

AFTER LIFE PLAN

The project LIFE14 NAT/IT/001017 Conservation of Birds of Prey in Sicily (acronym ConRaSi) stems from the need to improve the conservation status of some species of birds of prey - Bonelli's Eagle (*Aquila fasciata*), Egyptian Vulture (*Neophron percnopterus*) and Lanner Falcon (*Falco biarmicus*) - threatened with local extinction, improving their reproductive success through new conservation measures and strengthening the ones already in place. Its main aim is to reduce the impact of some significant threats and, in particular, the illegal taking of eggs and young from the nest, which brought the species to the brink of extinction.

The project, initially scheduled to last three years and extended until autumn 2021, had to cope with the consequences of the Sars pandemic Covid-19, which particularly affected Sicily. Thus, the actions had to adapt to the restrictions imposed by the national and regional governments to the extent that the project deadline had to be greatly extended. The main concrete actions of the project were: fighting against illegal harvesting, increasing the reproductive success through management tools, improving the knowledge of the populations and increasing the involvement of local communities.

In order to avert the dangers, identification and surveillance activities have been carried out at nesting sites during the breeding phase, censuses of breeding populations, annual marking campaigns of young specimens with coloured rings and satellite transmitters, molecular sexing of ringed young and genotyping of samples (the genotypes are stored in the ISPRA database) and activation of supplementary feeding stations. Other unforeseen activities were also carried out (such as the treatment of infections and the administration of drugs to young Bonelli's eagles to prevent trichomoniasis and the recovery of tagged birds in difficulty or which had died), which led to positive results, especially for the conservation of Bonelli's eagles and Egyptian vultures.

Birds of prey in Sicily:

The Bonelli's eagle, the Egyptian vulture and the Lanner falcon are three species of birds of prey listed in Annex I of the Birds Directive. In Italy, the Bonelli's eagle and the Lanner falcon are considered at risk of extinction (EN), while the Egyptian vulture is considered at high risk of extinction (CR).

Active conservation in Sicily is essential for the survival of these three species, as it is home to 100% of the Italian breeding population of Bonelli's Eagle, 65% of the national population of Egyptian Vulture and 70-80% of the Italian population of Lanner Falcon. In fact, all three species face serious problems in Sicily due to human activities, with the consequent risk of rarefaction and possible rapid extinction.

The main threats are:

- direct persecution such as culling, taking of eggs and chicks and poisoned bait;
- the reduction of key trophic resources;
- the increasing loss of habitat due to the transformation of Sicilian landscapes;
- the intensification of agricultural activities;
- electrocution.

With specific regard to Bonelli's Eagle, the Life project also produced an Action Plan in which, on the basis of the threat analysis, the necessary conservation measures are defined. The Plan was adopted by the Sicilian Region by Decree of the Director General of the Regional Department of the Environment, which states in Article 2: '*Its adoption constitutes a modification and/or integration to the conservation measures of the Natura 2000 sites, in line with what is reported in the updates of the relative forms*'.

EVALUATION IN THE LIGHT OF THE ACTIONS CARRIED OUT DURING THE PROJECT:

ConRaSi post-LIFE conservation objectives for populations of the three species

The positive results obtained during the project, in order to be consolidated over time, require the maintenance and consolidation of some of the management activities already undertaken.

In this framework, there is a commitment to continue in the future, in the areas involved in the LIFE project, some of the basic activities to ensure the persistence of the results achieved and to continue the proper management of the habitats for the protection of these three species of birds of prey. As far as the time frame is concerned, the activities outlined below should be continued for the 5 years following the end of the project.

The measures to be implemented as identified in the After LIFE plan are the result of a prioritisation carried out bearing in mind the conservation needs of the species and the availability of resources that will become available each year.

Since the positive results achieved are also the consequence of a solid partnership, and in order to provide certainty of continuity, considering also the numerous and frequent changes in the organisational chart of some of the beneficiaries that occurred during the different phases of the project, a coordination committee will be set up, made up of representatives of the bodies involved, which will meet at least twice a year to coordinate and verify the state of implementation of the actions undertaken.

With respect to the actions of the LIFE ConRaSi project, 5 sectors have been identified for which it is considered necessary to carry out concrete actions also in the post-LIFE period, in order both not to compromise the results obtained and to contribute to the improvement of the conservation status of the target species, in particular

- **monitoring and estimation of the population size of the three target species;**
- **surveillance activities**
- **management of feeding stations and warrens**
- **updating of management plans, safeguard measures and standard forms**
- **dissemination and awareness-raising activities**
- **website management**

MONITORING AND CENSUS OF BONELLI'S EAGLE, LANNER FALCON AND VULTURE POPULATIONS

The monitoring of the three target species of the project are strategic actions to be carried out in order to continue the management and conservation policies of the species. The monitoring of the conservation status is also considered indispensable to assess the achievement of the provisions of the Birds 2Directive, i.e. the attainment of an adequate level of conservation for all bird species.

The estimation of the population size and monitoring operations will be coordinated by WWF Italy and will be carried out using the same methodology already used during the project, with the possibility of using qualified external personnel in the field activities. The activity will be carried out with internal funds of the association or by raising funds from external financiers.

As far as GPS monitoring of eagles is concerned, the application of new transmitters is not considered necessary as the number of radio eagles being tracked is sufficient for the purposes of the project. Radiolocations will continue to be collected from those still radiolocated until the transmitters cease to function.

For the observation and monitoring of birds, the same instrumentation will be used as that acquired during the implementation of the project, maintaining the existing agreement with the Movebank platform for the reception of animal movements. Similarly, the instruments (spotting scopes and binoculars) for bird observation will be used in the monitoring operations carried out by the staff of the bodies involved or by volunteers, which will continue even after the end of the project.

Type of action	partners	Actors involved	Cost
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Monitoring of target bird population	WWF Italy	qualified personnel external	Euro 20,000 / year
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SURVEILLANCE ACTIVITIES

Another action that needs to be continued is undoubtedly surveillance, as the problem of illegal trade in birds of prey continues to be one of the greatest risks for the conservation of these species, as demonstrated by the ongoing CITES investigations and the seizure of dozens of birds.

As far as surveillance activities are concerned, these will continue through the consolidation of pre-existing or developed video surveillance activities within the project and the dissemination and publicity capacity deriving from the actions of the project itself and from private foundations (FIR, EBN) that have already supported activities related to the fight against the illegal trade of birds of prey in Sicily. The possibility of organising volunteer camps will be evaluated from year to year in collaboration with the actors already involved in the field and belonging to the Gruppo Tutela Rapaci Sicilia.

The equipment acquired by the project will be used by the partners in the continuation of the actions also after the end of the project. This applies in particular to all surveillance equipment (phototraps and webcams), which will remain in the hands of those involved in surveillance activities.

Type of action	partners	Actors involved	Cost
Surveillance	WWF Italy in coordination with Gruppo Tutela Rapaci Sicily	qualified personnel external	Euro 10,000 / year

MANAGEMENT OF MEAT AND RABBIT HUTCHES

Warrens

The construction and management of rabbit warrens was one of the main aims of Action C.2 aimed at increasing food availability for Bonelli's Eagle. The main objective was the creation of nuclei of wild rabbits (*Oryctolagus cuniculus*), in order to support Bonelli's eagles and create new populations (through possible local reintroductions) and/or the strengthening of existing ones, in a stable way over the long term, thus increasing the availability of prey for Bonelli's eagles in the hunting areas throughout the year, but mainly during the breeding season, thus avoiding, as far as possible, a decrease in the productivity of the pairs present.

It will therefore be necessary in the coming years to check the condition of the enclosures for possible maintenance. Staff will ensure the supply of water and, if necessary, food. The presence and health of the rabbits in the hutches will also be monitored, and new rabbits will be added if their numbers are too low, or some rabbits will be released in the immediate vicinity of the hutches if high densities are reached in the hutches.

The action remains with DRSRT, the partner that built the facilities during the LIFE ConRaSi project. The DRSRT will use its own internal resources to carry out the action.

Type of action	partners	Actors involved	Cost
Rabbit management	DRSRT	internal staff/ rabbit supplier	The activities will be carried out with the resources annually available for the institutional activity of the Department.

Feeding stations

The construction and management of the feeding stations, also a major aim of Action C.2, was instead to increase the food supply for the Egyptian Vulture.

It will therefore be necessary in the coming years to continue checking the conditions of the fences for possible maintenance and to guarantee their supply in relation to the phenology of the species in the different sites. In addition, it appears necessary to proceed with the authorisation of all feeding stations for category SOA 1. In fact, in Sicily control plans for the containment of ungulate populations (wild boar and fallow deer) within the protected areas began a few years ago. Periodic culling is carried out by authorised personnel (Regional Forestry Corps agents) using non-toxic ammunition. Some of the culled animals have been and are currently transferred to the feeding stations, where the carcasses are opened and dissected in order to make them available and suitable for the Egyptian Vulture.

Therefore, it is planned to continue to supply the kennels with carcasses from the control of problematic fauna. The possibility of using carcasses from the CRAS and/or from neighbouring farms will also be verified. The action remains in the hands of the DRSRT, the partner that built and managed the facilities during the LIFE ConRaSi project. The DRSRT will use its internal resources to carry out the action.

Type of action	partners	Actors involved	Cost
Feeding station management	DRSRT	internal staff	The activities will be carried out with the resources annually available for the institutional activity of the Department.

ADAPTATION OF MANAGEMENT PLANS AND STANDARD FORMS

The Sicilian Region will update the so-called Safeguard Regulations of the CSF and SPAs. The Sicilian Region will update the so-called Safeguard Regulations of the CSZs and SPAs, which will be adapted to the results of the LIFE ConRaSi project, making the conservation measures already outlined binding. As regards the updating of the standard forms, this will be done by 2022 and later in the case of new data provided by the monitoring activities.

These activities will be carried out by the DRA with its own staff.

Type of action	partners	Actors involved	Cost
Updating Natura 2000 site management plans and standard forms	DRA	internal staff	The activities will be carried out with the resources annually available for the activity Department.

DISSEMINATION AND AWARENESS-RAISING ACTIVITIES

The dissemination and awareness-raising action has been very important in raising awareness of

both the species and the threats affecting Sicilian populations of these three species of birds of prey, and in raising awareness of nature conservation among local populations. It is planned to continue the activity

specific on the project species as part of the youth education and adult awareness programmes promoted by the Network of Sicilian Nature Reserves. The WWF will provide support for the organisation of on-site dissemination events and the dissemination of information materials.

Lecturers from the University of Palermo, with whom the project has already collaborated, may contribute to dissemination and awareness-raising activities.

Type of action	partners	Actors involved	Cost
Printing communication materials	DSRT, DRA, WWF Italy	Staff and internal resources	Euro 2,000 /year

WEBSITE MANAGEMENT

Given the success of the project's web pages, as evidenced by the high number of hits so far, the domain www.lifeconrasi.eu will be maintained.

Type of action	partners	Actors involved	Cost
Maintaining the website	WWF Italy	Staff and internal resources/manager domain	Euro 500

ANY ADDITIONAL FUNDING

With regard to the management, maintenance and improvement of the species' habitat, measures to implement the project's forecasts will be studied as part of the development of the new 2021-2027 ERDF OP and the 2023-2027 CAP/ERP.

Detailed Timetable					
Action	2022	2023	2024	2025	2026
Monitoring and census of the three target species	Jan - Sep	Jan - Sep	Jan - Sep	Jan - Sep	Jan - Sep
Surveillance activities	Feb - Jun	Feb - Jun	Feb - Jun	Feb - Jun	Feb - Jun
Management of meat and rabbit hutches					
Refuelling of tankers	Tue - Sep	Tue - Sep	Tue - Sep	Tue - Sep	Tue - Sep
Updating management plans					
Updating of standard forms					
Update of safeguard measures					
Dissemination and awareness-raising activities					
Website management					