

From research to conservation: challenges to secure the future of the Egyptian Vulture (lessons learned from Spain)



**Flyway Action Plan for the Conservation of the Balkan and Central Asian Populations of the Egyptian Vulture
Sofia, Bulgaria July 2015**

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An old relationship that fades



Socotra Island 2009

Why Spain?

European Status (2010)



Griffon

27189

EU Population (pairs)
% Population EU/Europe
% Population Spain/EU
EU population trend
EU Status
Red List Category UICN

99
 94
 Large Increase
 Secure
 Least concern



Cinereous

1889

100
 98
 Large Increase
 Rare
 Near threatened



Egyptian

1900

97
 97
 Large decline
 Endangered
 Endangered



Bearded

162

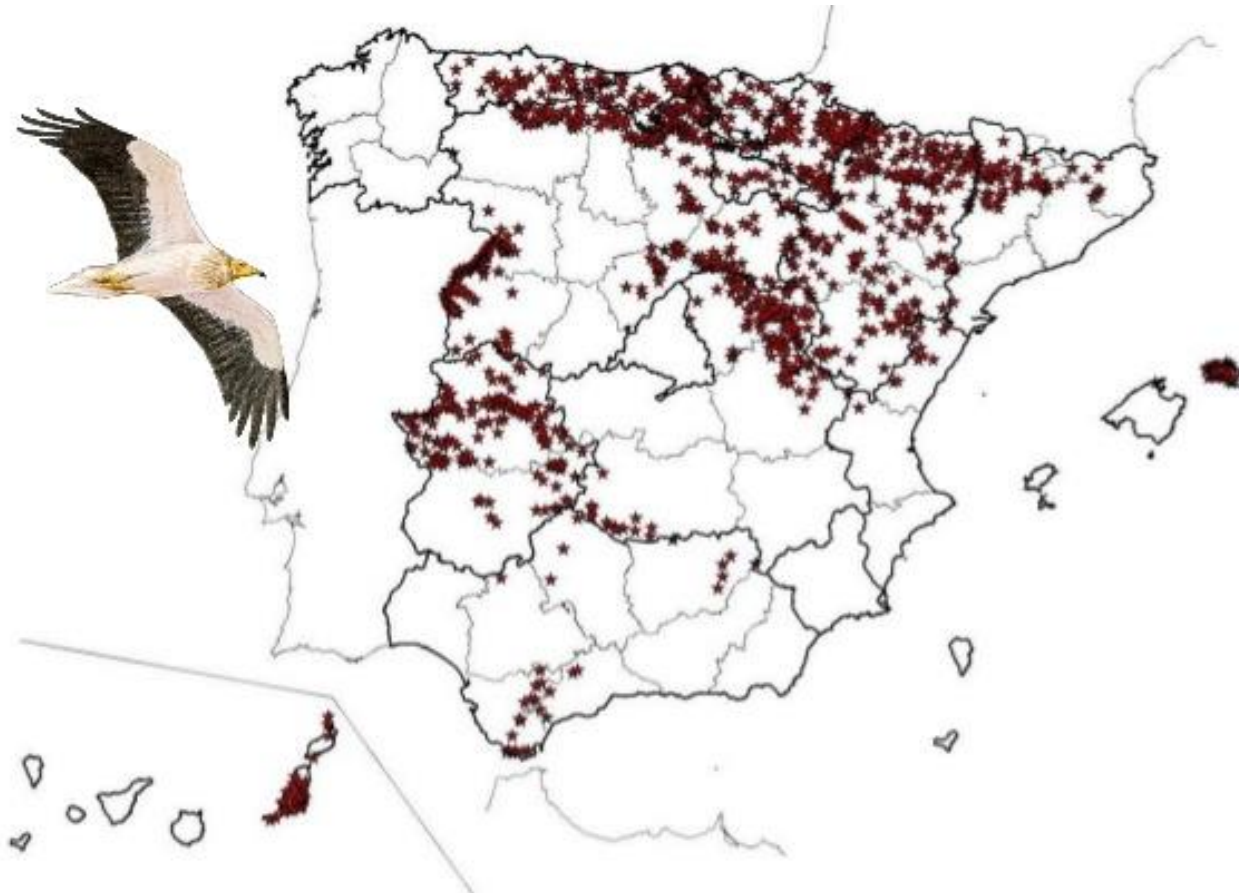
100
 63
 Large increase
 Vulnerable
 Least concern

France	87
Greece	70
Spain	1500-1600
Italy	14
Portugal	84
Bulgaria	40-45
TOTAL EU	1795-1900
Albania	14
Macedonia	30-35
TOTAL NON-EU	44-49

“Lessons” from Spain

- 1 Population trends
- 2 Migration and wintering
- 3 Limiting factors and viability
- 4 Conservation in practice

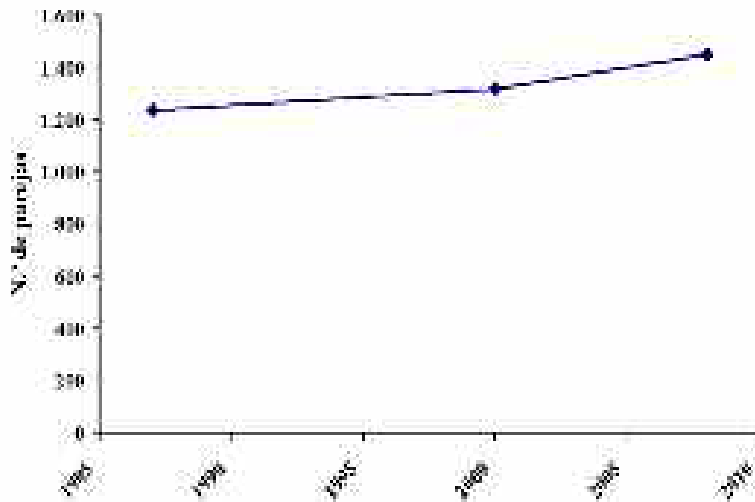
Knowledge in Spain: Population size and trends



Del Moral, J. C. (Ed.) 2009. *El almoche común en España. Población reproductora en 2008 y método de censo*. SEO/BirdLife. Madrid.

Knowledge in Spain:

Global long-term estimations are not very accurate



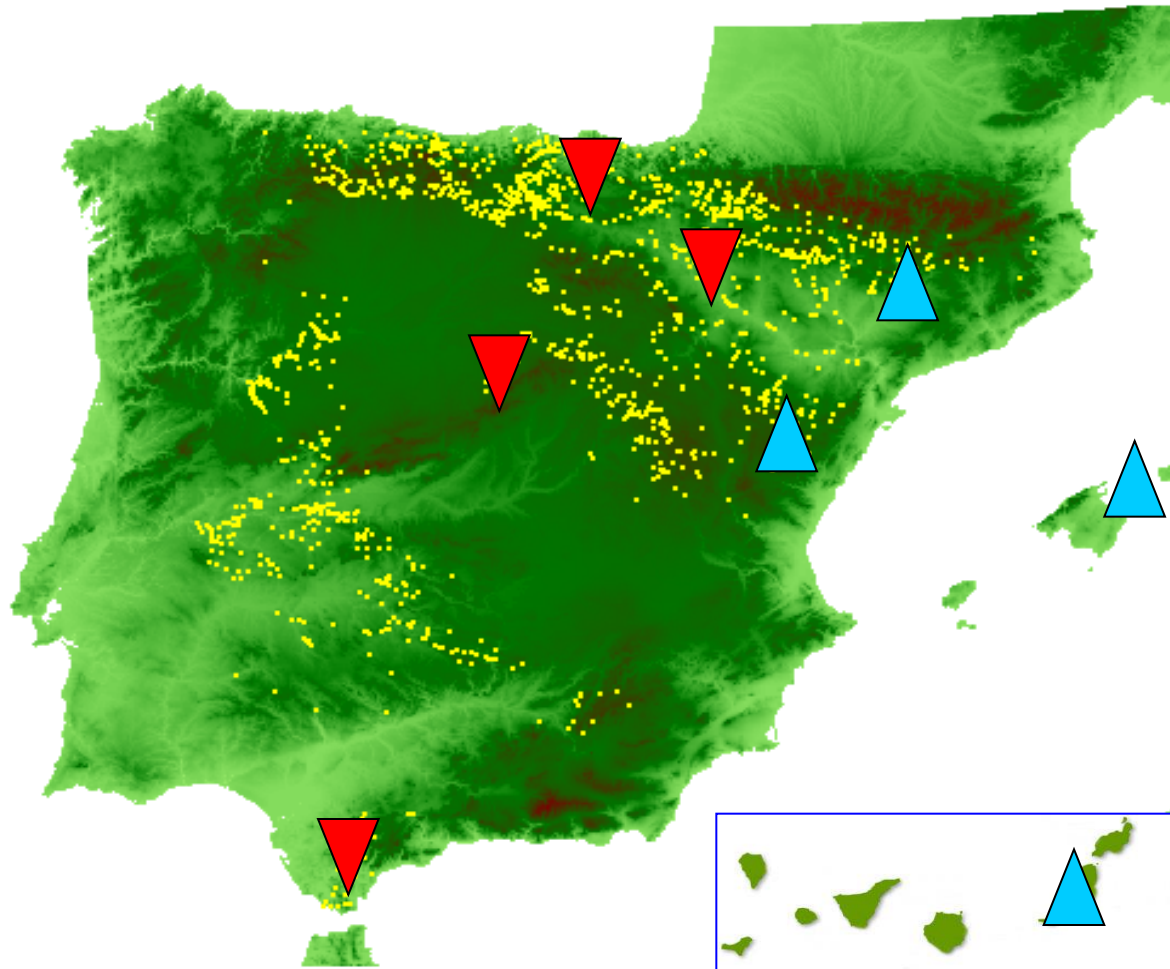
Del Moral (2009) S.E.O.

Irregular quality of the regional coverage

Censusing Egyptian vultures is not an easy task!!

Knowledge in Spain:

Regional long-term studies shed light



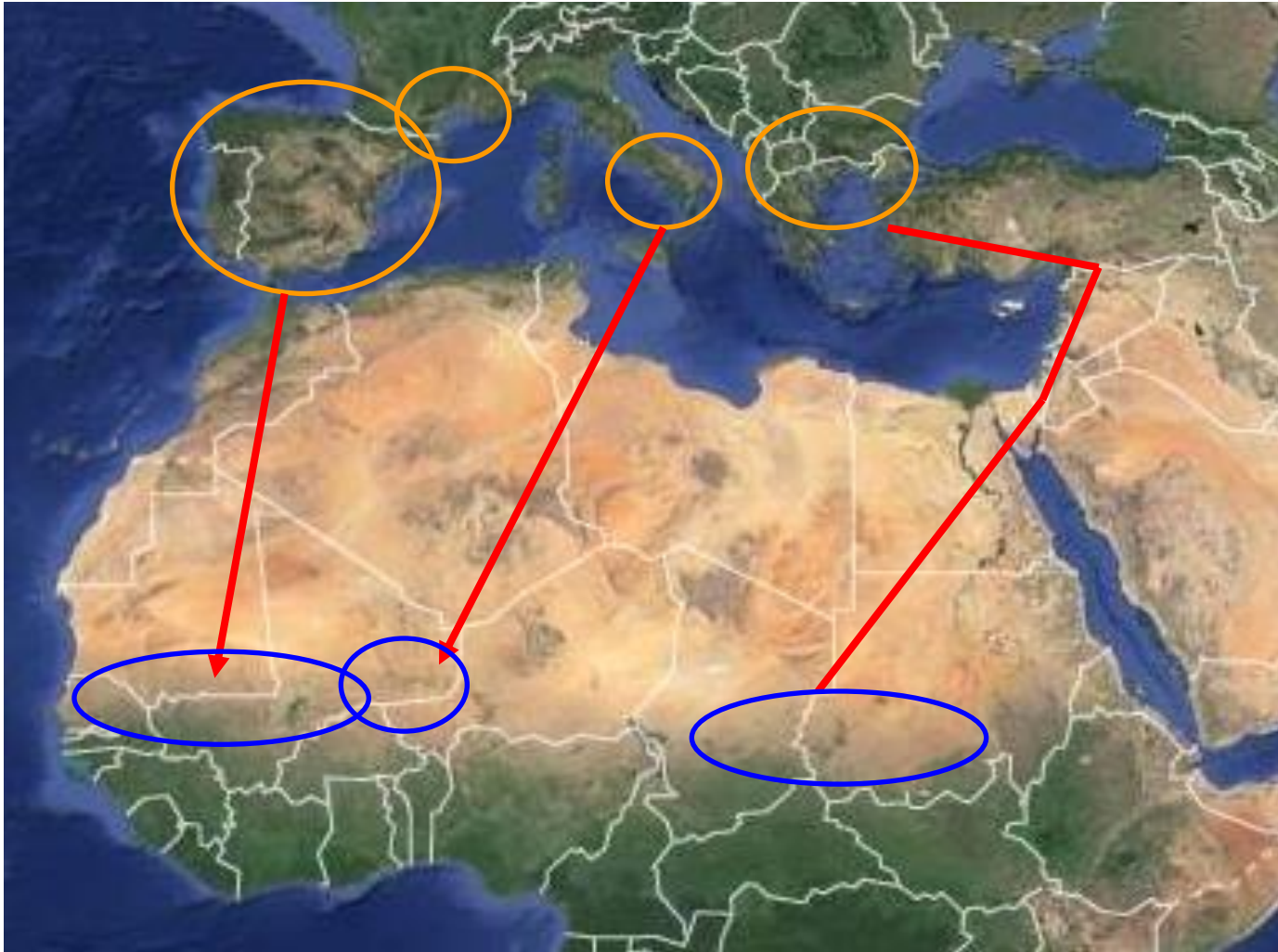
Lesson 1: conclusion

- When dealing with large and unknown populations accurate censuses are difficult
- Long-term studies in pilot areas may shed light
- Applicable to Turkey and Asian countries?

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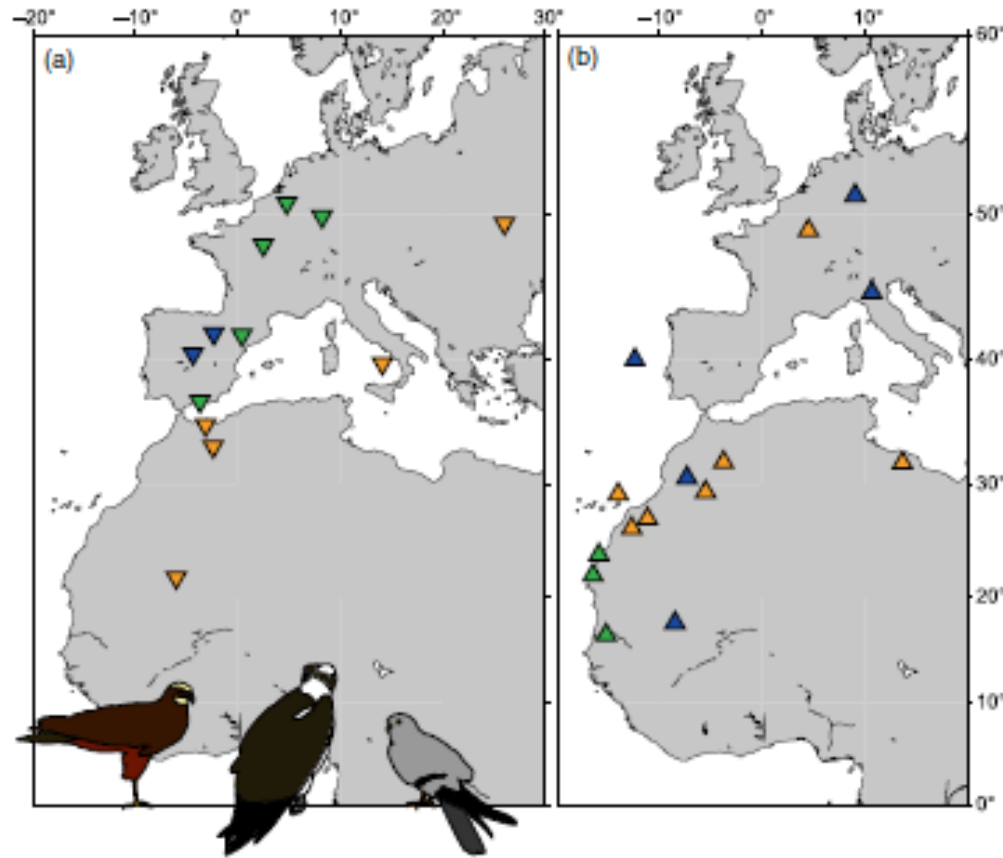
Where the vultures winter?



Where migrants die?



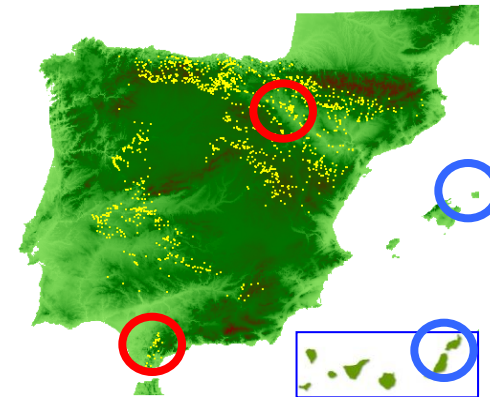
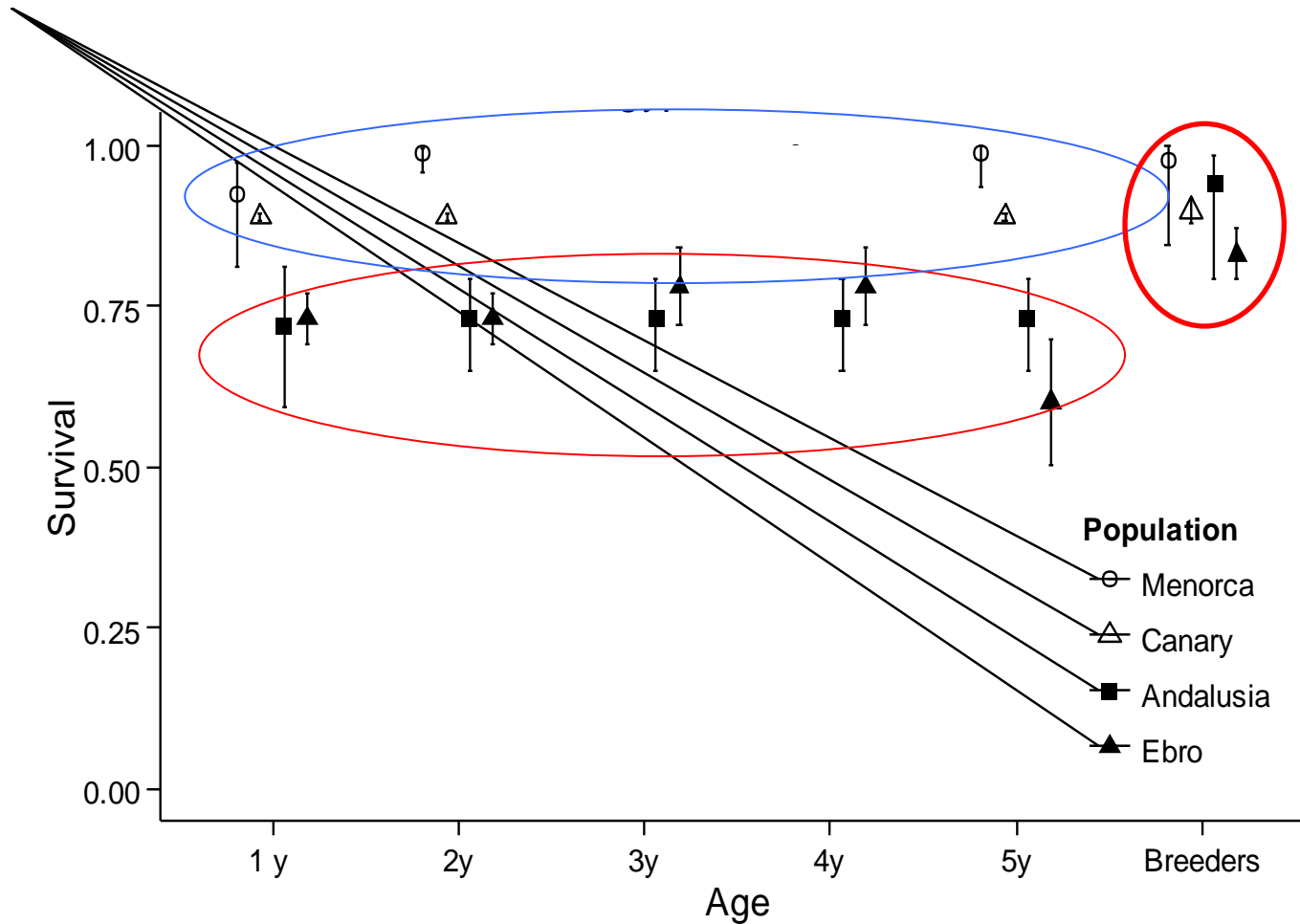
A common fact: high mortality rates during migration



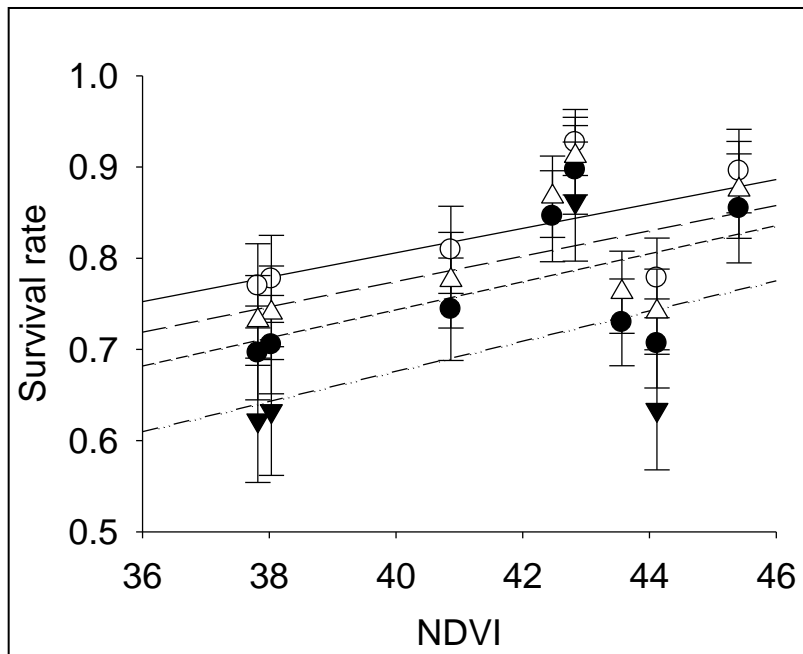
In medium-sized birds of prey 50% of deaths occur during migration, Klaasen et al 2014

What we know?

The cost of being migrant



Conditions in the Sahel are also important



Survival and NDVI in the Sahel are positively related
Grande et al 2008 Oikos

Lesson 2: conclusion

- High mortality during migration is natural, being biased to juveniles
- Sedentary populations have higher survival
- There is not a common factor driving the extinction of all the Iberian populations (as would be expected if mortality in Africa were determinant).
- Local factors are important and perhaps decisive.
- Do not generalize!

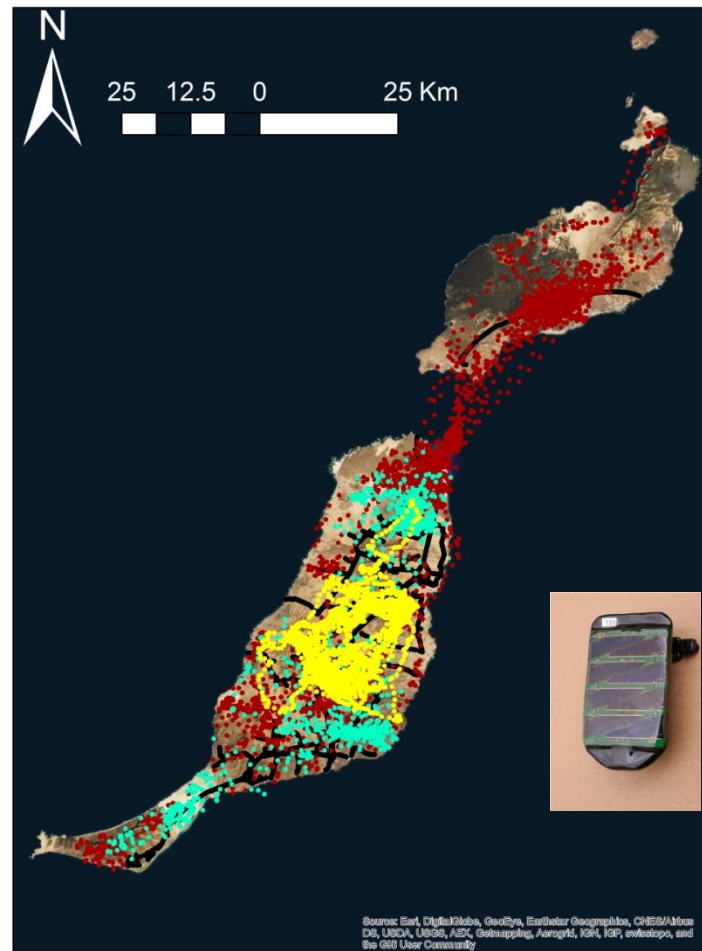
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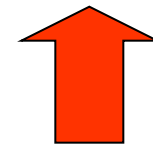
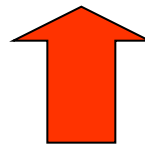
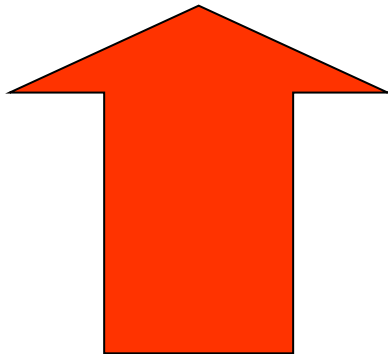
If we want to know
It is necessary to individualize the birds!

Condition *sine qua non*



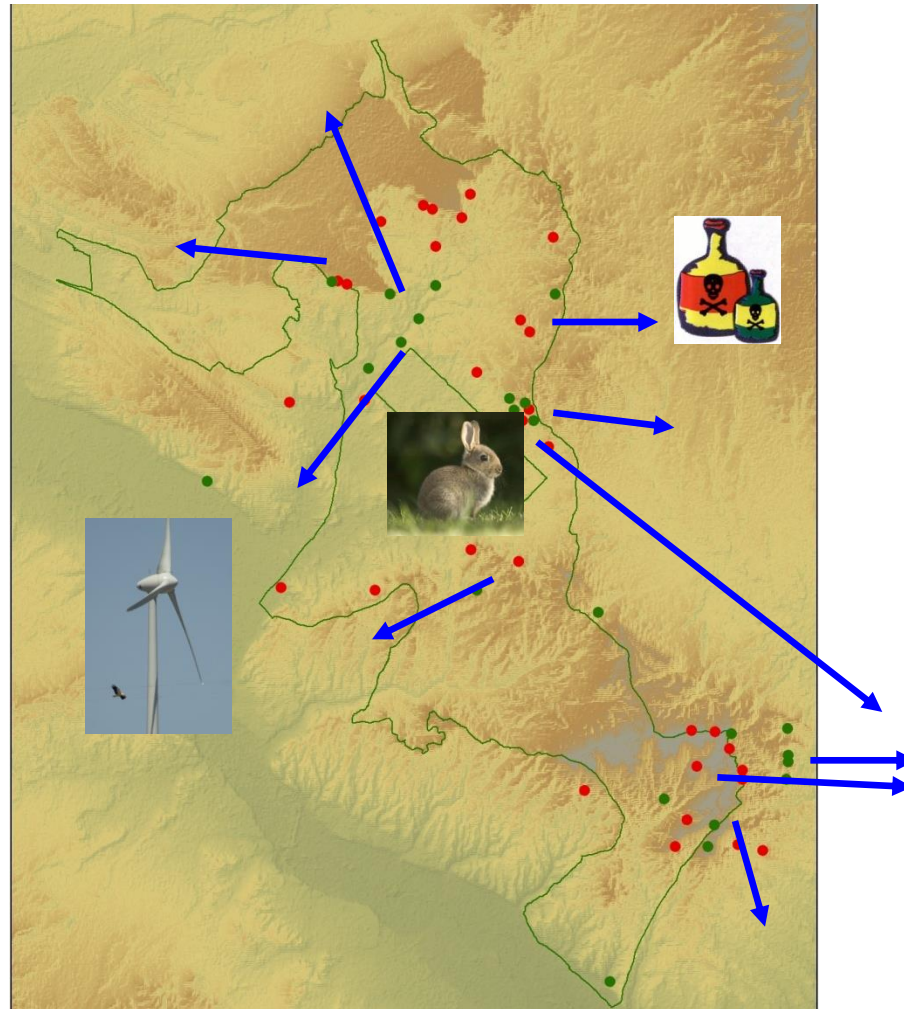
Adult mortality is the main factor driving declines
it is dependent of factors operating at breeding sites

How do Spanish Egyptian vultures die?



Canary islands

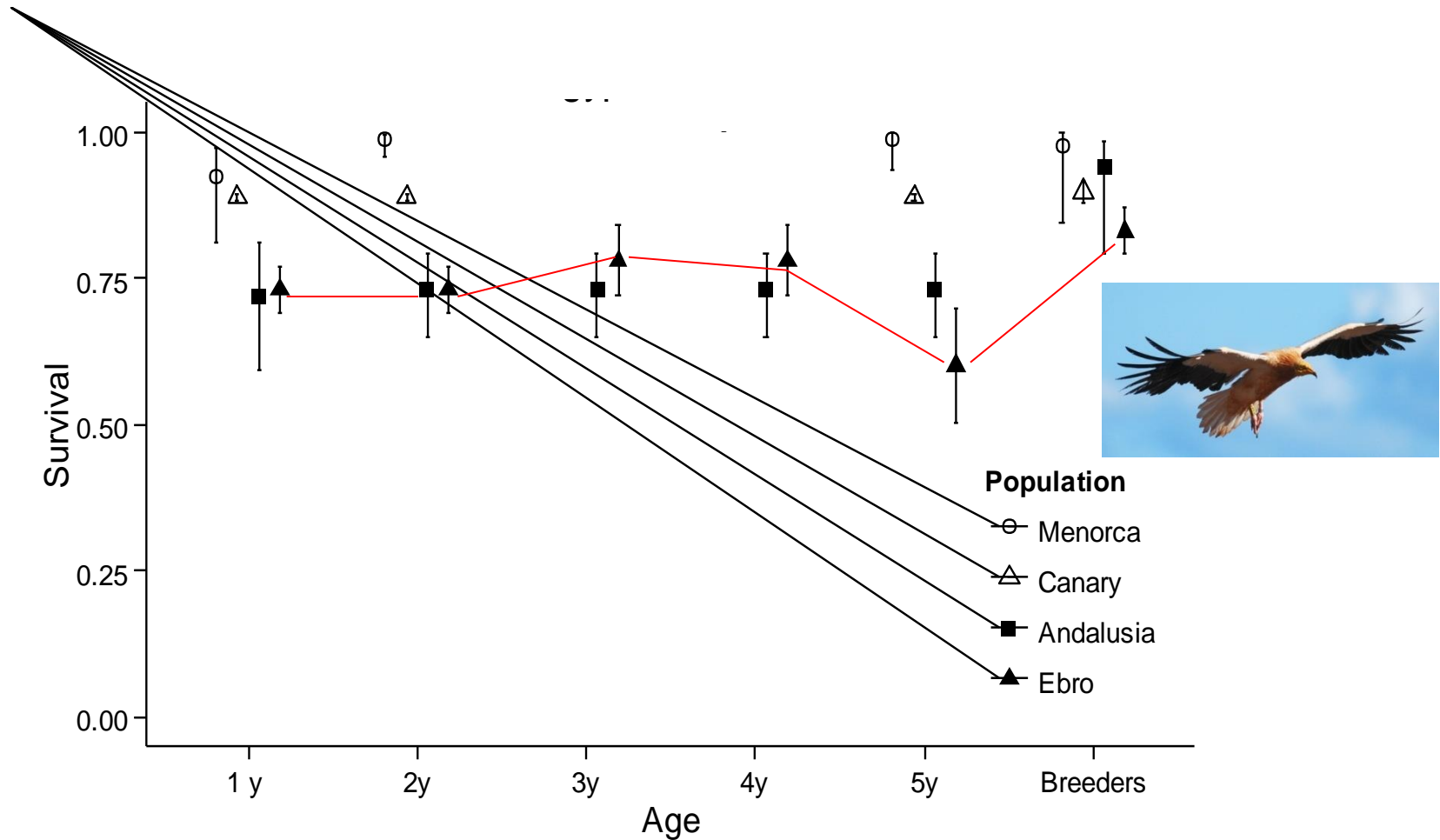
Factors are not independent!



When key prey vanished Egyptian vultures search for food outside protected areas suffering high mortality rates. *Cortes-Avizanda et al In review.*

What we know?

Lower survival at pre-adult stages



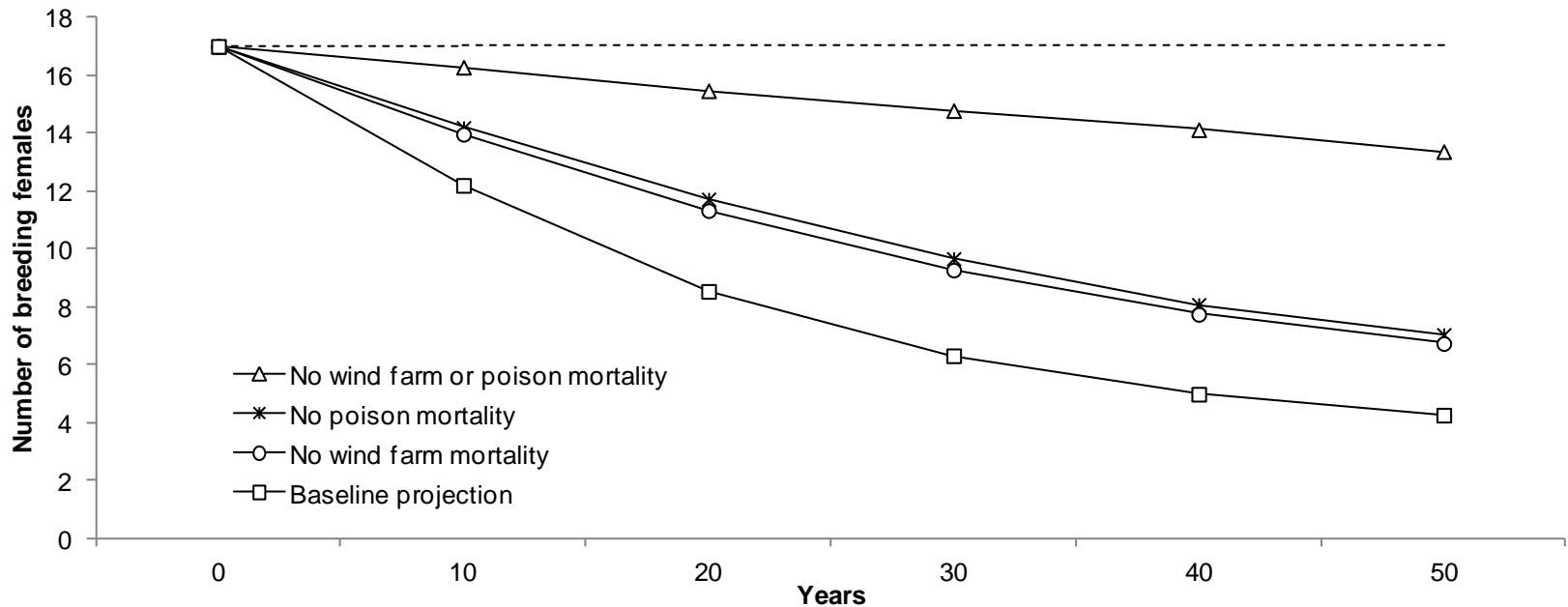
Lesson 3: conclusion

- Main factor driving population dynamics and negative trends is non-natural mortality
- Poisson > wind farms > others
- Factors may be not independent
- Local factors are important (again)
- Prospecting birds are more susceptible to unnatural death

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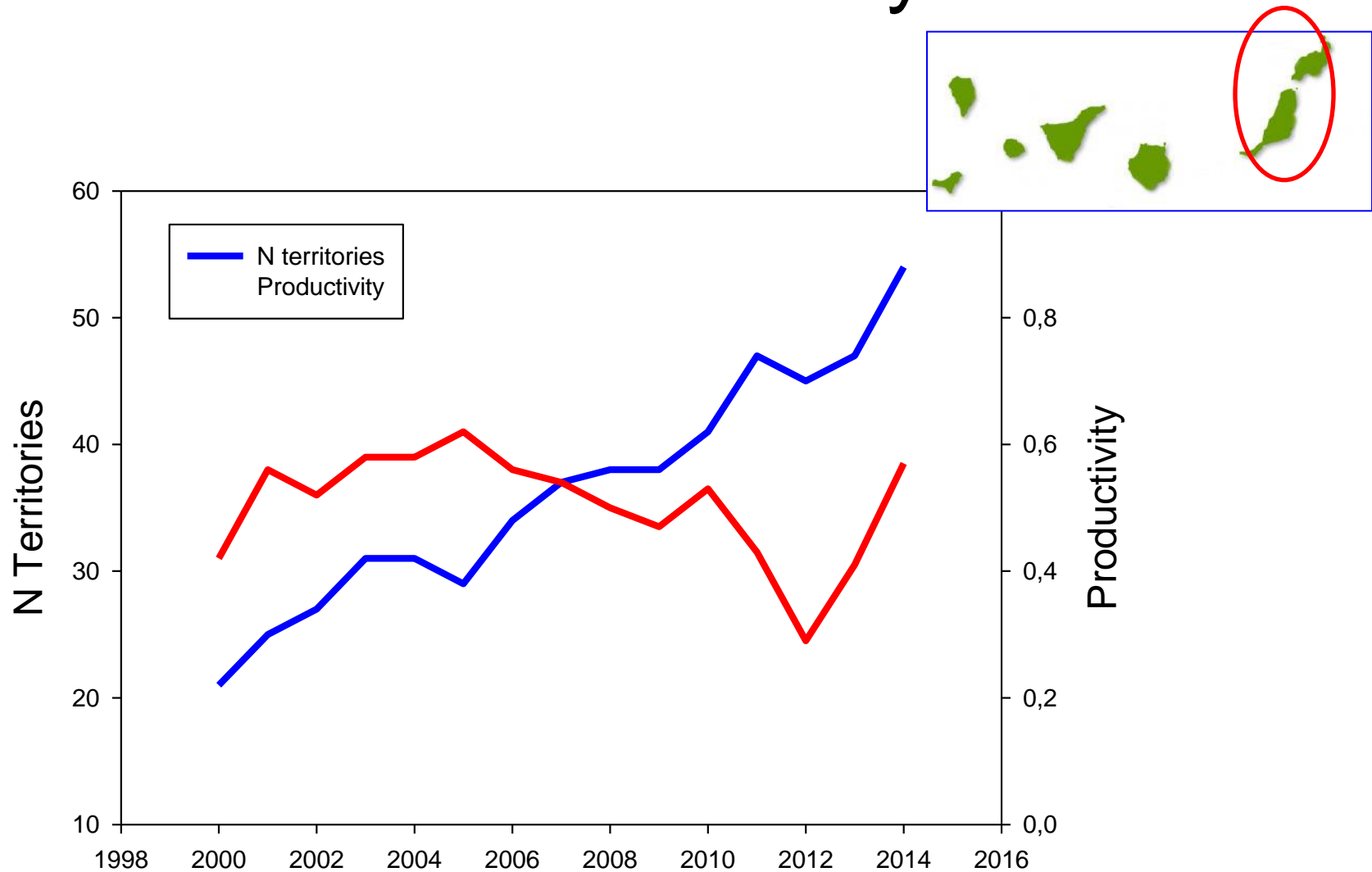
Is it profitable to counteract only one factor? Poisons and windmills in Andalusia



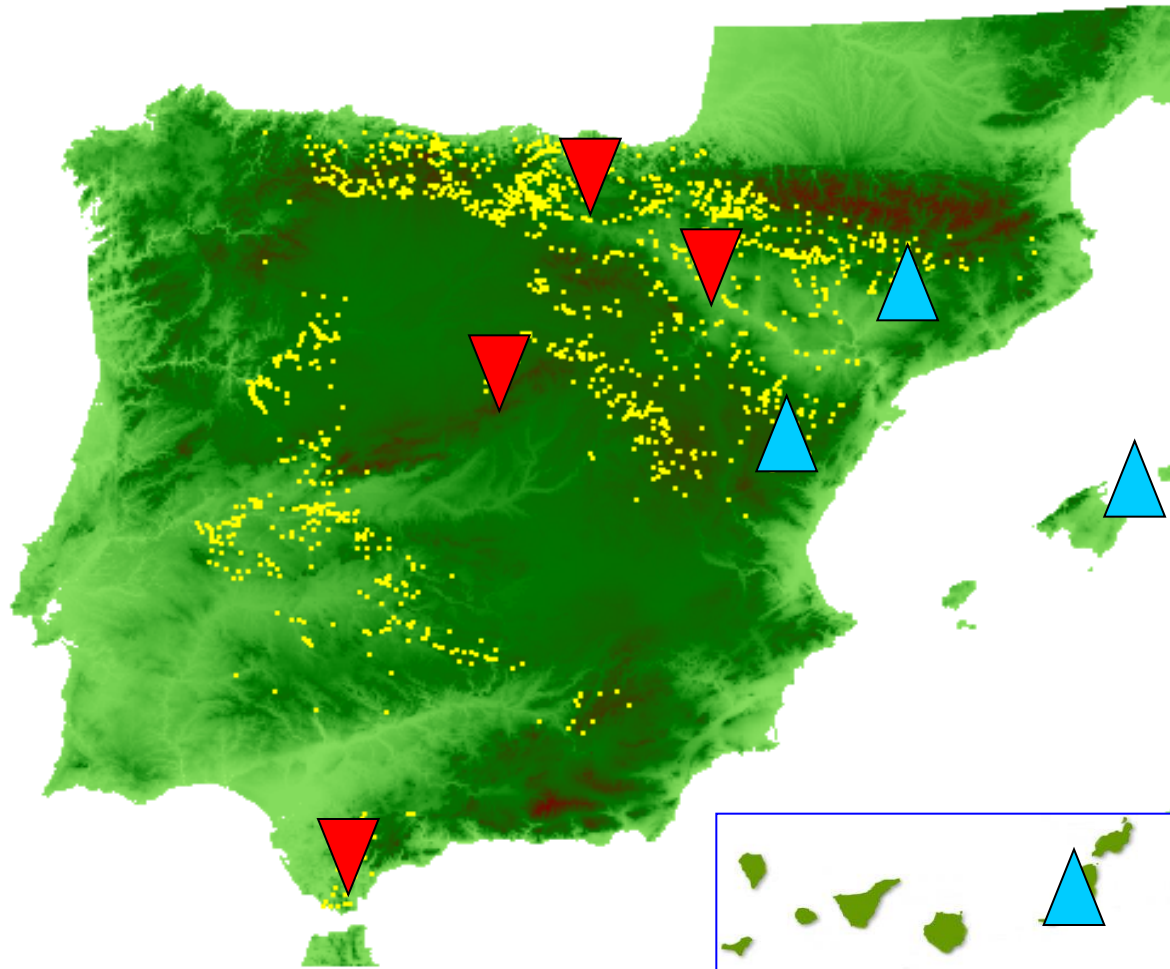
Is it possible to reverse a negative trend? YES!!



Consequences of reducing non-natural mortality



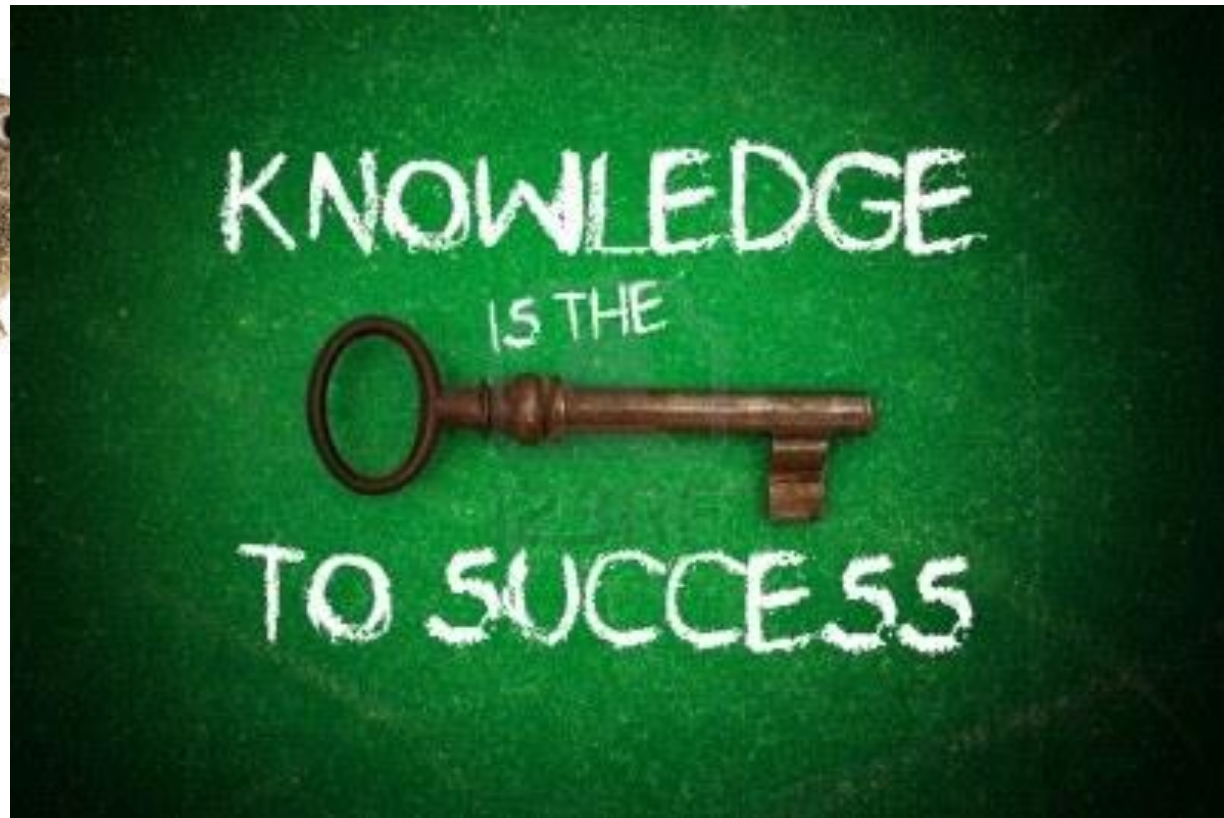
Efforts and success may be nonlinear



Lesson 4: conclusion

- It is possible to reverse negative population trends
- Counteracting synergistic factors is imperative
- Efforts needed depend on local conditions (again focal populations?)
- LIFE projects may be the “inflection point”

The future is never assured in a changing world





Thank you!

Evaluating conservation measures

STOPPING NON-NATURAL MORTALITY

Variable cost

Variable popularity

Very effective to recover populations

SUPPLEMENTARY FEEDING

Cheap and popular

Help to the maintenance of communal roosts and territories

Many negative effects if not aimed to specific objectives

REDUCING DISTURBANCES AT BREEDING

Cheap but unpopular

Help to maintain territories and productivity

Little demographic relevance (but depending on scale)

CAPTIVE BREEDING

Very expensive

High public appeal

Little demographic relevance (but.....)

Summarizing the estate of affaires in Spain

Conservation Target	Activity	+	-
Monitoring	State censuses	Regularly carried out by SEO	Heavily dependent on public funds
	Regional and local	Carried out by regions, Variable regularity	Heavily dependent on public funds
Mitigation of non-natural mortality	Fight against poison	Good results in some regions	Political disinterest in many regions
	Modification of power lines	Good results in many regions	
	Wind farm modifications		Political disinterest, lack of planification
	Lead poisoning	Local initiatives to change of ammunition	Political disinterest
Protection of breeding areas	Declaration of parks and reserves	A large part of ther territory holding EV is protected	Populations living in humanized areas are not benefited
Maintenance of trophic resources	Management of livestock carcasses	New regulations allowing the abandonment of dead animals	Restrictive conditions imposed by administrations
	Availability of other prey	Rabbit populations recover	Loss of landscape diversity
Stablishment of global strategies	Administrative agreements	Regional projects in some cases supported by LIFE-Natura funds	Lack of coordination between the state and regions

New threats?



Rewilding European Landscapes
Cortes-Avizanda et al 2015

Duration_: 20 min_

Title_: From research to conservation: challenges to secure the future of the Egyptian Vulture (lessons learned from Spain)

Task: Inspirational talk that presents the history, current level of conservation and perspectives for EV conservation on the Iberian peninsula, with references to work along the flyway.

Expected outcomes: Participants understand the urgency and complexity of conserving the EV, but are also optimistic that it is possible and achievable with serious investment of targeted efforts.