATION

- Intervention to make Lake Guadine Pradaccio more suitable for the species, by clearing weed vegetation;
- Intervention to widen the water mirror of Lake Gore and Lake Magnano, obstructing the drainage channels, clearing weed vegetation;
- Intervention for the planting of aquatic species to increase the suitability of Lake il Terzo to host the species to generally increase the biodiversity of this wetland area;

- Database update and maintenance.

MONITORING

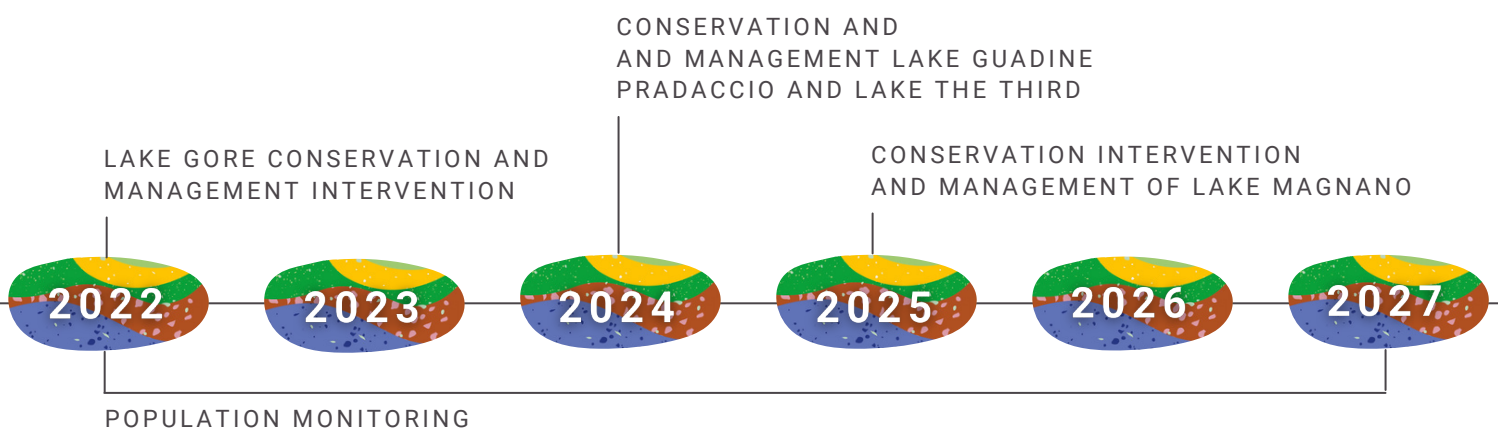
- Population monitoring in Lago Sfondato and Lago del Coccio, Lago Pratignano, La Martina.

FUNDS

- Measure 8.5 PSR E-R; MEC budget funds, other regional, national and EU funding sources.

NATURA 2000 NETWORK SITES

IT4020020, IT4030001, IT4030002, IT4030005, IT4040001, IT4050015.



SUMMARY OF INTERVENTIONS



Type of activity	Actions/interventions/activities (brief description)	Nature 2000 Site	Locality	Responsible entity	Participating entities	Period	Funds	Project action	Priority
Conservation	Mowing to contain the shrub and tree vegetation along the watercourses populated by the species	IT4070011, IT4090002	Several streams		MAR, RER	2024-2027	MAR funds, and other regional/national/EU funding resources	C2	
Monitoring	Monitoring of the population of <i>C. castellani</i>	IT4070011, IT4090002	Several streams		MAR, RER	2024-2027	MAR funds, and other regional/national/EU funding resources	A2, A4, D4	

Type of activity	Actions/interventions/activities (brief description)	Nature 2000 Site	Locality	Responsible entity	Participating entities	Period	Funds	Project action	Priority
Conservation	Intervention to make the lake more suitable for hosting the species, through the removal of	IT4020020	Lago Guadine Pradaccio	PNATE	RER, PNATE	2024	Measure 8.5 PSR E-R	C2 (C5)	Medium
Conservation	Intervention for the enlargement of the stretch of water, blockage of the drainage canals, removal of weeds	IT4030001	Lago Gore	PNATE	RER, PNATE	2022	Measure 8.5 PSR E-R	C2 (C5)	Medium
Conservation	Intervention for the enlargement of the stretch of water, blockage of the drainage canals, removal of weeds	IT4030002	Lago del Magnano	PNATE	RER, PNATE	2025	Measure 8.5 PSR E-R	C2 (C5)	Medium
Conservation	Intervention for the planting of aquatic species to increment the suitability of the habitat for the species as well as the overall biodiversity of the wetland area	IT4040001	Lago il Terzo		RER, MEC	2024	MEC funds, and other regional/national/EU funding resources		
Monitoring	Monitoring of the population of <i>G. bilineatus</i>	IT4020020, IT4030001, IT4030002, IT4030005, IT4040001, IT4050015	Lago Sfondato e Lago del Coccio, Lago Pratignano, La Martina	PNATE, MEC, RER	PNATE, MEC, RER	2022-2027	Funds of the entities, and other regional/national/EU funding resources	A2, A4, D4	High



INFORMATION, COMMUNICATION, DISSEMINATION

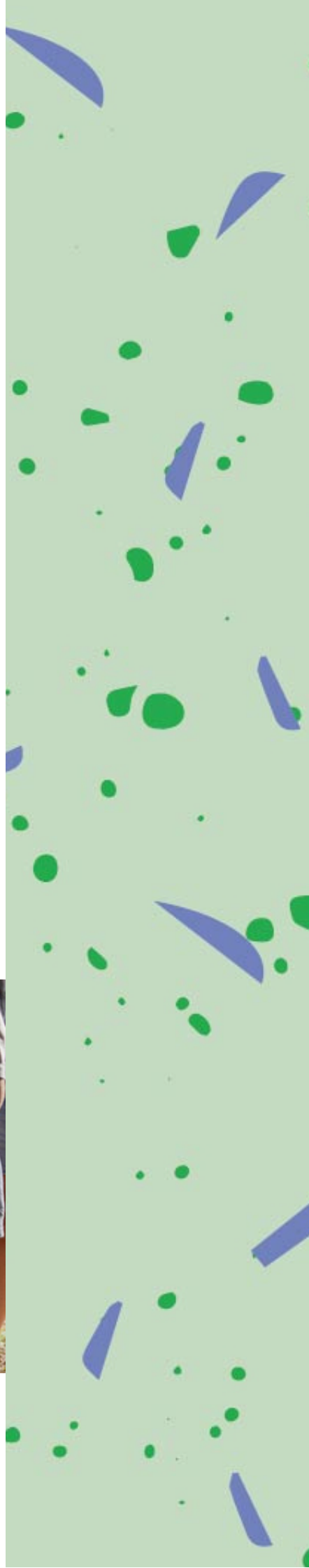
An essential feature of Life projects is the attention paid to the communication and dissemination aspects. In particular, it is a priority to publicise the objectives pursued, the methodologies used and the results obtained.

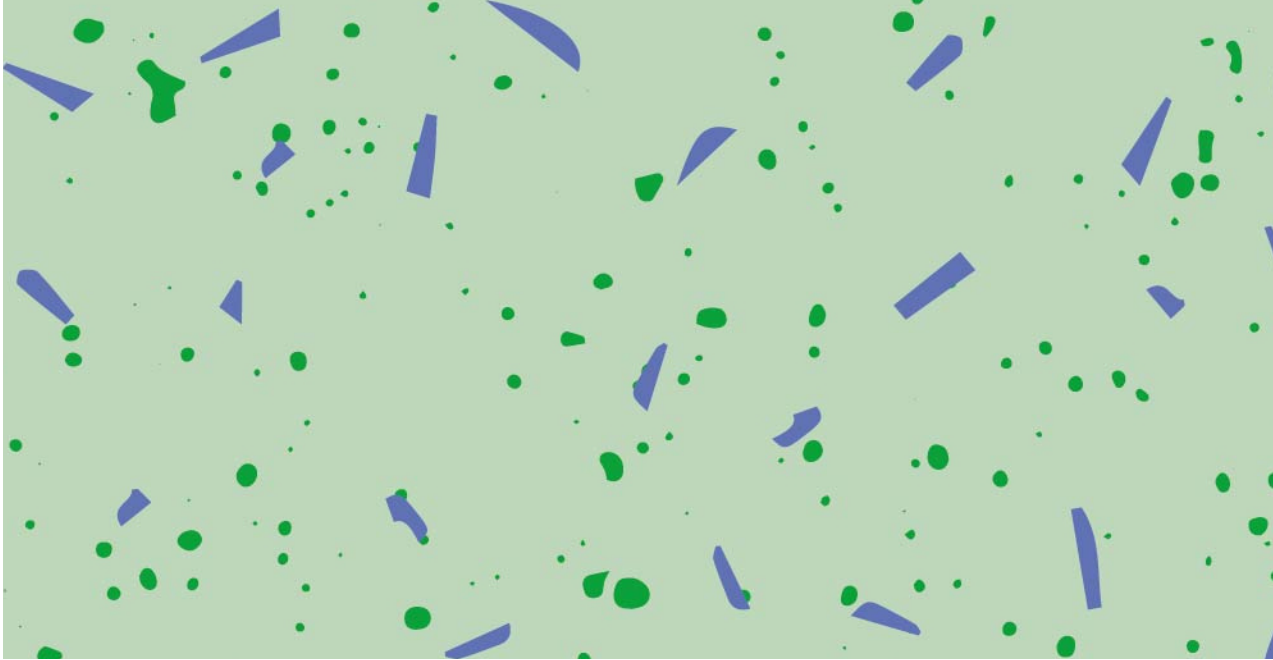
The main cultural challenge of the Life Eremita project was to transform negative prejudice about insects into new awareness. With this, the communication actions were developed targeting both a public with technical-scientific interests and a wide audience of the curious and nature enthusiasts.

During the After-Life period of the Life Eremita project, most of the information, awareness-raising, communication and dissemination activities, already carried out during the project years, will be implemented and continued:

- The **project website and social pages** will be maintained and updated, continuing communication with the community about activities, events and achievements;
- Further visibility will be given to the project through the distribution of **posters and printed materials**, through the information structures, Park Visitor Centres and at events and seasonal animation programmes;

- **Educational modules** will be produced and distributed as part of the catalogue proposed to schools in the territory of the protected areas of eastern Emilia, and included among the educational proposals of the environmental education project "Un Parco per Te" (A Park for You), which every year involves several classes in the comprehensive institutes of the PNFC municipalities;
- **Guided tours** will be conducted on the target species in the protected areas of the Eastern Emilia Region;
- The **Hermit tour** will continue in the PNFC area and the Romagna macro-area. At least 2 editions per year are envisaged;
- **Networking** with other LIFE and NON LIFE projects will continue;
- Thematic **training workshops** will be held for forest technicians (professionals and civil servants), forest enterprises/cooperatives and owners/managers of forest areas at PNATE.





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