ERBFacility – European Raptor Biomonitoring Facility *Building capacity for contaminant sampling and collection of supporting data for raptors across Europe*

ERBFacility PROOF OF CONCEPT

Considerations to using the Tawny Owl Strix aluco vs Common Buzzard Buteo buteo as focal species





1. DISTRIBUTION & MIGRATORY STATUS

BEST IF:

- Pan-European covering as many countries as possible

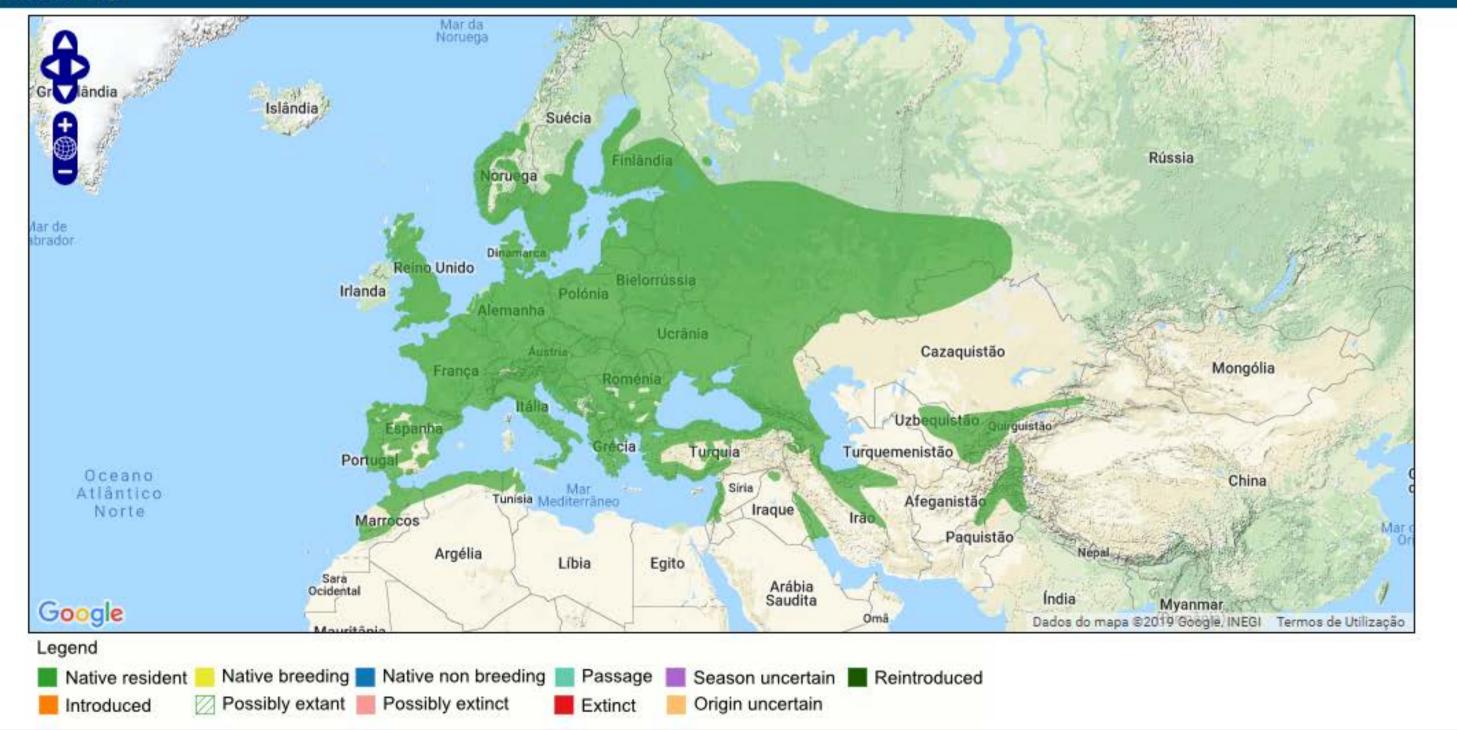
- Resident throughout the distribution range

Possible solutions to the migratory issues: Use samples from chicks/fledged young/adults of known breeding status



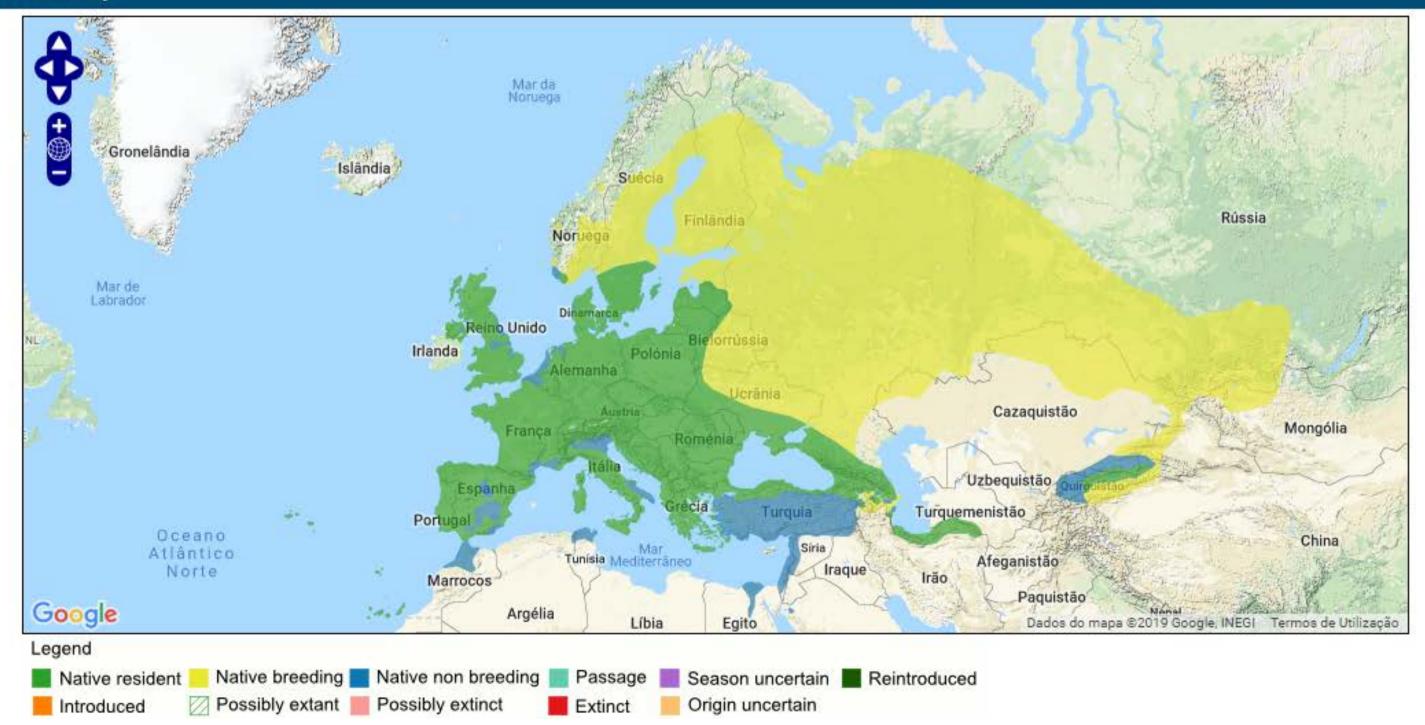
TAWNY OWL

Distribution map



COMMON BUZZARD

Distribution map



COMMON KESTREL

Distribution map



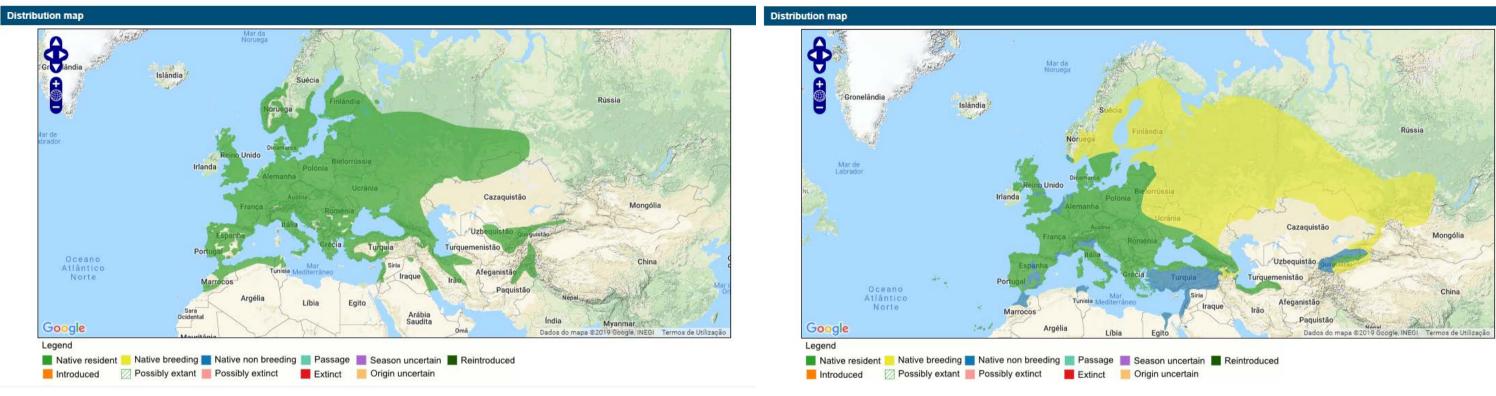
BARN OWL

Distribution map Mar da Noruega Gronelândia Islândia Suécia Finlândia Noruega Mar de Labrador Dinamarca Reino Unido Bielorrússia Irland Polónia Alemanha Ucrânia Cazaquistão Austria França. PE IS. Uzbequistão Quirguistão Espani Turquia écia Turquemenistão Portugal Oceano Tunisia Mediterrâneo Atlântico Afeganistão Norte Iraqu Irão Marrocos Paquistão Google Argélia Líbia Egito Dados o mapa 182019 0 Legend Native breeding Native non breeding Passage Native resident Season uncertain Reintroduced Possibly extant Possibly extinct Origin uncertain Extinct Introduced



TAWNY OWL

COMMON BUZZARD



456 (83%) 100x100km squares

Resident over whole range

518 (95%) 100x100km squares

Migratory in N+E

2. POPULATION SIZE AND TREND

	TAWNY OWL	COMM
EUROPEAN POPULATION SIZE	0.54 – 0.94 million bp	0.8 – 1
TREND	Stable	

ION BUZZARD

1.4 million bp

Stable

3. DIET

	1	1
	TAWNY OWL	COMMO
Dietary comments (rodenticides)	Generally a rodent specialist but some birds (to S of range and/or bad seasons)	Generalis (variable rodents/indiv
Dietary comments (metals)	Earthworm eater	Scavenger - I Pb shot. E

ON BUZZARD

st diet /scavenger ble proportion of lividual specialisms)

- more likely to ingest Earthworm eater.

4. HABITAT

TAWNY OWL	COMMON BUZZARD
Very broad. Anywhere with trees including urban areas	Very broad. Anywhere with tre



5. BODY SIZE

TAWNY OWL	COMMON BUZZARD
Male: 414 g (310-540)	Male: 756 g (427-1183)
Female: 501 g (415-650)	Female: 940 g (486-1364)



6. POTENTIAL SOURCES OF SAMPLES

	TAWNY OWL	COMMON BUZZARD
EXISTING SAMPLES IN ESB'S		
CARCASSES (ROAD-KILLED)	+++	+
CARCASSES (POWERLINES)	+	++
CARCASSES (WIND FARMS)	_	+
CARCASSES (MUSEUMS)	++	+++
CARCASSES (Wildlife Rehab Centres)	++	++
CARCASSES (POISONED)	-	+
SKINS - TAXIDERMISTS	+	++
BLOOD - NESTLINGS	?	?
BLOOD - ADULTS	?	?
DESERTED EGGS	?	?
FEATHERS	++	++



7. ACTORS INVOLVED IN COLLECTING SAMPLES

	TAWNY OWL	COMM
EXISTING SAMPLES IN ESB'S	Collections arena	Colle
CARCASSES (ROAD-KILLED)	Road ecology researchers, citizens	Road ecolog
CARCASSES (POWERLINES)	Researchers, EIA companies	Research
CARCASSES (WIND FARMS)	Researchers, EIA companies	Research
CARCASSES (MUSEUMS)	Collections arena	Coll
CARCASSES (Wildlife Rehab Centres)	WRCs	
CARCASSES (POISONED)	Legal authorities, WRCs	Legal a
SKINS - TAXIDERMISTS	Taxidermists	Ta
BLOOD - NESTLINGS	Ringers, researchers	Ringe
BLOOD - ADULTS	Ringers, researchers	Ringe
DESERTED EGGS	Ringers, researchers, volunteers	Ringers, res
FEATHERS	Ringers, researchers, volunteers	Ringers, res

ION BUZZARD

lections arena

gy researchers, citizens

hers, EIA companies

hers, EIA companies

llections arena

WRCs

authorities, WRCs

Taxidermists

ers, researchers

ers, researchers

esearchers, volunteers

esearchers, volunteers

8. PREVIOUS MONITORING

Review of raptor and owl monitoring capacity across Europe (Derlink et al. 2018 BIRD STUDY)	TAWNY OWL	COMMON BUZZARD
Total number of species schemes submitted	26	50
Total number of breeding schemes submitted	24	29
Number of countries submitting breeding schemes A	13	16
Number of breeding schemes of >10 year duration	19	18
Number of countries with breeding schemes of >10 year duration	12	13
Number of breeding schemes per breeding country	0.59	0.69
Proportion of breeding countries with breeding schemes	0.32	0.38
An overview of existing raptor contaminant monitoring activities in Europe (Gómez-Ramírez et al. 2014)		
Number of countries with ecotoxicology studies	9	10

9. CONTEXTUAL DATA

	TAWNY OWL	COMMON BUZZARD
Age	++	++
Sex	+	+
Morph type / plumage pattern	+++	+++
Body measurements	+++	+++
Diet	+	+
Reproductive performance	++	++
Behavioural data	+	+
Population trends	+	++
Population reproductive performance	+	++
Population diet	+	+
Population behavioural data	+	+

10. PROS & CONS

	TAWNY OWL	COMMON E
PROS	Widespread distribution; resident; abundant; road-kills as a source of samples; frequent in WRCs; broad habitat use; occupies nest boxes	Widespread distribution frequent species fou museums); frequent specimens already availat body size; broad
CONS	Population parameters not frequently studied where no nestboxes schemes exist	Partially migratory in Euro to observe ar

BUZZARD

tion; abundant; most und dead (taken to nt in WRCs; many lable in museums; large ad habitat use

rope (origin bias), easy and monitor

11. PRACTICALITIES

	TAWNY OWL	COMMON E
MONITORING	Difficult to find nest sites, but it occupies nest boxes. May require nocturnal monitoring methods. May require permit for monitoring.	Relatively easy to Very conspicuous ar Simple monitori May require permi
HANDLING	Requires ringing permit	Requires ring

BUZZARD

o find nest boxes. and easy to detect. ring methods. nit for monitoring.

nging permit

THANK YOU HI

