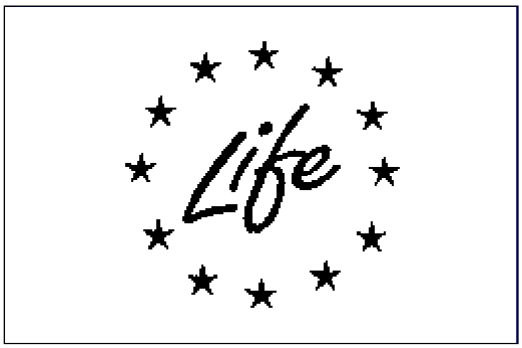
(Projects funded under the Call 2014 onwards must use this format)



LIFE Project Number.

LIFE14 NAT/IT/001017

Final Report

Covering the project activities from 01/09/2015[1] to 31/10/2021

Reporting Date[2]

31/01/2022

LIFE PROJECT NAME or Acronym

Measures for the conservation of Bonelli's Eagle, Egyptian Vulture and Lanner Falcon in Sicily - ConRaSi

Data Project

Project location:	Sicily Region (Italy)
Project start date:	01/09/2015
Project end date:	30/09/2018 Extension date: 31/10/2021
Total budget:	€ 2,877,095
EU contribution:	€ 2,071,508
(%) of eligible costs:	72.00

Data Beneficiary

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[1] Project start date

[2] Include the reporting date as foreseen in part C2 of Annex II of the Grant Agreement

1. Table of contents

2. List of key-words and abbreviations

- ASP: Province Sanitary Authorities
- CB: Coordinating Beneficiary (WWF Italia)
- CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora
- EAI: Ecologia Applicata Italia srl (sub-contractor)
- DRA: Dipartimento Regionale per l'Ambiente Regione Sicilia (project partner)
- DRSRT: Dipartimento Regionale per lo Sviluppo Rurale e Territoriale Regione Sicilia (project partner)
- GREFA: Grupo de Rehabilitación de la Fauna Autóctona y su Hábitat (project partner)
- GTR: Gruppo Tutela Rapaci, group of national/local organizations involved in activities to protect raptors in Sicily
- PM: Project Manager
- SDF: Standard Data Form (document associated to each Natura 2000 site)

3. Executive Summary

The main goal of the project was to improve the conservation status of three bird species of European concern (i.e. listed in the relevant Annexes of the Birds Directive) occurring in Sicily. The project aimed at halting the illegal collection of nestlings, enhancing the trophic carrying capacity of the environment, improving the knowledge of the species, providing planning tools to ensure that land is managed compatibly with the conservation of the raptors, assessing the attitudes of local communities and key stakeholders towards the project topics. The key project deliverables included: species distribution maps, habitat suitability models and genetic assessment, action plans for the conservation of Bonelli's Eagle and Lanner Falcon, several communication outputs. The project put in place a remote video-surveillance system and a network of artificial feeding stations and warrens. Finally, the project tracked several young eagles equipped with GPS-tags.

The project LIFE ConRaSi started on 1st September 2015 and was initially scheduled to end on 30th September 2018. However, two project amendments extended its duration to September 2020 and October 2021, respectively. Despite some initial delays, the difficulties related to setting up the feeding stations and the Covid-19 pandemic, the project fulfilled most of its objectives.

More in detail, the package of preparatory actions delivered the partnership agreements and its revised versions (action A.1), technical protocols to ensure a consistent monitoring of the presence of the three target species and of the nesting sites (actions A.2 and A.5), the habitat suitability models (A.3), the necessary blueprints and authorizations for setting up the feeding stations and warrens (A.4), the Bonelli's eagle action plan eventually adopted by the Sicily Region (A.6), revised SDFs and indications on how to update the management plans of the Natura 2000 sites where the species occur (A.7, the action was also aimed at updating the management plans and making eventual adjustments to the Natura 2000 network, but these objectives were only partially achieved, as explained in the technical paragraph).

Surveillance activities (Action C.1) started in 2016 and continued throughout 2021, taking advantage of the extension of the project duration. The efforts the project put in place went well beyond what was initially foreseen, resulting in excellent results in terms of control of poaching and population increase of the target bird species, particularly for the Bonelli's eagle. The initial plan to set up the feeding stations and warrens was adapted to the real needs in the

field, with the total number reduced to 11 (6 feeding stations and 5 warrens). Feeding stations were refurbished weekly from mid-March 2021 throughout September of the same year; warrens becameoperational just after the release of the reproductive pairs, with food and water provided on a weekly basis (action C.2). A total of 38 young Bonelli's eagles were tagged from 2017 to 2021and tracked regularly (action C.3). The action allowed the identification of Thricomoniasis as serious threat to the species; also, the biological samples collected at the nests were used to build a genetic databank, currently hosted at ISPRA's genetic laboratory; finally, the action allowed the transfer of 1+3 fledgings to Sardinia, where they joined the reintroduction programwithin the project Aquila a-LIFE.
The monitoring actions (D.1; D.2) were implemented throughout the project duration, even in 2020, despite the limitations imposed by the authorities to control the spread of Covid-19. The action delivered an exhaustive dataset on distribution, population size and movements as never before. Ex-ante and ex-post polls were delivered by action D.3 and the results were used to fine tune the communication. An assessment of the socio-economic impacts of the project was delivered by action D.4, although the methodology of data collection had to be revised given that public meetings could not be organized due to the Covid-19 pandemic.
Communication actions (E.1-E.6) delivered all the expected outputs: notice boards, leaflets, video-documentaries, website, Layman's report. Meetings with local stakeholders and schools (E.4) were organized only in part, due to the Covid-19 limitations imposed by the authorities in 2020 and 2021.
The actions of the package F (F.1-F.4) allowed a smooth management of the project and delivered the after-LIFE plan and the financial audit.

4. Introduction

Overall and specific objectives
The overall goal of the project "Measures for the conservation of Bonelli's Eagle, Egyptian Vulture and Lanner Falcon in Sicily" was to improve the conservation status of these three bird species by implementing concrete actions to enhance their reproductive success.
More specifically, the project aimed at fulfilling the following specific objectives:

1. Halting the illegal removal of young birds from the nest, currently the main threats to Bonelli's Eagle and one of the key threats to Lanner Falcon;
2. Enhancing the trophic capacity of the environment where the species occur, by setting up artificial feeding stations and warrens;
3. Improving the knowledge of distribution, demography, mortality and survival rates of the three target species in Sicily;
4. Setting up a genetic database of the Bonelli's Eagle population;
5. Providing tools to the local administrations to ensure a land management compatible with the presence of the three targeted species;
6. Improving the attitudes of stakeholders and of the general public towards the targeted species.

Sites involved
The project actions were implemented in Sicily (Italy). Although originally designed to take place in 9 Special Protection Areas, the project eventually covered a wider area, due to the high vagility of the targeted species and the new data collected by the project on distribution, movements and nesting sites.
Targeted species
The project targeted three species of birds of prey, listed in the Annex I of the Birds Directive.
Bonelli's Eagle (*Aquila fasciata*) currently occurs in Sicily with about 60 breeding pairs. Sicily is the only place in Italy where the species currently occurs and breeds. The Italian Red List classifies the species as *Endangered*, due to the limited population size and the threats the

species is currently facing (at the start of the project the species was assessed as *Critically endangered*).
The Egyptian Vulture (*Neophron percnopterus*) breeds in Calabria, Basilicata, Apulia and Sicily, with the latter hosting more than half of the Italian population. The Egyptian Vulture is classified as *Critically Endangered*.
The Lanner Falcon (*Falco biarmicus*) currently occurs in Sicily with about 40 breeding pairs, corresponding to almost 60-70% of the overall Italian population. Although not on the verge of extinction as the other two species, the Lanner Falcon population has been decreasing since several years. The Italian Red List classifies this species as *Vulnerable*.
Main conservation issues
The three targeted species share negative population trends, with at least two out of the three targeted species on the verge of extinction.
The major threats affecting the Bonelli's Eagle can be summarized as follows:

- Illegal removal of nestlings;
- Habitat degradation and fragmentation, mainly caused by the abandonment of the traditional agricultural practices;
- Electrocution and impacts with the wind mills;
- Chick/young mortality caused by Trichomoniasis.

The major threats affecting the Egyptian Vulture include:

- Habitat degradation and decline of the trophic carrying capacity, mainly due to the abandonment of the traditional husbandry practices;
- Human disturbance at the nesting sites;
- Poisoned baits (illegally used by farmers to target other species);
- Electrocution and impacts with the wind mills;
- Possible impact of non-steroidal anti-inflammatory drugs used for veterinary purposes.

In the case of the Lanner Falcon the major threats are:

- Illegal removal of nestlings;
- Habitat loss and degradation;
- Human disturbance at the nesting sites;
- Pesticides used in agriculture;
- Possibile impacts of Trichomoniasis.

Socio economic context
The targeted species do not trigger any type of conflict with the human activities carried out in the areas where they occur. The general attitude of the communities towards the raptors is then positive. However, the abandonment of the traditional husbandry and agriculture practices is having a serious impact on the targeted species, whereas the relationship between the decrease of the raptors and a certain approach in the land management is not acknowledged by communities and authorities. On the other hand, those who look at nature as a core element of a sustainable tourism consider the raptors as a great opportunity to attract tourists and a possible boost for the local economy. At the time being, only a minority considers the presence of the raptors or, more in general, the preservation of healthy ecosystems an added value that can also boost and sustain the economic growth, suggesting that there is still work to do in termsof information and awareness.
Expected longer terms results
The project is expected to keep improving the conservation status of the targeted species through a process that is meant to strengthen the network of volunteers composed of NGOs, small and local organizations, single individuals that look at the raptors as a heritage to take care of. Indeed, the project itself represented a successful attempt to scale up the conservation work done by a bunch of volunteers into something bigger, more organized and by far more

impacting. In this perspective, the project is expected to continue delivering good results even in the after LIFE. What that means in terms of future number of breeding pairs is not easy to say at this stage, even though the indicator table has already fixed the thresholds to be reached at the end of the project and five years later.
Concerning replicability and transferability, the ConRaSi project relies on a number of best-practices already successfully implemented in several other areas worldwide. Among the interventions put in place by the project, video-surveillance is the one that can be easily transferred elsewhere, particularly where the Egyptian Vulture and the Lanner Falcon are facing a substantial decrease caused by nest poaching.

5. Administrative part (maximum 1 page)

The administrative structure that was put in place is coherent with the organigram described in the original proposal and is functional to ensure an effective management of the project. At the CB level, the project management was ensured by an internal team, led by the project director and by the administrative director, supported by the administrative officer and assistant, while the project management was outsourced. Each partner identified a project director, although – as already mentioned – in some cases the persons in charge changed over the months. The information flow among partners was facilitated by the projectmanager, through phone/Skype calls and physical meetings held in Palermo on a regular basis.From 2020 onward meetings were held in remote mode due to the limitations imposed by the authorities to control the spread of Covid-19.

The project partnership was composed of 4 bodies: WWF Italy was the coordinating beneficiary. Its staff has a long-lasting experience in managing LIFE projects, thus allowing an efficient management and a prompt resolution of the problems. Two regional departments joined the partnership: DRSRT and DRA. Their presence was strategic insofar it allowed a relatively easy implementation of the interventions that require a strong institutional support; moreover, the involvement of two regional departments dramatically increased the chances that interventions will continue even after the project end. The Spanish NGO GREFA was the fourth project partner; its added value consisted in a robust technical background deriving froma long-lasting experience with raptors, particularly with the Bonelli's Eagle.

Problems encountered. Particularly during the initial phases, the project accumulated a delay due to the interaction of several factors (e.g. extra time required to sign the Grant Agreement and the partnership agreements; slow start of the project, particularly of the preparatory actions; overall project timing regulated by the reproductive rhythms of the targeted species; possible mistakes in the original time plan; slow authorization procedures). The major deviations in the

work plan concerned actions A.4 and consequently C.2. Other actions suffered from the delays as described in the following paragraphs, though impacts were less critical. Covid-19 pandemic caused also problems and delays, although the extension of the project duration contributed to mitigate this impact.

Relevant project amendments

Upon request of the partners, the project was amended in 2018 to extend the project duration to 30 September 2020. Letter Amendment Nr. 4 to Grant Agreement - LIFE14 NAT/IT/001017 - CONRASI (Ref. Ares(2018)4630869 - 10/09/2018).

Letter Amendment Nr. 5 to Grant Agreement - LIFE14 NAT/IT/001017 - CONRASI (Ref. Ares(2020)4290188 - 17/08/2020). The amendment extended the project duration to 31October 2021.

6. Technical part (maximum 25 pages)

6.1 Technical progress, per Action

Action A.1. Project start and kick-off meeting
The action was aimed at preparing and signing the partnership agreements, delivering a work plan and organizing the kick-off meeting.
Timing of the action

	Foreseen	**Actual**
Start date	01/09/2015	01/09/2015
End date	30/11/2015	31/07/2017

Progress
The action started in September 2015; the Grant Agreement was signed in early October and the project moved its first steps in November of the same year.
The key milestones of the action can be summarized as follows:

- 2nd December 2015: kick-off meeting held in Palermo at the Regione Siciliana headquarters. About 50 participants joined the event, including also representatives of local key stakeholders and of the Neemo-Timesis monitoring team.
- January 2016: delivery of the first work-plan, which was then updated regularly throughout the project and shared with partners.
- April 2016: Partnership agreements were signed.
- July 2017: based on the EASME request (EASME B3/SB D (2016) 5209148) an Addendum to the partnership agreement was signed by each partner and transmitted to EASME.
- July 2018: the action was re-opened following the request of extending the project end to September 2020. The request was approved by EASME in September 2018 (EASME B3 (2018) n. 5177241).
- July 2020: CB asked to EASME an additional extension of the duration of the project until October 2021.
- August 2020: EASME agrees to further extend the project duration throughout October 2021, due to the delays in the action implementation caused by Covid-19 (Ref. Ares (2020) 4290188). The partnership agreements were amended accordingly and sent to the partners for signature.

Deliverables	**Foreseen**	**Actual**	**Comments**
Signed partnership agreements	11/2015	04/2016	Submitted with progress report (Aug/2016): *A1_partnership_agreement_DRA.pdf* *A1_partnership_agreement_DRSRT.pdf* *A.1_partnership_agreement_GREFA.pdf* Signed *Addendum* annexed to Mid-term report: *A1_Addendum_DRA.pdf* *A1_Addendum_DRSRT.pdf* *A1_Addendum_GREFA.pdf* Signed addendum annexed to this report *A1.Addendum.2020.zip*
Work plan	-	-	Submitted with Mid-term report: *A1_workplan_May2017.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
Kick-off meeting	11/2015	02/12/2015	-

Major problems, drawbacks, delays

The delay in signing the partnership agreements (April 2016 in place of November 2015 as originally planned) had significant repercussions on the whole project, since in absence of this formal act, the start of the actions was also delayed. On the other hand, the kick-off meeting was held almost within the time window foreseen originally by the project.
The project was initially scheduled to end in September 2018. However, the project duration was at first extended to September 2020 to allow for completion of some delayed actions and then further extended to October 2021, due to the Covid-19 pandemic, which significantly impacted the implementation of the actions throughout 2020 and partially 2021.

Action A.2. Delivery of a monitoring protocol for the 3 targeted species

The action was aimed at delivering a monitoring protocol of the 3 targeted species, in order to ensure a consistent data collection throughout the project implementation.

Timing of the action

	Foreseen	**Actual**
Start date	01/12/2015	01/03/2016
End date	28/02/2016	30/05/2016

Progress

April 2016. Following the publication of a call for tender the company *Ecologia Applicata Italia srl* was formally appointed to develop the monitoring protocol.

May 2016. The advanced version of the document, developed in collaboration with the Spanish partner GREFA, once shared and discussed with the other partners DRA and DRSRT and with the scientific supervisor, was finalized.

The protocol provided clear indications for each of the phases of the monitoring:

- Assessing the effective nesting
- Confirming the reproduction
- Assessing the results of the reproduction
- Post-fledging monitoring

The protocol also included indications on the precautions to take and a first preliminary list of areas where the target species were known to occur historically. Indications and images were also included for each of the three target species, enabling the operators to correctly assess the age of the observed birds.

Major problems, drawbacks, delays

The protocol was released three months later than originally foreseen. Although the action was delayed (because of the delays of action A.1), this did not have any significant impact on the implementation of the other actions, given that the personnel in charge of the development of the monitoring plan was the same involved in the monitoring.

Deliverables	**Foreseen**	**Actual**	**Comments**
Monitoring protocol of the 3 targeted species	02/2016	05/2016	Submitted with progress report (August 2016): *A2_monitoring_protocol.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
End of the planning of the monitoring	02/2016	05/2016	-

Action A.3. Analysis of habitat selection and breeding performances of the three targeted species

The action consisted in the development of GIS Habitat Suitability Models and in their transfer to the regional departments in charge of land management.

Timing of the action

	Foreseen	**Actual**
Start date	01/12/2015	01/03/2016
End date	30/06/2016	30/11/2016

Progress

As already mentioned in the paragraph dealing with action A.2, action A.3 was outsourced to *Ecologia Applicata Italia srl (EAI)*. Action A.3 went through several steps.

- August 2016. Habitat Suitability Models delivered by EAI together with a technical report. September 2016. The outputs were then circulated internally to WWF Italy, to the partners and to external experts for validation[3]. The result of this preliminary work was annexed to the first progress report in the form of an ESRI© proprietary *mdb* geodatabase. Following the Commission's request (EASME B3SB D(2016) 5209148), an open-source version were attached to the mid-term report. Any layer included in the GeoDatabase comes embedded with *metadata* complying with the criteria set by the INSPIRE Directive (2007/2/CE 14/03/20017). Metadata were created by the official INSPIRE editor to ensure the maximum compliance: http://inspire-geoportal.ec.europa.eu/editor/.
- November 2016. The models were incorporated into the regional Web-GIS (SIT) managed by the DRA[4] and into the internal GIS data bank managed by the DRSRT. The formal integration of the habitat suitability models into the DRA cartographic infrastructure was formalized by a letter (Prot. 154 of 25th November 2016); similarly, the regional partner DRSRT confirmed by email (25th May 2017) to have integrated the models into its internal cartographic archive. A lighter version of the technical report that does not include any detailed localization of the targeted species was uploaded into the *documents* section of the project website[5].
- February 2022. A revised version[6] of the Habitat Suitability Model for Bonelli's eagle was developed and circulated to the regional partners. Compared to the first version, the revised model provides a more accurate definition (differences in the rendering can be visualized in the two images below). The model confirms that Sicily has still wide areas suitable for the species, particularly the southern and western-central sectors. It is worth noticing that two of the areas recently re-colonized by the eagles - Iblei Mountains and Catania plain – confirmed to be suitable areas.

[3] Dr. Pascual Lòpez Lòpez (Cavanilles Institute of Biodiversity and Evolutionary Biology, University of Valencia), Prof. Mario Lo Valvo Univ. of Palermo), Prof. Luca Luiselli (Univ. of River State, Nigeria)

[4] https://www.sitr.regione.sicilia.it/geoportale/it/Home/SearchMetadata?search=capovaccaio

[5] https://lifeconrasi.eu/download/72/tutti-i-documenti-del-progetto/1248/relazione-per-sito-web.pdf

[6] The revised version takes into consideration the data collected on the species throughout the project, particularly those collected through the tags.

Major problems, drawbacks, delays

The action accumulated a delay of about 4 months, which was mainly caused by the overall delay affecting the project in its early stages. On the other hand, the action did not encounter anyparticular problem, both in the development, and in the final integration of the models into theregional pre-existing GIS infrastructures. Finally, the delay did not have any particular impacton the whole project.

Deliverables	**Foreseen**	**Actual**	**Comments**
GIS baseline layers, distribution maps, Habitat Suitability Models	05/2016	08/2016	Proprietary files annexed to the first progress report (August 2016) and to mid-term report: *A3_Geodatabase_opensource.zip*
Habitat Suitability Models technical report	05/2016	09/2016	Annexed to mid-term report *A3_Technical_report_HSM.pdf*
Updated Habitat Suitability Models for Bonelli's eagle	-	10/2021	Technical report + revised habitat suitability models annexed to this report: *A3_habitat_suitability_model_2021.zip*
Milestones	**Foreseen**	**Actual**	**Comments**
Incorporation of the Habitat Suitability Models into the regional GIS infrastructures	02/2016	11/2016	-

Action A.4. Executive planning of artificial warrens and feeding points

The action was aimed at delivering guidelines, executive plans and authorizations to build artificial feeding stations and warrens. The outputs of this action are necessary for the implementation of action C.2.

Timing of the action

	Foreseen	**Actual**
Start date	01/12/2015	15/12/2015
End date	30/03/2016	11/2018

Progress

The key milestones of the action can be summarised as follows:

- December 2015. Preliminary guidelines for setting up artificial warrens and feeding stations delivered by GREFA.
- September 2016. Technical report dealing on the location of the artificial warrens and feeding stations, along with guidelines on how to set up and how to manage the structures delivered by EAI (annexed to the mid-term report).
- March 2017. Field assessment completed.
- May 2017. The overall action framework is revised by the partners, who agree to reduce size and number of the infrastructures, coherently with the real needs of the target species. The decision was made by the technical staff, under the coordination of the scientific supervisor. The number of infrastructures originally foreseen by the project seemed excessively high, considering that based on the results of the monitoring, food availability was not considered a key limiting factor for the target species; also, the original surface would have resulted in significantly higher costs for building and maintaining the infrastructures. The partners eventually agreed to set up 5 artificial warrens and 6 feeding stations and a reduction of their surface to 2.500m^2 (50x50m) for both feeding stations and warrens.
- February 2018. On the 15th a meeting involving key authorities (*Conferenza di Servizi*) was organized by DRSRT. The *Conferenza di Servizi* is a specific meeting that public bodies organize when it is necessary to inform other local authorities that there is a project being implemented of in their territories. Authorizations are usually released after this meeting. The conference is generally a useful tool for streamlining procedures.
- May 2018. Formal decree delivered by DRA to the competent agencies and authorities for their approvals of the overall project for the realization of the feeding stations and warrens (including the assessment of incidence).
- July 2018. Formal approval of the overall project for the realization of the feeding stations and warrens released by DRSRT.
- August 2018. The Sicani Regional Park claimed jurisdiction over the issuance of permit for #4 artificial feedings to be realized within its borders. In addition, the park requested an assessment from the CRPPN (Regional Council for the Protection of Natural Heritage).
- October 2018 authorization released by CRPPN.
- November 2018. Final authorization issued by Sicani Regional Park. Final validation of the project by DRSRT.

Major problems, drawbacks, delays

The implementation of action A.4 encountered many obstacles due to: delays caused by action A.1; the multitude of actors involved in the authorization procedures; the complexity of the authorization procedures and bureaucracy, including the reorganization of the regional office in charge of issuing the authorizations (assessment of incidence); the lack of previous experience of the partners on this topic.

Deliverables	Foreseen	Actual	Comments
Guidelines for setting up artificial feeding stations and warrens	-	12/2015	Preliminary documents annexed to the first progress report (August 2016): *A4_guidelines_warrens_GREFA.pdf* *A4_guidelines_feeding_stations_GREFA.pdf*
Deliverables	**Foreseen**	**Actual**	**Comments**
Blue-prints of artificial feeding stations and warrens	03/2016	08/2016	Technical reports annexed to mid-term report: *A4_BluePrints_feeding_stations* *A4_BluePrints_warrens.pdf*
Executive projects	05/2016	11/2018	*A4_Executive projects.zip*
Authorizations	-	11/2018	Authorizations *A4-Authorizations.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
End of the planning phase	02/2016	11/2018	-

Action A.5. Selection and monitoring of the sites under the surveillance of camera-traps and webcams.

The action was aimed at delivering a monitoring plan for an effective video-surveillance.

Timing of the action

	Foreseen	**Actual**
Start date	01/12/2015	01/03/2016
End date	30/03/2016	30/05/2016

Progress

The key milestones for the action can be summarised as follows:

- April 2016. Monitoring plan including a list of nesting sites to be monitored delivered by EAI and approved by partner the following month.
- November 2016. Revised version following the EASME's request delivered by EAI.
- December 2016. Upon request of the project external monitor, confirmation by Regione Siciliana that no specific authorization was necessary for installing the surveillance equipment.
- March 2017. Upon request of DRSRT, further assessment of the ownership of the surveillance sites where the equipment was planned to be located completed.

The action delivered a technical document (monitoring plan) describing the areas where the first camera traps had to be installed, together with a description of the operational phases: preliminary monitoring of the nesting sites, installation/removal of supports and of camera traps; technical checks before installation. The document included maps showing the first possible monitoring locations based on historical data (Bonelli's eagle –map on the left side and Lanner Falcon – map on the right).

Major problems, drawbacks, delays

The action suffered from a two-months delay, mainly due to an internal discussion – triggered by EASME – on the topic of the authorization, which, however, had no impact on the project.

Deliverables	**Foreseen**	**Actual**	**Comments**
Monitoring plan for video-surveillance	03/2016	05/2016	The document was annexed to the first progress report (August 2016). A revised version was annexed to the mid-term report *A5_Video_surveillance_monitoring_plan.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
-	-	-	-

Action A.6. Bonelli's Eagle action plan: delivery and adoption

The action was aimed at delivering an action plan for the preservation of the Bonelli's Eagle and the adoption by the regional and national authorities.

Timing of the action

	Foreseen	**Actual**
Start date	01/01/2016	01/10/2016
End date	30/11/2017	30/06/2021

Progress

The key milestones of the action can be summarised as follows.

- December 2016. Preliminary summary circulated by GREFA; Ministry of Environment contacted by the CB to clarify the procedure for the adoption of the action plan by the Ministry.
- January 2017. Call for tender published and lead expert hired.
- March 2017. Letter from the Ministry of Environment clarifying its role and ISPRA's received. ISPRA formally onboard in the process to develop the plan. Technical committee established.
- May 2018. First draft version of the action plan sent to ISPRA for revision.
- November 2020. Draft version of the plan submitted to the technical committee and to the Ministry of Environment.
- December 2020. Minor amendments requested by the Ministry of Environment.
- January 2021. Revised version of the plan sent back to the Ministry.
- March 2021. Second set of revisions requested by the Ministry of Environment.
- May 2021. Final version of the action plan delivered and sent formally to Regione Siciliana and Ministry of Environment.
- June 2021. Action plan formally adopted by the Regional Department of Environment of Sicily region. Article 2 of the Decree states: "*Its adoption constitutes a modification and/or integration to the conservation measures of the Natura 2000 sites, coherently with the reported in the updates of the related forms*".

Although not originally foreseen by the project, the action delivered an Action Plan for the Conservation of the Lanner Falcon in Sicily. This document provides an updated view of the situation of the species, with a special focus for Sicily. The document, prepared by a team of experts, provides detailed information on the ecology of the species and a comprehensive assessment of the key threats (habitat loss, illegal killing, taking of chicks and eggs from the nest, lead and other chemicals, electrocution and impacts with power lines, trichomoniasis). The plan provides also a deep assessment of the actions that are deemed necessary to improve the conservation status of the species. Habitat preservation and restoration, fight against poachers and an intense monitoring and research represent the key actions to be put in place in the short-medium term. The document incorporates the conservation measures for the species already circulated to the Sicilian regional partners. The action plan was shared with the partners.

Major problems, drawbacks, delays

The action started with almost a 10-month delay, as a consequence of the delay accumulated mainly by action A.1. The process slowed down when ISPRA entered into the process, although this was a necessary step to ensure that the document would have been adopted by the Ministry. On the other hand, the launch of the Aquila A-LIFE project triggered a discussion on whether the action plan would have included a section addressing the Sardinian future eaglepopulation. ISPRA eventually committed to revise the action plan at the end of the Aquila A- LIFE project, with the aim of including the latest data on the species in Sardinia. Based on thisdecision, it was

also agreed that the Ministry would have adopted the final version of the actionplan expected to be delivered at the end of the Aquila A-LIFE project. The topic was addressedby the EC letter (Ref. Ares(2021)1294334-16//02/2021), in which EASME acknowledged thatthe plan would have been revised by ISPRA at the end of the Aquila A-LIFE project.

Deliverables	**Foreseen**	**Actual**	**Comments**
Bonelli's Eagle action plan	12/2016	06/2021	Annex to this report: *A6_Bonelli's_eagle_Action_plan.pdf*
Lanner Falcon regional action plan	-	10/2021	Deliverable originally not foreseen annexed to this report: *A6_Lanner_action_plan.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
Sicily Region and the Ministry of Environment adopt the action plan	11/2017	06/2021	Decree of the Sicilian region annex to this report: *A6_Decree of the Sicilian Region.pdf*

Action A.7. Assessing and upgrading the SPA management plans
The expected outcome of the action was a comprehensive evaluation of management plans for SPAs where the target species occur to assess whether they incorporate adequate conservation measures and propose adjustments as necessary.

Timing of the action

	Foreseen	**Actual**
Start date	01/10/2016	01/02/2017
End date	30/09/2018	31/10/2021

Progress
The most relevant steps for this action were:

- February 2017. Action launched following a discussion involving the CB and DRA on how to implement this activity.
- March 2017. Start of the assessment of SDFs and management plans following the assignment of DRA. The preliminary assessment of the standard data forms (SDFs) and management plans of the SPAs where the target speciesoccur was completed.
- December 2020. The SDFs of the Sicilian SPAs updated with the most recent data on the project species (see table below).
- January 2021. A dataset to update the SDFs of the SACs was submitted by the CB to Regione Siciliana and to the Ministry of Environment. A list of priority conservation measures to be incorporated into the management plans of the concerned Natura 2000 sites was also sent to the Regional partners.
- November 2021 A new dataset to update the SDFs of the SACs was submitted by the CB to Regione Siciliana.

Major problems, drawbacks, delays
The action started later than initially planned because of the delay of action A.1 and because it is informed by the results of the actions D.1 and C.3. Despite the DRA's commitment, the action was implemented at a slower pace than expected. Management plans were not formally revised, due to the complexity and the length of the process; furthermore, Sicily Region is now launching a tender to revise some of the plans[7] confirming that the revision process could not start earlier. On the other hand, the conservation measures referred to the Egyptian Vulture and Lanner Falcon to be integrated into the management plans were transmitted to DRA, whereas the indications on Bonelli's eagle were given through the action plan. The revised data on the target bird species were communicated by the CB to DRA and correctly received by the Ministry; similarly, revised data concerning the SCAs were transmitted to DRA before the end of the project but to date do not show up in the official database of the Ministry.

On October 2020, following the infringement procedure no. 2015/2163 and the ongoing coordination between the Regions and the Ministry of Environment and Protection of Land and Sea the CB contributed to the development of objectives and conservation measures for the species Lanner and Egyptian vulture.

Deliverables	**Foreseen**	**Actual**	
Assessment of the efficacy of current management plans of the SPAs where the targeted species occur	03/2017	06/2019	Annexed to this report: *A7_final_technical_report_SPAs.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
Preliminary technical report	10/2016	01/2019	-

Action C.1. Surveillance of nesting sites through camera-traps, web cam and surveillance camps

The action was aimed at putting in place a surveillance system to prevent poaching at the nest. The system is composed of: 20 sites/year controlled by remote camera-traps; 5 sites/year controlled by webcams; 4 voluntary camps.

Timing of the action

	Foreseen	**Actual**
Start date	01/11/2015	01/12/2015
End date	30/03/2018	30/06/2021

Progress

Surveillance activity was carried out throughout 6 years, using altogether up to 36 camera-traps (2018) to monitor up to 21 breeding sites (2017).

Key milestones can be summarised as follows.

Surveillance through camera-traps

Year	**Bonelli's Aagle**		**Lanner Falcon**	
	N. camera traps	N. sites	N. camera traps	N. sites
2016	12	8	0	0
2017	17	11	11	10
2018	25	9	10	7
2019	12	5	17	6
2020	10	5	5	2
2021	31	13	8	4

- January 2016. Action sub-contracted to EAI, whose experts had a long-time experience in carrying out monitoring and surveillance activities on the targeted species in Sicily; 12 camera-traps installed[8]. The camera-traps sent out a total of 7,730 shots, 261 of which captured activity by Aquila di Bonelli. Five young Bonelli's eagle flew off between May and June. During the first week of April, before the start of surveillance, one nesting site was subject of illegal collection of eggs.

- (Starting from) January 2017. Action sub-contracted to Silene Cooperative. 28 camera-traps installed in 21 breeding sites (11 breeding sites of Bonelli's Eagle and 10 of Lanner falcon). 17,550 shots sent, of which 152 were taken by Bonelli's Eagle or Lanner. Two camera-traps were stolen. Of the 6 sites where reproduction took place, 11 young birds successfully flew off the nest: in 3 sites of Bonelli's eagle 6 young birds flew away and in 3 sites of Lanner 5 birds flew away.

- May 2017: 2 webcams installed in proximity of eagles' nests, although only one was able to operate. No relevant events were documented during the activity.

- (starting from) January 2018: 36 camera-traps installed covering 16 sites (9 Bonelli's Eagle and 7 Lanner). Overall, 26,440 shots received, of which 164 captured activities

[8] Every year the equipment was uninstalled at the end of the breeding season (end of June/early July).

by Bonelli's eagle and lanner, while another 15 captured humans, including a climbing poacher, who took a young from a site. Investigations were immediately started by Carabinieri (SOARDA investigative group) but the poacher wasnot identified. Of the 7 sites where reproduction took place, 20 young birds flew away:in 3 sites of Bonelli's eagle 10 young birds flew away and in 5 sites of Lanner 10 birdsflew away.

- (starting from) January 2019. 30 camera-traps installed to cover 12 breeding sites (5 of Bonelli's Eagle, 6 of Lanner and 1 of Peregrine Falcon). 22 young birds left successfully the nests (6 Bonelli's eagles, 14 Lanner falcons 2 Peregrin falcons). A potential poacher was identified close to a Lanner nesting site. An investigative activity resulted from this event and led to the identification of several people involved in illegal activities.

- May 2020. Because of the Covid-19 pandemic and the resulting restrictions on movement, the action started very late, though it lasted until the end of the reproductive season. Only 15 camera-traps were installed to cover 7 breeding sites (5 of Bonelli's eagle and 2 of Lanner). Overall, 15,572 shots were received, of which about 250 captured activities of Bonelli's eagles, Lanner falcons and other wildlife. 9 young birds left successfully the nests (6 Bonelli's eagle and 3 Lanner falcons). No relevant events were documented during the activity.

- January 2021: 39 camera-traps installed to cover 17 breeding sites (13 of Bonelli's eagle and 4 of Lanner). At the end of the reproductive period 7 cameras were displaced to monitor 6 feeding stations. Overall, 57,000 shots were received (48,000 by nesting sites and 9,000 by feeding stations). 17 young birds left successfully the nests (3 young birds for Lanner and 14 for Bonelli's eagle). No relevant events were documented during the activity.

Overall, a total of 50 camera-traps and 4 video cameras with related accessories and spare batteries were purchased.
The images taken by the camera-traps were initially stored in a digital archive. The large majority of the pictures have no particular value, given that they depict small landscapes, with just cliffs and vegetation, or non-target fauna. These pictures will be deleted. The ones showing the target species will be kept, although they do not give any specific insight into the biology of the target species. Hence, these pictures will only be used for communication purposes.

Surveillance camps

- 2016. The surveillance camp was held from April 28th throughout May 26th and was carried out by 4 operators. On May 19th, a first young eagle flew off,followed by a second one on May 26th.
- 2017. Surveillance activities started on March 31st and ended on May 23rd; at the other site the activity started on April 1st and ended on June 20th. Atotal of 18 volunteers took part in the surveillance for a total of 134 surveillance days.
- 2018. Surveillance was carried out from March 22nd throughout June 17th, 89 days later, with the flight off of both eagles. A total of 11 volunteers participated in the surveillance.
- 2019. Activities started on 12th April and ended on 14th June, 62 days later, with the flight off of two eagles. A total of 10 volunteers participated in the surveillance.

- 2020: The activity was cancelled due to Covid-19 restrictions.
- 2021: The project team decided to concentrate the residual resources on the video surveillance, no further volunteer camp was then organized.

Webcams

The purpose of using webcams was to capture videos to be broadcasted via website.
In 2017, two webcams were installed in two nesting sites on 9th and 27th May 2017. One of the webcam installed did not broadcast any image, probably because of a gap inthe GSM coverage in the installation site (although the GSM coverage was deemed satisfactoryon the top of the cliff). The second webcam broadcasted on 27- 28 May, 31st May and 1st June, only a limited number of days due to a power failure. Based onthe 2017 experience, the following year was decided to not purchase other webcams and to limit the installation to only one camera, which allowed the monitoring of the chicks' growth. Yet, live broadcasting was not possible due to the technical limitations of this equipment. Given the technical difficulties encountered in the field, the team decided to not purchase other webcams; in 2019 and 2020 the webcams were not activated due to the impossibility of managing their technical failures.
In 2021, 2 new cameras relying on different technologies were purchased with the aim to be placed at the feeding points. The webcams were activated just before the end of the project and throughout December 2021. This equipment will be used again in the after-LIFE period.

Major problems, drawbacks, delays

The action had a slow start in 2016 and a limited impact in the same year. From 2016 onward the action was implemented at the highest intensity, coherently with the project goals (i.e. by ensuring the surveillance of at least 20 sites per year). Nevertheless, in 2020 the action was impacted by the pandemic, due to the overlap of the breeding season with the lock-down measures. Surveillance of the nesting sites was carried out at low intensity (only 15 camera traps were installed at 7 nesting sites) and no surveillance camp was organized. In 2021, no camp was organized, as the residual financial resources were allocated to photo-trap surveillance.
Surveillance, either in the form of voluntary camps and through camera-traps was successful in preventing any attempt to poach the nests, although a case was recorded as already mentioned.
Installing webcams on the top of a remote cliff, in absence of an urban power grid and WIFI network was more difficult than expected and once installed, these did not deliver the expected results.

Deliverables	Foreseen	Actual	Comments
Results of the surveillance by camera-traps and webcams 2016	12/2016	08/2016	Annexed to the first progress report (August 2016): *C1_video_surveillance_2016.pdf*
Results of the voluntary camps 2016	-	08/2016	Annexed to the first progress report (August 2016): *C1_voluntary_camps_2016.pdf*
Results of the surveillance by camera-traps and webcams 2017	07/2017	07/2017	Annexed to mid term report: *C1_video_surveillance_2017.pdf*
Results of the voluntary camps 2017	07/2017	07/2017	Annexed to mid term report: *C1_voluntary_camps_2017.pdf*
Results of the video and webcams 2018	09/2018	09/2018	Annexed to progress report: *C1_video_surveillance_2018.pdf*

Results of the voluntary camp 2018	09/2018	09/2018	Annexed to progress report: *C1_voluntary_camps_2018.pdf*
Results of the video and webcam 2019	09/2019	09/2019	Annex to this report: *C1_video_surveillance_2019.pdf*
Results of the voluntary camp 2019	07/2019	07/2019	Annex to this report: *C1_voluntary_camps_2019.pdf*
Results of the video and webcam 2020	09/2020	09/2020	Annex to this report: *C1_video_surveillance_2020.pdf*
Results of the video and webcam 2021	09/2021	09/2021	Annex to this report: *C1_video_surveillance_2021.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
First camera-trap in place	03/2016	04/2016	-

Action C.2. Trophic support through artificial warrens and feeding sites

The action was aimed at setting up a number of artificial feeding stations and warrens coherently with the executive projects and prescriptions of action A.4.

Timing of the action

	Foreseen	**Actual**
Start date	01/11/2015	01/03/2019
End date	30/03/2018	31/10/2021

Progress

The action started in 2019, as a consequence of the delays of the preliminary action A4. Due to the internal regional rules, the procedure to allocate the resources for purchasing the materials was launched only at the beginning of 2019, following the validation of the project by the regional administration. The construction of the feeding points and warrens wasfinalized in January 2020. Warrens were populated with rabbits in the following months, withthe process being delayed by the Covid-19 pandemic. The last warrens were populated in October 2020.

Warren N.	**Date of activation with rabbits**	**n. of supplied rabbits**
1	12/06/2020	6 (2 males and 4 females)
2	12/06/2020	6 (2 males and 4 females)
3	05/06/2020	6 (2 males and 4 females)
4	01/10/2020	6 (2 males and 4 females)
5	01/10/2020	6 (2 males and 4 females)

Following the delivery of a note sent by DRSRT to the health authorities (provincial ASPs of Palermo, Agrigento, and Trapani), additional sanitary authorizations were requested for feeding stations, questioning what was agreed upon at the "Conferenza di Servizi" (2018). The ASPs requested field inspections and eventually the construction of platforms to prevent the spill of organic materials through the ground. The platforms in each of the six feeding stations were immediately built at beginning of 2020. In the same year, the procedure for selecting the meat supplier, was finalized. In March 2020, activities were first slowed down and then halted due to the restrictions imposed by the central government to control the Covid-19 outbreak (see *ASP_Covid_note.pdf* in the folder Other Annexes). As of December 2020, only the facilities located in the province of Palermo had been inspected by the ASP officials. The feeding points located in Palermo's provinces were authorized by the competent health authority on 7 January 2021, followed by Trapani's on 18 February and Agrigento's between 12 and 16 of March. Palermo and Trapani's feeding points became operative from 15 March, a week later Agrigento's one, still in time to support the vultures forthe reproductive season 2021.

Feeding Station N.	**Date of authorisation**	**Date of activation with meat**
1	07/01/2021	from 16/03/201 to 21/09/2021
2	07/01/2021	from 16/03/201 to 21/09/2021
3	18/02/2021	from 16/03/2021 to 14/09/2021
4	12/03/2021	from 24/03/2021 to 28/09/2021
5	15/03/2021	from 23/03/2021 to 28/09/2021
6	16/03/2021	from 23/03/2021 to 28/09/201

All feeding stations and warrens will be maintained active and serviced by the partner DRSRT for five years, coherently with the LIFE rules, as confirmed in the attached document delivered by DRSRT to its offices.

Major problems, drawbacks, delays

Action A.4 brought to a significant reduction of the number and size of the infrastructures: 6 artificial feeding stations and 5 warrens were eventually built, in place of 9 and 20 as originally foreseen. The process to make the feeding points operative was delayed for several reasons as already mentioned. Following the request from the sanitary authorities to install aerial platforms, building operations and field inspections of the sanitary officers were postponed due to the pandemic; similarly, the procedures for selecting, hiring and authorizing the company in charge of managing the feeding points were delayed.

Deliverables	**Foreseen**	**Actual**	**Comments**
9 artificial feeding points	-	01/2020	
20 artificial warrens	-	01/2020	
Technical report on feeding points and warrens 2021		10/2021	Technical report annexed to this report: *C2_technical_report_feeding_points_warrens_2021.pdf*
Sanitary authorizations	-	-	Sanitary authorizations for feeding stations annexed to this report *C2_sanitary_authorizations.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
First artificial feeding structure in place	-	11/2019	No milestone is listed in the project

Action C.3. Bird ringing and GPS-tagging; genetic assessment

The action was aimed at ringing and GPS tagging not less than 10 young eagles per year and building a genetic databank of the Bonelli's Eagle population, through collection and genetic analyses of organic samples.

Timing of the action

	Foreseen	**Actual**
Start date	01/04/2016	08/07/2016
End date	30/03/2018	31//10/2021

Progress

- 2016. The action was not implemented due to the delay accumulated by other preliminary actions (mainly action A.1) but started in 2017.
- 2017. The first tagging sessions took place in the period 8-12 May. Like each successive session, the operation was carried out in collaboration with GREFA. 9 young Bonelli's eagles were tagged. One of the young birds at the nest was diagnosed Trichomoniasis. The bird was transferred to the rescue center of Ficuzza. Another young bird was recovered at the ground with the same pathology a few days after being tagged and taken to the rescue center for treatment. Two weeks later both the individuals fully recovered and were released into the wild.
- 2018. 10 young Bonelli's eagles were tagged in the period 10-15 May; another chick was only ringed because deemed too young to bear a GPS tag. In September 2018 Pumba, one of the young tagged in May, was found deadly shot. Based on the experience of previous year that revealed a high incidence of Trichomoniasis, a Spanish veterinary joined the team. 9 out of 11 birds showed signs of infection but thanks to a specific pharmacological prophylaxis, all these young eagles were able to fledge.
- 2019. 8 eagles were tagged in May. One eagle was transferred to Sardinia to be reintroduced in the framework of the Aquila a-LIFE project. One of the tagged eagles was shot in 2019.
- 2020. The tagging session was cancelled due to the restriction imposed by the authorities due to the Covid-19 pandemic.
- 2021. 11 young eagles were equipped with GPS tags and three fledglings were picked and transferred to Sardinia, to be reintroduced in the island in the framework of the project Aquila a-LIFE.

Feathers of each tagged/ringed bird were collected and sent to ISPRA for the genetic analyses. This allowed to develop a genetic database that is currently hosted at the genetic laboratory of ISPRA. The results of the analyses carried out by ISPRA are summarised in a technical report annexed to this report.

Movements of the tagged birds were monitored and assessed throughout the project by EAI and the results were provided as technical reports. It is worth mentioning the case of the only eagle that crossed the Messina strict and – after some months spent in Calabria – it was found dead probably due to an impact with an infrastructure.

Major problems, drawbacks, delays

Except for the initial delays, the action was carried out successfully throughout the project and it also allowed to collect birds to be released in Sardinia in the framework of the Aquila a-LIFE project (n=4). The discovery of the spread of Trichomoniasis is an important secondary result of this action, particularly in the perspective of ensuring a future to the species.

Deliverables	Foreseen	Actual	Comments
First report on the tagging operations and bird tracking	11/2016	07/2017	Technical report annexed to mid term report: *C3_tagging_session_2017.pdf*
Second report on the tagging operations and bird tracking	11/2017	07/2018	Technical report annexed to progress report: *C3_tagging_session_2018.pdf*
Third report on the tagging operations and bird tracking	11/2019	11/2019	Technical report annexed to this report: *C3_tagging_session_2019.pdf*
Fourth report on tagging operations and bird tracking	10/2021	10/2021	Technical report annexed to this report: *C3_tagging_session_2021.pdf*
Results of the genetic analyses carried out by ISPRA	-	10/2021	Technical report annexed to this report: *C3_technical_report_genetic_analyses.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
First GPS-tagged eagle	06/2016	05/2017	-

The E-OBS GPS-tag, model Solar 48G being fixed on eagle shoulders

Action D.1. Monitoring species distribution and demographic parameters of the targeted bird populations

The action foresees a comprehensive monitoring of the three targeted species to be carried out in Sicily, coherently with the protocol provided by the preliminary action A.2.

Timing of the action

	Foreseen	**Actual**
Start date	01/01/2016	01/04/2016
End date	30/09/2018	30/09/2021

Progress

Since 2016 EAI was in charge to carry out a continuous monitoring of the target bird species, particularly throughout the breeding season. Data collection in the field was conducted throughout Sicily coherently with the prescriptions of the monitoring protocol delivered by action A.2, in terms of time frame, data to be collected, tools to be used (binoculars and telescopes), etc.

The results for the entire monitoring campaign show an increase in Bonelli's eagle pairs, which were estimated at about 40 before the start of the project. The Egyptian vulture population shows a stable condition: the 6 pairs counted in 2015 remain basically the same at the end of ConRaSi monitoring. The status of the Lanner falcon in Sicily has been debated for years; however, the population trend appears to be in critical decline.

The data collected throughout the project allowed also to improve the knowledge on the diet of the Bonelli's eagle. The topic was dealt with in a thesis prepared by a student from the University of Palermo. The document was also uploaded to the project web site[9] (more than 700 downloads recorded). Bonelli's eagle food remains collected by the team were also analysed to assess the presence of heavy metals and brought to a thesis.

Major problems, drawbacks, delays

Apart a slight delay in the start of action in 2016, the timing of the action was aligned with the original project schedule and no particular constraints or problems were encountered, except for the pandemic period. Nevertheless, monitoring activities were carried out also in the first part of 2020, despite the restrictions on the movements.

[9] https://www.lifeconrasi.eu/download/72/tutti-i-documenti-del-progetto/2930/le-attivita-per-la-conservazione-dellaquila-di-bonelli-svolte-nellambito-del-progetto-life-conrasi-tesi-di-laurea-dott-simone-costa.pdf

Deliverables	Foreseen	Actual	Comments
Monitoring protocol	12/2015	-	This is the output of action A.2 and is wrongly listed in the project among the deliverables of action D.1
First monitoring technical report	06/2016	11/2016	Annexed to the mid-term report: *D1_technical_report_2016.pdf*
Second and third technical report on bird monitoring	09/2017	09/2017	Annexed to the second progress report (Dec. 2018) *D1_technical_report_2017.pdf* *D1_technical_report_2018.pdf*
Fourth, fifth and sixth reports on bird monitoring	09/2019, 2020, 2021	09/2019, 2020, 2021	Technical reports annexed to this report: *D1_technical_report_2019.pdf* *D1_technical_report_2020.pdf* *D1_technical_report_2021.pdf*
Geodatabase	09/2017, 2018, 2019, 2020, 2021	09/2017, 2018, 2019, 2020, 2021	Geodatabase period 2017-2020 annexed to this report: *D1_geodb_2017_2020.zip* Geodatabase period 2021 annexed to this report: *D1_geodb_2021.zip*
Images database	09/2017, 2018, 2019, 2020, 2021	09/2017, 2018, 2019, 2020, 2021	Archive of images period 2017-2021 annexed to this report *D1_db_images.zip*
Milestones	**Foreseen**	**Actual**	**Comments**
-	-	-	No milestone was listed for this action

Action D.2. Assessment of population size and distribution of the three targeted species at the beginning and the end of the project

The action is aimed at providing the baseline data in terms of number of pairs of each of the targeted species against which measuring the project impacts.

Timing of the action

	Foreseen	Actual
Start date	01/01/2016	01/04/2016
End date	30/09/2018	30/09/2021

Progress

This action builds on the results collected by action D.1. Consequently, its implementation was entrusted to EAI, the society in charge of the monitoring of the target bird populations (action D.1).

The first technical report on abundance and distribution of the three targeted species was delivered in 2016. This technical report provided distribution maps and analyses of the trends deriving from the assessment of larger data sets than the ones collected by the ConRaSi project at that time.

A second technical report was delivered in 2021, based on the data collected during 5 years of monitoring activities under the project. 2021 data showed that up to 66 (in 2014 they were 25-30) Bonelli's eagle nesting sites were monitored and the number of reproductive pairs increased to 60 with 50 pairs that lay eggs. In the same year 9 reproductive pairs of Egyptian vulture were monitored (in 2014 they were 4) confirming the positive population trend of the last two year for the species. Data regarding Lanner falcon confirmed once again the extremely negative trend: in 2021 only 38 mating pairs were monitored with 36 young pullets fledged. In the years prior of the submission of the project, the number of Lanner pairs were estimated at around 100, although this was definitively an over-estimate of the real population.

In 2021 Bonelli's eagle distribution covered 36 ZSC (31 occupied territories) and 7 ZPS (31 occupied territories); however, in terms of nesting sites only 24 of them covered 23 ZSC and 14 of them covered 6 ZPS.

Egyptian Vulture distribution covered 11 ZSC (10 occupied territories) and 2 ZPS (7 occupied territories); however, in terms of nesting sites only 7 of them covered 7 ZSC and 6 of them covered 1 ZPS.

Lanner distribution covered 11 ZSC (14 occupied territories) and 3 ZPS. The data of the last decade suggested that overall Lanner distribution covered 30 ZSC and 8 ZPS.

Major problems, drawbacks, delays

n.a.

Deliverables	**Foreseen**	**Actual**	**Comments**
First technical report on abundance and distribution of the three targeted species	10/2016	11/2016	Technical report annexed to mid-term report: *D2_Technical_report.pdf*
Second technical report on abundance and distribution of the three targeted species	09/2016	09/2021	Annex to this report: *D2_technical_report_2021.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
-	-	-	No milestone was listed for this action

Action D.3. Assessment of the stakeholders' attitude

The action was aimed at measuring the attitude of the local communities and of selected stakeholder categories towards the project topics. Data are collected through a specific survey that is supposed to be replicated before the end of the project, so as to measure eventual changes in the targets' attitudes. The results are also used to fine-tune the communication and the dissemination activities.

Timing of the action

	Foreseen	**Actual**
Start date	01/01/2016	01/10/2016
End date	30/03/2018	04/2020

Progress

The action was sub-contracted in 2016 to Istituto Piepoli. The survey was composed of two separate components: a quantitative survey, addressing through a CATI-methodology a stratified sample of 700 individuals and a qualitative survey, targeting 24 key Sicilian stakeholders, to be selected in collaboration with the project partners. The survey took place in February 2017, while the results were released in March and formally handed over to WWF in the course of a meeting held in Rome on 3rd May. The results of the surveys were: a general concern about the actual conservation status of the raptor species in Sicily; people believe that the interventions put in place so far are not enough to ensure the long-term preservation of these species. Although the generic terms "raptors" is well known, just a minority can distinguish the single species. Shooting, depredation of the nests and death caused by poisonedbaits are believed to be the major threats affecting these birds. Protected areas are generally well known, while Natura 2000 is almost completely unknown. The project could benefit of the support of a large share of people, given that the target species are known. The survey highlighted the lack of any conflict between human activities and raptors that, on the contrary,can boost the eco-tourism.

The poll was then replicated in 2021. Compared to 2016, the poll confirmed that the project is to some extent known to the public. Unfortunately, the knowledge and awareness indicators about the importance of protecting and conserving the raptor species decreased compared to 2016'. According to the experts, the drop can be explained by taking into consideration: 1) the temporal distance of the research from the communication campaigns implemented by ConRasi, and 2) the historical moment in which the research was carried out, coinciding with the Covid-19 pandemic, which saw the public opinion completely focused on the spread of the virus.

Major problems, drawbacks, delays

The action accumulated initially 1-year delay due to the slow start of several other more relevant project actions. The replication of the poll was postponed to the end of 2020 while the results were available in early 2021.

Deliverables	**Foreseen**	**Actual**	**Comments**
First technical report describing the results of the survey	04/2016	03/2017	Annexed to the mid-term report: *D3_results_quantitative_survey.pdf* *D3_results_qualitative_survey.pdf*
Second technical report describing the results of the survey	04/2020	04/2020	Annex to this report: *D3_results_survey2021.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
First survey completed	03/2016	02/2017	-

Action D.4. Social and economic impacts; impact on the ecosystem services
The action was aimed at assessing the socio-economic impacts of the project.
Timing of the action

	Foreseen	**Actual**
Start date	01/06/2018	01/06/2021
End date	30/09/2018	10/2021

Progress
The action was carried out internally by the WWF staff.
The original survey drafted for the workshop with the stakeholders was re-adapted to be used on-line in June 2021. It included eight questions addressing the general public and three specific questions addressing people involved in the tourism sector. The survey was published on the project website in July 2021 and 60 forms were filled in, collected and analysed. An assessment on the social and economic impact of the project was then issued in October.
The campaign showed that people have a positive perception of the project and are optimistic about the possibility that the actions of the project can bring social and economic benefits; however, the general knowledge about the project themes seems to be slightly affected by the communication actions due to the fact that media were monopolized by news about Covid-19 pandemic. Only 28% of the interviewees seems to be aware of raptors' conservation issues (39% in 2017); the level of general awareness of raptors threats fell to 85% (95% in 2017); the general knowledge about protected areas in Sicily fell to 58% (78% in 2017); only the knowledge about European projects as conservation tools increased (26% vs 15% in 2017).
The greatest impacts of the project are in environmental terms: the number of target species mating pairs increased, especially for Bonelli eagle and an emerging disease that threats species conservation was highlighted.

Major problems, drawbacks, delays
The action was severely impacted by the pandemic, as it was supposed to be supported by a data collection carried out during specific workshops, that had to be cancelled due to the restrictions imposed by the authorities.

Deliverables	**Foreseen**	**Actual**	**Comments**
Technical report assessing the socio-economic impact of the project	09/2018	10/2021	Annex to this report: *D4_technical_report_socio_economic_impact.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
-	-	-	No milestone is listed in the project

Action E.1. Communication and dissemination of the project results

The action is aimed at delivering a project logo, the mandatory notice-boards and a video documentary.

Timing of the action

	Foreseen	**Actual**
Start date	01/11/2015	01/01/2016
End date	30/09/2018	10/2021

Progress

Project logo

- February 2016 the outcome of a logo contest a draft logo was submitted to the partners in order to revised and refine it.
- May 2016 the definitive version was finally chosen.

Video-documentary

May-December 2017. Five video clips released and uploaded into the ConRaSi YouTube channel (available also with English captions):

- Generic promotional spot: https://youtu.be/CIi1dIgPY94 (1154 visualizations)
- Video surveillance: https://youtu.be/ADCtGqHgucM (553 visualizations)
- Tagging operations: https://youtu.be/jxlVj7o17mg (1117 visualizations)
- Recovery of sick eagles https://www.youtube.com/watch?v=4PPeo_p0-SQ (2404 visualizations)
- The Egyptian Vulture https://www.youtube.com/watch?v=6N7iOPx3ico (3919 visualizations)

June 2018. 30-min documentary released.
https://www.youtube.com/watch?v=2XWbqG7-arw&t=42s (4542 visualizations)

Notice boards

- September 2016. Market survey completed to select a sub-contractor to whom entrust designing and printing of the notice boards (Rotoform).
- December 2016 Starting of the distribution of the notice boards. Taking advantage of the graphical layout already available, 1,000 posters[10] were also printed, to be used in the local activities, such as meetings with scholars and stakeholders.

Major problems, drawbacks, delays

Concerning the way the action was implemented, we highlight a couple of discrepancies with what was originally foreseen by the project:

1. as already mentioned in the progress report, the DVD that was supposed to contain thevideo-documentary was not printed, given that this type of physical support is less and

9 https://www.lifeconrasi.eu/download/72/tutti-i-documenti-del-progetto/1473/poster70x100.pdf

i. less used. The unspent funds (4.000 €) were initially reallocated to organize a journalistfield trip. However, the field trip was eventually cancelled due to the limitations imposed by the authorities to limit the spread of Covid-19.

2. the original number of notice-boards as foreseen by the project was deemed excessive (n=150), therefore only 50 notice boards were finally following also the information provided with the first progress report and the discussions held with EASME at the second monitoring visit in December 2016.

Deliverables	**Foreseen**	**Actual**	**Comments**
Project logo	12/2015	05/2016	Submitted in August 2016 with the first progress report: *E1_bozzetti loghi.pdf*
DVD (Video-documentary)	12/2017	10/2017	No physical DVD was printed
150 Notice boards	07/2018	12/2016	The number of notice boards was lowered to 50. Annexed to the mid-term report: *E1_noticeboard.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
Project logo finalized	12/2015	05/2016	-
First notice board in place	05/2016	12/2016	-

Communication highlights

- November 2016. Communication strategy delivered by the CB, although not originally foreseen by the project.
- 22nd November 2016. Press conference organized in Palermo (DRSRT headquarter) to launch the project.
- 15th June 2017. Corriere della Sera published a long article on the Bonelli'eagle monitoring activity through the application of satellite tags.
- 24th April 2017. The project team celebrated in Palermo the anniversary of the Habitats Directive with a public meeting.
- January throughout July 2017 a newsletter was disseminated to a mailing list of about 100 contacts and through the web site
- November 30th 2017. RAI program Geo & Geo WWF Italy presented the Life ConRaSi project
- July 2018 EU publication named Life & Wildlife Crime reported on the Life ConRaSi surveillance activity of nests against illegal harvesting of eggs and young.
- November 18, 2018 Il Giornale published a long article dedicated to the Lola's trip (young monitored Bonelli's eagle) to Egadi Isle. First case of flight outside the island of Sicily.
- November 7 2019. La Stampa posted on its animal and environmental section an article on a young Bonelli's eagle killed in Sicily. The article recalls the imortance of the poaching threat for raptors conservation.
- November 14 th 2020. Corriere della Sera.it published an article on the conservation progress of Bonelli's eagle. The article highlights the results of the ConRaSi project through an interview to Massimiliano Di Vittorio.
- 17th May, 2021 The TGR Sicily transmitted a long TV report on the 2021 tagging campaign of Bonelli's eagles. https://www.rainews.it/tgr/sicilia/video/2021/05/sic-aquila-bonelli-wwf-sicilia-bbbaca89-d864-4221-90e3-3bac2943941c.html
- October 4, 2021 Il Messaggero, published a long article on the conservation of Bonelli's eagle. The article recalls the efforts to safeguard the Bonelli's eagle made by the

ConRasi project and the close collaboration with the Carabinieri Forestali, underlining the results achieved thanks to the monitoring and surveillance of nesting sites.

All the publications related to the project are attached to this report. (E1_articles.pdf in the folder E1).

Action E.2. Communication materials

The action is aimed at delivering four printed leaflets to be used in the dissemination activities:

- Leaflet 1 - Poison & vultures.
- Leaflet 2 - Outdoor activities and preservation of the raptors.
- Leaflet 3 - Conservation of Bonelli's Eagle, Egyptian Vulture and Lanner Falcon.
- Leaflet 4 – Learning about the raptors, booklet for the schools.

Timing of the action

	Foreseen	**Actual**
Start date	01/11/2015	01/06/2016
End date	30/09/2018	30/09/2018

Progress

The contents of the communication materials was developed internally by the staff of the CB with the support of the experts involved in the different actions.

The following materials were produced.

- November 2016 Leaflet 3 - Conservation of Bonelli's Eagle, Egyptian Vulture and Lanner Falcon. 5000 copies – 460 downloads from the web site[11]
- August 2017 Leaflet 2 - Outdoor activities and preservation of the raptors. 5000 copies - 340 downloads from the website[12].
- October 2017 Leaflet 1 - Poison & vultures. 5000 copies – 648 downloads from the website[13].
- March 2017 Leaflet 4 - Learning about the raptors, booklet for the schools. 5000 copies – 10,243 downloads from the web site[14].
- August 2017 Colored stickers with Life project logo 800 pz.
- April 2018 Leaflet 4 - Learning about the raptors, booklet for the schools. Other 5000 copies printed.

The following table provides a distribution list of the deliverables from action E.2.

Item	**Beneficiary**	**N.**	**Date**	**Final target**
Leaflet 1 – Poison and vultures (5,000 copies)	DRSRT	4,000	08/2017	
	Event in Palermo	100	05/2018	General public
	International birdwatching Fair (Comacchio)	400	05/2018	General public
Leaflet 2 – Outdoor activities and preservation of raptors (5,000 copies)	DRSRT	3500		
	Event in Palermo	200	05/2018	General public

[11] https://www.lifeconrasi.eu/download/72/tutti-i-documenti-del-progetto/1422/pieghevole.pdf

[12] https://www.lifeconrasi.eu/download/72/tutti-i-documenti-del-progetto/2365/azione-e2-pieghevole-su-attivita-allaria-aperta-e-tutela-dei-rapaci.pdf

[13] https://www.lifeconrasi.eu/download/72/tutti-i-documenti-del-progetto/2438/azione-e2-opuscolo-informativo-su-rapaci-e-veleno.pdf

[14] https://www.lifeconrasi.eu/download/72/tutti-i-documenti-del-progetto/1677/azione-e2-opuscolo-informativo-sui-rapaci-rivolti-ai-ragazzi.pdf

Item	Beneficiary	N.	Date	Final target
	International Birdwatching Fair (Comacchio)	500	05/2018	General public
Leaflet 3 – Conservation of the three targeted species (5,000 copies)	Press-conference in Palermo	200	11/2016	Public participating in the event
	DSRT	400	12/2016	People participating in public events. School meetings
	DRA	800	12/2016	People participating in public events
	Riserva Laghi di Preola	400	12/2016	Visitors of the reserve
	EAI/Silene	400	12/2016	Volunteers and collaborators
	International Birdwatching Fair (Comacchio)	500	05/2018	General public
	Event in Palermo	100	05/2018	General public
Leaflet 4 – Learning about the raptors (10,000 copies)	DRSRT	3,900	05/2017	School meetings
	DRA	500	05/2017	People participating in public events
	Habitats Directive event in Palermo	200	05/2017	Public participating in the event
	Casa delle Culture e del Volontariato - Caltanissetta	400	07/2017	General public
	Event in Messina	200	04/2018	Scholars
	Comune di Messina	400	04/2018	
	Event in Palermo	200	05/2018	General public
	Reserves managed by WWF (Laghi Preola, Torre Salsa, Caporama, Saline di Trapani e Paceco)	4000	04/2018	General public

Major problems, drawbacks, delays

The action was implemented without significant problems. Some of the communication materials were printed in a lower number of copies compared to the initial figures. This is because due to the pandemic all public events had to be cancelled.

Deliverables	Foreseen	Actual	Comments
Leaflet: conservation of the raptors	-	11/2016	Paper and pdf versions annexed to mid term report: *E2_leaflet_generic.pdf*
Leaflet: raptors and outdoor activities	12/2016	08/2017	Paper and pdf versions annexed to mid term report: *E2_leaflet_outdoor_activities.pdf*
Leaflet: poison and raptors	12/2016	09/2018	Paper and pdf versions annexed to mid term report: *E2_ Leaflet_poison_and_raptors.pdf*

Leaflet: learn about the raptors	03/2016	05/2017	Paper and pdf versions annexed to mid term report: *E2_booklet_school_children.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
First leaflet finalized	03/2016	11/2016	-

Action E.3. Project web site

This action is aimed at the development and management of a project website.

Timing of the action

	Foreseen	**Actual**
Start date	01/11/2015	01/03/2016
End date	30/09/2018	30/10/2021

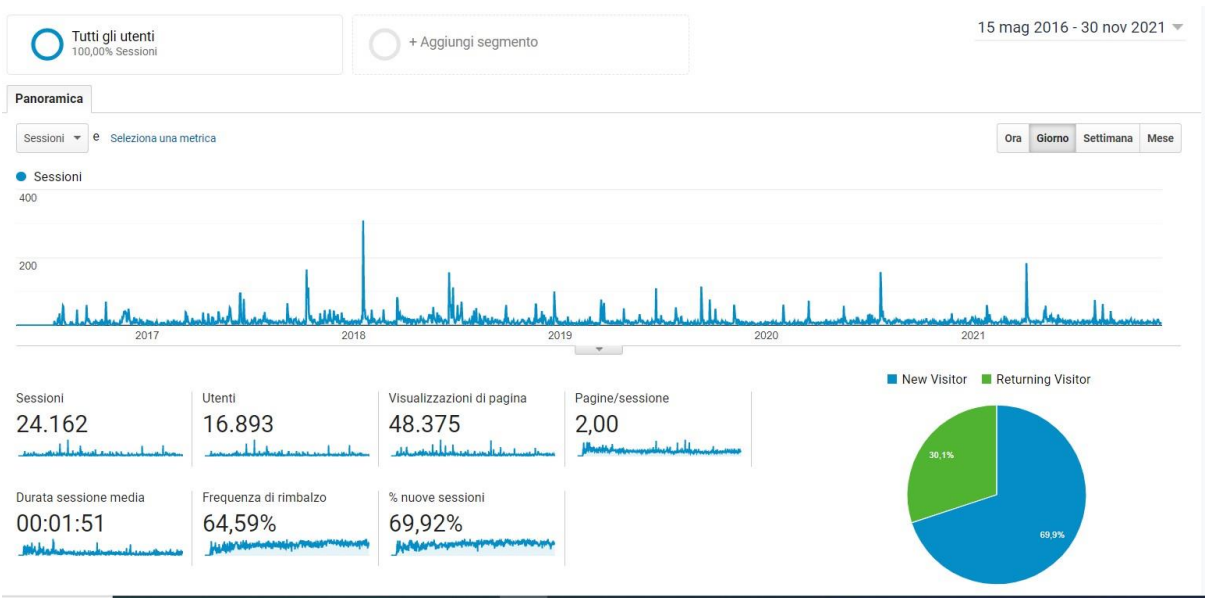
Progress

The project web site and the related social forums were updated regularly throughout the period covered by this report. The structure of the web site had a static section (Home; Il progetto; I partner; Le tre specie; Per le Scuole) and a dynamic blog, which is the physical space where all news are published. The technical documents and the media are hosted in the homonymous section "Documenti e Multimedia", whereas the videos are available in the ConRaSi YouTube channel. As in the past, the website has been also used as repository of the documents related to the calls for tender.

The static section of the web site is also available in English, as well as a selection of news that are regularly published in that language.

ConRaSi can also be followed through the social networks Facebook and Twitter. Facebook and Twitter usually mirror the news published in the web site, other than re-launching news from other sources related to the topics of the project. The major figures related to the web site collected by Google Analytics up to November 2021 can be summarised as follows: 24,162 sessions; 16,893 visitors (of which 69.9% new visitors); 48,375 visited pages. The proposal set the target of 1,000 visitors within the first year and 3,000 by the end of the project: the figures confirm that the objective is being fulfilled. Altogether, the documents available on the website were downloaded about more than 22,500 times.

The website will be maintained for at least 5 years after the end of the project under the responsibility of the CB.



Major problems, drawbacks, delays

n.a.

Deliverables	**Foreseen**	**Actual**	**Comments**
Web site	02/2016	05/2016	A first web page was uploaded on 31st March 2016. Full functional web site operative in May.
Milestones	**Foreseen**	**Actual**	**Comments**
Web-site operative	03/2016	05/2016	A first web page was uploaded on 31st March 2016

Action E.4. Stakeholder meetings

The aim of the action was to disseminate the project results in the course of meetings with selected local stakeholders (9 per year, total 27 meetings) and with school-children (6 per year from the second year onward, total 12 meetings).

Timing of the action

	Foreseen	**Actual**
Start date	01/11/2015	01/06/2016
End date	30/09/2018	06/2019

Progress

25th January 2017. A training course was held in Palermo targeting the DRSRT staff involved in the activities with the schools. The course was aimed at introducing the project and the target species.

6th July 2017. A second training course was held to update the staff on the latest interventions carried out by theproject and to share a CD-ROM containing: a power point presentation to be used in the activities with the schools, the short videos realised so far, the pdf of the printed materials, a standard sheet to record any detail of each meeting (name of the schools, n. of participants, etc.).

6th November 2018. A third meeting was held to update the staff on the latest interventions carried out by the project. Further materials were handed over the DSRT staff: files to facilitate the identification of stakeholders and a questionnaire to be used at the meetings.

Concerning the meetings with scholars, these are summarised in the following table.

Anno scolastico 2017/18	**Istituto scolastico**	**N. ragazzi**	**Località**
21 April	Scuola Media L. Da Vinci (PA)	n.a.	Ficuzza (PA)
21 April	Scuola Media Giardinello (PA)	n.a.	Ficuzza (PA)
26 April	Scuola Media Favara (AG)	n.a.	Favara (AG)
05 May	Scuola Media Marconi (PA)	n.a.	Ficuzza (PA)
24 October	Scuola Umberto di Savoia III A, B, C	64	Trapani
24 October	Scuola Umberto di Savoia III D, E	50	Trapani
08 November	Istituto Collodi Sturzo I B, C	40	Marausa (TP)
08 November	Istituto Collodi Sturzo I A, II D	35	Marausa (TP)
11 November	Scuola Umberto di Savoia IV C, D	10	Trapani
11 November	Scuola Umberto di Savoia V C	20	Trapani
School year 2018/19	**School**	**N. of pupils**	**Location**
20 April	Scuole medie comune di Messina	About 100	Messina
Anno scolastico 2017/18	**Istituto scolastico**	**N. ragazzi**	**Località**
24 April	Istituto Comprensivo G. Philippone	50	San Giovanni Gemini (AG)
27 April	Istituto Comprensivo G. Philippone	50	San Giovanni Gemini (AG)
10 May	Istituto Comprensivo Giovanni XXIII	50	Cammarata (AG)
1 June	Scuola A. Inveges	80	Sciacca (AG)
5 June	Primo Circolo Giovanni XXIII	46	Sciacca (AG)

22 November	Istituto Comprensivo L. Pirandello	40	Porto Empedocle (AG)

Although for the first 4 meetings it was not recorded the number of involved pupils, based on the figures recorded, it was estimated that more than 700 pupils were addressed since the start of the activity. Further details are provided in the attached report.
Only one meeting with stakeholders was held in Agrigento in June 2019 with 14 participants from institutions and associations

Major problems, drawbacks, delays
The action accumulated a delay due to the slow start of the project. In the first progress report it was requested to transfer the financial resources, together with the responsibility of the intervention, to the CB. The request was eventually rejected by the Commission (EASME B3/SB D (2016) 5209148). DRSRT had initially intended to launch a procedure to outsource the action in autumn 2017, so as to organize the first set of meetings before the end of 2017. The possibility of outsourcing this activity – as also foreseen by the project – was eventually rejected by the partner DRSRT because of the difficulties encountered in managing the call for tender procedure. Therefore, after long discussions, this partner made the decision to carry out these interventions with its own staff. These uncertainties further contributed to increase the overall delay of the action. At the end of 2019, the DRSRT carried out a market survey to sub-contract the activity but the action was eventually cancelled (2020), due to government measures that prevented any public meetings to limit the spread of the pandemic. These measures remained in effect during virtually all periods of school operation till the end of the project.

Deliverables	**Foreseen**	**Actual**	**Comments**
First technical report describing the activity	12/2015	12/2017	-
Second technical report describing the activity	12/2016	09/2018	Annex to this report: *E4_technical_report_stakeholder_meetings2018.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
First meeting with stakeholders	12/2015	-	-

Action E.5. Layman's report

The aim of the action is to deliver a Layman's report for dissemination purposes.

Timing of the action

	Foreseen	Actual
Start date	01/04/2018	07/2021
End date	30/08/2018	10/2021

Progress

The action was carried out internally by the WWF staff in terms of contents production and translation.

The Layman's report was finalized in September and 50 copies were printed in October. Copies of the report were also shipped via e-mail to the people directly involved in the project and an on-line version was uploaded to the project website, available for download[15]. An English version is also available for download from the web site[16]. Printed copies of the Layman's report were also dispatched as explained in the following table.

Number of copies	Institutions
2	Corpo Carabinieri – Nucleo CITES
5	DRSRT
5	DRA
5	GREFA

Major problems, drawbacks, delays

n.a.

Deliverables	Foreseen	Actual	Comments
Layman's report	08/2018	10/2021	Annex to this report: *E5_Layman's_report.pdf*
Layman's report English version	08/2018	10/2021	Annex to this report: *E5_Layman's_report_English.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
-	-	-	-

[15] https://www.lifeconrasi.eu/download/72/tutti-i-documenti-del-progetto/3960/laymans-report.pdf

[16] https://www.lifeconrasi.eu/download/72/tutti-i-documenti-del-progetto/3972/azione-e5-laymans-report-english-version.pdf

Action E.6. Networking

The aim of the action is to network with other LIFE and non-LIFE projects dealing with the same topics of ConRaSi's.

Timing of the action

	Foreseen	**Actual**
Start date	01/04/2016	01/06/2016
End date	30/08/2018	10/2021

Progress

The action started in June 2016. Preliminary contacts were made by email with the following projects:

- LIFE14 NAT/IT/000484 Life under griffon wings;
- LIFE14 NAT/NL/000901 Life Re-Vultures;
- LIFE 10 NAT/BG/000152 The Return of the Neophron;
- LIFE06 NAT/GR/000637 Management of the SPA site of Andros Island to achieve a favourable conservation status for its priority species.
- And of course with LIFE12 NAT/ES/000701 – LIFE Bonelli, in which one of the partners is GREFA, which is also currently also partner in the LIFE ConRaSi.

In the course of 2016 and again in 2017 we worked with Dr. Pascual Lopez Lopez of the University of Valencia, who is supporting the team in the monitoring activities. At the end of 2016 we got in touch with the Vulture Conservation Foundation with the aim of ensuring a regular exchange of information, particularly for the activities concerning the Egyptian Vulture.

In 2017 we worked with Dr. Mario Posillico (Forestry/Carabinieri Service) who is involved in a project to GPS-tag Griffons in Central Italy. In June 2017 we also networked with Dr. Enrico Bassi who is coordinating the Italian campaign to ban the drug Diclofenac, within a wider project taking place in Europe. In the same year, we started an exchange of information with a team running a project in Sicily on Lanner Falcon funded by Peretti Foundation.

LIFE16 NAT/IT/000659 LIFE Egyptian Vulture. Most of networking with this project took place in 2021, when we liaised with Dr. Arianna Aradis from ISPRA and the main topic of discussion was the creation of the feeding points. The experiences gained by the LIFE ConRaSi – particularly in terms of the procedures to obtain the authorizations - were transferred to ISPRA to facilitate the process of creating a feeding point in the municipality of Campobello di Mazara.

Throughout the project, the team worked side by side with the enforcement authorities, particularly Carabinieri Forestali.

Further details are provided in the attached report.

Major problems, drawbacks, delays

n.a.

Deliverables	**Foreseen**	**Actual**	**Comments**
Technical report describing networking	09/2018	10/2021	Annex to this report: *E6_technical_report_networking.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
Start of the networking	01/2016	06/2016	-

Action F.1. Project management
The action is aimed at ensuring a regular implementation of the project.
Timing of the action

	Foreseen	Actual
Start date	01/09/2015	01/09/2015
End date	30/09/2018	31/10/2021

Progress
The CB core team met regularly inorder to plan, to update each other on the progress of actions and to make decisions, throughoutthe duration of the project, at least twice a month. Especially in the first phase of the project, market surveys were carried out, calls for tenders for the entrusting of activities foreseen by the project, authorization of expenses.

The CB core team also met regularly (six times a year on average) with representatives of the ABs, initially in Palermo but, after the pandemic spread, primarily through videoconferencing.

Special care was given to the communication with the Spanish partner GREFA, given that its physical participation in the meetings occurred only in limited cases. Therefore, the PM liaised directly and regularly with GREFA, to make sure that any decision made at the coordination meetings was shared with this partner.

Communication with EASME/ CINEA mainly occurred through formal letter and by informal email. The CB received the following main communications:

- EASME B3/MO/TH (D 2017- 7011155) – the letter provided comments on the Mid-term report and the third monitoring visit (the answers are provided as attachment to this report: Answers_to_EC_letters.pdf)
- EASME B3 1) (2018) 5177241. Letter amendment n.4
- Ares (2019)5346610, dated 22/08/2019 Joint mission of 2-3 July 2019
- Ares (2021)1294334, dated 16/02/2021 CONRASI Sixth Visit of February 2021
- Ares (2021)7788612, dated 16/12/2021 Seventh monitoring visit and fourth Progress Report

The communication with the monitoring team was ensured by the PM and occurred through the periodic reports sent out by email, but also by phone and email.

Major problems, drawbacks, delays
The coordinating structure underwent several changes throughout the project.

Deliverables	**Foreseen**	**Actual**	**Comments**
First technical report describing the coordination	10/2016	10/2016	Technical report annexed to this report: *F1_technical_report_coordination.pdf*
Second technical report describing the coordination	10/2017	10/2018	Annex to this report: *F1_technical_report_coordination2018.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
-	-	-	-

Action F.2. After-LIFE Plan

The action is aimed at delivering an after-LIFE plan

Timing of the action

	Foreseen	**Actual**
Start date	01/07/2020	1/11/2021
End date	30/09//2020	28/01/2022

Progress

The draft plan was delivered in October and then finalized in collaboration with the partners. The document was prepared considering the indications of CINEA (recommended length, content, time coverage); the after-LIFE Plan was also provided in English.

Deliverables	**Foreseen**	**Actual**	**Comments**
After LIFE Conservation Plan	10/2018	28/01/2022	Technical report annexed to this report: *F2_After_LIFE_Conservation_Plan.pdf*
After LIFE Conservation Plan English version	10/2018	28/01/2022	Technical report annexed to this report: *F2_After_LIFE_Conservation_Plan_English.pdf*

Major problems, drawbacks, delays

n.a.

Action F.3. Indicator table

The action is aimed at compiling the indicator table, to provide a metric of the project success.

Timing of the action

	Foreseen	**Actual**
Start date	01/07/2016	01/07/2016
End date	30/09/2021	31/10/2021

Progress

A preliminary indicator list was compiled at submission time. Indicators were then updated during the project implementation and finalized at the end of the project. A comparison of the initial KPIs vs the final ones is provided in paragraph 7.

Major problems, drawbacks, delays

The initial transfer of the figures into the KPI table went on smoothly. The latest version of the platform on the other hand, was not as friendly as expected, and the process of populating the indicator table requested a long time and some sections still appear not fully clear.

Action F.4. Financial audit

The action is aimed at delivering a financial audit.

Timing of the action

	Foreseen	**Actual**
Start date	01/07/2020	01/07/2020
End date	30/09/2020	31/10/2021

Progress

September 2021. Upon publication on the project website of a call for tender in April 2018, the financial audit was subcontracted.

The financial audit is annexed to this report.

Major problems, drawbacks, delays

n.a.

Deliverables	**Foreseen**	**Actual**	**Comments**
Financial Audit	10/2021	10/2021	Annexed to this report: *F4_audit_signed.pdf*
Milestones	**Foreseen**	**Actual**	**Comments**
-	-	-	-

6.2.

6.3. Main deviations, problems and corrective actions implemented

We highlight hereby the main problems encountered during the implementation of the project.

Technical problems

- Unforeseen complexity of some of the technical actions. Some of the actions turned out to be by far more complex than originally foreseen. This applies certainly to action A.4, whose aim was to provide the executive projects and the authorizations necessary to start implementing the related action C.2. The process to deliver the executive projects undertook a number of unforeseen and time demanding intermediate steps, that involved different actors (regional authorities, municipalities and finally three different sanitary authorities with jurisdiction on the provinces where the feeding points were built). The coordination team ensured a constant support to the partner DRSRT to accelerate the implementation of the action, whereas the scientific supervisor gave his support in several activities, even beyond his contractual obligations (i.e. surveying the sites, supporting the DRSRT staff in delivering the executive projects).
- Working under extreme conditions. Action C.1, among others, aimed to put in place 5 webcams in proximity of nests. Nowadays webcams are becoming more and more popular, because of the low costs and because these tools can be easily installed and managed. However, installing a webcam on a remote cliff, in absence of an urban power grid and WIFI network may be not as easy as supposed. Therefore, the investigative phase to choose the most effective equipment lasted longer than initially planned and brought to the purchase of a limited number of webcams that, once installed, did not deliver the expected results.
- Camera-trap stealing. Throughout the monitoring season 2017 two camera-traps were stolen. The stealing of the camera-traps was somehow expected and luckily the number of these unfortunate events remained quite low. A counter measure that turned out to be successful was to install two camera-traps pointing at each other, although this option was not always available due to the nature of the terrain where camera-traps were installed.
- High incidence of the disease Trichomoniasis. A high share of the eagles handled at the nest turned out to be infected with Trichomoniasis. The data collected shed light on a potential threat to the species, which was almost unknown before the start of the project. As a consequence, a veterinary joined the last two tagging sessions.
- Problems in disseminating some results. One of the core activities of the project is to protect the nesting sites, whose exact location must obviously remain unknown to prevent any illegal act. Therefore, any result, technical report or news deriving from the monitoring activities must be carefully assessed before being disseminated. Some crucial information cannot simply be disseminated, while others need to be preventively cleaned off the sensitive information. Therefore, the dissemination of the project results through the website appeared sometimes less dynamic than expected.

Financial problems

- Complex internal administrative rules. The public bodies are obliged to follow strict administrative rules anytime the financial resources necessary to the implementation of some project actions have to be allocated. This resulted in complex and time demanding internal procedures. Also, the public bodies have to follow strict procedures

when sub-contracting. These problems particularly affected the regional partner DRSRT, given its financial exposure in the implementation of action C.2 Although these problems were already known at submission time, their impact turned out to be more severe than expected.

- Uncertainty in the timing of allocation of the financial resources by the Sicily region. Although this is an issue going beyond the control of the partners, it has to be remarked that the internal procedures to approve the annual budgets were time-consuming. Furthermore, these delays are irregular and driven by political causes, therefore it is difficult to foreseen whether and to what extent they will occur.
- Discrepancies in the personnel daily costs. The personnel daily rates provided by the financial tables do not always reflect the real costs, the main cause being the fact that the personnel working in the project was not the one that was identified at submission time (mainly because of personnel shuffles).

Organizational problems

- Personnel re-arrangements. With the only exception of GREFA, all partners had to face some personnel shuffle at some point. WWF Italy reallocated the project leadership in the very initial phase and at the beginning of 2017, while both the regional offices DRA and DRSRT replaced their project managers between February and March 2016, with a further re-arrangement for DRA that took place in June 2016. The measures that we put in place to alleviate the impacts on the project included: enhancing the communication with the concerned partner (and informing the external monitoring team), organizing meetings to make the transfer as smoother as possible, and ensuring all the necessary support to avoid commitment gaps.

6.4. Evaluation of Project Implementation

Methodology applied.

- Planning, constructing and launching the artificial feeding stations and warrens (Action A.4/C.2). The process of planning the feeding stations started in 2015 and continued for many years through several different phases: delivery of preliminary guidelines by GREFA; development of exact locations, blue-prints and guidelines for management by EAI; field assessment by DRSRT; development of the executive plans by DRSRT; authorization process; further authorization by sanitary authorities. Overall, the process took a very long time for a number of reasons that are explained in details in the paragraph describing the action. When looking at the whole process, the reasons of the delay are several and include: slow start of the project, time-consuming internal mechanisms ruling the public administrations, complex jurisdiction.
- Video surveillance by camera-traps (Action C.1). Over the years the camera traps confirmed to be reliable, broadcasting to the dedicate e-mail addresses thousands of images. Transmission problems due to a lack of GSM coverage only occurred in a very limited cases, confirming the goodness of the choice of relying on *Telecom Italia*, the company providing the widest GSM coverage in Sicily, rural areas included. The cost-efficiency of the action can be considered pretty high, given that the camera-traps can last for years, while the broadcasting over the GSM network is not particularly expensive.

In any case, costs are not even comparable with the ones of the voluntary camps, that call for a high coordination effort, the continuous involvement of a team, travel and accommodation costs.

- Video surveillance by web-cams (Action C.1). Following a long exploratory phase aimed at identifying the best equipment/methodology, two web-cams were purchased and put into service in May 2017. The decision to limit the number of the web-cams (2 instead of 5 as foreseen by the project) arose from the awareness that these tools would have worked under extreme conditions, with high chances of failure, as indeed happened. Both web-cams faced technical failures and for this reason they were no longer used.
- GPS tracking (Action C.3). 38 young Bonelli's Eagles were successfully GPS tagged. Climbing to the nest and equipping the birds with the tags revealed to be a very complex action. Nevertheless, the intervention was carried with success thanks to the support of the Spanish partner GREFA.
- Monitoring the three targeted species (Action D.1 and D.2). The targeted bird species were monitored following a specific protocol, which was delivered by the preparatory action A.2. The protocol strongly built on the methodologies usually applied in ornithology. As such, it represented the best compromise between the resource investment and amount/consistency of the obtained results. Concerning the costs, the monitoring actions were certainly expensive, as these relied on a team of ornithologists operating in different sites at the same time. Also, monitoring implied high travel costs, given that Sicily is a large island, with the nesting sites being spread over large areas and located in sites that can be reached only through secondary rural and unpaved roads.
- Dissemination activities (Action E.1, E.2, E.3). Even in the case of the dissemination the ConRaSi project put in place quite standard methodologies and means, including the use of the social networks. Concerning the cost efficiency, the dissemination costs were kept quite low, by limiting as much as possible the printing costs.

(Projects funded under the Call 2014 onwards must use this format)

Comparison of the results achieved against the objectives and expected results foreseen in the proposal

Action	Foreseen in the revised proposal	Achieved	Evaluation
	Objectives: Expected results:		
A.1	Ensuring a regular implementation of the project activities. Partnership agreements and kickoff meeting	Yes	Despite an initial delay the action was implemented as expected. Revised versions of the partnership agreements and addendum were made available during the project life span.
A.2	Ensuring a consistent monitoring. Monitoring protocols	Yes	The action was implemented without problems.
A.3	Increasing the ecological knowledge on the target species. Geodatabase with distribution maps Habitat suitability models	Yes	The action was implemented without problems. The outputs were transferred to Sicily Region as expected.
A.4	Blueprints, plans and authorizations for building the feeding stations.	Yes	The action took longer than expected. The number of feeding stations was reduced to 6 (originally 9) and the number of warrens was reduced to 5 (they were originally 20). The area was also reduced from 100x100m to 50x50m in the case of the feeding stations, and from 300x300m to 50x50m in the case of the warrens.
A.5	Ensure consistency in the identification of the sites undergoing surveillance and methodology. Surveillance protocols	Yes	The action was implemented successfully

Action	Foreseen in the revised proposal	Achieved	Evaluation
A.6	Providing tools for the conservation of the Bonelli's eagle. Bonelli's eagle Action plan	Yes	The implementation of the action took longer than expected. The plan was eventually adopted by Sicily Region. Although not foreseen by the project, the team delivered also the action plan for the conservation of the Lanner Falcon.
A.7	Updating SDFs and management plans of the Natura 2000 sites. Updated management plans of the target SPAs. Assessment of the efficacy of the Natura 2000 network. Revision of the SPAs whenever necessary.	Partially	The SDFs of the SPAs were updated but the process to update the management plans was not accomplished, as it would have required more time, not compatible with the project. Indeed, Sicily region has its own time plan and in February 2022 a tender for updating the management plans was published. The efficacy of the Natura 2000 network was assessed in the technical reports delivered by action D.1 and in the action plan for the Bonelli's eagle.
C.1	Preventing poaching events. No bird taken from the nests under surveillance. Surveillance equipment installed at selected nesting sites. Technical reports summarizing the activities carried out and the key results.	Yes	The action was implemented successfully throughout 6 years instead of 3 as originally planned. However, one poaching event was recorded by the photo-traps. The implementation of the action also allowed to strengthen the collaboration with the law enforcement authorities (Carabinieri). 2 webcams were also purchased but they suffered from technical failures as explained in the report. 2 new webcams – relying on a different technology – were also purchased and used before the end of the project. The equipment was installed and uninstalled every year at the nesting sites, selected in collaboration with the monitoring team. Technical reports were issued yearly as foreseen by the project.
C.2	Increasing the trophic carrying capacity. 9 feeding stations and 20 warrens.	Partially	The infrastructures were adjusted either in terms of numbers (6 feeding stations and 5 warrens instead of 9 and 20, respectively) and area (50x50m instead of 300x300m and 100x100m). The process leading to the authorizations, to the

Action	Foreseen in the revised proposal	Achieved	Evaluation
			construction and authorization of the infrastructures and to their effective launch, took a very long time, much more than expected.
C.3	Increasing the knowledge on Bonelli's eagle movements and ecology. Ten young eagles equipped with GPS tags per year. Yearly reports describing bird movements	Yes	The action was implemented successfully. Thanks to the extension of the project, it was possible to recover the session 2020 that was cancelled due to the Covid-19 pandemic. Overall, 38 young eagles were tagged, whereas the target of the project was initially set to 30.
D.1	Monitoring the target bird populations. Increased knowledge of population density and distribution to feed into PVAs and the action plan for the conservation of the Bonelli0s eagle	Yes	The action was implemented successfully
D.2	Monitoring the target bird populations. Comparison of the populations before and at the end of the project	Yes	The action was implemented successfully.
D.3	Assessing people's attitude towards the target bird species Ex-ante and ex-post polls	Yes	The action was implemented successfully
D.4	Assessing socio-economic impacts of the project.	Partially	The original methodology to collect the data was not implemented due to the limitations imposed by Covid-19. The expected output was delivered anyway.

Action	Foreseen in the revised proposal	Achieved	Evaluation
	Technical report on the socio-economic impacts delivered by the project		
E.1	Dissemination Delivery of logo, notice boards	Yes	The action was implemented successfully
E.2	Dissemination Delivery of 4 types of leaflets	Yes	The action was implemented successfully. However, the impact of communication was weakened due to the limitations imposed by the authorities to limit the spread of Covid-19. For the same reasons, 3 out of 4 leaflets were printed in 5.000 copies rather than 10,000 as originally foreseen.
E.3	Project web site	Yes	The action was implemented successfully
E.4	Involving local stakeholders.	Partially	The action was implemented only partially. The action was under the responsibility of DRSRT, but since the initial phases it became clear that the regional department would have faced problems in running the actions through sub-contractors. For this reason, in the first report it was made the request to re-attribute the action to WWF, but the request was eventually rejected by EASME. The action was then then launched but it was finally cancelled due to the limitations imposed by the authorities to control the spread of Covid-19.
E.5	Layman's Report	Yes	The action was implemented successfully
E.6	Networking	Yes	The action was implemented successfully
F.1	Ensuring a smooth implementation of the project	Yes	The action was implemented successfully
F.2	Providing indications on the after LIFE. After-LIFE Plan	Yes	The action was implemented successfully
F.3	KPI indicators	Yes	The action was implemented successfully. However, the new KPI platform implemented by CINEA is far from being friendly and populating the table is time demanding, whereas some sections remain unclear.

Action	Foreseen in the revised proposal	Achieved	Evaluation
F.4	Certification of the incurred costs. Financial Audit	Yes	The action was implemented successfully

Results of the replication efforts

The project did not particularly aim at replicating its experience elsewhere, given that most of the interventions are best practices already implemented in several contexts. However, through the networking the project made available its results and experiences to other actors involved at different levels in the conservation of raptors in Italy and abroad. Also, the lessons learnt - particularly those deriving from the implementation of the surveillance and the tagging techniques – were disseminated through direct contacts with researchers and conservationists.

Effectiveness of the dissemination activities

The dissemination activities became effective in the course of 2016, when the project web site was launched; afterwards, in November 2016 a press conference was held in Palermo and for the first time the project was launched in the local media, with articles published in newspapers and TVs. In June 2017 the project raised the interest of the national media when a press release dealing with the GPS tagging was spread out. In the meantime, the project delivered the four leaflets, one of which raised an incredible interest, particularly the digital version, that had more than 10.000 downloads from the website. The web site, thanks also to the multiplying effect of the related social networks, delivered good results in terms of number of visitors, coherently with the targets originally set by the project. Overall, the communication was sufficiently effective taking into consideration the type of project and ambitions. However, the communication had a stop in 2020, when any public event was cancelled due to the limitations imposed by the authorities to control the spread of Covid-19. Particularly relevant was the obligation to cancel the meetings with the stakeholders and with the schools, through which we expected to get in touch with a high number of persons and school pupils. Inevitably, withthe only communication being the one passing through the web site, the attention of the publicon the project declined, as also confirmed by the results of the second poll delivered by actionD.3.

Policy impact

Implementation of the national legislation. The surveillance activities carried out within the ConRaSi project prevented the poaching of three species of birds of prey that are classified as "particularly protected" by the Italian law 157/92; moreover, the same law prohibits the collection of eggs and nestlings. Other than allowing the implementation, the project played also an active role in stimulating the authorities to enforce the protection laws: on 19th October 2016 the partners sent a letter to the Prefects of the Sicily Region asking for a more effective surveillance of the nesting sites. The same letter was also published in the project website. Finally, during the monitoring several potential poaching events were prevented in collaboration of the local Carabinieri/Forestry service.

Implementation of the EU Birds Directive. Action A.7 assessed whether the targeted species are listed in the SDFs of the SPAs identified by the project and whether the related management plans included specific interventions aimed at their conservation.

Implementation of CITES. The illegally collected nestlings enters the black market and are transferred in the countries where collectors are located, either in Italy, Europe or Arabian countries. The trade of these birds is strictly ruled by CITES, therefore any measure to halt the illegal trade is a contribution towards the implementation of that convention. It has to be added that the activities carried out within the ConRaSi project allowed to consolidate the pre-existing collaboration between the network of volunteers and the regional/national CITES offices.

Bottlenecks

The objectives of the Habitats and Birds directive seem still far to be achieved in Sicily. The Natura 2000 network is not effectively managed, as the management plans would need to be updated and the conservation measures need to be put in place. Indeed, action A.7 had been

designed just to improve the Natura 2000 management tools (e.g. SDFs and management plans) but the objective was only partly achieved, due to the limited capacity of the regional authorities to act in favour of Natura 2000 and the slowness of the internal processes. Nevertheless, the project contributed to update the SDFs and made available a list of conservation measures to be embedded into the management plans, once they will be updated (as mentioned in other sections of this report the Sicily Region launched in February 2022 a tender to update the management plans of the Natura 2000 sites).
The process leading to the construction and launch of the feeding stations took a very long time. The regional and the sanitary authorities had no previous experience in making the feeding stations operative, which, coupled with the complexity of the legislation and the fragmentation of the jurisdiction, contributed to extend the timing well beyond any worse scenario. Based on our experience, we believe that the EC should set and disseminate to the authorities clear guidelines to explain the importance of the feeding stations, the role they play in supporting species of European concern, their possible impacts on health, the way to harmonize them with current national/regional legislations.

EU added value of the project. According to the proposal, the EU added value of the project has to be measured as the contribution of the populations of the targeted species dwelling in Sicily against the whole European populations. The demographic figures show a steady increase for the Bonelli's Eagle and a certain stability for the Egyptian Vulture, whereas for the Lanner Falcon the trend is concerning. Consequently, the project had a relevant EU addedvalue, particularly for Bonelli's eagle and the Egyptian vulture.

6.5. Analysis of benefits

Direct/quantitative environmental effects

N. of poached nests. One poaching event was reported in 2016, before the video surveillance started and a camera-trap took a picture of poacher climbing a rock later on. Apart from those two events, no further stealing of nestlings was reported throughout the project. This confirmed that surveillance and voluntary camps as effective tools to prevent these crimes.
Impacts on the populations of the targeted species. The surveillance activities had an astonishing positive impact on the population of Bonelli's eagle. During the project, thanks mainly to the good results obtained by the LIFE ConRaSi, the conservation status of the species in the IUCN Italian Red List was down-listed from Critically Endangered to Endangered. Good results were also obtained with the Egyptian vulture, with a substantial stability of the breeding pairs and an excellent number of fledged young. On the other hand, the Lanner falcon confirmed the negative population trend seen also in other sectors of its range. Although surveillance activities in Sicily addressed also this species with a growing investment in terms of surveillance, the reasons of the decline are not fully understood, and they could be a mix of: poaching, spread of Trichomoniasis, impacts of the chemicals used in agriculture, competition with the peregrine falcon. Further specific research is needed to fully assess what is causing the decline of the species.
Knowledge of the species. The information on species distribution, movements and reproduction rates increased dramatically thanks to a monitoring carried out with the highest intensity ever. Also, the data on the incidence of the Trichomoniasis on Bonelli's Eagle shed light on a threat, whose existence was ignored before the project started. Finally, the genetic databank currently hosted at the genetic laboratory of ISPRA will enable the distinction between individuals bred in captivity and those picked from nature, tool particularly useful for the law enforcement authorities.
Natura 2000. The LIFE ConRaSi provided a number of tools benefitting Natura 2000. The

Bonelli's eagle action plan is a crucial tool highlighting the conservation measures that need to be put in place for the species. Similarly, the Habitat Suitability Models can guide the authorities in the decision processes, particularly when assessing the potential impacts of works or infrastructures on species and habitats. Conservation measures were also identified for the other two target species and transferred to the regional authorities. Standard Data Forms were revised on the basis of the data collected throughout the project and transmitted to the regional authorities. The revision of the management plans was another task foreseen by the project, although its implementation was not compatible with the regional procedures and the timing.
Awareness and information of the local communities and stakeholders. The survey carried out in February 2017 showed that 13% of the population confirmed to know the ConRaSi project. This was an encouraging result of the dissemination activities carried by the project, particularly if this figure is compared with the one related to the people's knowledge of Natura 2000 (only 5% of the population is aware of it). On the contrary, the project did not have the chance to contact a number of key stakeholders, particularly because the action that was supposed to achieve that objective went on very slowly and it was finally cancelled due to the restrictions imposed by the authorities to control the spread of Covid-19.

Qualitative environmental effects
Population trends. In the case of Bonelli's eagle and Egyptian vulture the population trends were confirmed. The Bonelli's eagle showed a constant growing trend, resulting in: the increase of the individuals, the colonization of areas in which the species had been absent for decades (Iblei area) and the dispersal to areas outside Sicily (Calabria). Similarly, the Egyptian vulture showed a stable trend, in terms of population size and in terms of number of fledgings. As already mentioned, the monitoring of the Lanner falcon confirmed a negative trend of the population, whose causes are still not fully understood.
Threats. The project addressed the major threats affecting the three target bird species.Poaching at the nest remains a concerning threat, given the existence of a market fuelling the request of stolen birds. Indeed, the project was very successful in mitigating this threat. However, if surveillance stopped, the reproductive rate of Bonelli's eagle and the other species would probably drop in a few years. Another good result of the project is a renewed interest from the law enforcement authorities towards the crimes involving raptors, which is positive particularly in the long term, insofar it might contribute to reduce the potential impacts of the threat.
The project worked also to improve the trophic carrying capacity of the environment. The lack of food sources is not a primary threat for these species. However, the high rate of infections from Trichomoniasis affecting the young eagles, a disease that is transmitted by the Columbiformes, is somehow related to the rarefaction of the wild rabbits, and the consequent shift of the diet from rabbits to Columbiformes. In this context, the warrens built by the project will contribute to increase the availability of rabbits, with positive impacts on the eagle reproductive rate.
Continuation. A detailed discussion on the actions to be carried out from now onward is provided in the After-LIFE document attached to this report. Monitoring and surveillance activities, that are of primary importance to ensure the persistence of the obtained results, will continue under the coordination and with the funds of WWF. The trophic support via feeding points and warrens will be ensured by the regional authorities with their internal funds. Communication and dissemination will continue, mainly through the web site, that will remain on line for another 5 years. Further details are available in the after-LIFE plan.

Economic benefits
The project represented a significative job opportunity and a chance of professional growth for all professional figures involved in species and environmental conservation. Several technicians have participated in the project: veterinaries, biologists, rock climbers and

naturalists. A few specific actions required the contracting of professional figures:
-C2: 23 workers involved to build the feeding stations (non-qualified staff).
-C1: from 5 to 10 workers of Silene s.r.l. deployed for the video surveillance activity each year of the project (all qualified staff). Moreover, around 10 volunteers participated in the monitoring camps each year of the project (exception 2020 and 2021)
-D1 and D2: from 7 to 11 workers of Ecologia Applicata Italia deployed for the species monitoring activities each year of the project (of which 5 qualified staff); 5 workers with reimbursement participated every year to support the employments during the activities (non-qualified staff).
A more detailed discussion of economic benefits is provided by the annex D4_technical report_socio_economic_impact.pdf.

Social benefits
The project brought definitively social benefits, taking into consideration that Sicily is difficult region, with high unemployment rates, particularly for the young. A category suffering particularly from unemployment is represented by those technicians specialized in nature conservation and wildlife monitoring. The LIFE ConRaSi gave these young the opportunity to make their technical skills at disposal of the project. The project gave also the opportunity to work together with institutions and other organizations. Capacities and skills of those young grew dramatically thanks to the project.

Replicability, transferability, cooperation
The interventions proposed by the project have a high potential for replicability, particularly those related to the surveillance. The remote system put in place is indeed not particularly expensive, relatively easy to set-up and can be replicated in other contexts where birds are at risk of stealing. The other measures of the LIFE ConRaSi can be considered as best practices already implemented in other contexts (e.g. feeding stations and warrens).

Effectiveness of the dissemination activities
The dissemination activities became effective in the course of 2016, when the project web site was launched; afterwards, in November 2016 a press conference was held in Palermo and for the first time the project got the local media, with articles published in newspapers and TVs. In June 2017 the project raised the interest of the national media when a press release dealing with the GPS tagging was spread out. In the meantime, the project delivered three printed leaflets (out of the four originally foreseen by the project) whose dissemination is still ongoingand whose effects will be assessed at later stage. The web site, thanks also to the multiplying effect of the related social networks, is delivering good results in terms of number of visitors, coherently with the targets originally set by the project. Finally, a bi-annual newsletter, notice-boards contributed to boost the dissemination.

Policy implications

- Best Practice lessons: briefly describe the best practice measures used and if any changes in the strategy employed could lead to possible adjustment of the best practices.
- Innovation and demonstration value: Describe the level of innovation, demonstration value added by EU funding at the national and international levels (including technology, processes, methods & tools, nature management methods, models for stakeholder involvement, land stewardship models, organisational & co-operational aspects).

Best practice lessons

The project did not have a clear demonstrative approach and made large use of best practices. However, to some extent some of the techniques used had also an innovative character. Surveillance was carried out by deploying camera-traps in the nesting areas. This type of equipment is usually used for monitoring wildlife, whereas surveillance is still an unexplored field, at least in Italy. In that sense the LIFE ConRaSi confirmed the versatility of the camera-traps. The drop in their costs, associated with their powerful technical characteristic and the drop in the costs of data transmission make this equipment as a candidate for a wider use in the field of the fight to poaching.

7. Key Project-level Indicators

A preliminary indicator list was compiled at submission time. Indicators were then updated during the project implementation and finalized at the end of the project. Over the years, two different KPI platforms were made available by EASME/CINEA. We highlight hereby the differences in the two sets of KPIs (initial and final).

Concerning the Bonelli's Eagle, figures at the end of the project show a much improved situation compared to our expectations (estimated 60 pairs vs 42 initially expected); similarly for the Egyptian Vulture, the number of pairs is slightly higher than expected (8 vs 6); on the other hand, the data for the Lanner Falcon show a remarkable decline of the population that was not expected at submission time (40 vs 60 pairs). As also explained in other sections of this report, the population is declining globally though the causes are not fully clear.

Concerning the impact of the media, the initial targets set for the web site were significantly exceeded (2,500 unique visit vs 33,814) and this can be explained taking into consideration the growing interest towards the digital media; it has also to be reminded that the project lasted 6 years instead of the 3 initially planned.

Figures concerning the people reached through the polls were higher than initially estimated (more than 700 vs 500), confirming that the resources allocated to action D.3 were optimised to achieve the higher possible results.

The number of created jobs has been higher than initially calculated (10 vs 5). This is because the activities related to monitoring, tagging and surveillance requested more people than initially planned, as a consequence of the wide geographic area of occurrence of the target species.

Finally, the running costs were lower than planned and the reasons have been explained in detail in this report.