



LIFE with VULTURES

Transferability and Replicability Plan

*LIFE WITH VULTURES: SAVING GRIFFON VULTURES IN CYPRUS
THROUGH CONCRETE CONSERVATION ACTIONS
(LIFE18 NAT/CY/001018)*

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About the project

LIFE with Vultures is a targeted conservation project for the protection of the Griffon Vulture in Cyprus. In this four-year endeavor (2019-2023), [BirdLife Cyprus](#), the [Game and Fauna Service](#), [Terra Cypria – The Cyprus Conservation Foundation](#) and the [Vulture Conservation Foundation](#) have joined forces to tackle the main threats facing the Griffon Vulture and prevent Cyprus' most threatened bird of prey from going extinct. The project has a €1,375,861 budget and is co-funded (60%) by the EU's LIFE programme. Find out more at: www.lifewithvultures.eu

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Introduction

The Cyprus Griffon Vulture population through time

Based on historical references, the Griffon Vulture used to be widespread on the island. According to Flint and Stewart (1983) up to 140 individuals had been observed at a single carcass in the 1950s. A rapid decline followed during the 1960s with the population consisting of at least 100 individuals (Bannerman and Bannerman 1971). The population was estimated at 20- 30 pairs in the mid-1990s (Snow and Perrins 1998) but declined to 8-10 pairs by 2000 (Birdlife International 2004) and 14 individuals in 2005 (BirdLife Cyprus 2005). The current population (GV population census December 2020) is estimated to be 20 individuals, including three breeding pairs, consisting of individuals from the original Cyprus population and individuals that were translocated from Crete during previous conservation projects.

The LIFE with Vultures CY Project

In this four-year endeavour (2019-2023), **BirdLife Cyprus** (coordinating beneficiary), the **Game and Fauna Service**, **Terra Cypria – The Cyprus Conservation Foundation** and the **Vulture Conservation Foundation** have joined forces to tackle the main threats facing the Griffon Vulture and prevent one of Cyprus' most threatened species from going extinct.

The project includes actions against the use of poison baits, actions to reduce collisions with overhead powerlines and actions to increase feeding opportunities for the provision of safe food to the vultures. In addition, Griffon Vultures will be brought from Spain for release in Cyprus to prevent this vulnerable and isolated population from going extinct, which has been predicted to be likely within 15 years without urgent intervention (Phipps 2020).

Another key aspect of the project is the implementation of a coordinated and targeted awareness-raising campaign, both in local communities related to the Griffon Vulture and island-wide, to spread the message of the importance of the Griffon Vulture and the problems posed by poisoned bait in the countryside.

Project objectives

The primary objective of the LIFE with Vultures project is to prevent the extinction of the Griffon Vulture in Cyprus followed by improving the conservation status of the population. To achieve this, the project will address critical threats to the species, involving key stakeholders in the process and bolstering the local population to enable its recovery.

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Actions involved

Anti-poison actions

Increase background information around use of poison baits

In order to increase understanding among partners and stakeholders on the current state of illegal poison bait use and factors related to it, the project team will (1) assess the current legislative and administrative framework on the management of poison bait use incidents, (2) collate information on past poisoning incidents and create a database that will enable drawing of conclusions on poisoning incident factors, high-risk areas for poisoning and other and (3) contact a baseline awareness level study and explore drivers behind the use of poison bait through targeted questionnaires to targeted communities and stakeholders.

Develop policy and operational recommendations to solve the human-wildlife and human-human conflict

In an effort to alleviate the motives behind poison bait use, the project team will identify alternative methods to illegal poison-bait use as solutions to conflicts such as those between human-wildlife regarding lamb predation by foxes and stray dogs. The aim is to propose realistic and tangible measures to alleviate human-wildlife conflicts in rural areas.

Develop studies around Griffon Vulture population in Cyprus

A study on ecosystem services provided by Griffon Vultures will improve our understanding of the benefits of Griffon Vultures for ecosystem functioning and human wellbeing in Cyprus and will therefore strengthen support for future conservation actions. For example, similar studies in Spain have demonstrated that exploiting the ability of Griffon Vultures to rapidly consume livestock carcasses would significantly reduce greenhouse gas (GHG) emissions and economic costs arising from the collection and transport of carcasses to processing plants by vehicles (Morales-Reyes et al. 2015). Vultures also provide cultural and spiritual services, as well as recreational services in the form of ecotourism (DeVault et al. 2016). Another study on Griffon Vulture Population Viability Analysis (PVA) will enable the project team to assess the risk of extinction of the Griffon Vulture populations under different scenarios and to determine which demographic parameters (e.g. survival, productivity) and processes are most influential in determining population persistence. As part of this study, different scenarios will be developed to predict the effect of planned conservation actions on population growth predictions. The approach is based on standard methods and has been used to assess Griffon Vulture population recovery dynamics in the similar context of Sardinia (Aresu et al. 2020), demonstrating its suitability for replication and transfer.

Elaboration of a National Anti-poison Road Map

A National Anti-poison Road Map will be the key planning and guidance document for use in the fight against illegal use of poison bait during the project and beyond. This road map will bring together

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relevant stakeholders (from land users to Government authorities and NGOs) in order to lay down a long-term plan designed and agreed to address and deal with the problem of poison bait use effectively.

Development of protocols for managing poison incidents

A series of protocols and guidance documents on how the different stakeholders should respond and act in the face of a poison incident is key in order to support investigation of incidents as well as minimize further spread of poison in the food chain. Appropriate protocols will provide the guidance on how to collect samples properly, proceed in necropsies and toxicological analysis and investigate a case and enforce the law. The project team will also produce a protocol for vulture rescue and rehabilitation in order to minimise the loss of Griffon Vultures. This action will be implemented with the collaboration of the State General Laboratory and the Veterinary Services.

Creation of Anti-poison Dog Units

An effective tool in the battle against poison bait use are canine units that can detect poison baits and poisoned victims. These Anti-poison Dog Units are effectively used across Europe and the project foresees the creation and operation of two such units in Cyprus. The units will help increase our knowledge on the real extent of poison bait use in Cyprus, enable us to check and remove poison baits from the countryside and act as a deterrent factor to those who illegally use poison baits in the countryside. The ApDUs will be managed by the Game and Fauna Service, which is the competent authority for the protection of birds in Cyprus, while patrols will be focusing only in the countryside in areas relevant to the Griffon Vulture. In addition, the project foresees the initiation of a chain of custody for poison cases allowing the project team and stakeholders to bring a possible poison case to court undertaking all the necessary procedural legal actions for the successful outcome of cases and convictions of perpetrators.

Actions to enhance feeding opportunities

Evaluation of the current veterinary legislation related to disposal of carcasses and recommendations for upgrading

Vultures, as scavenger species, feed on dead animals of medium to large size. Between 1996 and 2000 the appearance of bovine spongiform encephalopathy emerged as one of the most serious public health and political crises concerning food safety ever experienced in the European Union (EU). Subsequent sanitary legislation (Regulation EC 1774 / 2002) that greatly restricted the use of animal by-products not intended for human consumption led to profound changes in the management of livestock carcasses (i.e. the industrial destruction of around 80% of all animal carcasses). This threatened the vulture population of Europe, including Cyprus, due to reduction of food availability. As part of this action, the project will review the current legislative framework and regulation in Cyprus on carcass disposal and supplementary feeding sites for vultures and compare it to the latest EU regulation (142/2011). The project will also identify best practice and produce some

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recommendations in collaboration with relevant stakeholders such as the Veterinary Services in an effort to increase feeding opportunities for Griffon Vultures in Cyprus.

Creation and operation of one feeding station

Currently, there are four feeding stations operating in Limassol and Paphos districts. Three of them are operated by the Game and Fauna Service and one of them is operated by the Department of Forests. Feeding stations serve the purpose of providing supplementary, safe food to Griffon Vultures. Setting up of one more feeding station would aid the re-establishment of the Griffon Vulture in other areas of the island and it is expected that with the increase of the population, through the import of Spanish birds, some birds might re-colonise historic nesting sites. The use of feeding stations will be monitored through cameras.

Anti-collision actions

Minimise risk of collisions with powerlines

According to the Multi-species Action Plan to Conserve African-Eurasian Vultures (Botha et al. 2017), collisions with infrastructure (powerlines) is identified as a critical threat ranked based on scope, severity and irreversibility. In Cyprus, there are a few recorded possible Griffon Vulture deaths due to collision with powerlines. In the first stage of the project the most dangerous electricity powerlines close to breeding, feeding and other important areas for the Griffon Vulture will be identified. At a second stage, in order to reduce mortality from collisions with powerlines, the project will mark with 'bird diverters' those powerlines that pose the highest collision risk for vultures. This action will be implemented in collaboration with the Cyprus Electricity Authority.

Bolster the Cyprus population

Restocking

Restocking of the Griffon Vulture population in Cyprus is needed due to the extremely low number of individuals (20 free flying birds at the start of the project, December 2019). Even if most of the threats are controlled, it will be very difficult for the current population to recover. Considering the implementation of all actions aimed at addressing the main threats, as well as the results from the studies, the project foresees restocking and actual transport of individuals from Spain, to start only after the first project year. For a successful restocking program, specific procedures will be followed, i.e. agree acclimatization and release strategy, equip birds with GPS transmitters, veterinary support for birds if needed.

Monitoring

The project team will be closely monitoring different aspects of the project to ensure project is moving towards the set targets and objectives. A set of monitoring indicators are set to be monitored throughout the project duration.

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Building capacity

In order to establish a national functioning network of actors related to the protection of the Griffon Vulture and its threats, the project foresees a number of trainings for relevant stakeholders.

Trainings focus on innovative toxicological analysis techniques, criminal investigation of poisoning incidents, vultures' rehabilitation and veterinary treatment. Some of the trainings will take place abroad and some in Cyprus with invited participants from relevant stakeholder groups.

Moreover, the project team will monitor the Griffon Vulture population and breeding through field work, trap cameras and GPS tracking.

Awareness raising and dissemination

In order to raise awareness among stakeholders and target groups of the critical status of the Griffon Vulture in Cyprus, its importance for the ecosystem, the threats it faces and the importance of the Natura 2000 network, the project foresees a comprehensive dissemination package and targeted awareness raising activities.

Information material:

To achieve mobilization of stakeholders in this great conservation effort as well as raise awareness among targeted audiences, the project will create information material (such as this website, leaflets, posters, notice boards, pin badges, T-shirts), powerful audiovisual material in a layman's form and will have a strong presence in social media and conventional media.

Communication campaign:

Realising that local communities within Griffon Vulture sites, hunters and livestock managers are among the key project stakeholders, the project will implement a targeted communication campaign through meetings and events, focusing on the importance of vultures, the ecosystems services vultures provide, the threats they face, the importance of the Natura 2000 network and how local communities can contribute to the effort. The project team will also be present at the Cyprus Hunting Fair.

Events:

A series of events will take place to celebrate the wonder of nature and for people to learn about vultures. World Biodiversity Day and International Vulture Awareness Day are some of the opportunities to spread the message of nature conservation. Towards the end of the project, the project team will organize a screening of the documentary produced as part of the project as well as a photo exhibition of project highlights captured throughout the project.

Networking:

To ensure exchange of knowledge, experience and best practice, the project will organize a conference in Cyprus with invited key participants across Europe who are working on similar aspects

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to the LIFEwithVultures project. The project also foresees project participation in the European Anti-poison Dog Units meeting.

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The need for a replicability and transferability plan

Beyond contractual obligations of the LIFE with Vultures CY project (LIFE18 NAT/CY001018) the project recognizes the need of replication and transfer of project results to other contexts/entities/regions for the same, similar or even different purpose. This will contribute to conservation efforts by utilizing practices, methodologies and actions already successfully implemented as part of this project.

Replication means the same methods, techniques, prototypes or practices developed and/or used in the project are used again in the same way and for the same purposes by other entities.

Transfer means that methods, techniques, prototypes or practices developed and/or used in the project are used in a different way or for a different purpose.

This document lays down a list of actions needed in order to replicate the LIFE with Vultures CY (LIFE18 NA.CY/001018) project and includes applicable recommendations to prepare the ground for putting the interventions made by the project into practice elsewhere. Since this document is prepared at the early stages of the project, this Plan can act as a guidance document throughout project implementation in order to integrate transferability and replicability actions in preparatory, conservation and dissemination actions.

The plan includes an overview of:

- (a) to what other species or areas the project methods can be applied and which of the project's approaches/methods are the most suitable to transfer and replicate, and
- (b) how can these methods be transferred and/or replicated.

This document will guide the implementation of this Plan as part of the LIFE with Vultures CY project (2019-2023).

Species or areas the project practices can be applied and suggested actions for replication and transfer

Griffon Vulture (*Gyps fulvus*) as well as other species that have similar ecological requirements and face similar threats to those the Griffon Vulture faces in Cyprus can be benefited by the same conservation actions that are applied by the LIFE with Vultures CY project.

In addition, other raptorial birds that inhabit the island such as the Bonelli's eagle (*Aquila fasciata*) and the Long-legged Buzzard (*Buteo rufinus*) which are affected by illegal poison use can be benefited by the creation of Anti-poison Units (ApDUs) whose role is to patrol key sites for the species in order to detect and remove poison baits, as well as any poisoned wildlife.

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Entities that are willing to improve the conservation status of Griffon Vultures or other bird species that face similar threats can use the same methods and practices developed as part of this project.

Some EU countries are currently implementing conservation actions to protect Griffon Vultures and other vulture species and while some countries have a long history of such conservation efforts (e.g. Spain, Italy, Bulgaria, Greece) other countries are newer to this (e.g. Croatia) making them suitable candidates for uptake of practices and methodologies. The Balkan Detox LIFE project (LIFE19 GIE/NL/001016) working to combat illegal wildlife poisoning across Balkan countries is another candidate for adopting practices of the LIFE with Vultures CY project. The identification of specifics on which actions are relevant for replication is enabled through the involvement of Vulture Conservation Foundation (VCF) in both LIFE projects. In addition, the project LIFE SAFE for VULTURES (LIFE19 NAT/IT/000732) which is focusing on the same species in Sardinia and involves similar aspects to the LIFE with Vultures CY project is another candidate for replication of project actions.

Entities involved or interested to be involved in anti-poison actions, in actions to reduce risk of bird collisions with powerlines, in wildlife reinforcement programs through translocation, in supplementary feeding of Vultures and on awareness raising actions on nature conservation issues are ideal candidates for replicability of methods.

A possibility for transfer is the creation of the ApDUs, where the method of training and operation of these Dog Units can be applied in Cyprus Police operations for other purposes such as detection of drugs. The Cyprus Police has showed interest in this action and this possibility will need further investigation as the project progresses.

Finally, any additional practice or method that is identified as transferable or replicable as the project progresses, the project team will reach to the relevant stakeholders to promote these methods and disseminate a how to guide considering also the entity's capacity and resources available for uptake.

Tools to enable transferability and replicability

The transfer and replication of the project results and solutions will be supported through a number of tools and activities presented below.

These tools aim to enable efficient transfer and replication of project actions. The objectives of these tools and activities is to identify the full potential of replication, to enable stakeholders' understanding of approaches and methodologies, to support stakeholder engagement and support the capacity development process through a knowledge and best practice transfer.

These tools and activities will be implemented as part of the LIFE with Vultures CY project (Action E3).

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Toolkit

Detailed 'how to' guides (Toolkit) will be created for key conservation actions as well as the Communication Plan implemented under the LIFE with Vultures CY project. The Toolkit is addressed to those stakeholder entities that are potentially interested to replicate the practices applied in the LIFE with Vultures CY project aiming efficient transfer of knowledge.

The Toolkit will amount to a detailed specification package for the implementation of concrete conservation actions such as the creation of Anti-poison Dog Units, the creation of supplementary feeding station for Griffon Vultures, the identification of high-risk power-lines for collision and reinforcement of Griffon Vulture population through translocation of birds. In addition to the concrete conservation action Toolkits, a 'how to' guide has been put together detailing how the communication plan for the LIFE with Vultures CY project is prepared.

This toolkit is available on the project website for ease of reference.

Technical workshops

The project will organise workshops for interested focus groups from the government sector to present the detail of concrete conservation methods applied and the contents of the relevant toolkit. The aim of these workshops is to ensure transfer of knowledge and best practice to the government mechanism.

Another workshop targeted to non-government stakeholders aims at the efficient dissemination of the toolkits. Invited to this workshop will be eNGOs including conservation, animal welfare, hunter, farmer, walking and other outdoor enthusiast organisations. This element of our transfer effort reflects the fact that illegal poisoning is an issue of concern to a wide range of society, even if vultures are not everyone's primary focus or 'point-of-entry' for engagement with the problem. Invitations will be issued to NGOs from both sides of the dividing line in Cyprus, adding an all-island and bi-communal element to transferability.

Networking and participation in workshops

The LIFE with Vultures CY project has been developed side by side with the Balkan anti-poison project (2018-2020) which works with key stakeholders to tackle illegal wildlife poisoning. To ensure transfer and replication of actions both ways, the two projects will maintain an open communication channel. Partners from the Cyprus project will also attend a workshop organised under the Balkan anti-poison project, for face-to-face exchanges. In case, these face-to-face meetings are not possible (restrictions posed by Covid19 pandemic), these will be replaced by online workshops.

The BirdLife network to which the coordinating beneficiary belongs (BirdLife Cyprus) can also mobilise a wider uptake, reaching more candidate entities for replication and transfer.

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