



**LIFE
ARCPROM**



ΑΝΘΡΩΠΟΣ
UOMO
HUMAN

ΑΡΚΟΥΔΑ
ORSO
BEAR



LIFE18 NAT/GR/000768

Improving human-bear coexistence in 4 National Parks of South Europe

Action C.8

Support to livestock farmers for exchanging Livestock
Guarding Dogs

GIS data analyses reporting owners and dogs donated



July 2024



Authors

Billinis Charalambos, Argiraki Panagiota, Chatzopoulos Dimitrios, Giannakopoulos Alexios

University of Thessaly

Contributors

Doukas Dimitrios, Lefkaditis Menelaos, Sideri Aikaterini, Siasios Athanasios, Sofia Marina, Spyrou Vassiliki, Tsinopoulou Garyfallenia,

University of Thessaly

TABLE OF CONTENTS

SUMMARY	4
ΠΕΡΙΛΗΨΗ	4
INTRODUCTION AND RATIONALE	5
LIVESTOCK FARMERS RECEIVED EVALUATED LGDS IN THE AREA OF RODOPI NATIONAL PARK	8
LIVESTOCK FARMERS RECEIVED EVALUATED LGDS IN THE AREA OF PRESPA NATIONAL PARK.....	9

SUMMARY

As part of Action C8 of the project, which supports livestock farmers in exchanging Livestock Guarding Dogs, the Laboratory of Microbiology and Parasitology at the Faculty of Veterinary Medicine, University of Thessaly, has undertaken the task of establishing and maintaining a network of livestock farmers with evaluated and effective Livestock Guard Dogs. These dogs are specifically trained to prevent bear attacks on farm animals. Additionally, the Laboratory committed to providing technical and veterinary support to the members of the network, in order to sustain its operation even after the program's conclusion.

This deliverable presents the geospatial distribution of livestock farmers who met the criteria for joining the network within the boundaries of Prespa National Park and the Rodopi Mountain Range National Park. Additionally, it includes a list of the evaluated Livestock Guard Dogs (LGDs) that were donated to the network members.

ΠΕΡΙΛΗΨΗ

Στο πλαίσιο της δράσης C8 του έργου, το Εργαστήριο Μικροβιολογίας και Παρασιτολογίας του Τμήματος Κτηνιατρικής του Πανεπιστημίου Θεσσαλίας ανέλαβε να εγκαταστήσει και να διασφαλίσει την ορθή λειτουργία ενός δικτύου κτηνοτρόφων που διαθέτουν αξιολογημένους και αποτελεσματικούς Σκύλους Φύλαξης Κοπαδιών, οι οποίοι θα είναι ικανοί να αποτρέψουν τις επιθέσεις αρκούδας στα εκτρεφόμενα ζώα. Επιπλέον, το Εργαστήριο ανέλαβε να παράσχει κάθε δυνατή τεχνική και κτηνιατρική υποστήριξη προς τα μέλη του δικτύου, προκειμένου να συνεχιστεί η λειτουργία του ακόμη και μετά το τέλος του προγράμματος.

Στο παρόν παραδοτέο περιλαμβάνεται η γεωχωρική κατανομή των κτηνοτρόφων που εντάχθηκαν κατόπιν αξιολόγησης στο δίκτυο ανταλλαγής αποτελεσματικών Σκύλων Φύλαξης Κοπαδιών στις δύο περιοχές στις οποίες εκτελέσθηκε η δράση, ήτοι στο Εθνικό Πάρκο Πρέσπων και το Εθνικό Πάρκο Οροσειράς Ροδόπης.

INTRODUCTION AND RATIONALE

In Greece, the most common methods for protecting livestock from large carnivore attacks, such as those by wolves and bears, include the installation of electric fences and the use of Livestock Guarding Dogs (LGDs). Research has shown that breeding and utilizing effective LGDs significantly reduces bear attacks on livestock, thereby minimizing conflicts between humans and these endangered wild species.

According to the Kennel Club of Greece and the Fédération Cynologique Internationale (FCI), there are three indigenous LGD breeds in Greece:

To establish a network of livestock farmers who maintain evaluated LGDs, several field visits were conducted both within and outside the designated project areas. Each visit involved at least one LGD breeding and management expert, along with a veterinarian from the University of Thessaly (UTH) project team. Livestock farmers requesting the provision of an evaluated LGD had to meet the following criteria: (a) prior reports of livestock losses due to large carnivore attacks (wolves/bears) or illegal poisoned bait, (b) compliance with all national regulations regarding the keeping and raising of LGDs, (c) provision of necessary veterinary care for the LGDs, ensuring their welfare, (d) commitment to providing data on the effectiveness of the LGDs in preventing carnivore attacks, and (e) acceptance of regular and unannounced visits by project team members to monitor the health and living conditions of the LGDs.

The dogs provided and adopted by UTH under this action were required to (a) exhibit the morphological characteristics of the three indigenous breeds (Greek Shepherd Dog, White Greek Shepherd Dog and the Molossos of Epirus) (b) pass a series of behavioural tests under different circumstances, and (c) be healthy and free from common canine diseases.

By the end of the action, 41 breeders had joined the network, operating within the boundaries of the Prespa National Park (n=11) and the Rodopi Mountain Range National Park (n=30). The total number of LGDs provided to these beneficiaries was 62, significantly exceeding the 35 originally planned under the program. However, as many livestock farmers continued to experience losses of LGDs due to carnivore attacks or other reasons, UTH made efforts to immediately replace LGDs removed from the herds whenever possible.

Geographic Information Systems (GIS) methodology, specifically ArcGIS 10.1 software (ESRI; Redlands, CA, USA), was used to geographically represent and map the donated LGDs.



Figure 1. Greek LGD in the area of Rodopi NP, Municipality of Paranesti (Photo: © A. Giannakopoulos/UTH)



Figure 2. Greek LGD in the area of Prespa NP, Municipality of Kallithea (Photo: © A. Giannakopoulos/UTH)



Figure 3. UTH Veterinary team visit to LGD network & donation-dissemination of LGDs and Anti-Poison First Aid Kits to shepherds in the area of Prespa NP, Municipality of Kallithea (Photo: © A. Giannakopoulos/UTH)



Figure 5. Donation of puppy's LGD in cooperation with the Natural Environment and Climate Change Agency (NECCA) (Management Unit of Rodopi in the area of Paranesti (Photo: © A. Giannakopoulos/UTH)

Livestock farmers received evaluated LGDs in the area of Rodopi National Park

Benefited producers	Farm's location	Productive direction	Number of LGDs donated
1.	<i>Kimmeria</i>	<i>Orchards</i>	1
2.	<i>Drama</i>	<i>Orchards</i>	1
3.	<i>Volakas</i>	<i>Orchards</i>	1
4.	<i>Livaditis</i>	<i>Orchards</i>	1
5.	<i>Ptelea</i>	<i>Goats</i>	4
6.	<i>Ptelea</i>	<i>Sheep</i>	1
7.	<i>Dimario</i>	<i>Beef Calves in Free-Range Farms</i>	2
8.	<i>Dimario</i>	<i>Beef Calves in Free-Range Farms</i>	1
9.	<i>Ptelea</i>	<i>Sheep</i>	2
10.	<i>Stavroupoli</i>	<i>Beef Calves in Free-Range Farms</i>	2
11.	<i>Kato Tholos</i>	<i>Beef Calves in Free-Range Farms</i>	2
12.	<i>Oraio</i>	<i>Sheep</i>	2
13.	<i>Oraio</i>	<i>Goats</i>	2
14.	<i>Pagoneri</i>	<i>Beef Calves in Free-Range Farms</i>	2
15.	<i>Stavroupoli</i>	<i>Sheep</i>	3
16.	<i>Komnina</i>	<i>Sheep</i>	1
17.	<i>Paranesti</i>	<i>Orchards</i>	1
18.	<i>Genisea</i>	<i>Orchards</i>	1
19.	<i>Stavroupoli</i>	<i>Beef Calves in Free-Range Farms</i>	2
20.	<i>Xanthi</i>	<i>Orchards</i>	1
21.	<i>Sidironero</i>	<i>Beef Calves in Free-Range Farms</i>	1
22.	<i>Dafnonas</i>	<i>Sheep</i>	1
23.	<i>Paranesti</i>	<i>Beef Calves in Free-Range Farms</i>	2
24.	<i>Komnina</i>	<i>Sheep</i>	1
25.	<i>Stavroupoli</i>	<i>Sheep</i>	1
26.	<i>Mesoxori</i>	<i>Sheep</i>	1
27.	<i>Isaia</i>	<i>Goats</i>	5
28.	<i>Stavroupoli</i>	<i>Sheep</i>	1
29.	<i>Komnina</i>	<i>Goats</i>	2
30.	<i>Dafnonas</i>	<i>Goats</i>	2

Total Number of evaluated LGDs donated

50

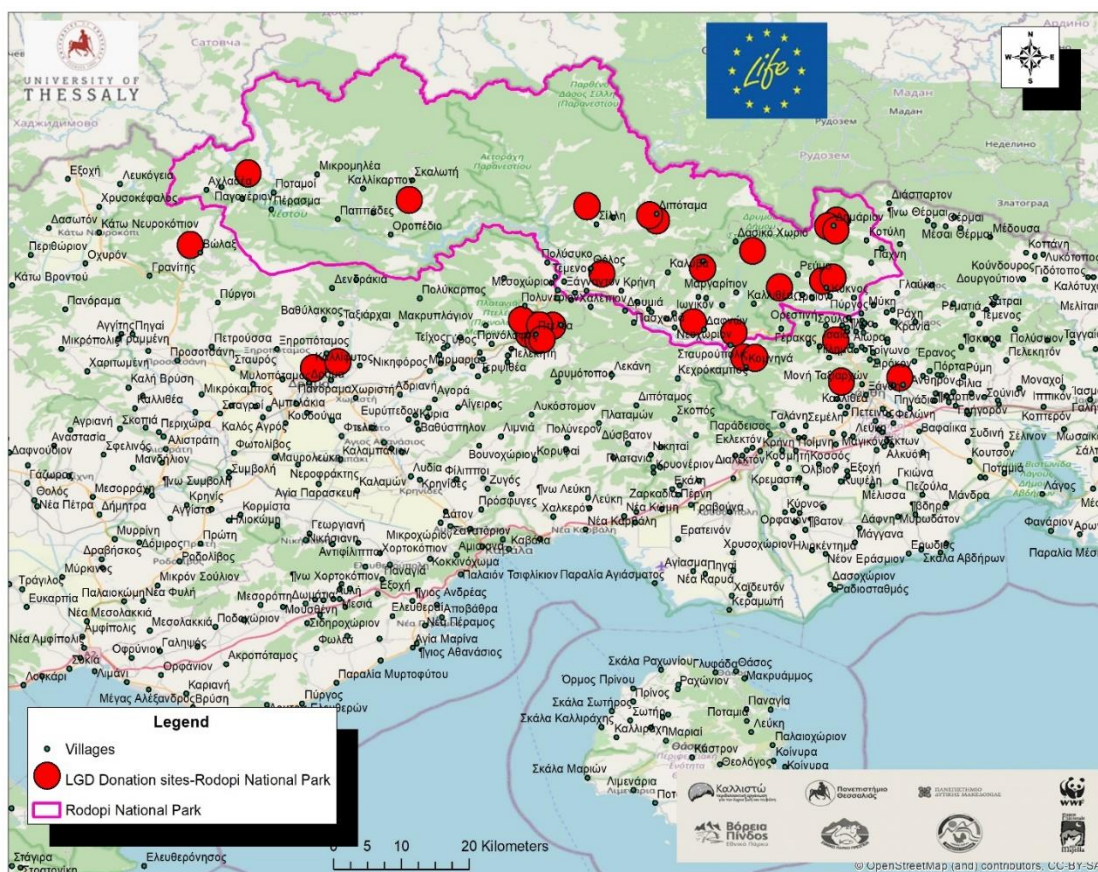


Figure 2: Geographical distribution of livestock farms and producers joined in the network in the area of Rodopi National Park.

Livestock farmers received evaluated LGDs in the area of Prespa National Park

Benefited producers	Farm's location	Productive direction	Number of LGDs donated
1.	Lefkonas	Sheep	1
2.	Vrondero	Goats	1
3.	Agios Germanos	Beef Calves in Free-Range Farms	2
4.	Kallithea	Beef Calves in Free-Range Farms	1
5.	Agios Germanos	Beef Calves in Free-Range Farms	1
6.	Kallithea	Sheep-Goats	1
7.	Kristalopigi	Beef Calves in Free-Range Farms	1
8.	Pyli	Sheep	1
9.	Lefkonas	Orchards	1
10.	Pyli	Sheep	1
11.	Plati	Orchards	1

Total Number of evaluated LGDs donated

12

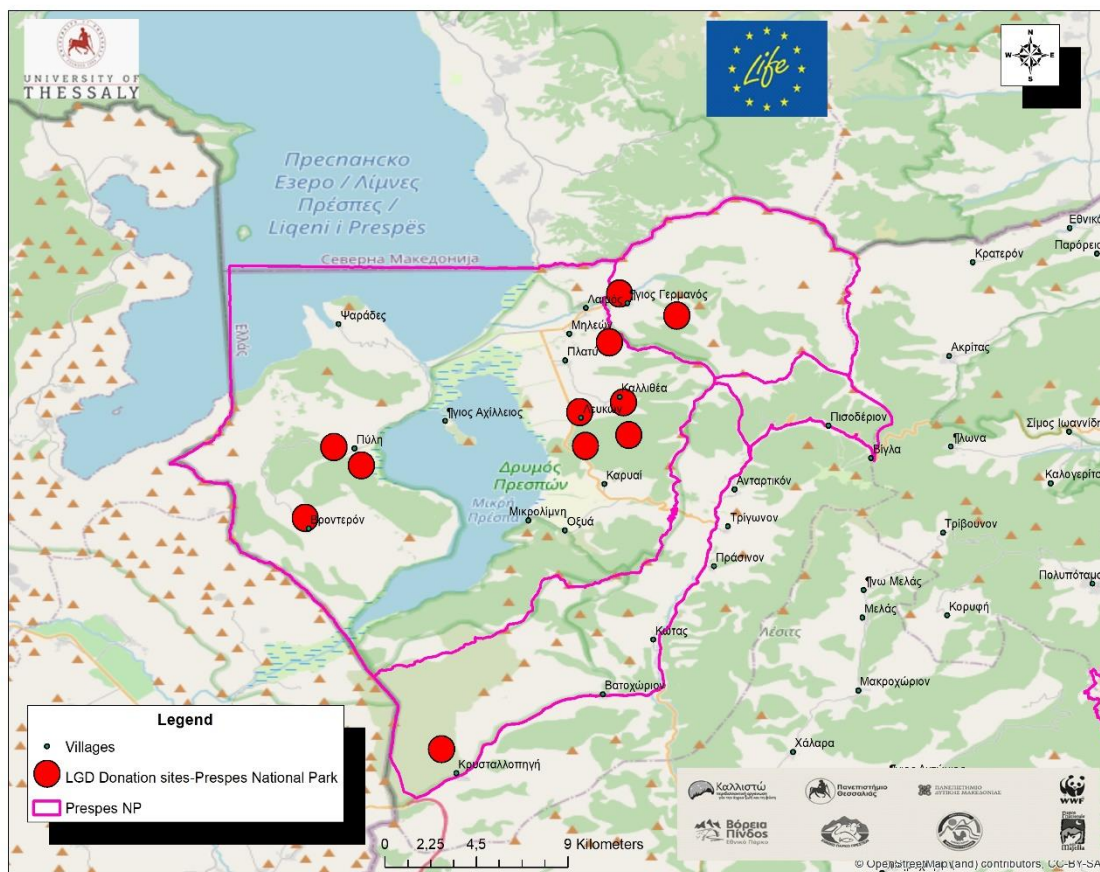


Figure 1: Geographical distribution of livestock farms and producers joined in the network in the area of the Prespa National Park