

CYCLE OF WEBINARS

TOWARDS HARMONISED AND INTEGRATED WILDLIFE DISEASE SURVEILLANCE IN EUROPE

**Approaches, opportunities and Citizen Science tools**

**MAIN RESULTS OF *MammalNet* project :**  
***Can we apply Citizen Science in monitoring  
wild mammals a European scale?***

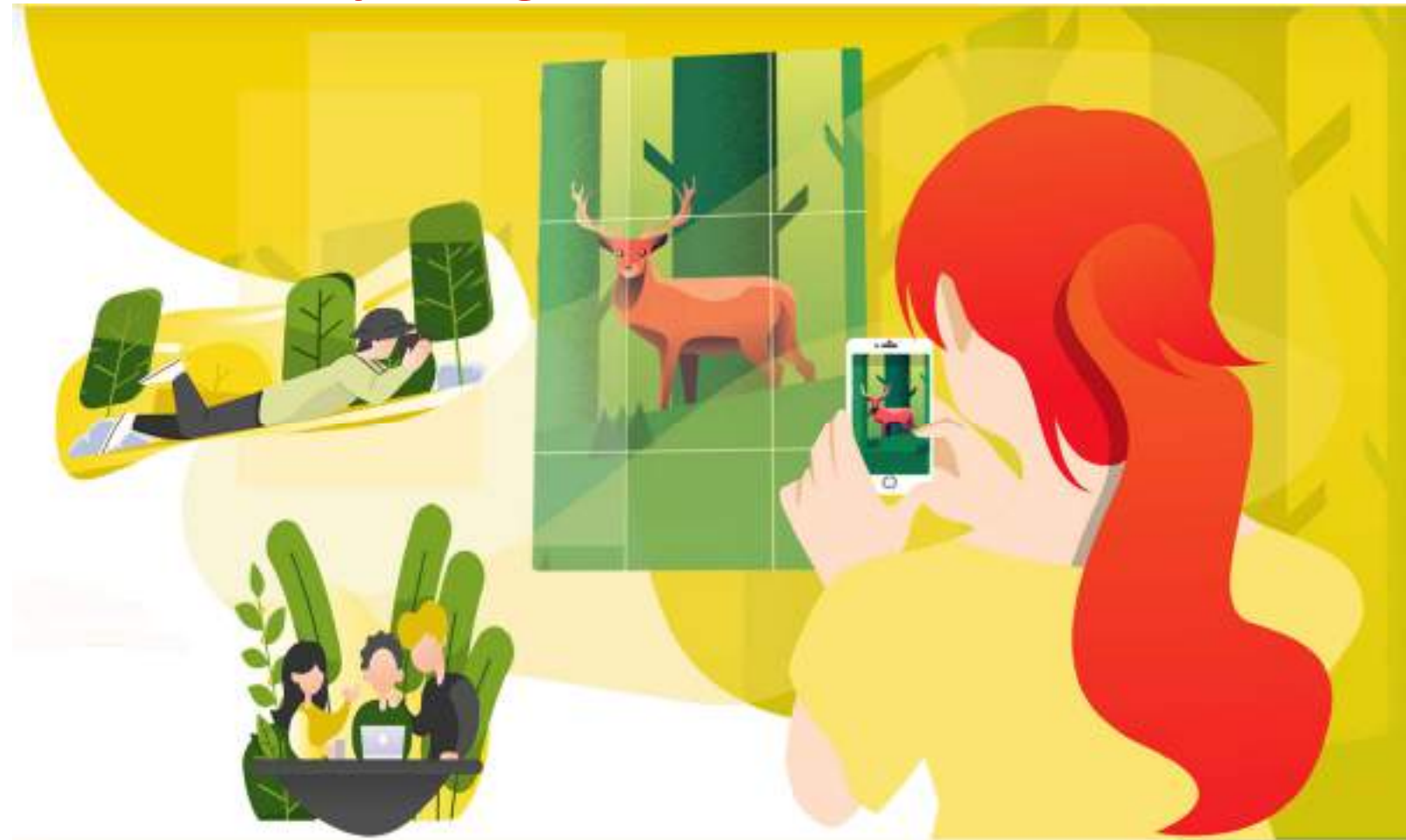
**José A Blanco-Aguilar & MammalNet  
consortium**



@enetwild  
@mammalnet\_eu



## ***Crowdsourcing: Engaging communities effectively in food and feed risk assessment exploring the collaborative model***

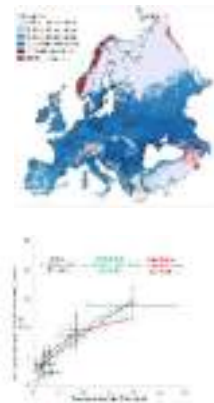


Citizens and scientists working together to improve knowledge of the distribution of European mammals<sup>2</sup>

# Why?



Availability of  
information on  
wildlife  
populations





# Why use Citizen Science to mammal research?

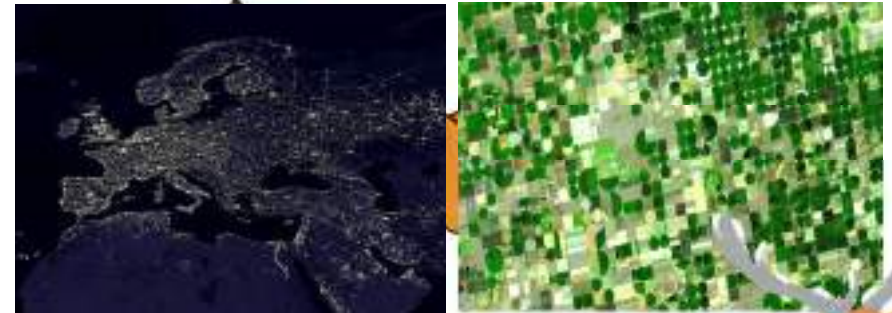
## TECHNICAL ASPECT

- Not possible to be performed only by professional scientists.
- Potential to assess important questions about wildlife management.
- Large-scale ranges (national or continental approaches)
- Temporal monitoring advantage

## INTRODUCED SPECIES AND NATURAL IMMIGRANTS



## RESPONDING TO ANTROPOGENIC CHANGE



## MAMMALS IN A REWILDING WORLD

at <http://dx.doi.org/10.1126/science.aav5570>



## CLIMATE CHANGE

DOI: 10.1111/cobi.12532

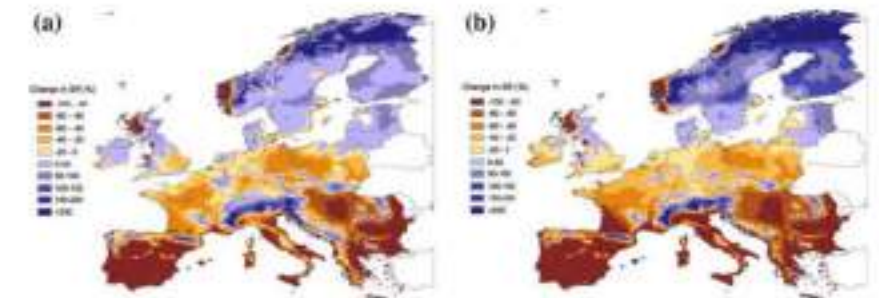


Fig. 3 Modelled changes in mammalian species richness in percentage, under the mild climatic scenario, B1 (a), and severe climatic scenario, A2 (b), in a  $10' \times 10'$  resolution.



# Audiences



**Camera trappers and  
photographers**



**Students, teachers and  
environmental-science  
educators**



**Researches and wildlife  
managers**



**Hunters, fishers and game  
managers**

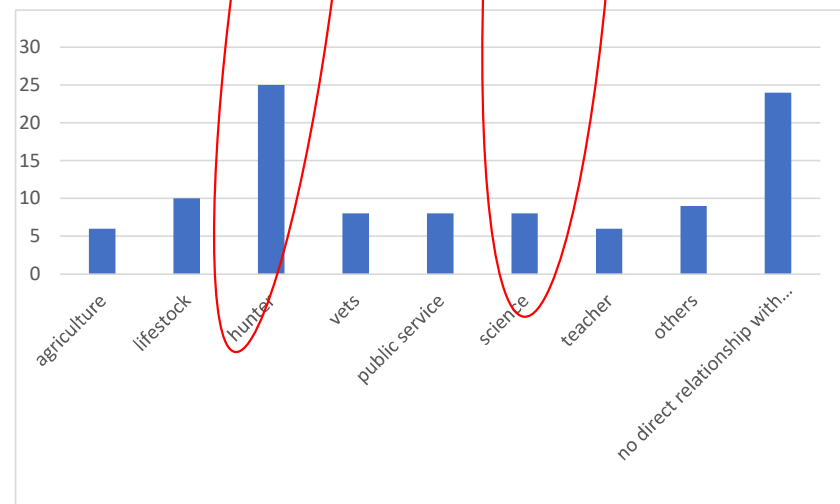
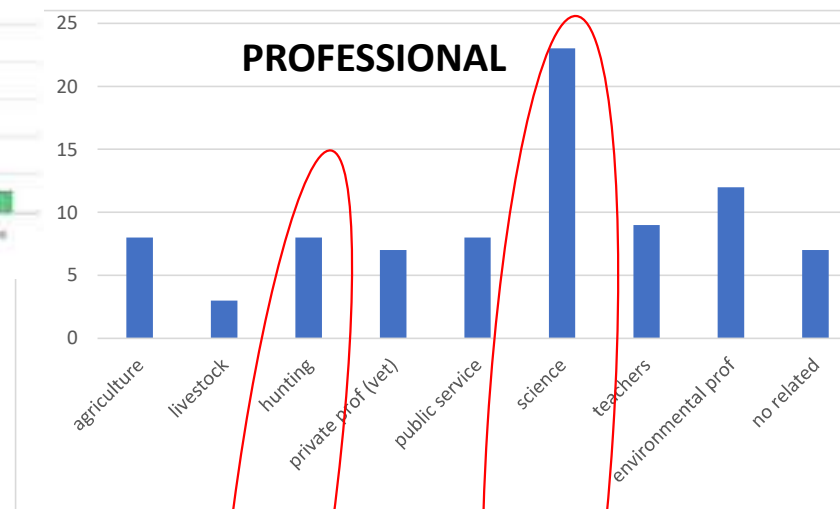
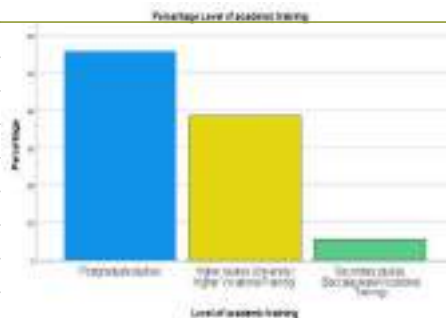
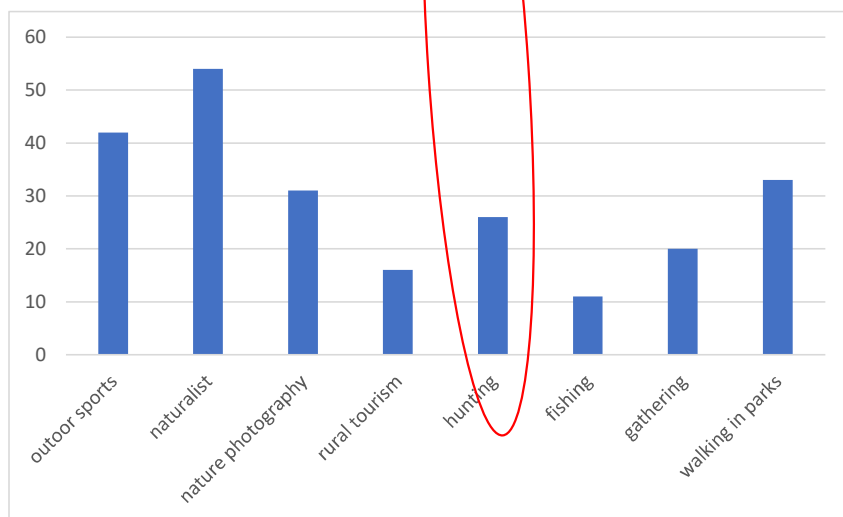
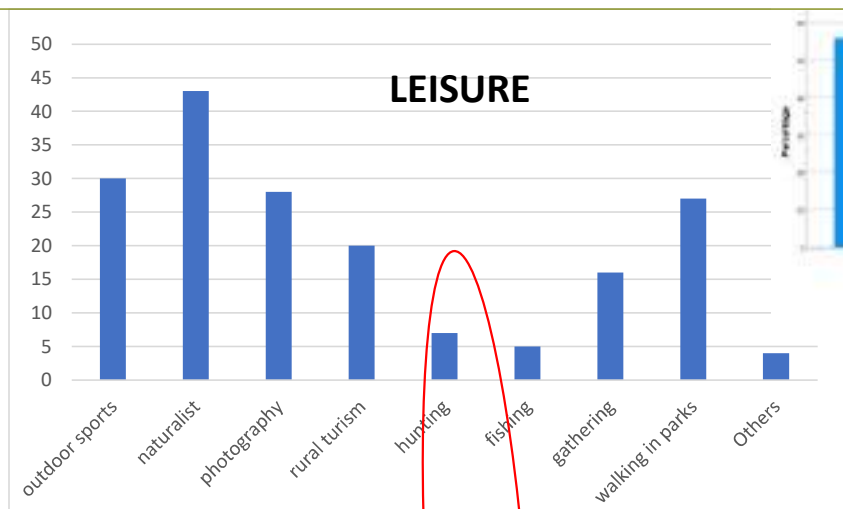


**Outdoor activities  
enthusiasts**



**Naturalists,  
environmentalists and  
conservationists**

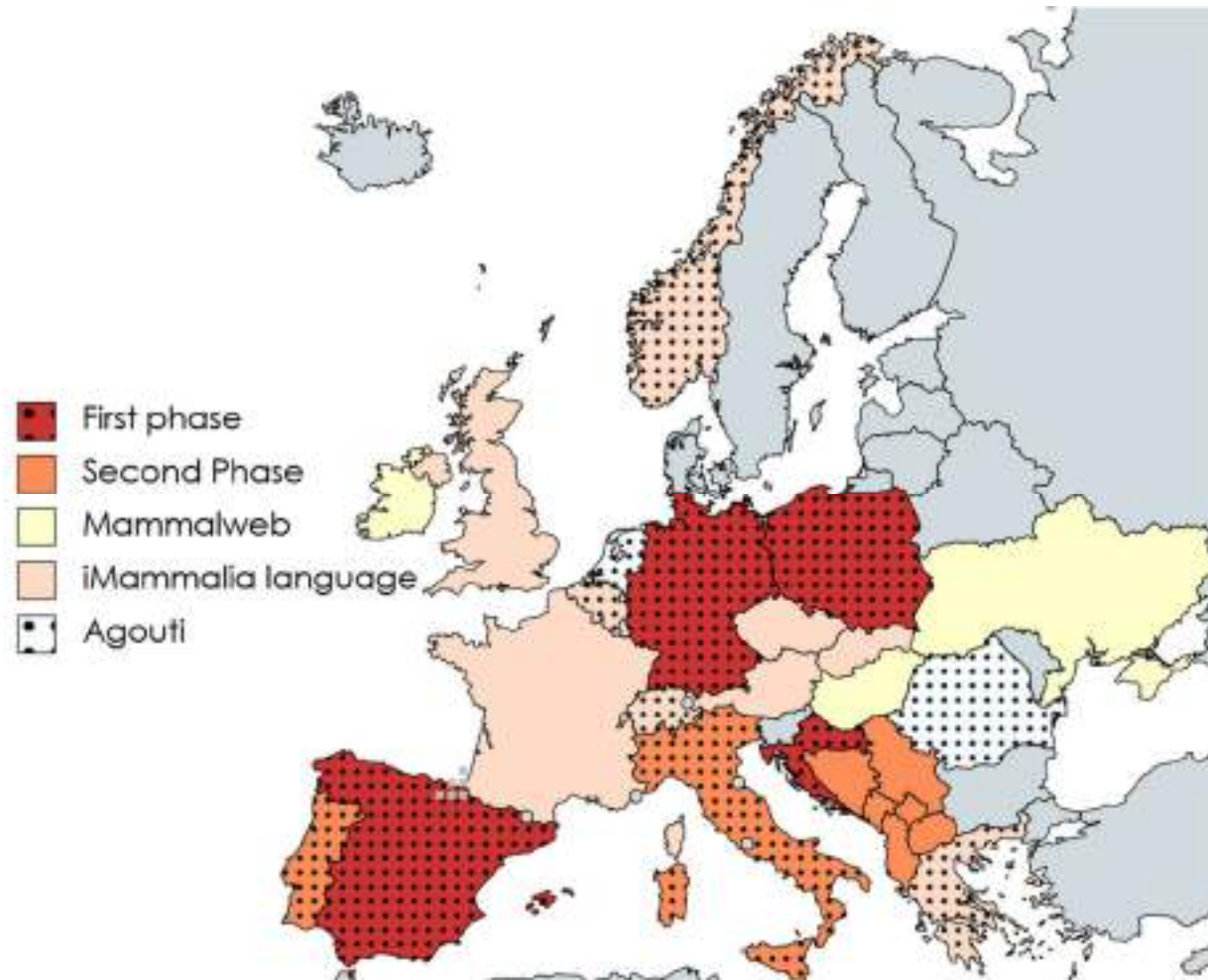
# Audiences





**MAMMALNET**  
WATCH WILDLIFE FOR SCIENCE

## Where





# COMMUNICATION



Web

- Blog (>80 post)
- Newsletters
- Videos



Social  
media

- Twitter (>1300)
- Facebook (>2000)
- Instagram (>1000)



Media

- Flyer/infography
- Press
- Radio /TV





## Training

- MOOC (>1000)
- Webinars Online meeting
- Courses



## Schools

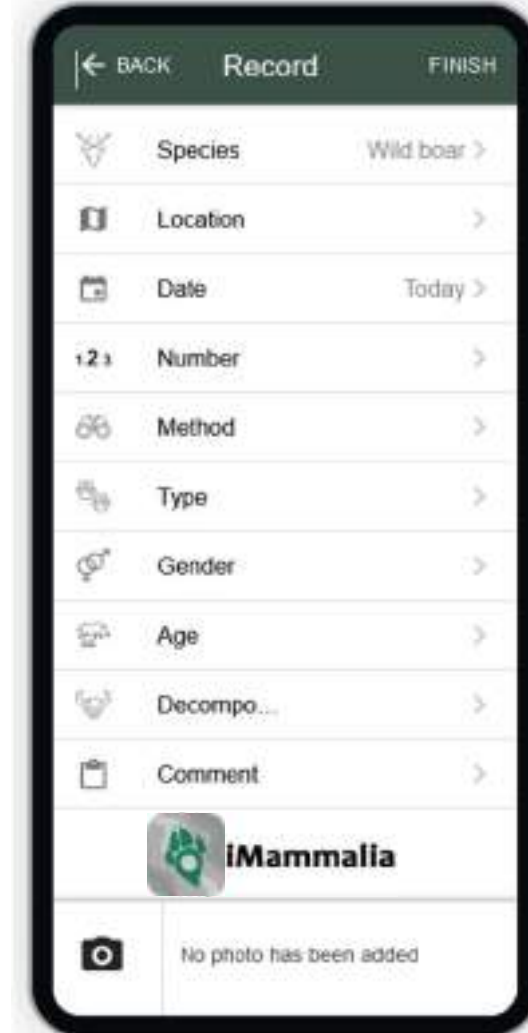
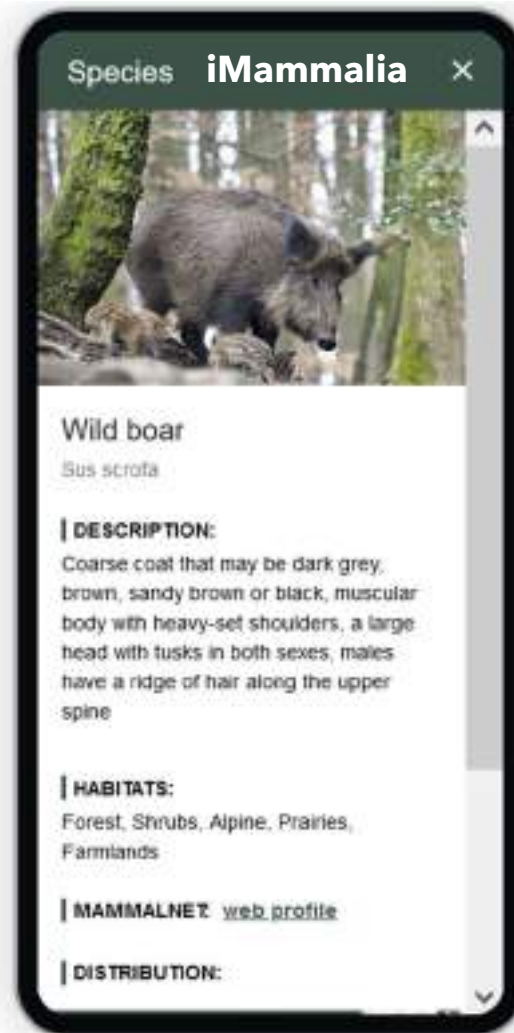
- Talks
- Workshops
- Edu Projects



## dissemination

- Fairs
- Guides
- Contests
- Quizzes

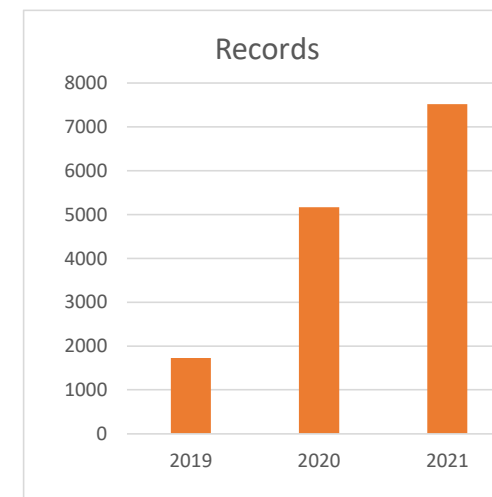
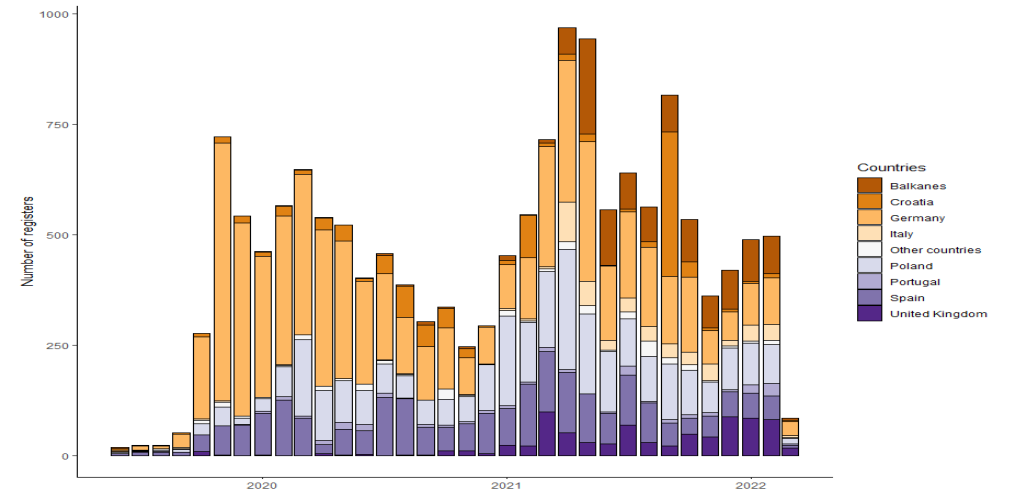
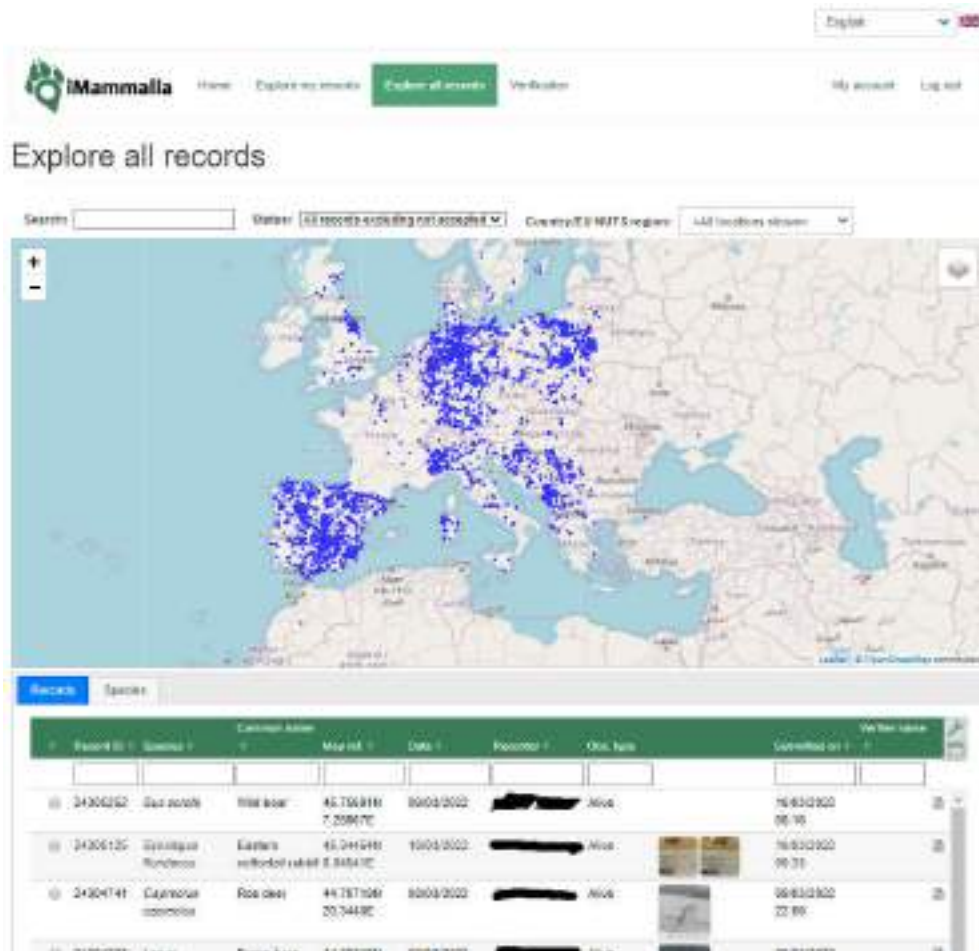




**MAMMALNET**  
WATCH WILDLIFE FOR SCIENCE







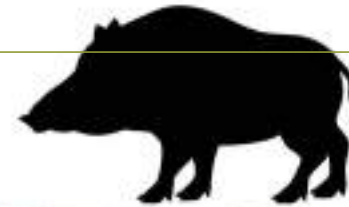




**MAMMALNET**  
WATCH WILDLIFE FOR SCIENCE



**ENETWILD**



**MAMMALNET**  
WATCH WILDLIFE FOR SCIENCE



**GBIF**

## Generalist vs taxon-specific apps

	iNaturalist	Observation
<b>MAMMALIA</b>	<b>18,935</b>	<b>10,340</b>
<b>Artiodactyla</b>	<b>6,040</b>	<b>3,323</b>
<b>Rodentia</b>	<b>5,694</b>	<b>1,883</b>
<b>Carnivora</b>	<b>3,292</b>	<b>1,509</b>
<b>Lagomorpha</b>	<b>1,771</b>	<b>1,590</b>
<b>Erinaceomorpha</b>	<b>1,068</b>	<b>580</b>
<b>Soricomorpha</b>	<b>508</b>	<b>243</b>
<b>Chiroptera</b>	<b>267</b>	<b>953</b>
<b>Cetacea</b>	<b>221</b>	<b>232</b>
<b>Perissodactyla</b>	<b>74</b>	<b>27</b>

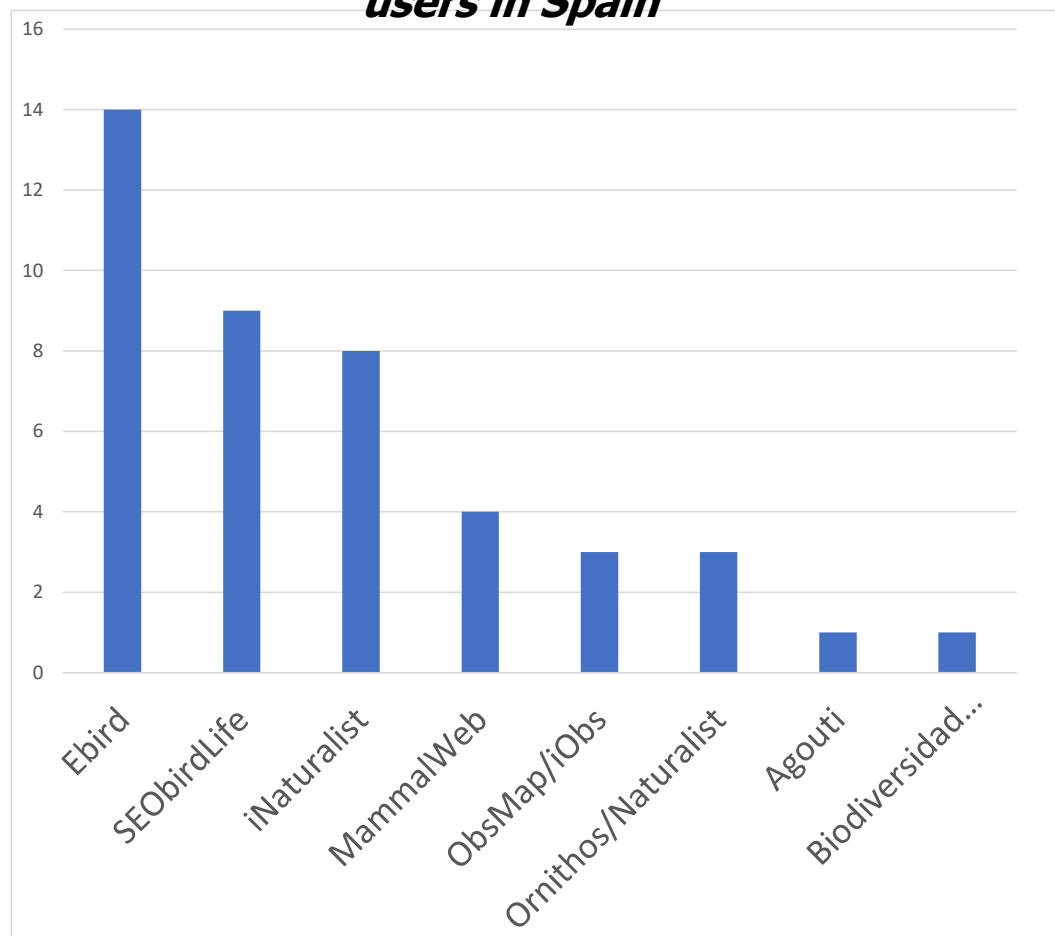
iMammalia collected  
**15000** records

*same period*

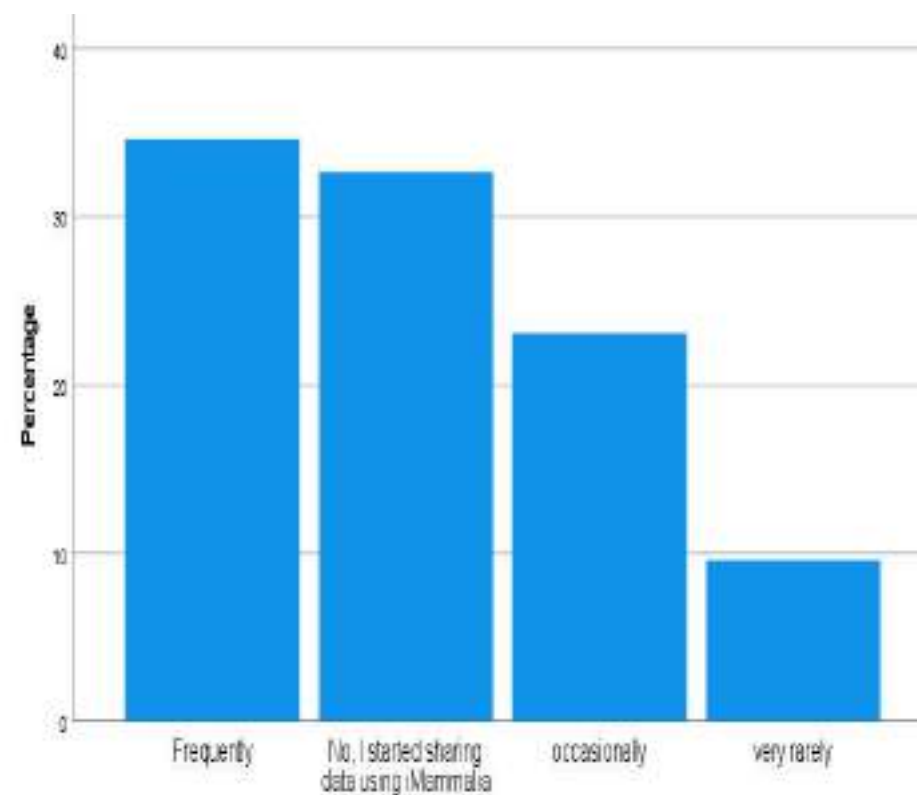
*same countries*

**Spatial precision 2000m**

***Other apps frequently used by iMammalia users in Spain***



***Before using iMammalia, did you share data using another app?***





**MammalWeb**

Web platform for citizens (e.g. naturalists, hunters) where they can:

- Share their own camera-trapping images. **TRAPPERS**
- Help identify other users' images. **SPOTTERS**
- Generate your own project



ROL: Trapper / Spotter







**MAMMALNET**  
WATCH WILDLIFE FOR SCIENCE



What do you see in this sequence?

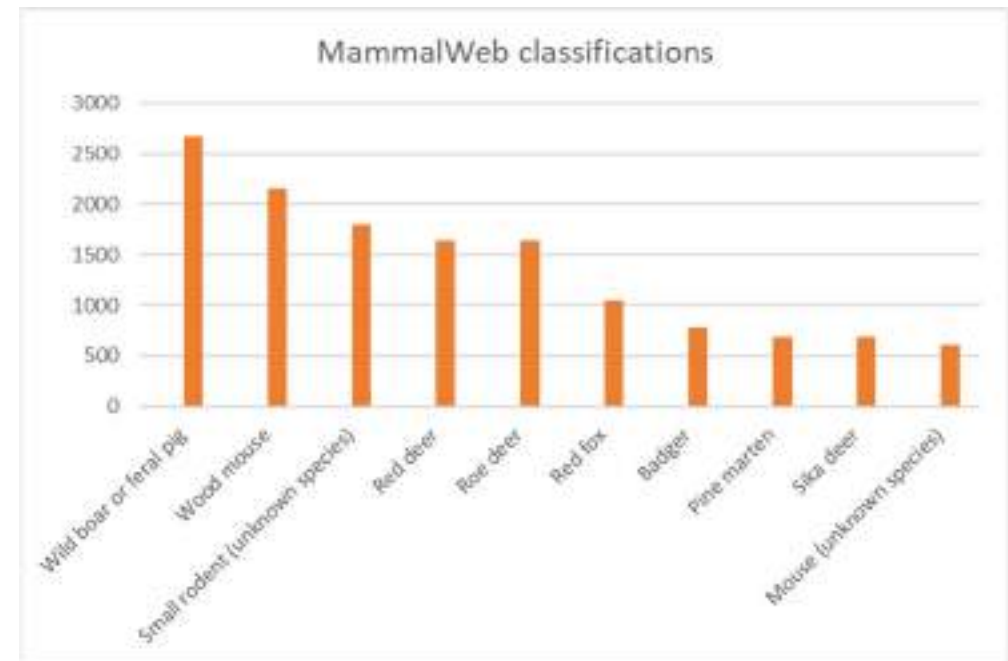


English (United Kingdom)

Filter list of species	
Iberia (Common)	Mammals (Europe)
Birds (Europe)	
American mink	Badger
Barbary sheep	Brown (European) hare
Brown bear	Brown rat
Common goshawk	Domestic or feral Cat
Domestic or feral Dog	Egyptian mongoose
European mink	Yellow deer
Granada (Barren) hare	Grey wolf
Beaked fox	Lepus (any) species
Livestock	Otter
Poliocton or ferret	Rabbit
Red deer	Red fox
Red squirrel	Red deer
Small mustelid (any)	Small rodent (undown species)
Spanish ibex	Skunk
Wild boar or feral pig	Wolverine
Hoopoe (Common)	Jay (Common)
Hag (Common)	Raven (Common)
Red-legged Partridge	Woodpecker
Don't know	Other
Nothing	Human



90,000 sequences / but 60000 /



>80% were classified (ES, HR, HU, IT)

>50% PL, IR

>30% DE

# IES BARAÑÁIN (NAVARRA)

## Estudio de la población de mamíferos en un gradiente urbano/rural



- To learn about the mammal community of different locations in Navarre (rural gradient).
- To learn techniques for identifying mammals.
- To study their life habits.

<b>Alumnado</b>	4º ESO (15-16 años)
<b>Profesorado</b>	<b>María Gutiérrez Pérez</b>
<b>Apoyo externo</b>	Diego Villanúa (GAN-NIK) <b>SECEM</b> Jose A Blanco (IREC) <b>SECEM</b>

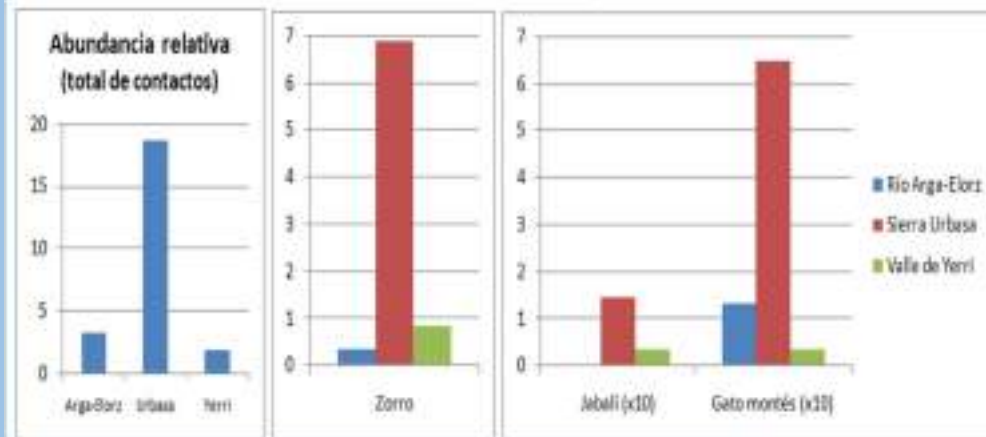
Barañáin		Urbasa		Yerri	
Cám. 1 (Mocrite AG300)	Cám. 2 (BelyGuard 165316)	Cám. 1 (BelyGuard 165316)	Cám. 2 (Mocrite AG300)	Cám. 1 (Mocrite AG300)	Cám. 2 (Victure HC300)
42.80, -1.70	42.80, -1.70	42.84, -2.03	42.84, -2.09	42.74, -1.93	42.74, -1.93
Zona de la desembocadura del río Elorz en Arga, próxima al polígono industrial de Landaben.		Parque Natural, a la entrada de un hayedo. Entorno de una finca particular, zona poco transitada.		Zona de la cabecera del pantano de Alicz, frecuentada por pescadores y senderistas.	





## IES BARAÑÁIN

### ABUNDANCIA RELATIVA



### PATRÓN ACTIVIDAD





# IES SAN BLAS AÑOVER DE TAJO

## Resultados:

Tabla 1. Especies de mamíferos localizadas en el área de estudio, se indica también el método con el que se detectó su presencia: rastros (🐾); foto-trampeo (📷) y observación directa (👁️).

ESPECIE	BOSQUE DE GALERÍA DE RÍO	PAISAJE MOSAICO
JABALÍ	📷	
JINETA	📷	
MELONCILLO	🐾	
ZORRO		🐾
TURÓN		📷
GARDUÑA	📷	
GATO ASILVESTRAO	📷	
CONEJO	🐾 👁️	📷 🐾 👁️
LIEBRE		👁️
LIRÓN CARETO	📷	📷
OTROS ROEDORES	📷	



Foto-captura de jabalí



Foto-captura de jineta



Excremento de meloncillo



Excremento de zorro



Foto-captura de lirón careto



Foto-captura de turón



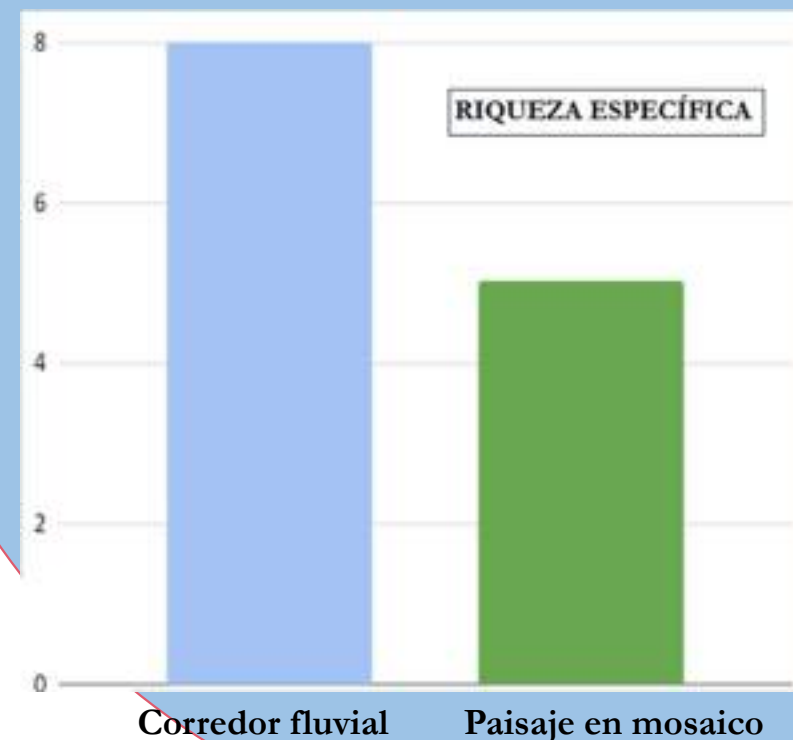
Foto-captura de conejo



Foto-captura de gato asilvestrado



Foto-captura de garduña





## CPI Poeta Uxío Novoneyra



<b>Alumnado</b>	Primaria y Secundaria (ESO)
<b>Profesorado</b>	Lourdes González
<b>Apoyo externo</b>	José Vicente López Bao (UOviedo-CSIC) <b>SECEM</b> Carlos Cortizo Amaro Orlando Álvarez Álvarez



### **OBJETIVOS** adaptados a las edades:

- ❑ Conocimiento de la fauna cercana
- ❑ Aumento de interés por lo que les rodea
- ❑ Acercamiento al trabajo científico
- ❑ Planteamiento de hipótesis
- ❑ Aplicación de los conocimientos adquiridos



FZS - Ukrainian  
Carpathians Programme



Navarra-IES Barañáin



Fototrampeig a  
Catalunya



FZS – Skolivski Beskydy  
NNP



FOTOTRAMPEO IES  
SAN BLAS



Mamíferos de la  
provincia de Córdoba  
(España)



# AGOUTI

The screenshot displays the ADAPT-IT interface for the 'NP Hoge Veluwe Mammal Monitoring' project. The top navigation bar includes 'ADAPT-IT', 'Dashboard', and 'Settings'.

**General progress**

Overview: NP Hoge Veluwe Mammal Monitoring (100%)

Species	Count	Status
Red fox	10	Active
European badger	5	Active
European rabbit	15	Active
European hedgehog	10	Active
European wildcat	5	Active
European otter	5	Active

**User management**

10 users are currently active in the system.

Active users (10):

User	Role	Status
John Doe	Admin	Active
Jane Smith	User	Active
Bob Johnson	User	Active
Alice Brown	User	Active
Charlie White	User	Active
Diana Green	User	Active
Eve Black	User	Active
Frank Grey	User	Active
Grace Blue	User	Active
Henry Yellow	User	Active

**Deployments**

Map showing deployment locations in the Hoge Veluwe area. A detailed view of a deployment point shows:

Deployment ID	Location	Status
1	Point A	Active
2	Point B	Active
3	Point C	Active
4	Point D	Active
5	Point E	Active
6	Point F	Active
7	Point G	Active
8	Point H	Active
9	Point I	Active
10	Point J	Active

AGOUTI
Dashboard
Settings
Sign out

Overview
Import
Analytics
Streams
Project settings
Sampling management
Data management
Export data
Institutions

## NP Hoge Veluwe Mammal Monitoring

**Project description**

Agouti Park De Hoge Veluwe is a Dutch national park in the province of Limburg and the home of Lily, Ruggles, Alphonse and Marmotte. [Read more...](#)

**My annotations** [Continue recording](#)

289

Northward tracks 2019 annotations. Great work!

97%

Most annotations are 40% accurate

**Multi observed species**

Woodchuck	60
Beaver	21
Fox	10

**My favorite sightings**

**My deployments** [Import a new deployment](#)

46

You imported 40 deployments. Good!

83%

17 of the 46 deployments you imported, are complete.

**Achievements**

**WOODCHUCK**

You spotted the Woodchuck 60 times

**BEAVER**

You spotted the Beaver 21 times

**FOX**

You spotted the Fox 10 times

**RUGGLES**

You helped the Ruggles by reporting 21 sightings







**Researches and wildlife  
managers**

## RESEARCHERS WORKING WITH CAMERA TRAPS

- Open Science is an opportunity for science and dissemination
- Citizen science with its limitations could have a good role to play in improving knowledge of mammals

- 1) Researchers do the sampling and fieldwork and citizens help to classify the images.

**PROBLEM:** the short sharing times required by the platforms for data sharing are incompatible with the needs of researchers in ecological studies.

**SHARE DATA after PUBLISH**

- 2) Start a project from the scratch, sharing field efforts with citizens.

**PROBLEM:** Financial support to obtain sufficient equipment to carry out planned research of scientific interest.

# Proposal

<https://wildlifeobservatory.eu/>



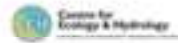
A network of observation points to harmoniously monitor wildlife at European scale





**MAMMALNET**  
WATCH WILDLIFE FOR SCIENCE

## Partners & Collaborators



## Alliances







**MAMMALNET**  
WATCH WILDLIFE FOR SCIENCE



European Food Safety Authority