



LETSGO GIGLIO

LETSGOGIGLIO: THE FIRST SUCCESSFUL UNGULATE ERADICATION STORY FROM AN ITALIAN ISLAND



U. Catalano

Sandro Nicoloso e Andrea Gaggioli
Francesco Nocentini, Selene Colotti, Alba Perardi, Paola Semenzato



Conferenza finale
Isola del Giglio 23,24 Ottobre 2024

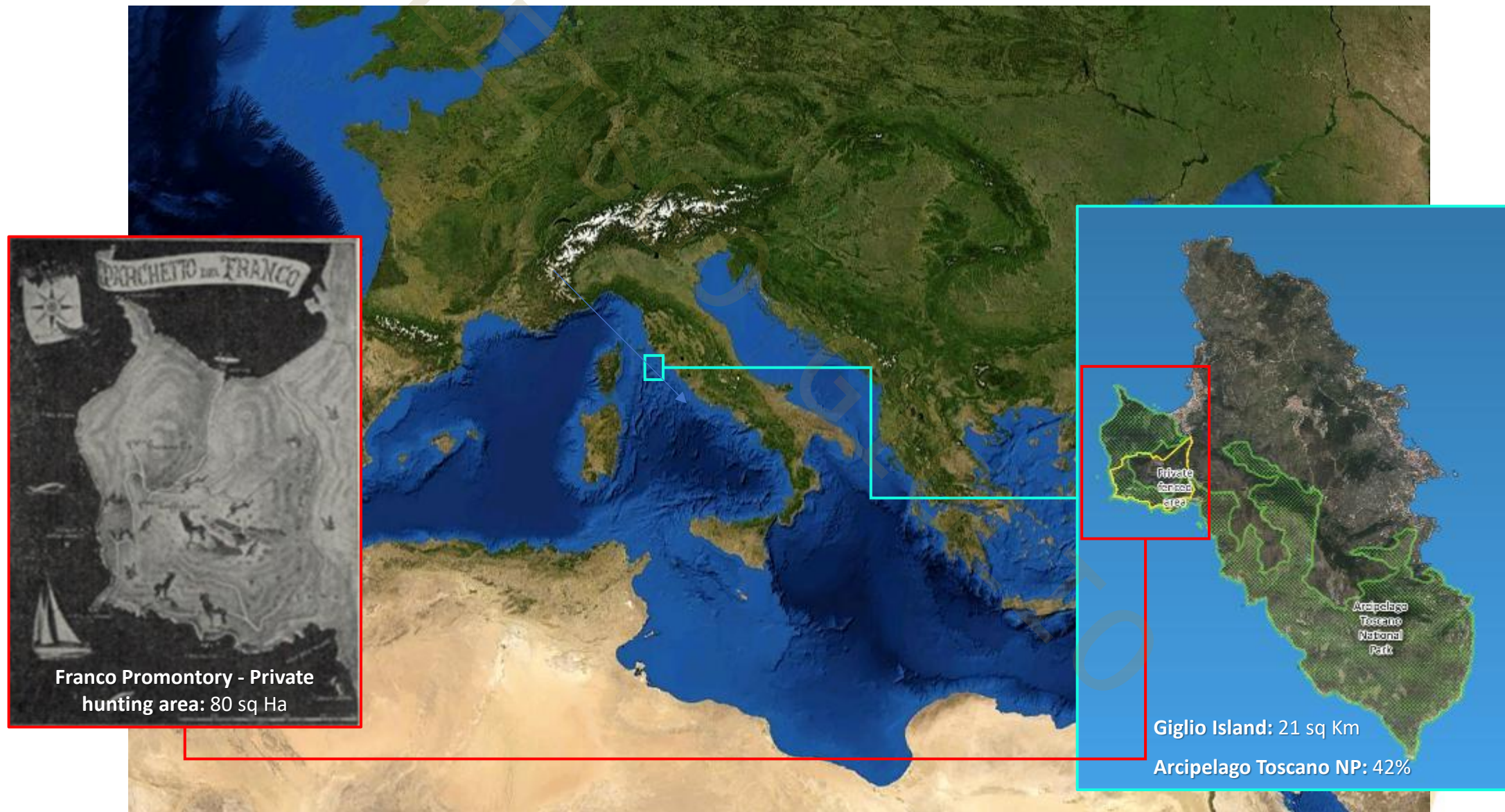


Progetto realizzato con
il cofinanziamento della
Commissione Europea



Progetto implementato con
il cofinanziamento della
Commissione Europea







diversity **MDPI**

Article
Islands as Time Capsules for Genetic Diversity Conservation: The Case of the Giglio Island Mouflon

Mario Barbato ¹, Marco Masseti ^{2,4}, Monica Pirastru ³, Nicolò Columbano ⁴, Monica Scali ⁵, Rita Vignani ⁵ and Paolo Mereu ³

How many mouflons in 2021?

Protocol for the eradication of mouflon (*Ovis aries*) on Giglio Island under the Life Let's Go Giglio project "Less alien species in the Tuscan Archipelago: new actions to protect Giglio island habitats"

January 2021

D.R.E.A.M. Italia Working Group:

Sandro Nicoloso, Paola Semenzato, Andrea Gaggioli,

Enrica Bellinello e Lilia Orlandi.



ISPRA's Opinion

Prot. 04487

FR-ERP/lru

February 2021



Protocollo Operativo per l'eradicazione del muflone (*Ovis aries*) sull'Isola del Giglio nell'ambito del progetto Life Let's Go Giglio "Less alien species in the Tuscan Archipelago: new actions to protect Giglio island habitats"



Progetto realizzato con il cofinanziamento della Commissione Europea



Project co-financed by the European Commission

Codice 00514	Espresso Nicoloso S. Controllato Semenzato P.	D.R.E.A.M. Italia Soc. Coop. Agr. For. Via Garibaldi n.5, Portoferraio (LI) - Tel. 0575 529524 Via Garibaldi n.5, Portoferraio (LI) - Tel. 0575 529527	ASSENZA CON SISTEMA DI GESTIONE QUALITÀ CERTIFICATO DA UNI EN ISO 9001	
Ediz. 01 Rev. 02 Data Feb. 2021	Approvato Gaggioli A.	http://www.dream-italia.it		

ISPRA
Istituto Nazionale per lo Studio e la Cura degli Ambienti Protetti

Prot. 04487 DEL 02/02/2021

Parco Nazionale Arcipelago Toscano
LOC. ENFOLA, 16
57037 PORTOFERRAIO LI
EMAIL: parco@islepark.it
PEC: pnarcipelago@postacert.toscana.it

Oggetto: Protocollo operativo per l'eradicazione del Muflone (*Ovis aries*) presso l'Isola del Giglio - progetto LIFE LETSGO GIGLIO.

Come da Vostra richiesta di cui all'oggetto, si trasmette il relativo parere.

Distinti saluti.

Responsabile Servizio
Coordinamento Fauna Selvatica

(Dott. Piero Genovesi)

Eradication techniques



Foot snares and
GSM/VHF alarmed
foot snare



Stakeout
shooting



Drop net and
hounds' drop net



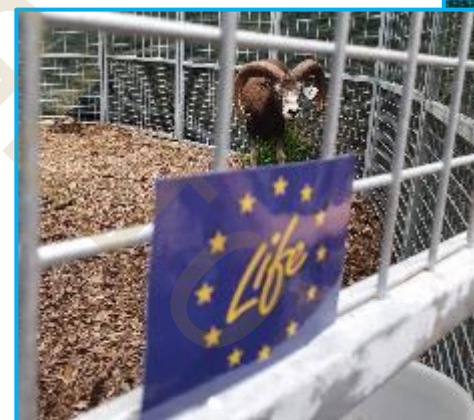
Yellow lines: final
rubber band position



Green ellipse: original
snares position



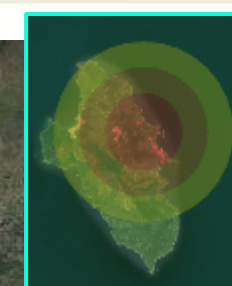
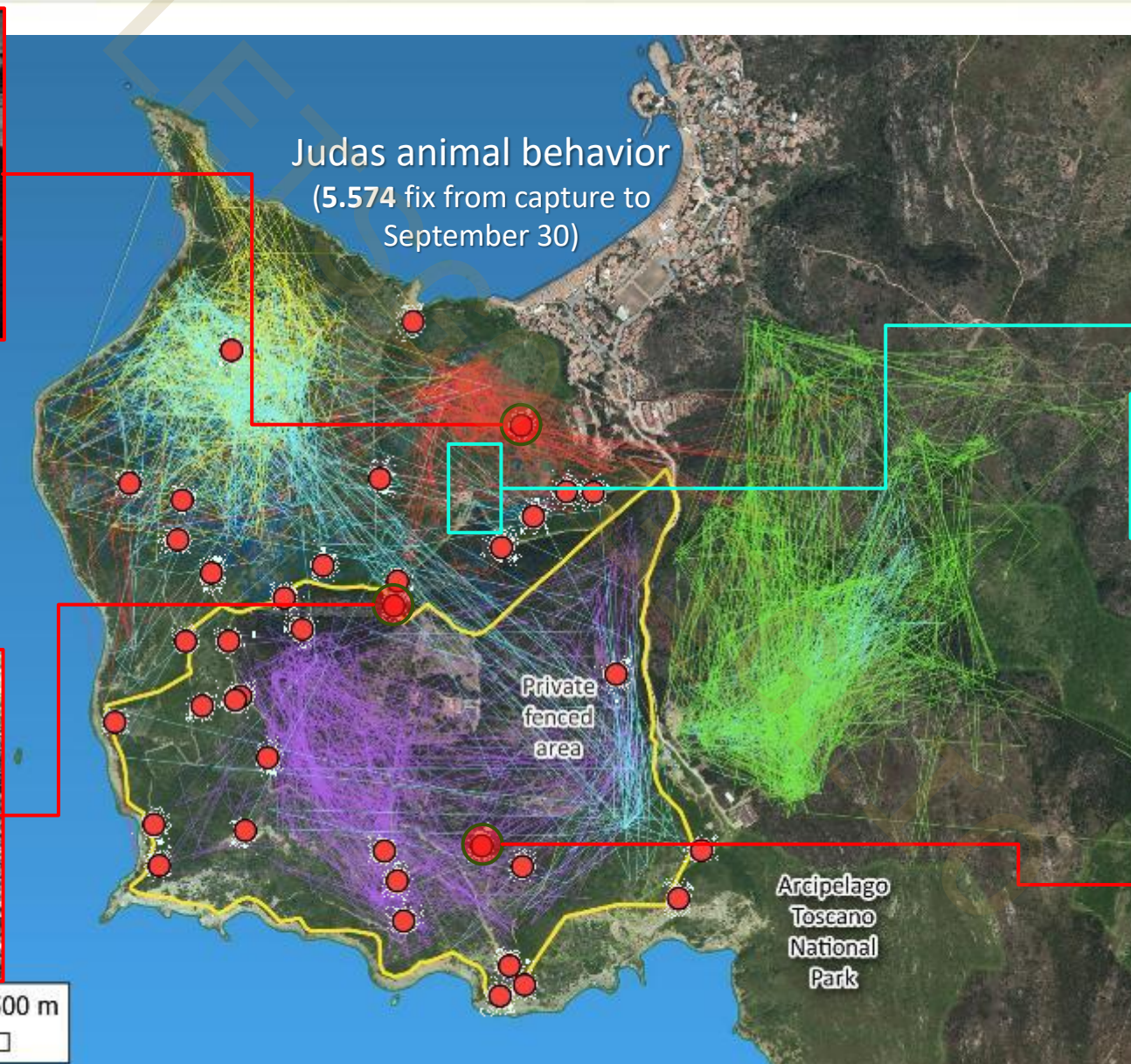
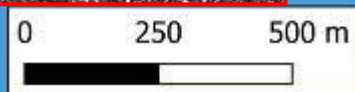
Corral with food



Temporary enclosure



Strategic plan for trapping



Drone

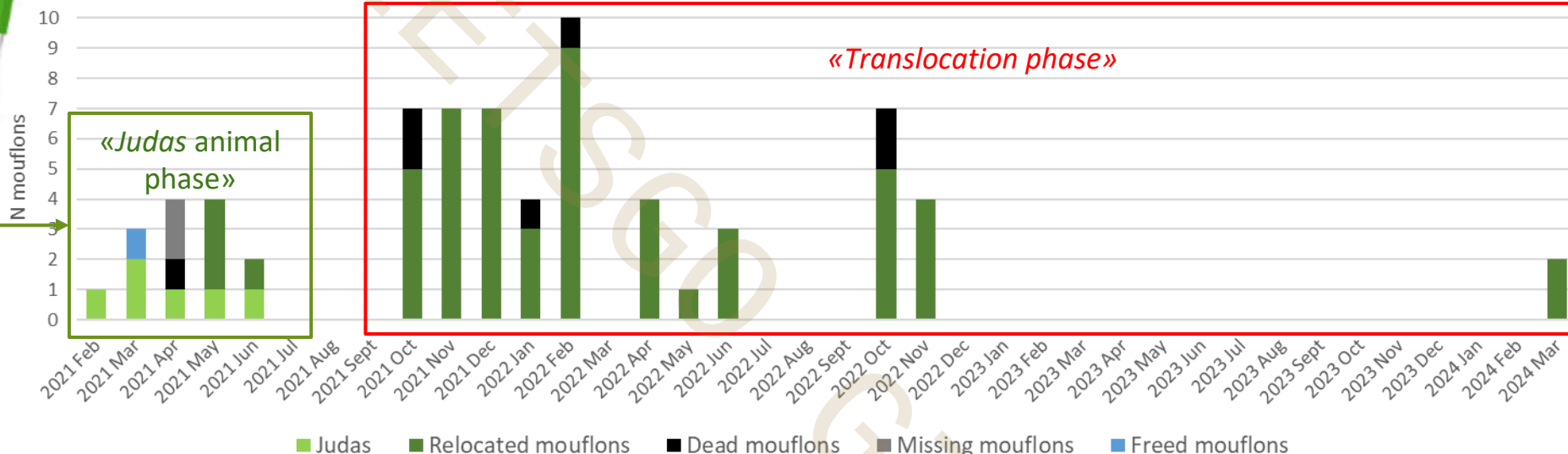


Camera trapping

Trapping results

START

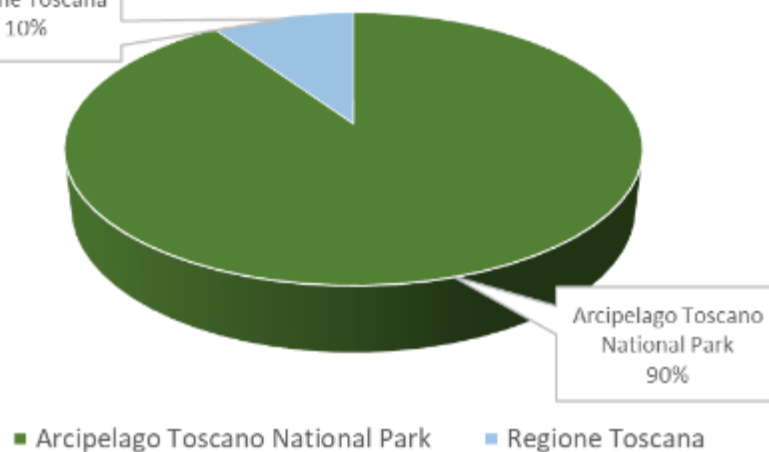
February
2021



FINISH

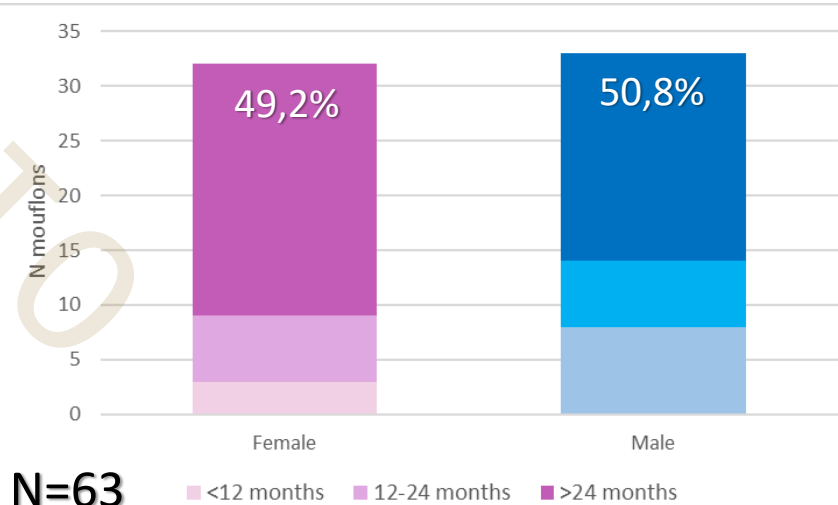
March
2024

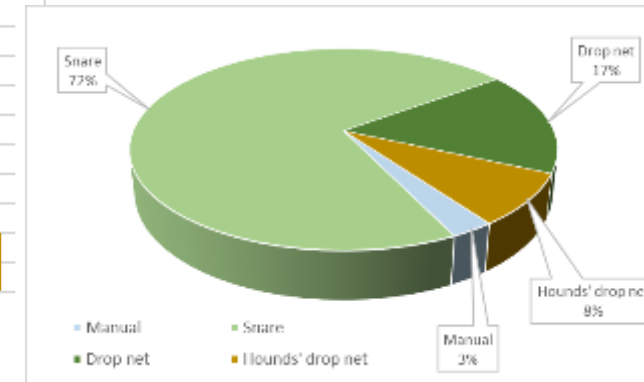
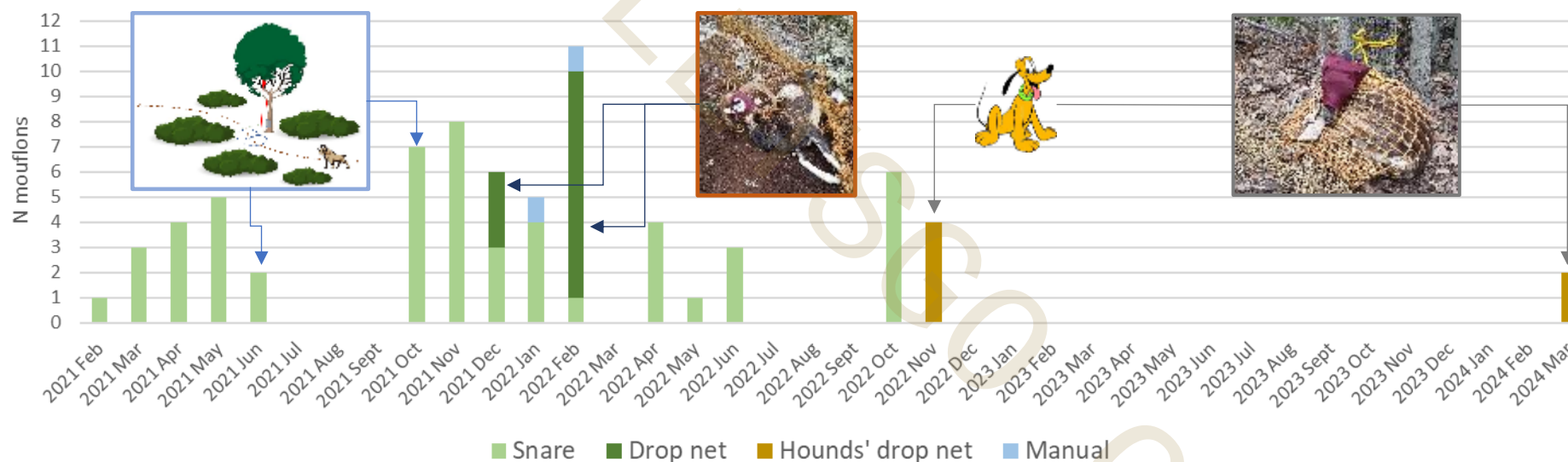
Regione Toscana
10%



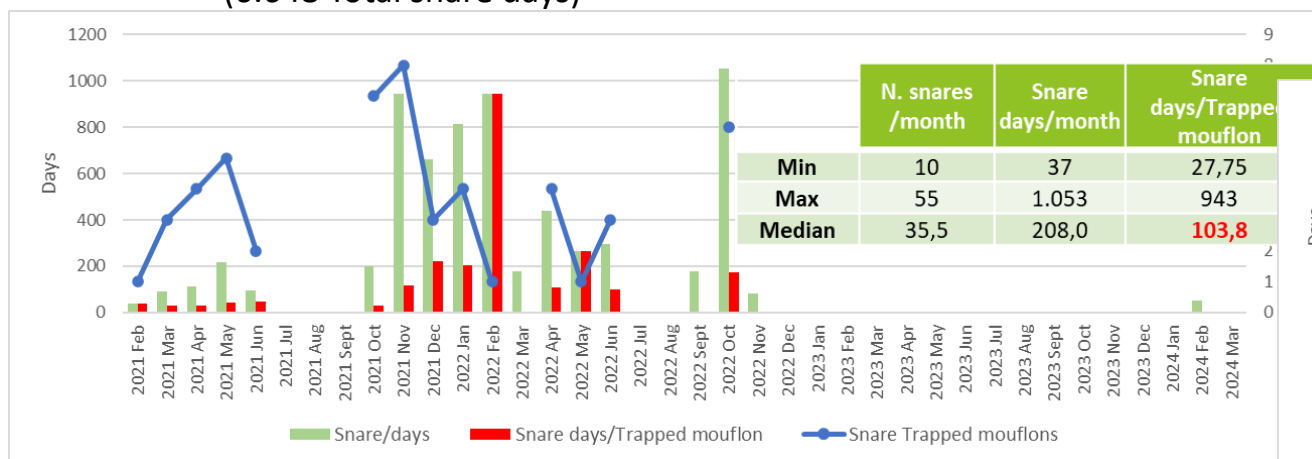
6 Judas animal

- 1 dead muflon by snares capture
 - 1 dead muflon by drop net capture
 - 1 dead muflon by act of vandalism
 - 6 dead muflons temporary enclosure-allocation phase
- 54 mouflons translocated from Giglio island**

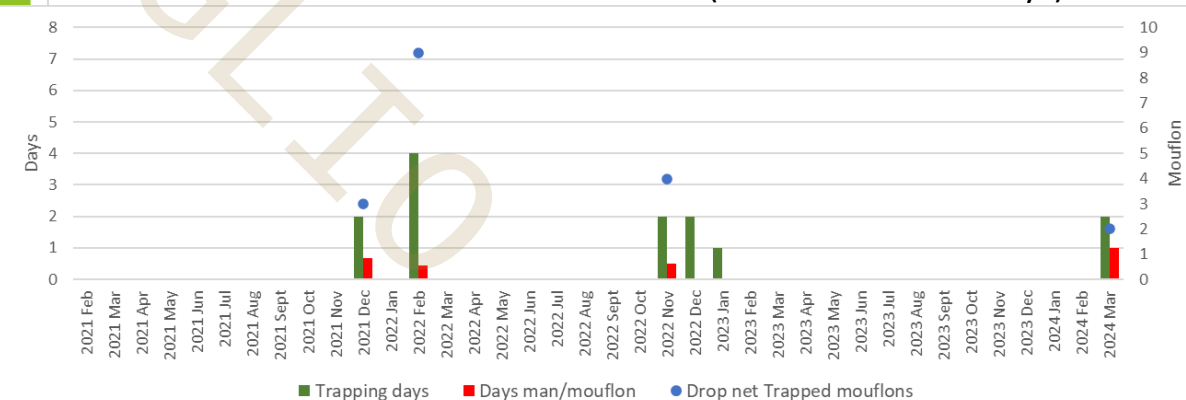




Monthly trapping effort with snares
(6.648 Total snare days)

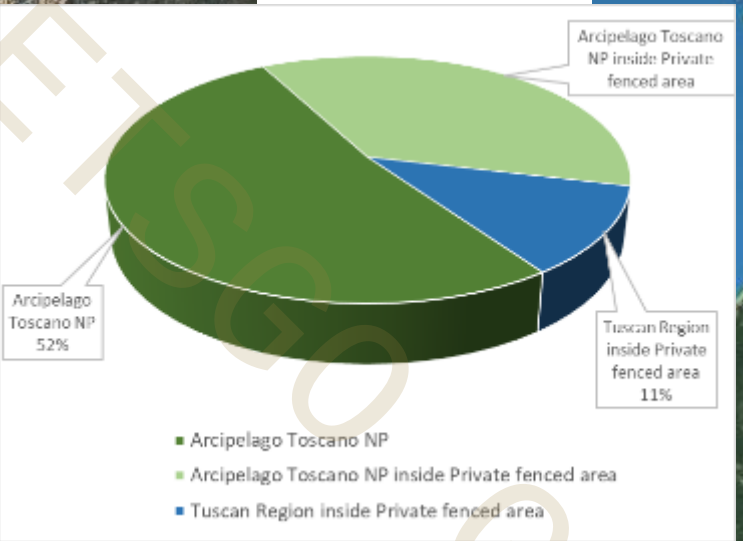
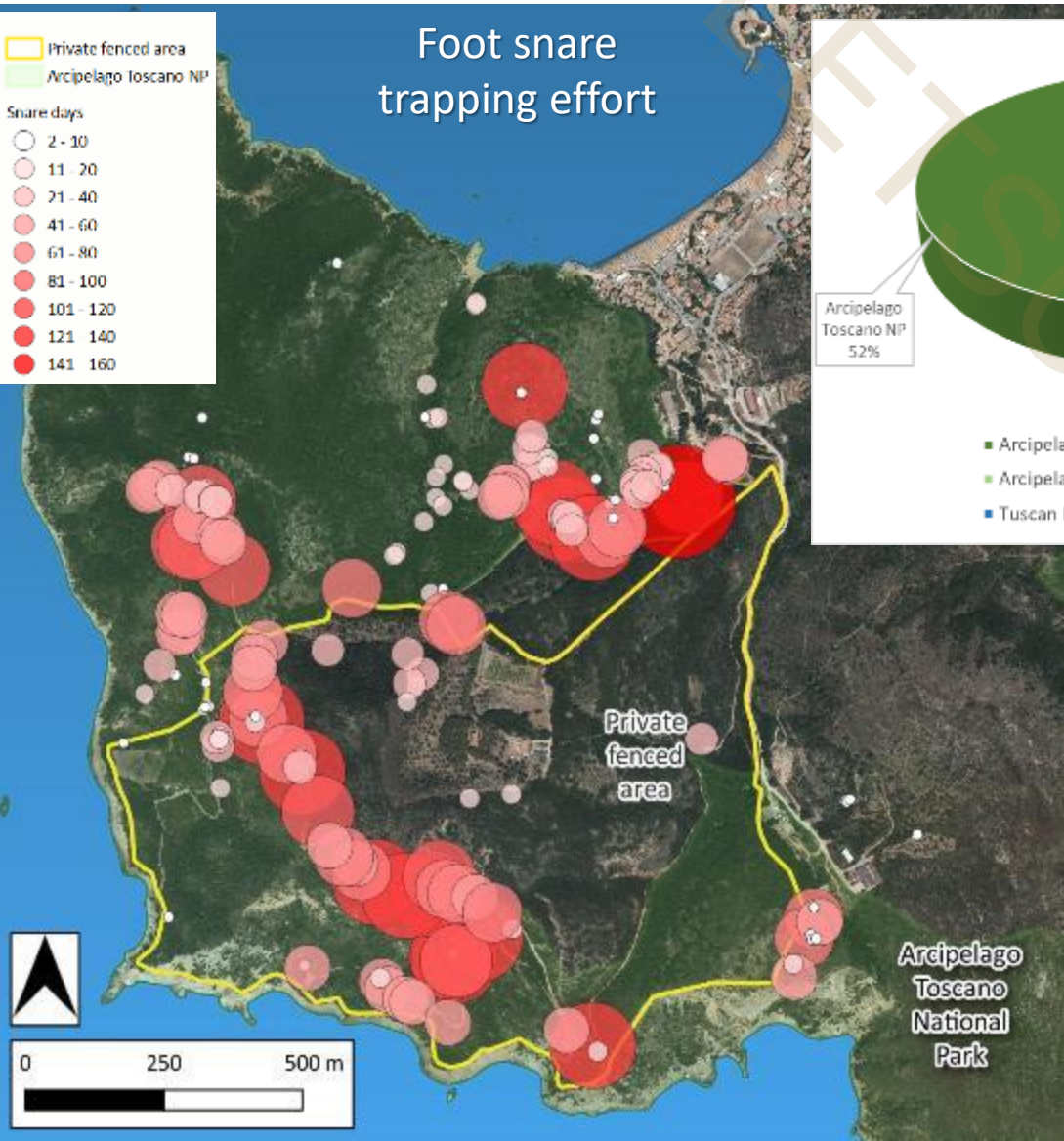


Monthly trapping effort with Drop net
(6.648 Total snare days)



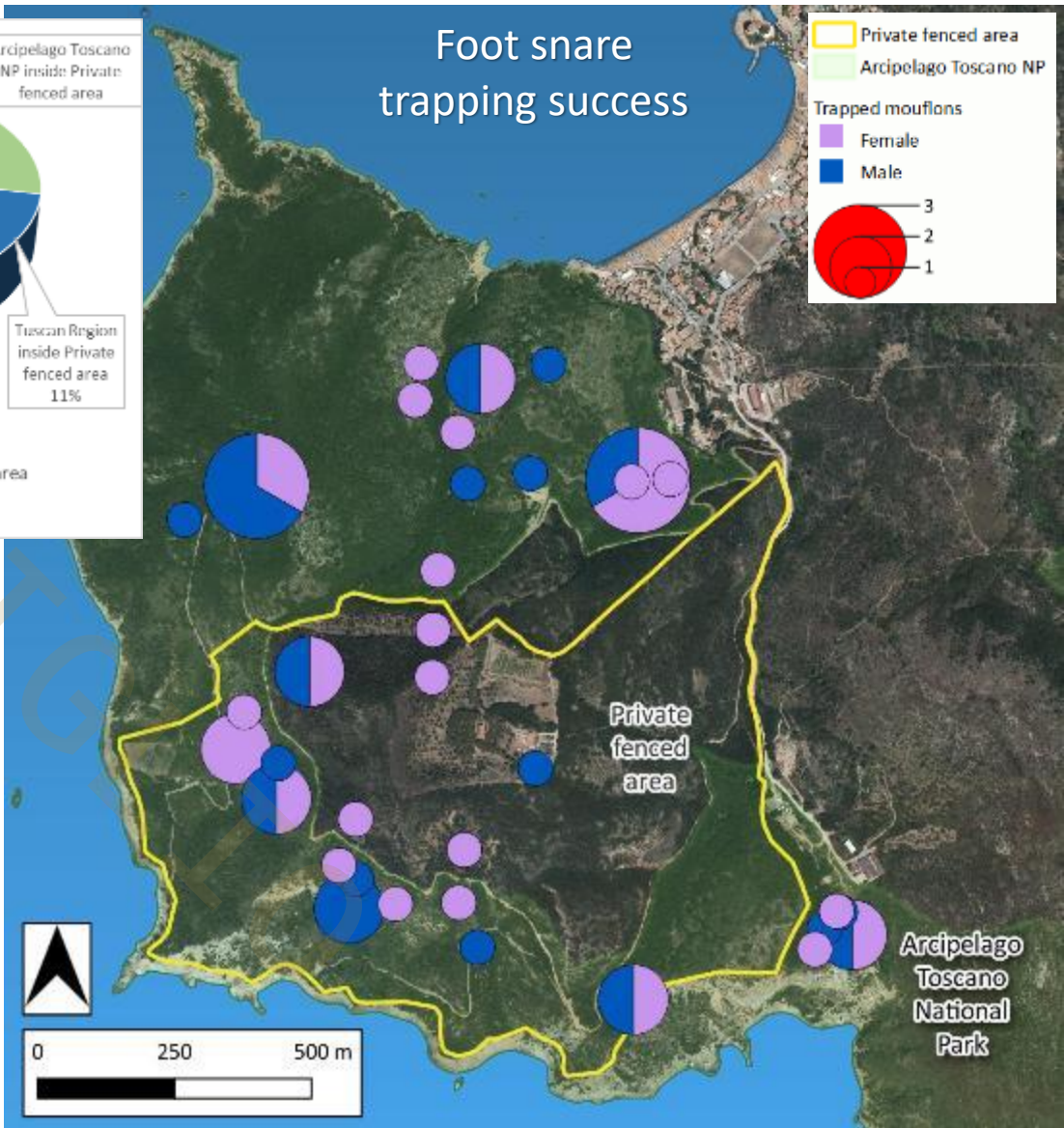
Snare trapping results: spatial distribution

Foot snare trapping effort

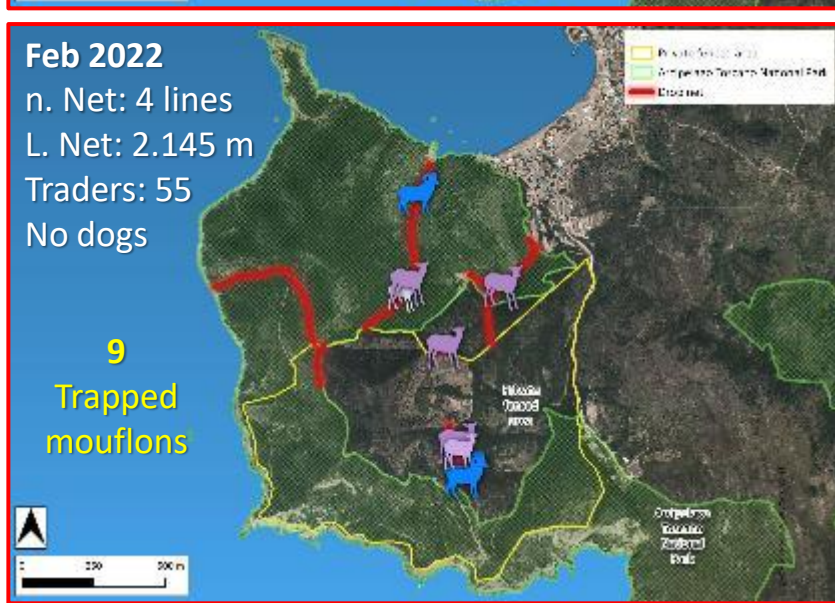
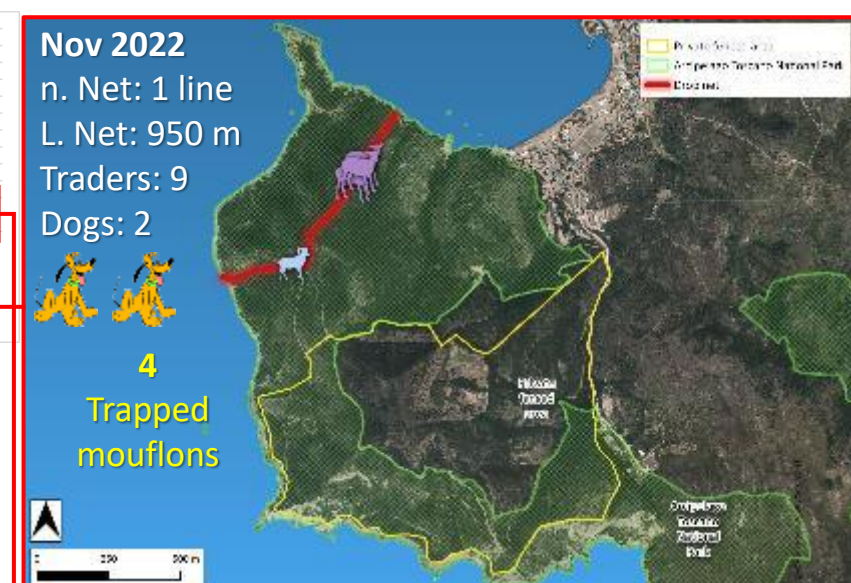
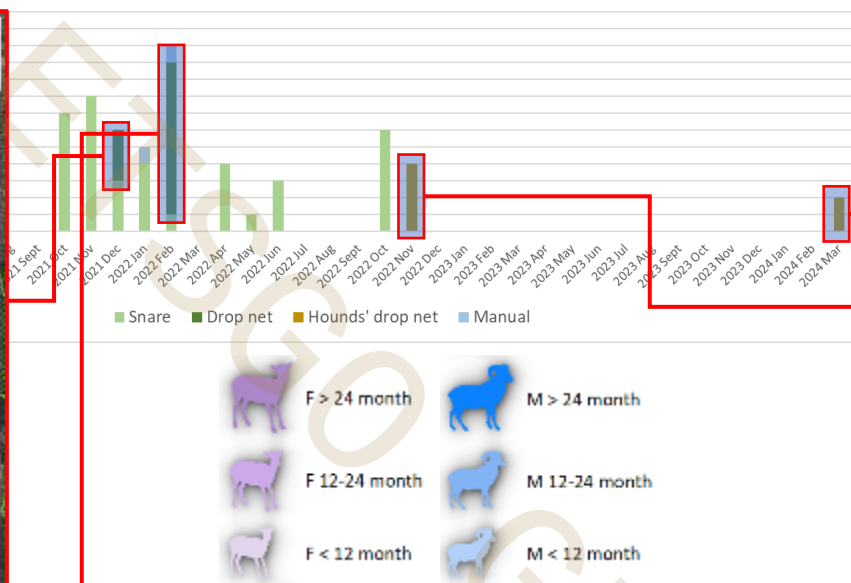
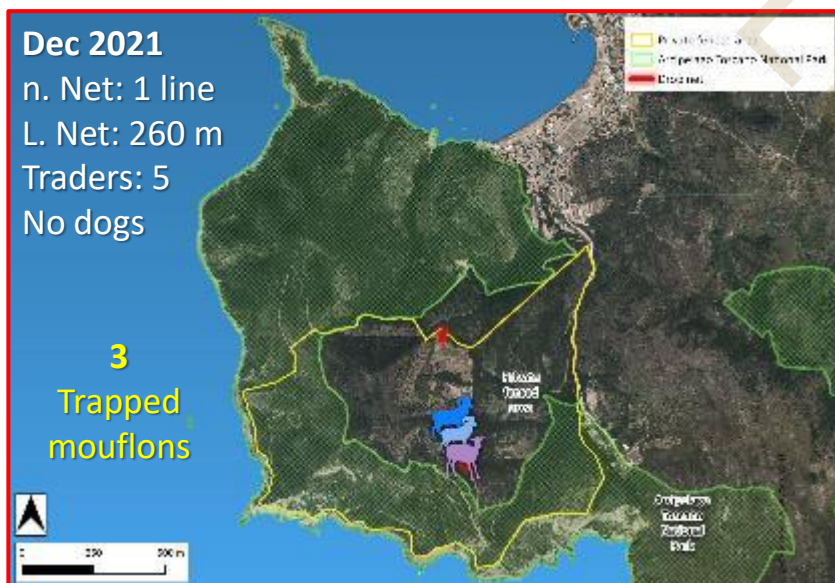


48% of the mouflons were trapped within the **private area** or on **fence gates** damaged by tourists or storm surges

Foot snare trapping success



Drop net trapping Results: spatial distribution



We are grateful to



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PROVINCIA di GROSSETO
PARCO NAZIONALE DELLO STIVIO
Art 51 REGIONE TOSCANA
PN Aspromonte
PARCO DELLA MAREMMA



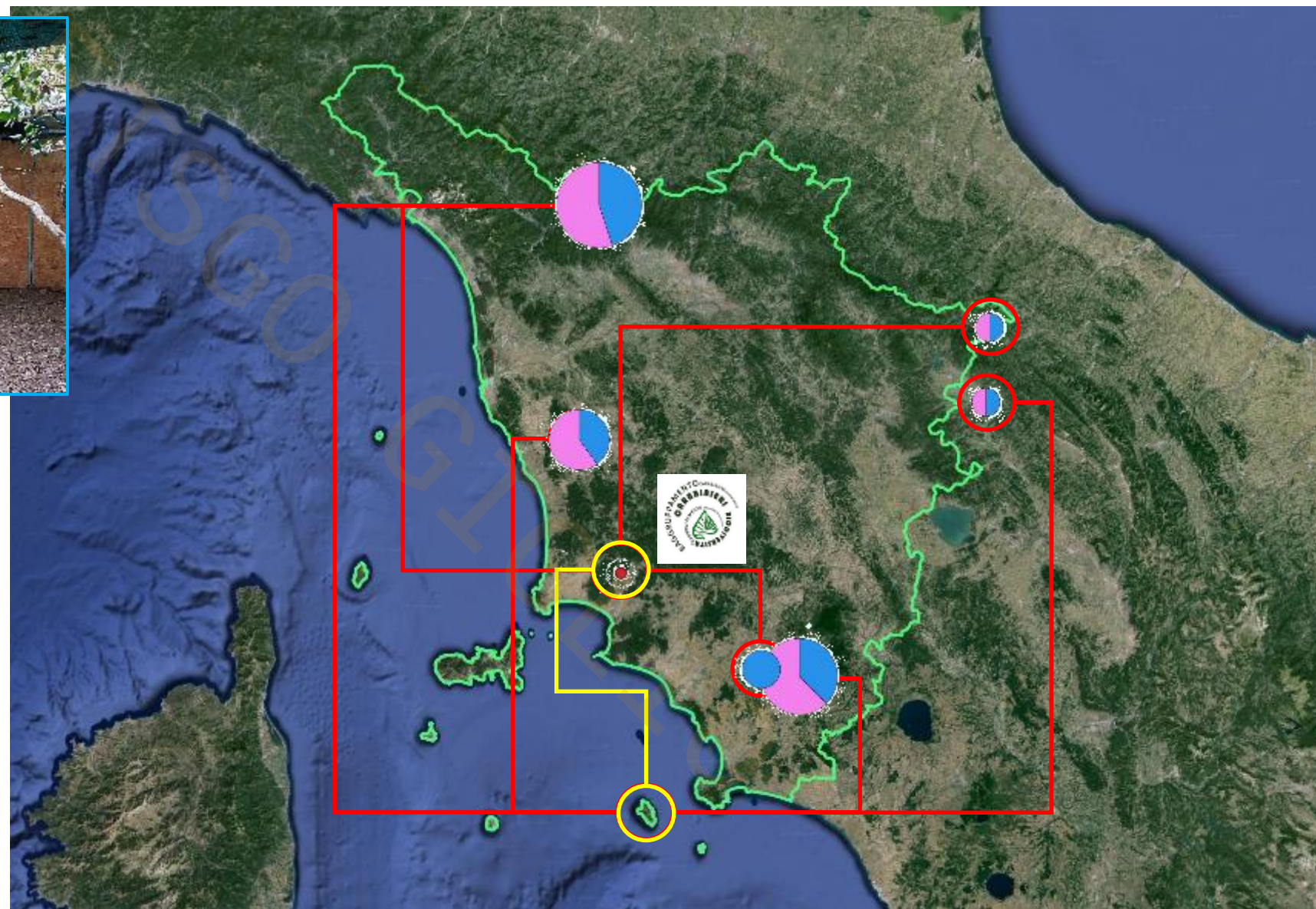
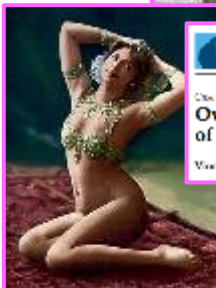


animals

Open Access

Ovariectomy in Mouflons (*Ovis aries*) in the Field: Application of Innovative Surgical and Anaesthesiological Techniques

Vincenzo Cacielli ^{1,*}, Alice Calverat ^{1,2}, Maria Borgia ^{1,2}, Francesca Giannini ¹ and Annalisa Rizzo ^{1,2}



Strategic plan for shooting



Arcipelago Toscano National Park **Professional hunters**



Provincia di Grosseto **Police officers**



Arcipelago Toscano National Park **Trained hunters**



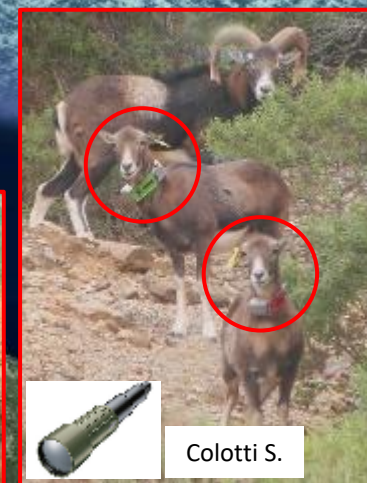
Regione Toscana Art. 51 **Trained hunter**



Regione Toscana **Trained hunter**



Employment of qualified staff

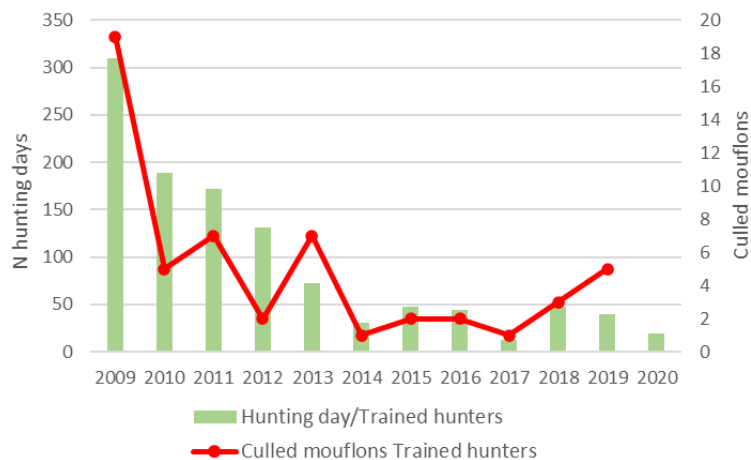


Shooting results: Control plan 2009-2021

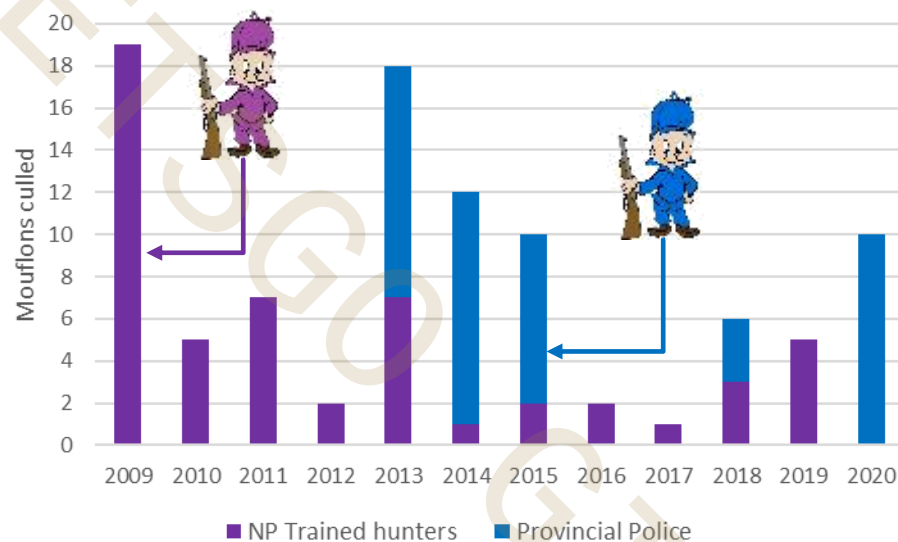


2009-2019

18 Arcipelago Toscano National Park
Trained hunters
(Only within the protected area)



Hunting and not Control
Spatial and temporal **limits** of action



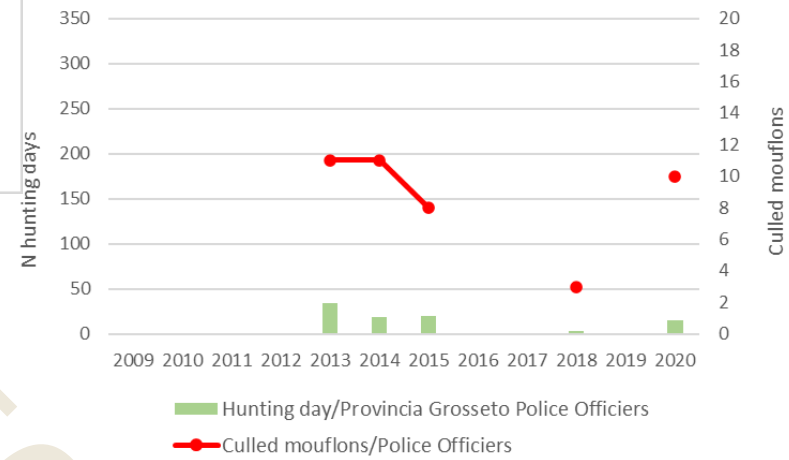
Hunting effort

Category	Days/hunt	Mouflons culled	Days/Mouflon culled
NP Trained hunters	1.117	54	20,7
Provincial Police	90	43	2,1



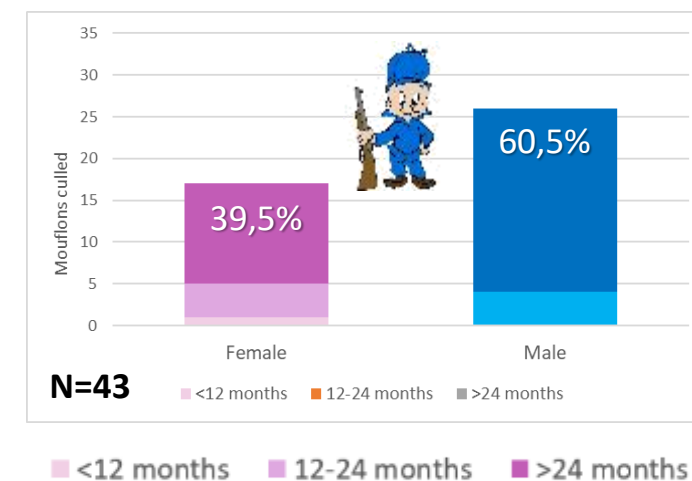
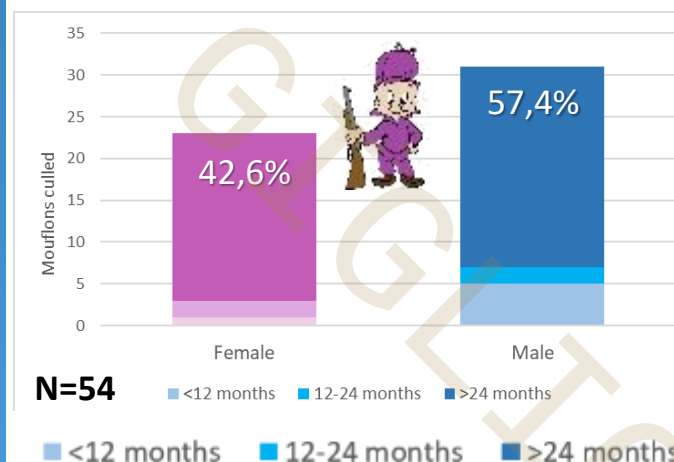
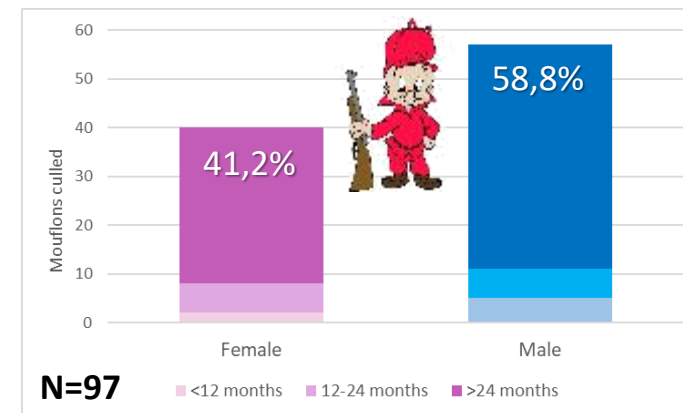
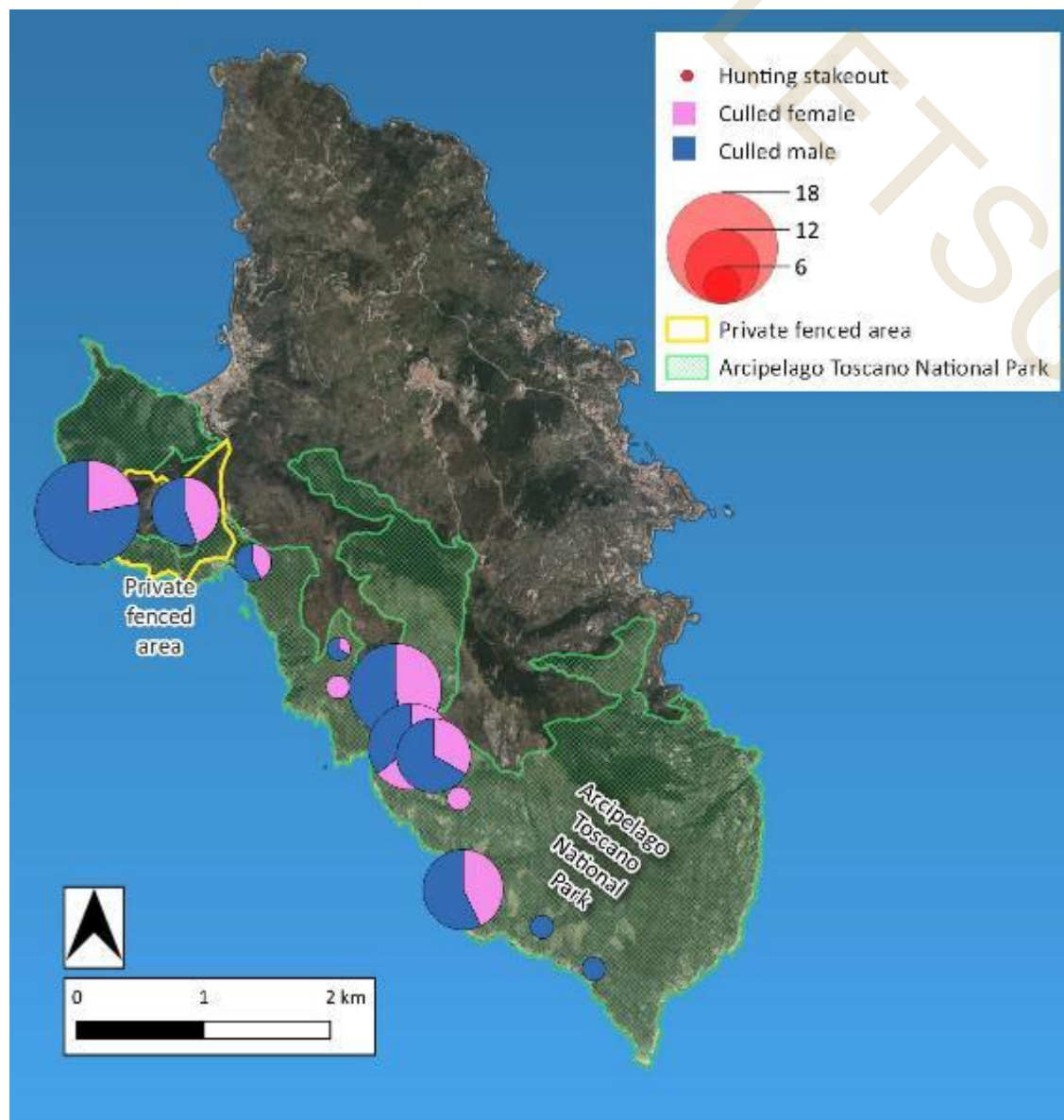
2013-2020

4 Provincia di Grosseto
Police officers
(Inside and outside the protected area)



Control and not Hunting
No limits on spatial and temporal action

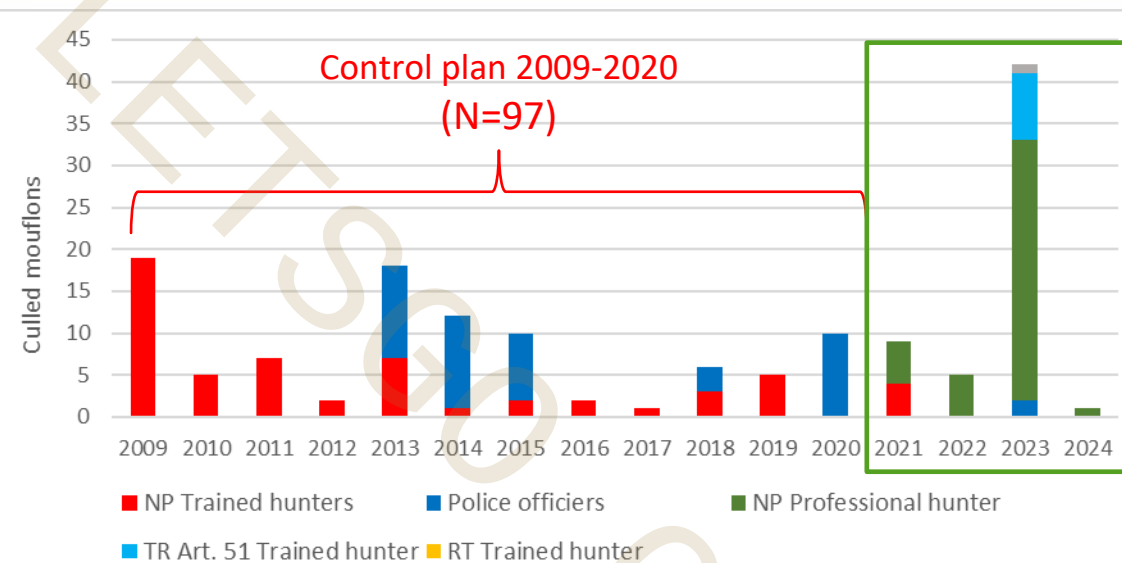
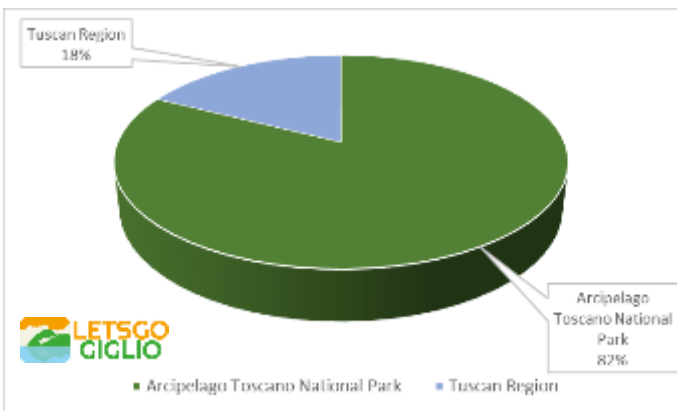
Shooting results 2009-2021: Control plan spatial distribution



Could a long-term control plan ensure the eradication?

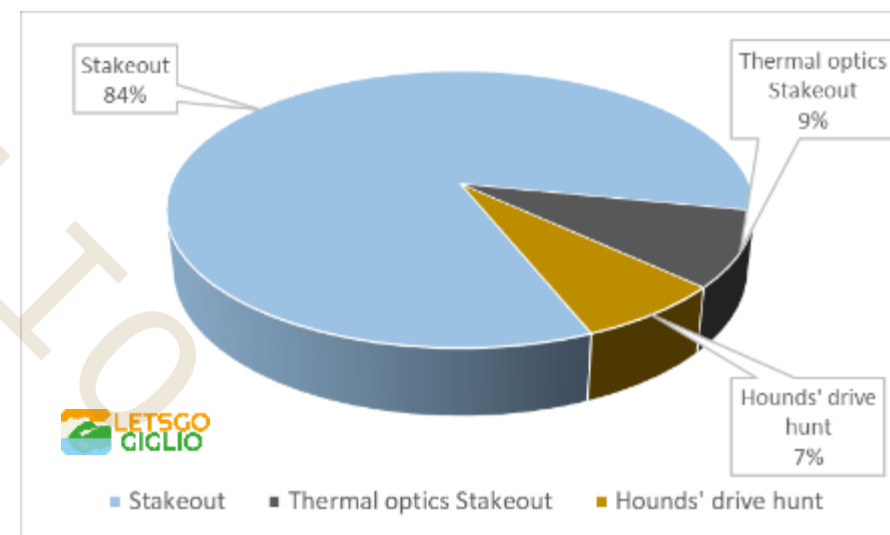
Shooting results: LetsGoGiglio techniques

Culled mouflons per different areas

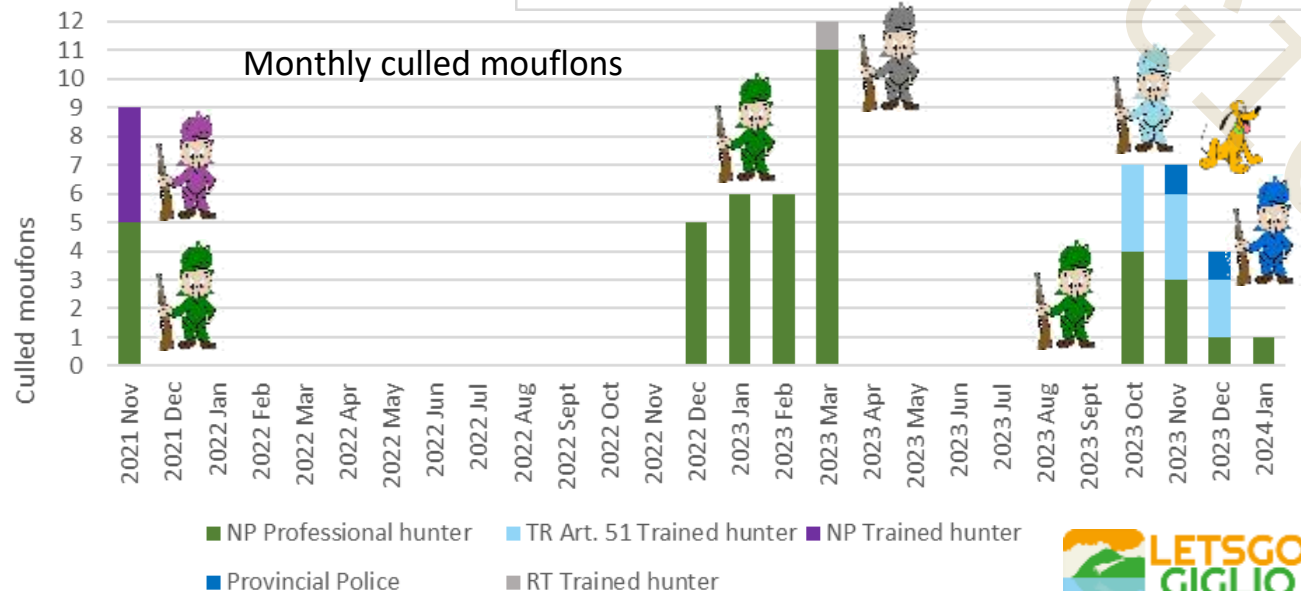


LETSGO GIGLIO
(N=56+1)

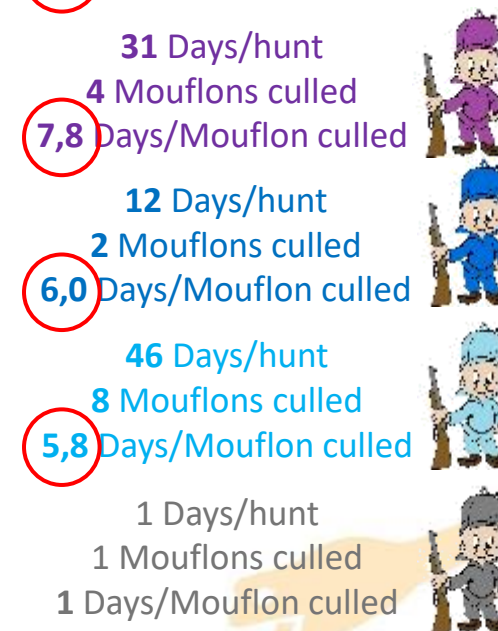
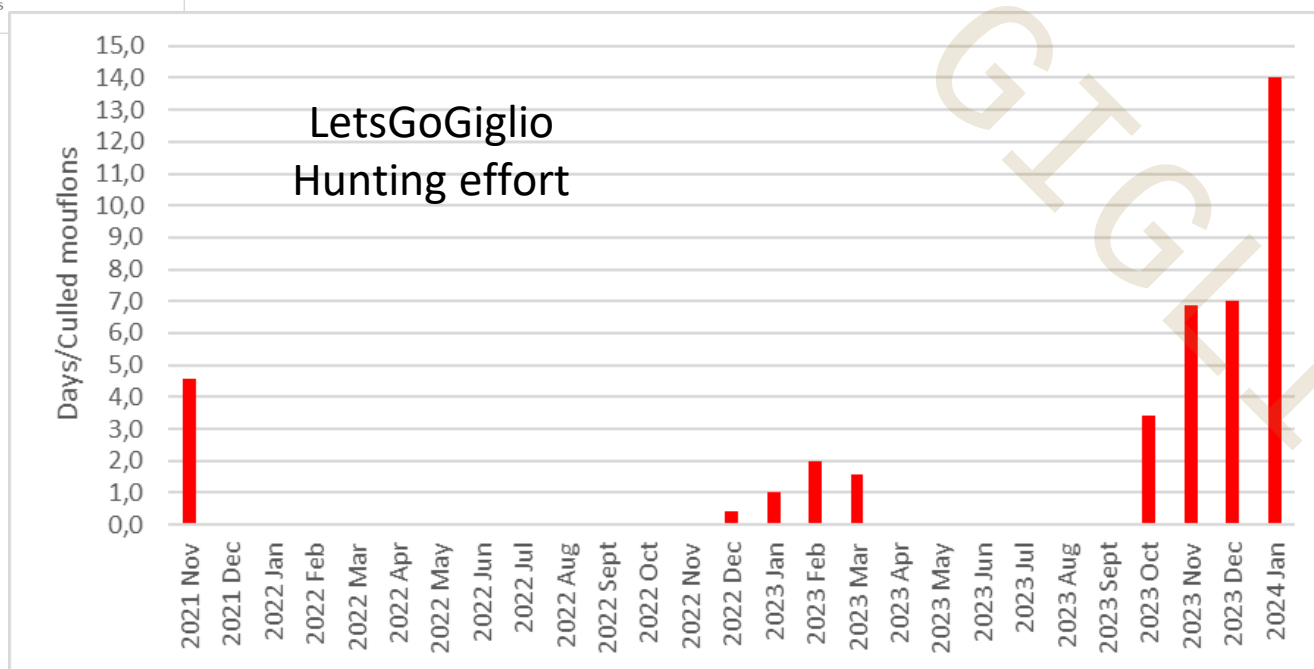
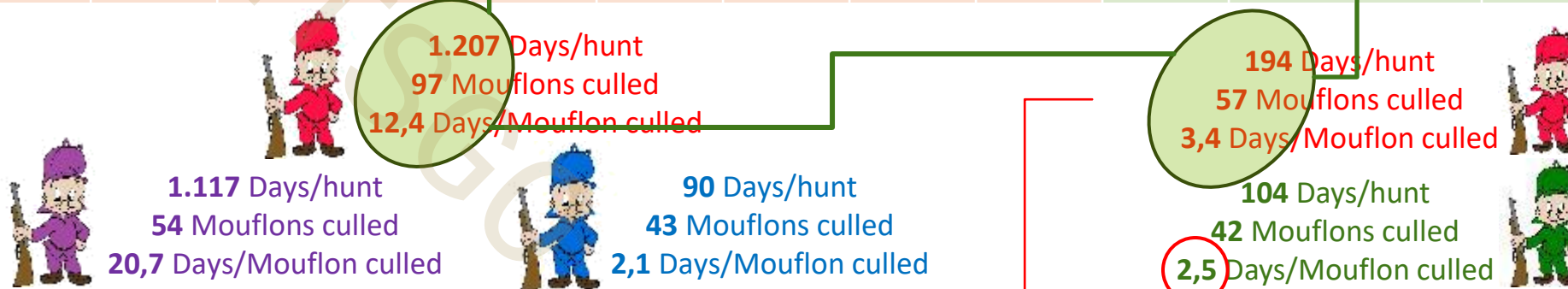
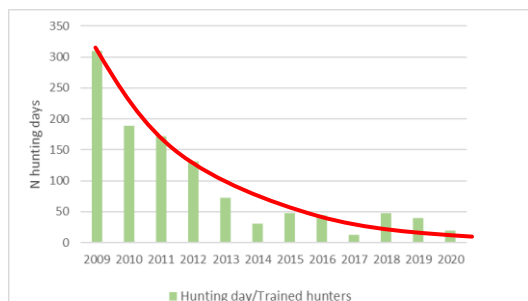
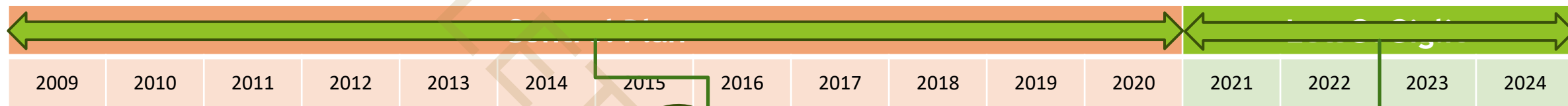
Culled mouflons using different techniques



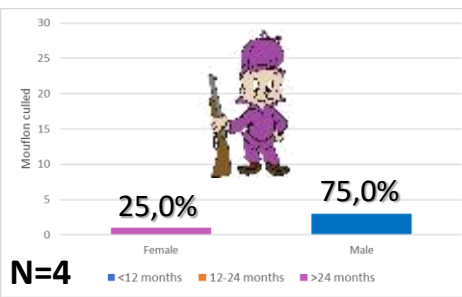
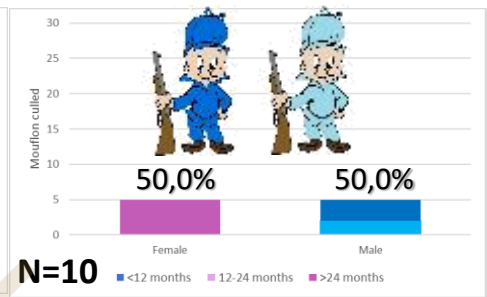
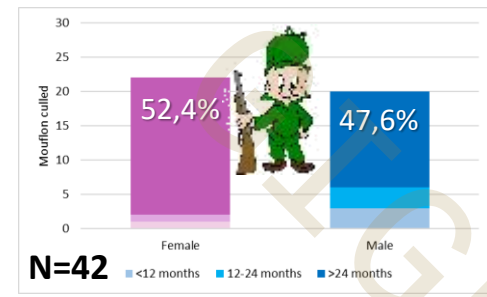
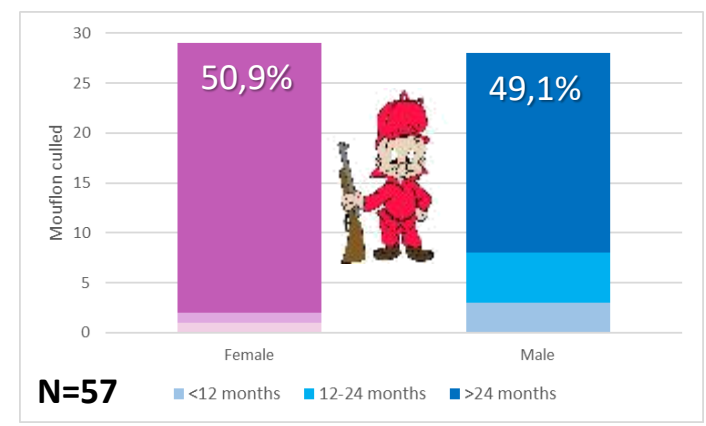
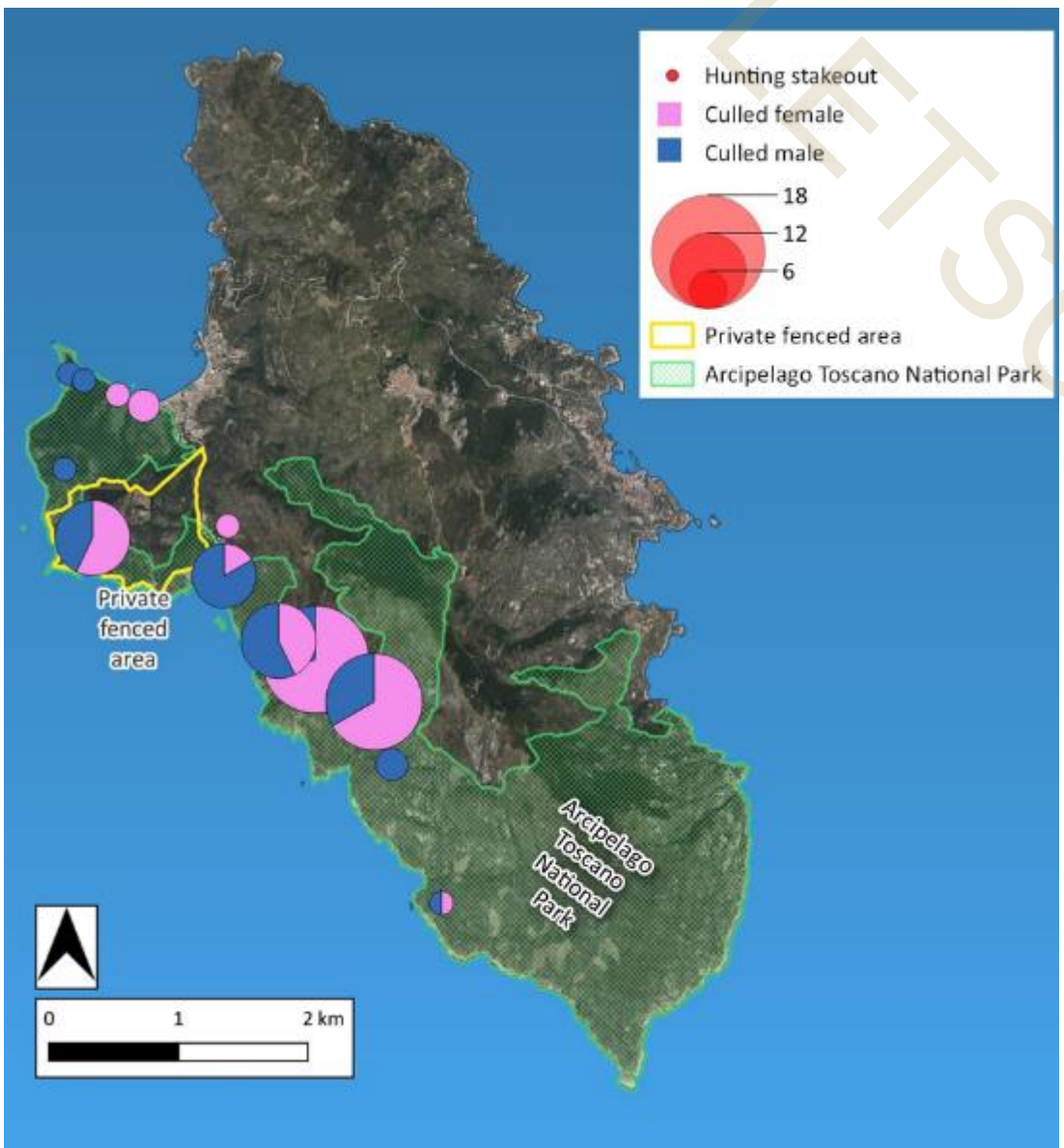
Monthly culled mouflons



Shooting results: total effort



Shooting results: LetsGoGiglio spatial distribution

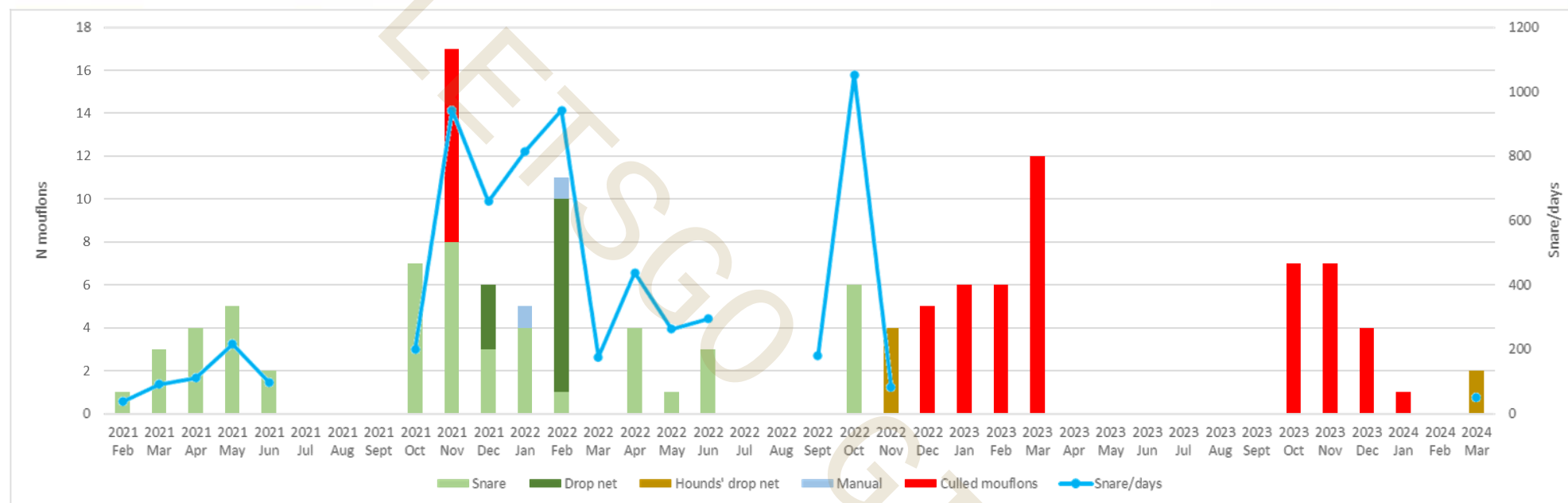


<12 months 12-24 months >24 months <12 months 12-24 months >24 months

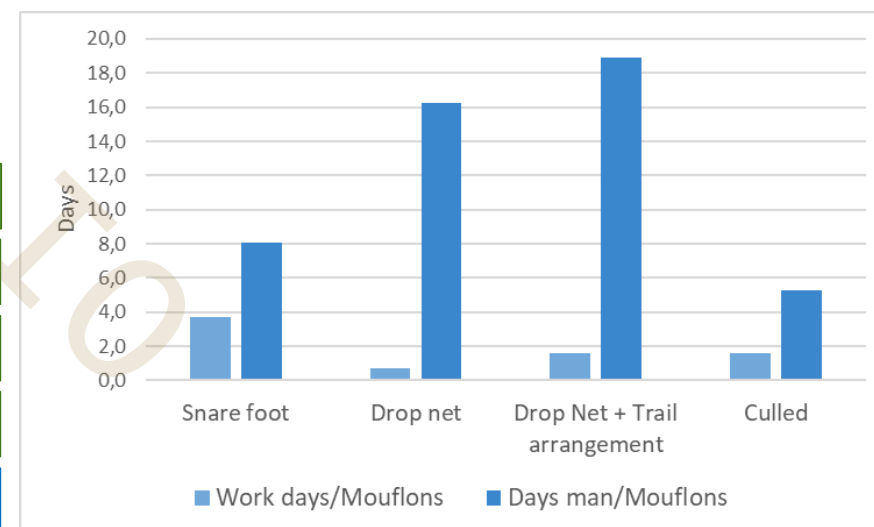
Could Professional hunters ensure the eradication?



Trapping vs culling



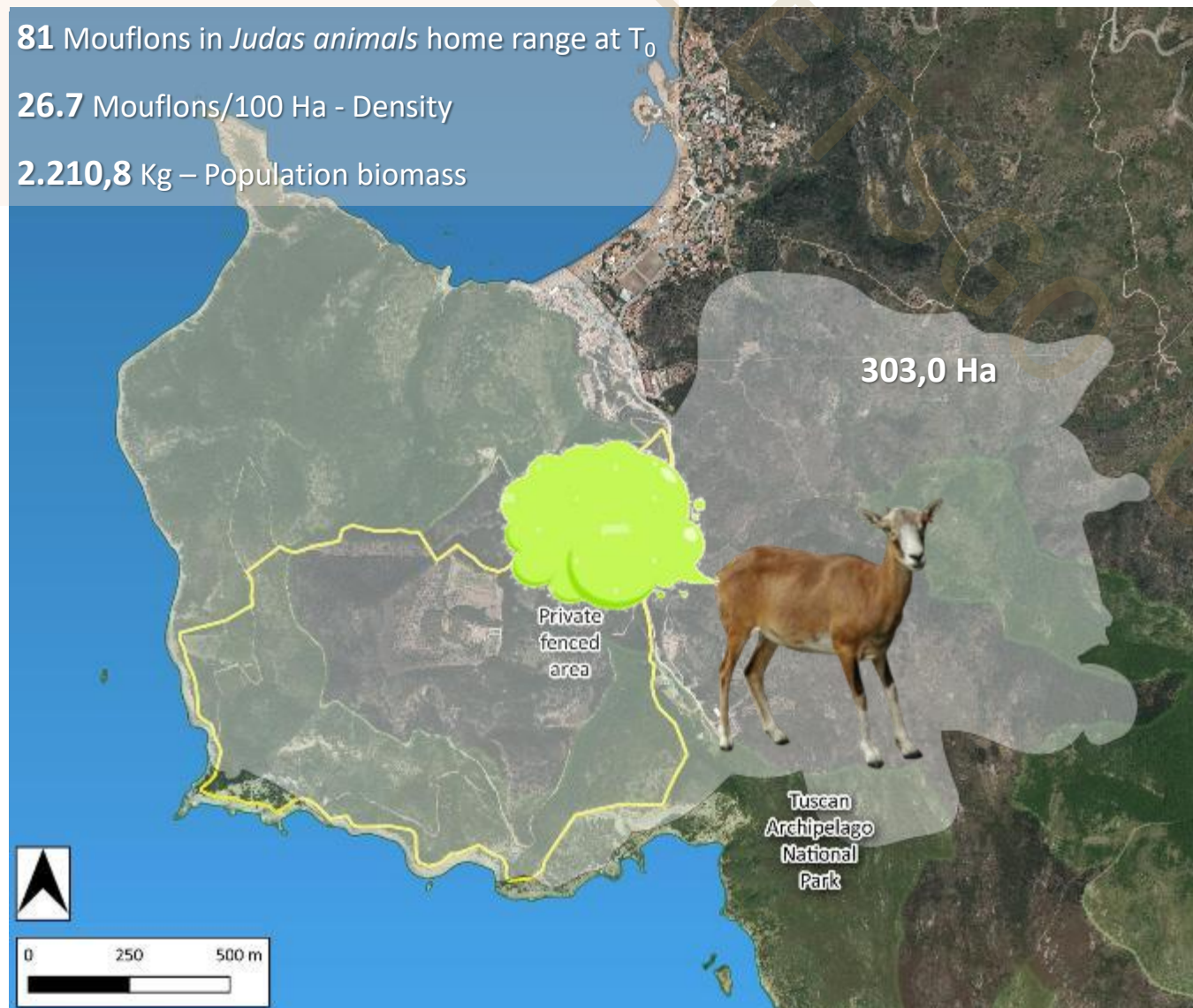
	Snare foot effort	Drop net effort	Drop net + Setting Up	Culled effort
Work days	194	13	29	85
Days/operator	418	292	340	194
N mouflons	52	18	18	57
Work days/mouflon	3,7	0,7	1,6	1,5
Days operator/mouflon	8,0	16,2	18,9	3,4



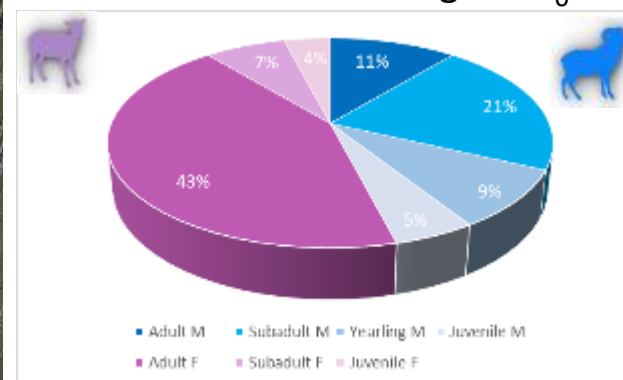
81 Mouflons in *Judas animals* home range at T₀

26.7 Mouflons/100 Ha - Density

2.210,8 Kg – Population biomass



Demographic classes in «*Judas animals*» home range at T₀



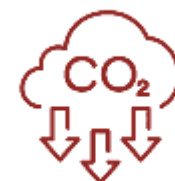
Class median body weight (Giglio island Data)

26,0 kg		F > 24 Month
19,0 kg		F 12-24 Month
12,9 kg		F < 12 Month
42,0 kg		M > 5 Years
33,5 kg		M 2-4 Years
22,5 kg		M 12-24 Month
11,7 kg		M < 12 Month

Biodiversity and forestal renewal lost

Daily fresh matter requirement
93.5 – 160.4 Kg

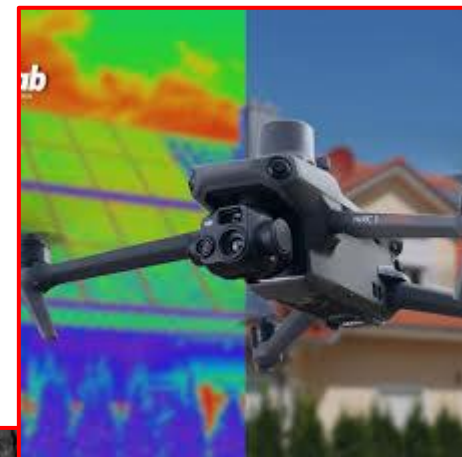
Annual fresh matter requirement
35-60 Tons



CO₂ sequestration per year lost
~29 Tons



Dicembre 2023-ottobre 2024



**We can declare Giglio Island:
zero mouflon!!**





Management of animal rights activists

Management of relations with private entities



Critical regulatory aspects





The first one
2021 February 28
01:25 AM

Si

Può

Fare!



The last one
2024 March 20
10:25 AM

