

# BALKAN DETOX LIFE

## Report on the tagged Griffon Vultures within the auspices of BalkanDetox LIFE project

BALKAN DETOX LIFE: STRENGTHENING NATIONAL CAPACITIES TO  
FIGHT WILDLIFE POISONING AND RAISE AWARENESS ABOUT THE  
PROBLEM ACROSS SEVEN BALKAN COUNTRIES  
(LIFE19 GIE/NL/001016)

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## **Subject and purpose of the report**

This document is prepared within the framework of the BalkanDetox LIFE project (LIFE19 GIE/NL/001016) and relates to *Action B.4: Implement intensive GPS tracking of Griffon Vultures for improved detection of potential poisoning incidents in the environment of the Balkan Peninsula*.

This document is designed to provide an overview of the individual Griffon Vultures that were tagged within the auspices of this project.

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## About the project

The BalkanDetox LIFE project is a five-year endeavour with a €1.8 million budget, which aims to raise awareness and strengthen national capacities to fight the problem of wildlife poisoning across Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Greece, the Republic of North Macedonia and Serbia. It received funding from the EU's LIFE Programme *with a contribution of 1.004.792€ (54,82%) to the total project budget*, and it is co-financed by the Vulture Conservation Foundation, the MAVA Foundation and Euronatur, as well as by the Whitley Fund for Nature and Environmental Protection and Energy Efficiency Fund for specific actions. Project partners are the Vulture Conservation Foundation as the coordinating beneficiary, and the Albanian Ornithological Society, Association BIOM, Bird Protection and Study Society of Serbia, Fund for Wild Flora and Fauna, Hellenic Ornithological Society, Macedonian Ecological Society, Ornitološko društvo NAŠE Ptice and the Protection and Preservation of Natural Environment in Albania as associated beneficiaries. Furthermore, this project is based on Spanish best practice experience and counts with the support from the Junta de Andalucía and the Spanish Ministry for the Ecological Transition and the Demographic Challenge.

Learn more at [www.balkandetoxlife.eu](http://www.balkandetoxlife.eu)

## Tracking Griffon Vultures using GPS transmitters

The knowledge about the behavior and movement of endangered species is of key importance for the precise targeting and assessing the efficiency of nature conservation actions. This is especially relevant for vultures, which explore vast areas to locate ephemeral and unpredictable food resources, and are exposed to many threats, none more so than illegal poisoning, which has crippled their populations in the Balkan Peninsula.

Griffon Vultures are social birds who forage in groups, range over vast areas regularly, and quickly detect animal carcasses by using their incredible eyesight and following visual cues. This ability enables them to consume carcasses fast and efficiently, which provides environmental benefits to nature, other wildlife and humans. However, it also means that if they feed on a poisoned carcass, many Griffon Vultures can be wiped out just by a single poisoning incident. Additionally, Poisoning events are very difficult to detect largely because the practice of using poison baits is illegal, temporally, and spatially dynamic and in most cases remains hidden.

Equipping Griffon Vultures from the Balkan population with GPS transmitters enables us to study and monitor their movements and behavioral patterns towards detection of possible poisoning incidents. Larger number of the vultures tracked allows the coverage of colonies and feeding events over a larger range (Stoynov et.al. 2018). This method allows us to discover poisoning incidents, but also to act preventively, based on the behavioral and movement patterns of the tagged birds, and prevent potential poisoning incidents on a larger scale, define new potential hotspots for poisoning, as well as to gain additional information and knowledge about general connectivity of the Balkan population of Griffon Vultures.

Therefore, 25 Griffon Vultures (*Gyps fulvus*) from the breeding colonies inhabiting the Balkan Peninsula were foreseen to be tagged with GPS/GSM transmitters within the BalkanDetox LIFE project by the end of 2021. The Project Team has successfully deployed a total of 20 tags on Griffon Vultures from the populations from Bulgaria, Croatia and Greece. Due to logistical difficulties for traveling caused by the Covid19 pandemic, particularly to other countries, availability and condition of birds and optimal timing of tagging and releasing of birds there were several delays which prevented us to deploy all the GPS transmitters according to the project schedule. In Croatia, one tag was redeployed on another bird after being detached from the first tagged bird.



## Tagging and monitoring

Griffon Vultures were fitted with GPS/GSM transmitters model OT-50 (produced by [Ornitela UAB](#)) weighed 71 g. or  $< 1\%$  of the body mass of the birds tracked along with the weight of the harness - following the recommendation of  $< 3\%$  for flying birds. Fourteen birds in total were tagged in Bulgaria, of which 9 in the area of Kresna Gorge, 4 in Sinite Kamani Nature Park, 1 in Vrachanski Balkan Nature Park. Three tags were deployed on Griffon Vultures in the area of Messolonghi in Greece, and 3 tags on birds from the Kvarner Islands in Croatia by the National partner Association BIOM. The devices were attached to the birds' lower back by leg-loop harness, prepared by three assembled strings (round silicone cord 2 mm + tubular teflon ribbon 0.25" and 0.44") according to the system developed by Hegglin and colleagues (Hegglin et al. 2004). In order to guarantee that the device would fall off in a couple of years, a vulnerable attaching element was deliberately used while fitting. The transmitters were mounted following the best practice in animal welfare - the heads of the birds were covered to ensure minimal stress and the transmitter placement time was reduced to less than ten minutes.



Photo: Ornitela OT-50 transmitter

The devices were programmed to save the location data if birds were outside of the coverage area of the given network operator and then to send it once the transmitter was back within range. GPS fixes were acquired every 10 min during the day (between 0500 and 2000 h UTC + 2) with dormancy periods during the night. The most useful and optimal power use settings of the transmitters are to get a GPS fix every 10 minutes and to load the data every 4 hours. In case of emergency – if there is information of potential poisoning incidents in the area, or of some specific behavior of the tracked vulture i.e., getting in an unusual site or position, or longer stays on the ground or perched somewhere without reason etc., the frequency of the GPS fix could be set up on 1-5 min and the data load as necessary (from 10 min, 15 min... 1 hour).



Photo: Deployment of the transmitter in Vrachanski Nature Park, Bulgaria.

Bird locations were obtained using a global positioning system (GPS), transmitted via a public mobile phone/internet system network (GSM/GPRS). These transmitters directly upload data to an online platform, the Ornitela control panel, which was adapted for the needs of the BalkanDetox LIFE project. It is built to be used for tracking birds carrying Ornitela transmitters and provides good opportunities for tracking vultures in the long run as well as in real time. The entire Project Team has access to the monitoring platform, along with many other nature conservation organizations from the Balkans who also

monitor movements of their tagged birds through the Ornitela control panel. Increasing the network of colleagues from the region interested in monitoring the movements and behavior of the tagged birds is very important for preventing potential poisoning incidents from occurring, as it increases the chances that any irregular behavior of the transmitters is spotted sooner, and that eventual field searches could be organized in optimal time.



Photo: Release of tagged griffon vulture in Kresna Gorge, Bulgaria.

Table: Information about tagged Griffon Vultures

Transmitter	Vulture Name	Age, C.Y.	Country	Location	Date of tagging
202574	Extreme	2	Bulgaria	Kresna Gorge	01.02.2021
202575	Track		Bulgaria	Sinite Kamani	03.03.2021
202576	Treti mart	2	Bulgaria	Sinite Kamani	03.03.2021
202577	Betri	2	Bulgaria	Vrahanski Balkan	03.03.2021
190493	Altani		Greece	Messolonghi	10.04.2021
210394	Eleni		Greece	Messolonghi	10.04.2021
210395	Ioannis		Greece	Messolonghi	10.04.2021
210396	Tundja	3	Bulgaria	Sinite Kamani	13.04.2021
210388	Rosie	2	Bulgaria	Sinite Kamani	14.06.2021



210387	Profirov	2	Bulgaria	Kresna Gorge	16.05.2021
210399	Jug		Croatia	Cres	28.05.2021
210389	Baumgart	2	Bulgaria	Kresna Gorge	12.06.2021
210390	Michev	3	Bulgaria	Kresna Gorge	12.06.2021
210391	WFn Detox 6	2	Bulgaria	Kresna Gorge	16.06.2021
210392	Jaques Shakira	1	Bulgaria	Kresna Gorge	06.10.2021
210393	Tarej		Croatia	Cres	25.10.2021
210400	Zlatan		Croatia	Cres	25.10.2021
213983	Gyps1-VCF	2	Bulgaria	Kresna Gorge	03.11.2021
213984	Gyps2-VCF	1	Bulgaria	Kresna Gorge	16.11.2021
213985	Simeon	1	Bulgaria	Kresna Gorge	21.12.2021
210399	Jug2		Croatia	Cres	17.01.2022

There were no mortality incidents with the vultures marked by the project. Only one transmitter (210399) which was deployed in Croatia was reused after being recovered from the field. The conclusion was that the transmitter most likely fell down due to equipment failure, as there were no signs in the file nor in the movement data that could indicate some kind of mortality.

## Additional tagging

The Project Team of the BalkanDetox LIFE project will deploy the remaining 5 transmitters until the end of 2022.

Two tags will be deployed on fledgling Griffon Vultures from the breeding population in Special Nature Reserve Gorge of river Mileševka in Serbia in June/July 2022. National partner from Serbia (Bird Protection and Study Society of Serbia) have begun with field visits to select the nests suitable for tagging, after which they will implement regular monitoring in order to determine the optimal time for tagging.

The remaining 3 tags will be deployed in Bulgaria and North Macedonia depending on the availability of birds.



## Conclusions

The marked Griffon Vultures from the project are residing and regularly visiting all key colonies of the species on the Balkan Peninsula. This provides good coverage for detecting potential poisoning cases and significantly increases the possibility of implementing preventive actions in the field and organizing timely responses from the relevant enforcement agencies and other governmental institutions.

With the increase in the number of vultures with transmitters in the next period, and the expansion of network of collaborators within the Ornithological control panels, this will improve even more.

## References

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