

# VULTURE STATUS AND CONSERVATION IN SPAIN



**25<sup>th</sup> - 29<sup>th</sup> October 2016**  
**Torrejón el Rubio, Extremadura (Spain)**  
**National Park of Monfragüe**



Rubén Moreno-Opo

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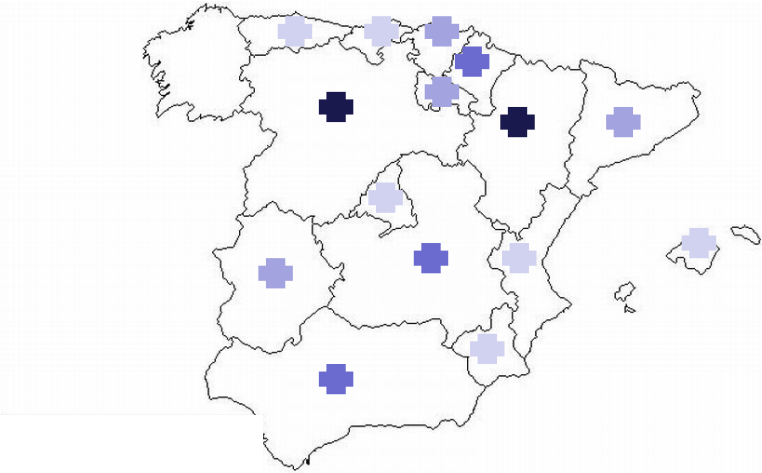
- POPULATION STATUS AND TRENDS
- LEGISLATION
- CONSERVATION ISSUES



*Spain, home of >90% European vultures populations*

Population status and trends

GRIFFON VULTURE

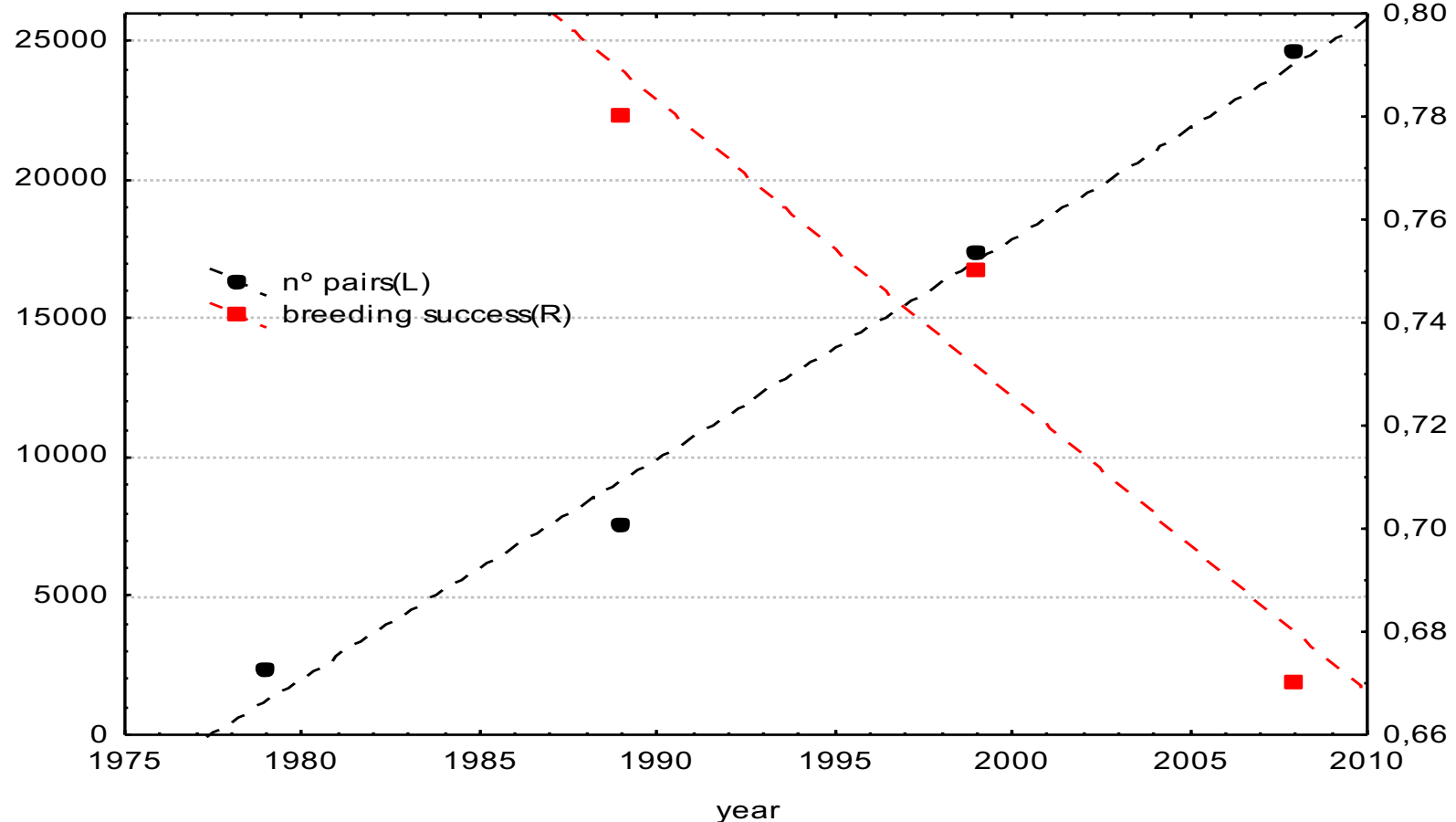


- >5000
- >2000-5000
- >500-2000
- 1-500

No. of pairs: 24,609-25,541 (2008)

No. of colonies: 1,560

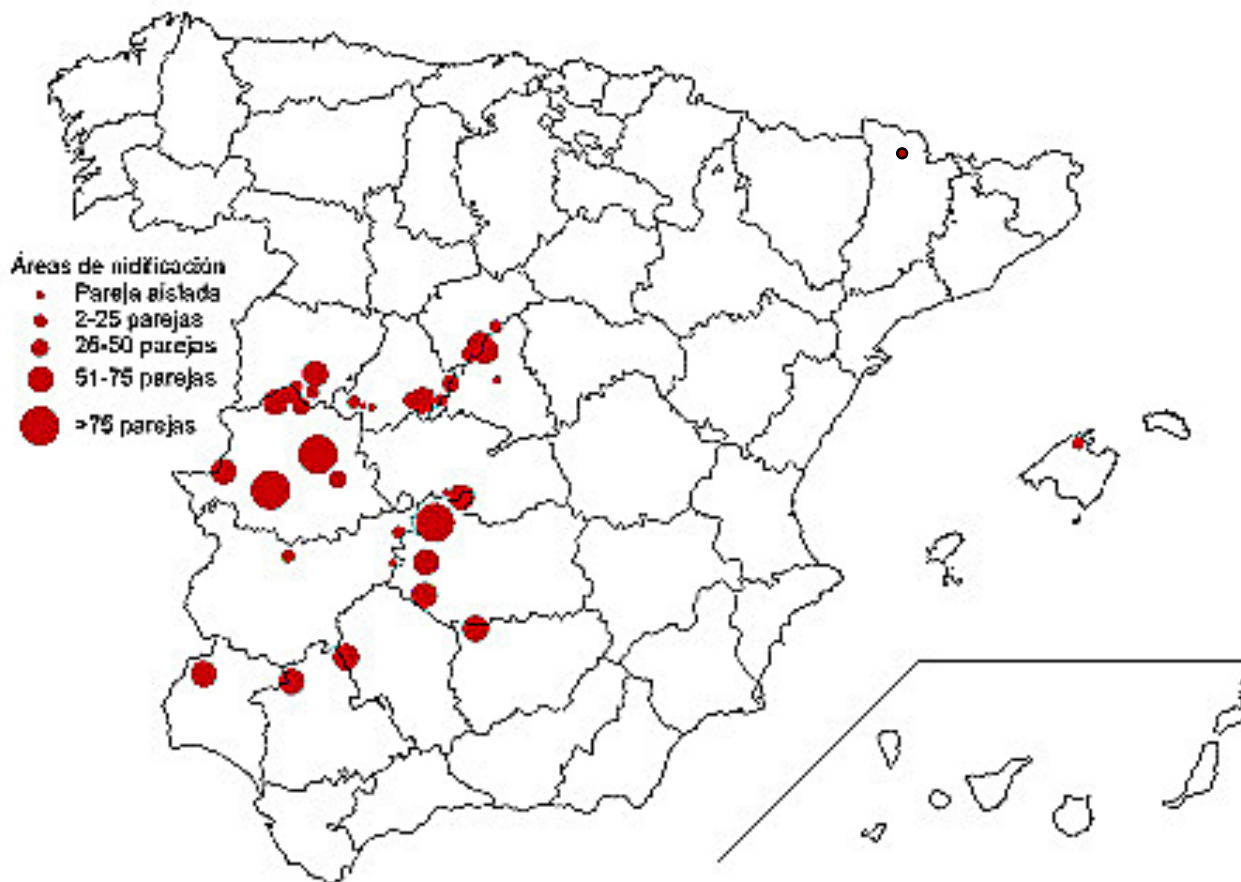
Breeding success: 0.67 (n=12,166)



**Estimated total individuals: 90,000**

**Expected trend: moderate increase**

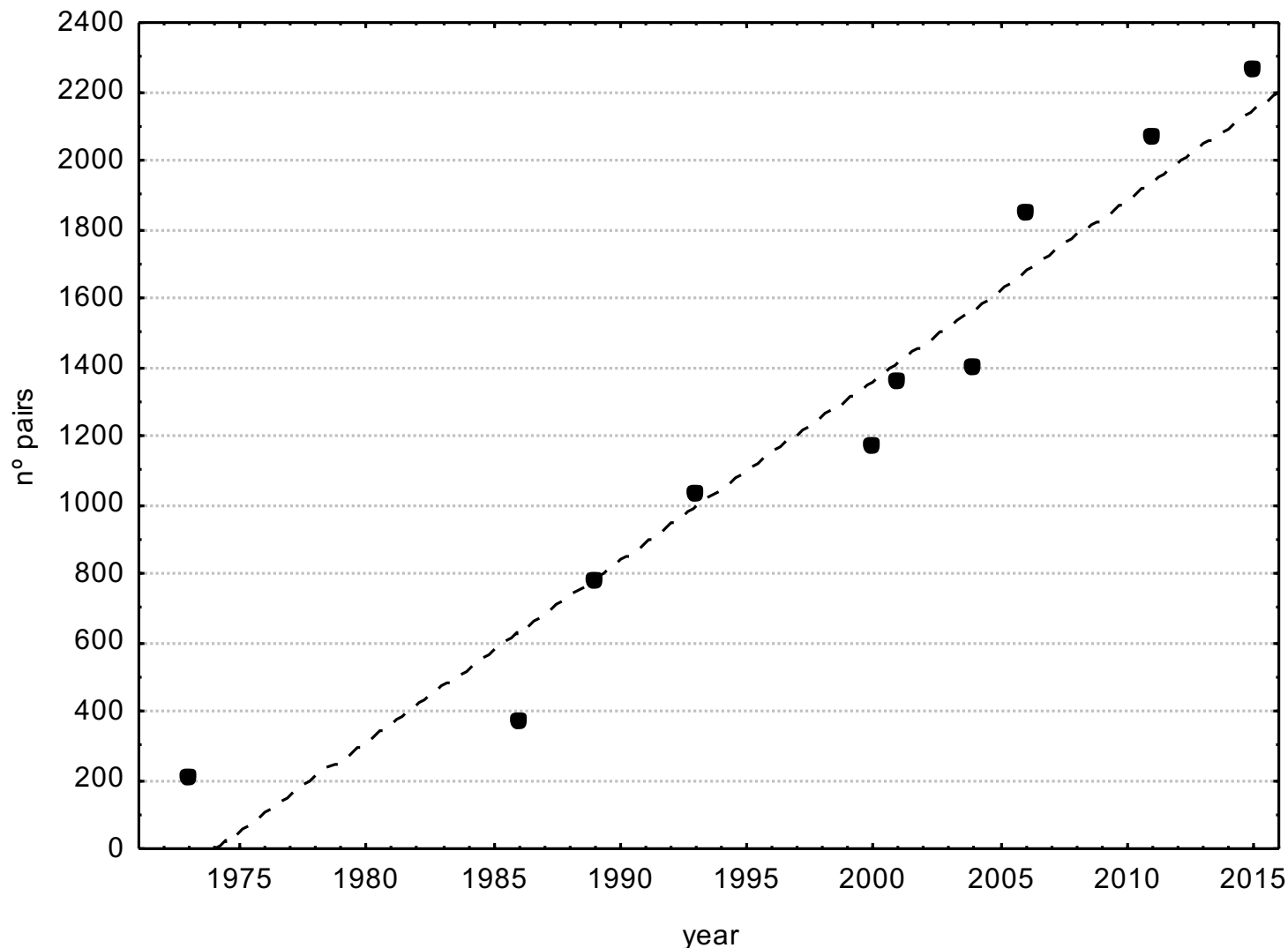
**Movements: long-distance foraging around Spain. 30% juveniles migrate to Africa (Griesinger 1998)**



No. of pairs: 2,068 (2011) - 2,258 (estimated 2015)

No. of colonies: 36. San Pedro (336) > Monfragüe (287) > Cabañeros (214) (72.5% *Quercus* vs. 27.5% *Pinus*)

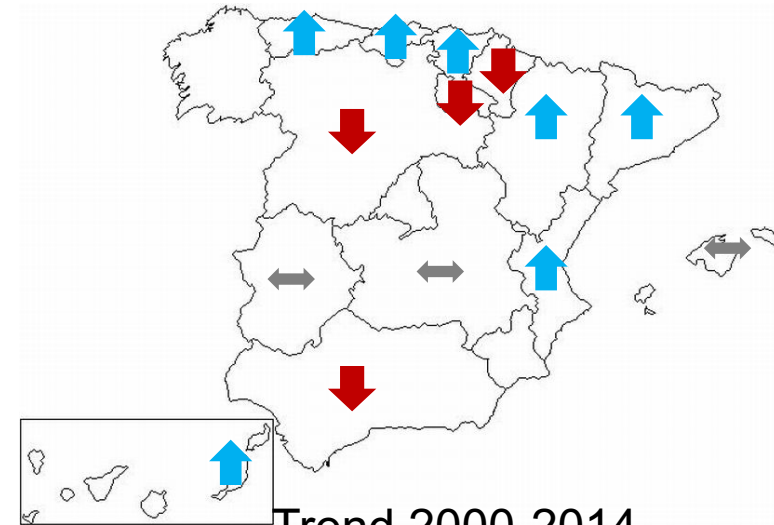
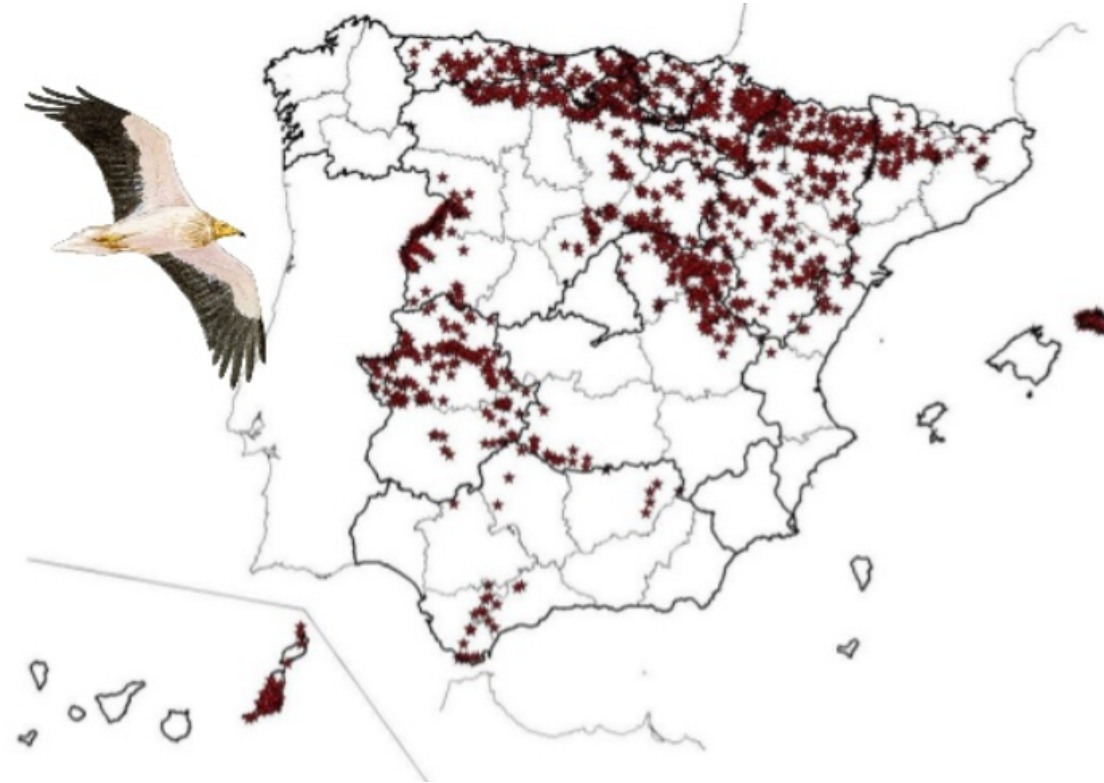
Breeding success: 0.58 (n=283)



**Estimated total individuals: 7,000**

**Expected trend: moderate increase, mainly expanding existing colonies**

**Movements: Foraging-dispersal in south and western Iberia. Non long-distance migrant**



Trend 2000-2014

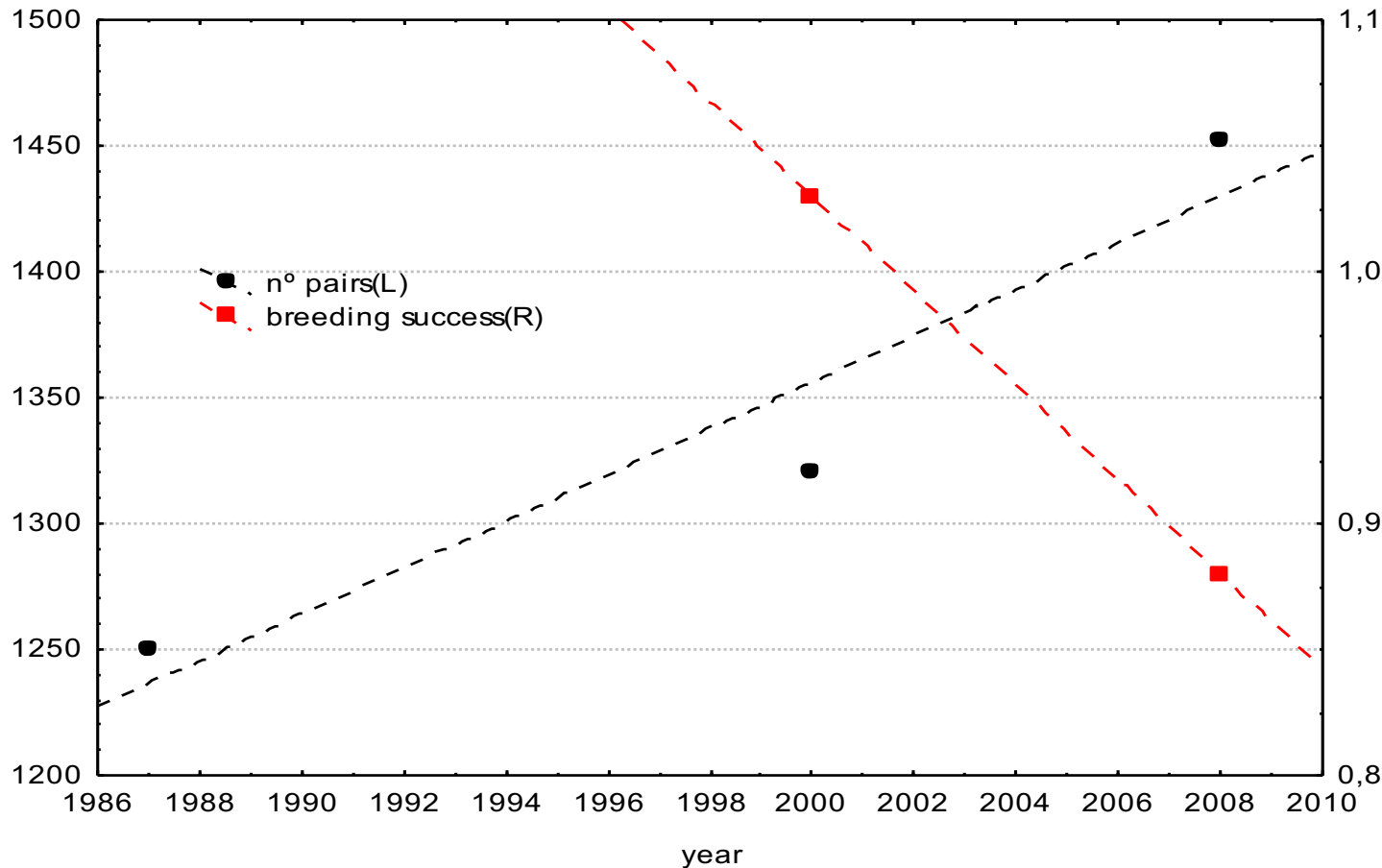
- ↑ positive
- ↓ negative
- ↔ stable/unknown

**No. of pairs: 1,452- 1,556 (2008)**

**Breeding success: 0.88 (n=486)**

# Population status and trends

# EGYPTIAN VULTURE

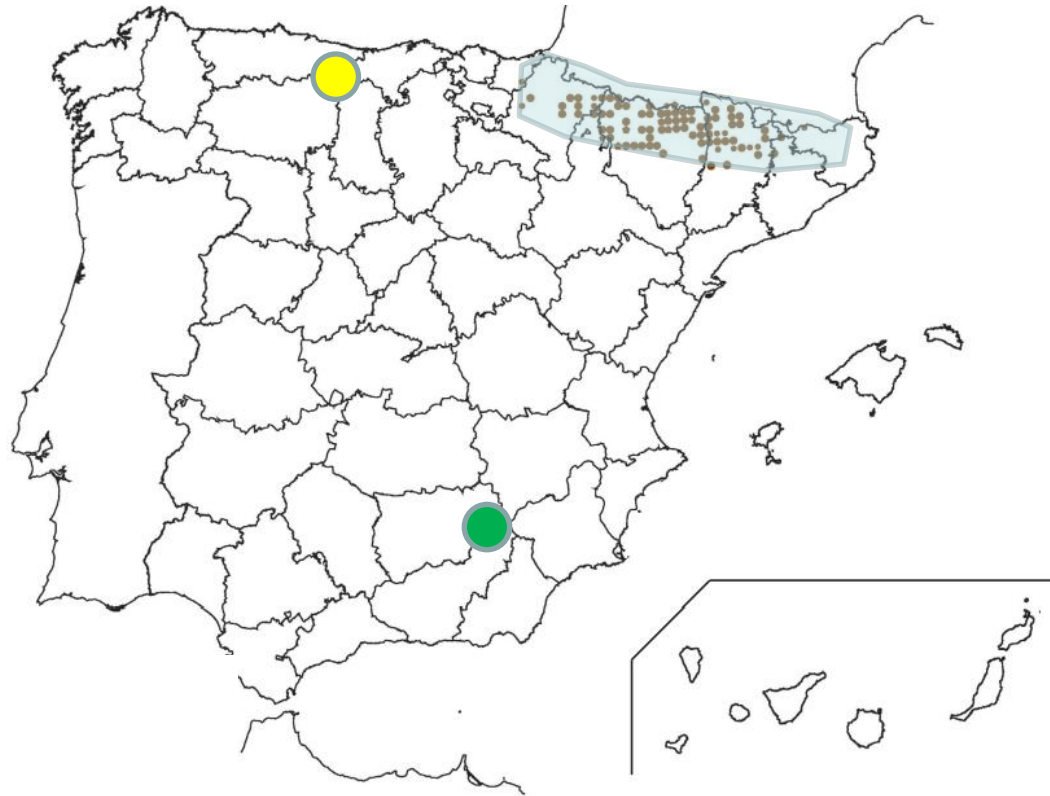


**Estimated individuals: 3,000-4,000. Only a few hundred non-adults reach Iberia and stay close to communal roosts**

**Expected trend: stable-decrease?**

**Movements: Long-distance migrant to Sahelian wintering grounds (western Africa) but increasing numbers overwintering in western Spain**





- Native population (Pyrenees)
- Reintroduced currently breeding
- Reintroduced

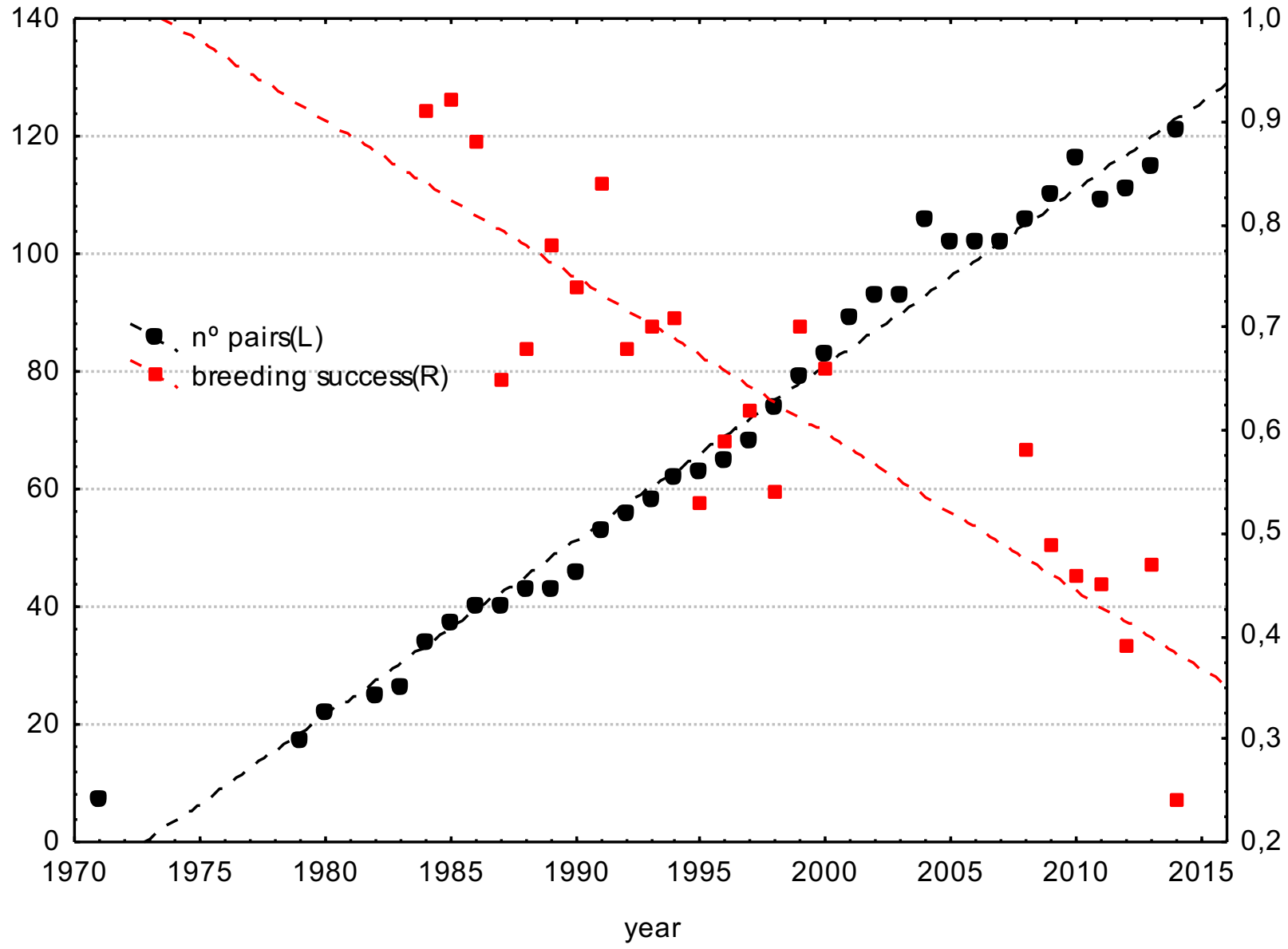
**No. breeding units: 121-134 (2014)- 61% of Europe**

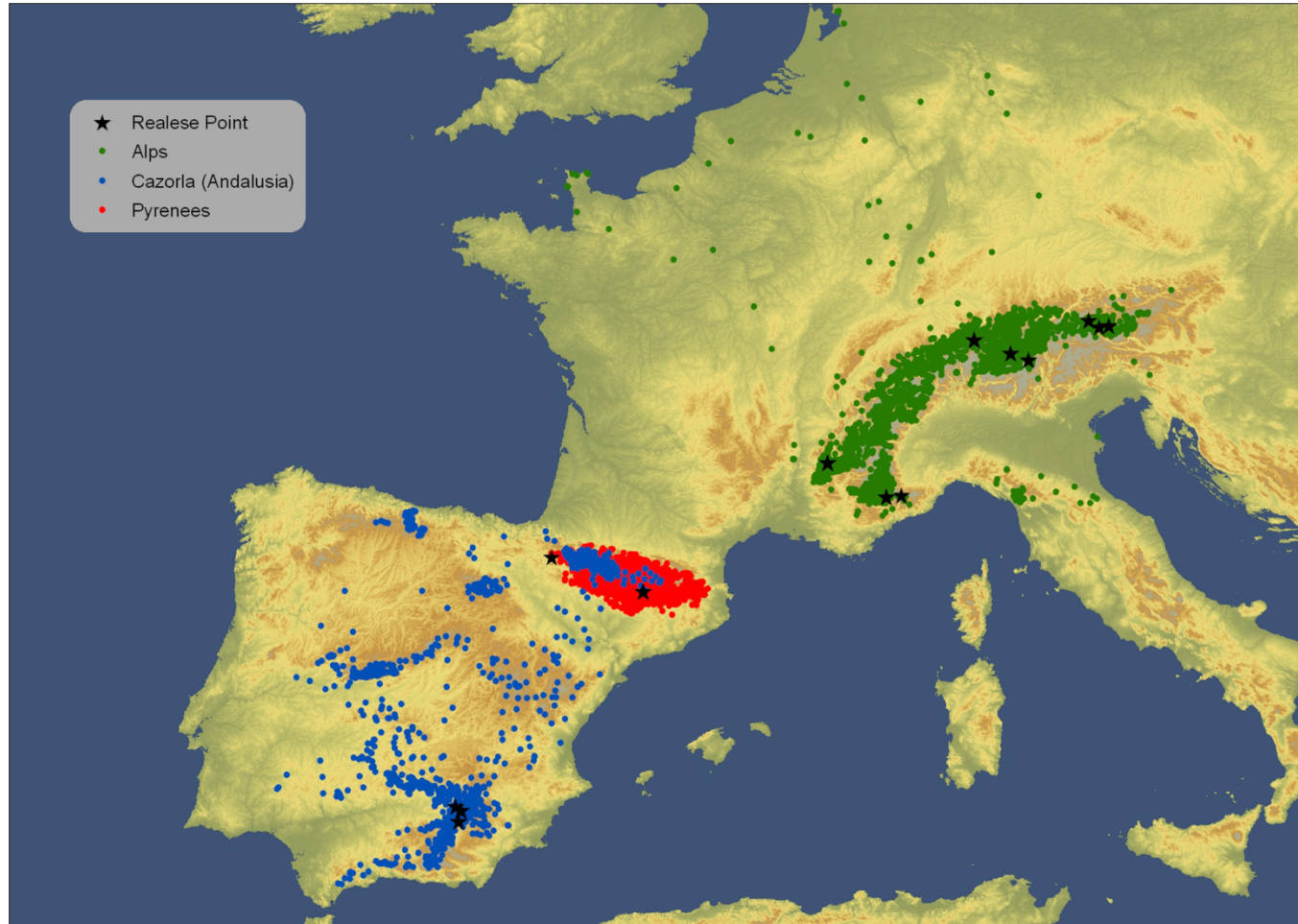
**Breeding success: 0.24 (n=121)**

**Polygynous/polyandrous trios: c. 20-30%**

# Population status and trends

# BEARDED VULTURE





Margalida et al. 2013. Plos ONE

**Estimated individuals: 600**




**Expected trend: slow increase. Difficulty in increasing breeding range**

**Movements: Significant differences in dispersal behaviour between native (Pyrenean) and reintroduced non-breeders (Alps and Cazorla)**

## All species especially protected (National law)

### Three included in Spanish Catalogue of Endangered Species: mandatory regional recovery plans

- Habitat protection: critical areas regulating human activities
- Implementation of active measures against threats
- Monitoring and awareness

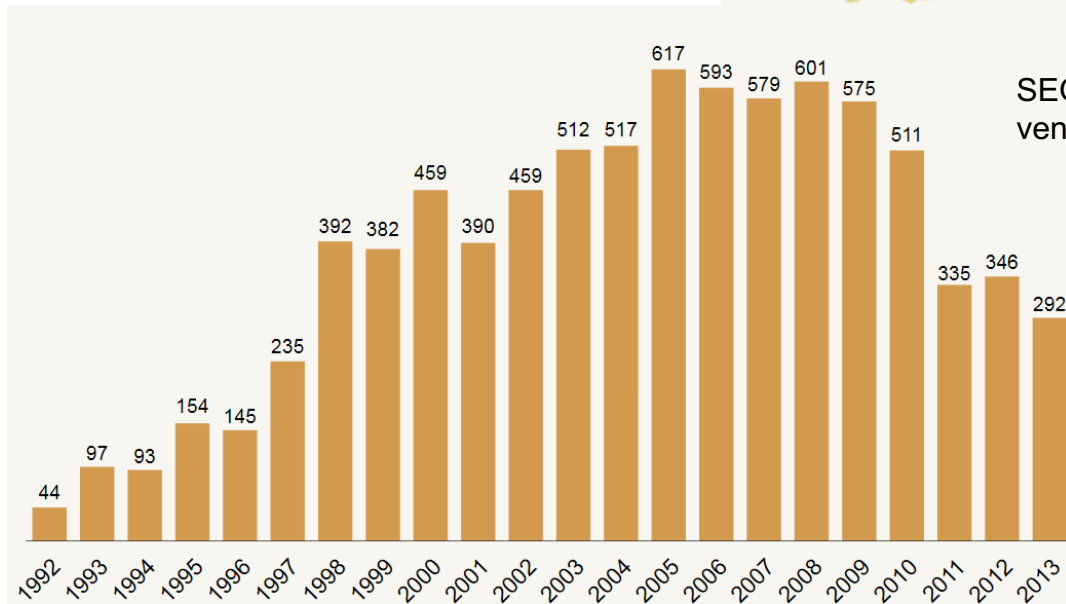
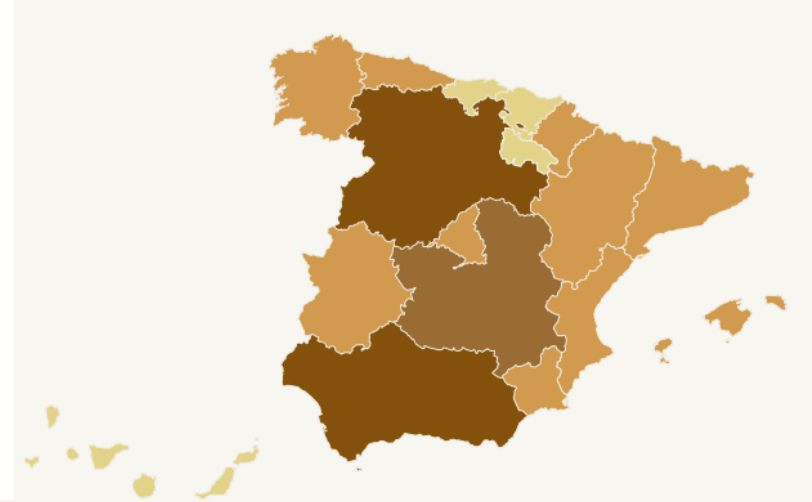
Species			
<i>Category</i>	Endangered	Vulnerable + Endangered (Canary Islands)	Vulnerable
<i>Regions with plans</i>	5	4	4
<i>% regions from total with presence</i>	100%	28,5%	66,6%

# POISONING

Widely distributed in Spain

Especially impactful  
in Egyptian, Bearded and Cinereous

Lack of national coordinated  
databases (but NGOs)



SEO/BirdLife & WWF. 2016. El veneno en España 1992-2013.

# POISONING

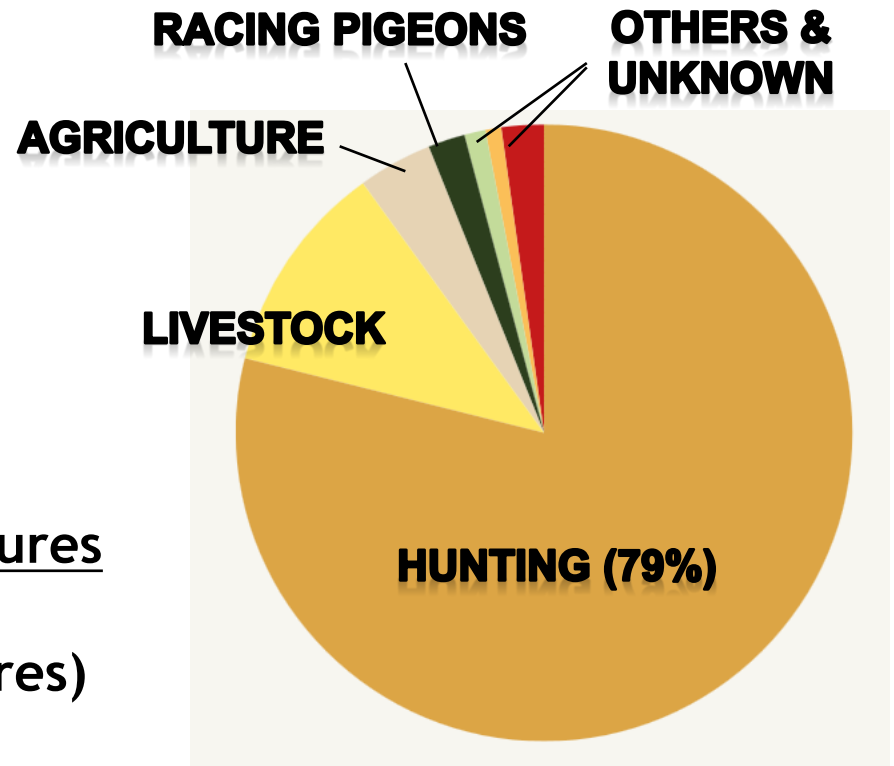


## Impact per species (1992-2013):

- Bearded vulture: 35
- Egyptian vulture: 305
- Cinereous vulture: 609
- Griffon vulture: 1656

## Drivers:

Predator control unintended for vultures  
(but livestock management increasing and also targeted to vultures)

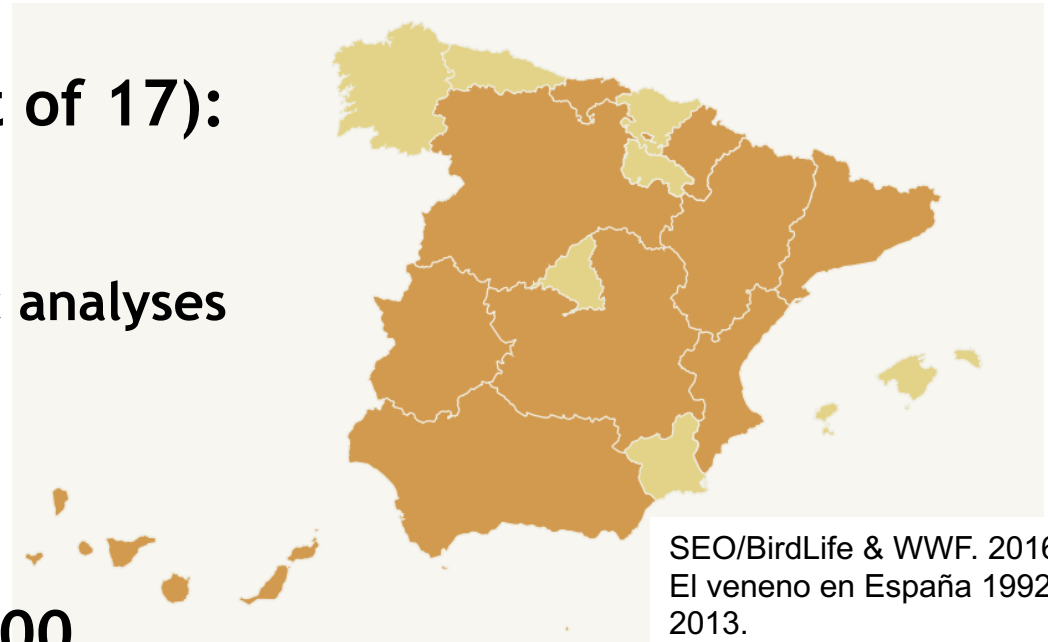


# POISONING



## Implemented measures:

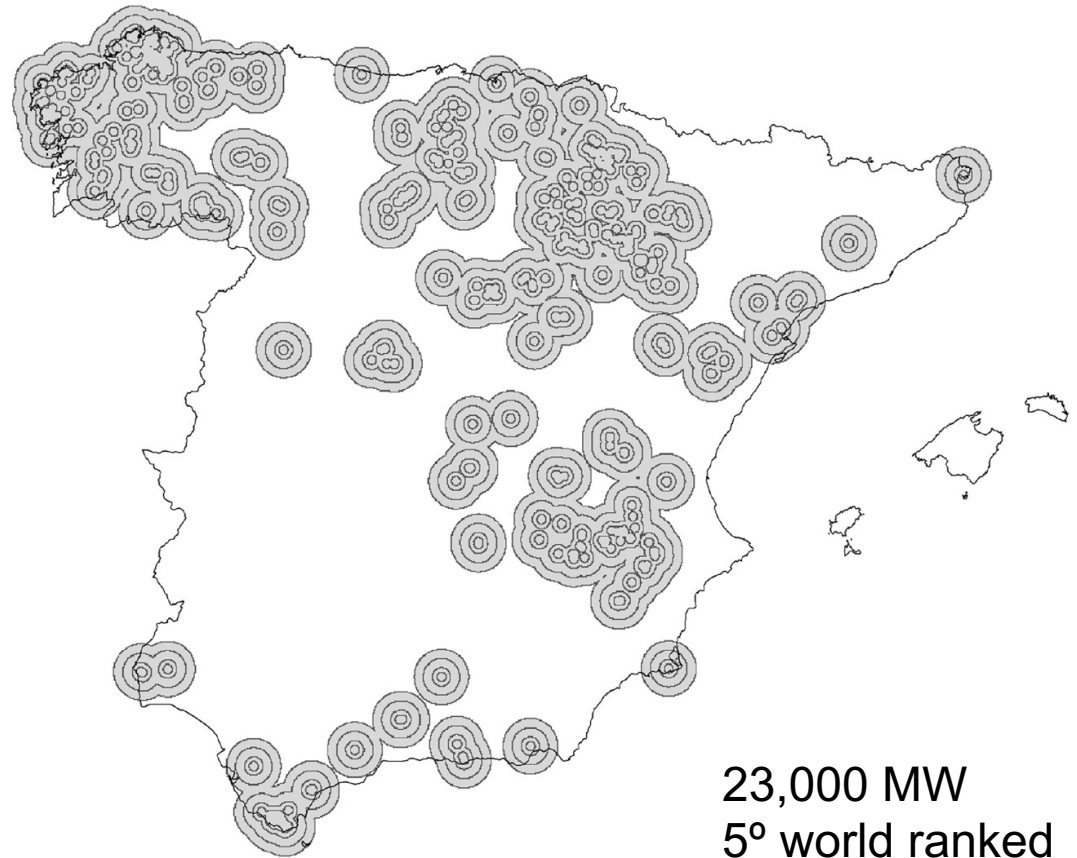
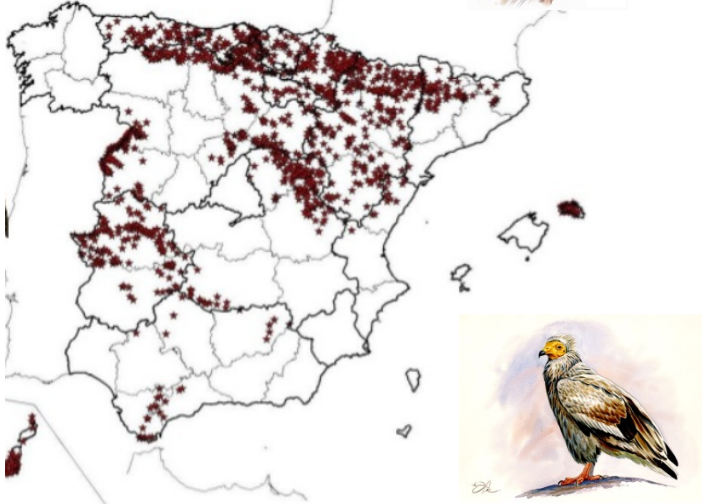
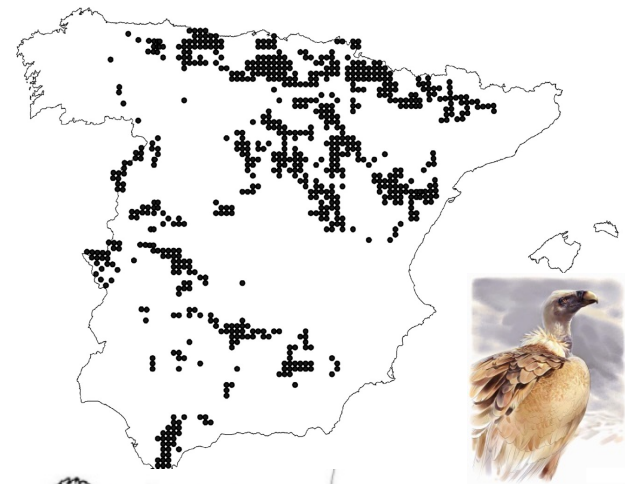
- **Strict legal framework: Penal Code, Biodiversity and Natural Heritage Act, National Strategy (2004)**
- **Regional plans legally binding (10 out of 17):**
  - **Canine patrols (6)**
  - **Monitoring, toxicologic analyses and surveillance**
  - **Alternative measures to predator control**
- **Judgement: approx. 200**
- **Key role of NGOs (LIFE+ projects, *Antidoto* network, awareness)**



SEO/BirdLife & WWF. 2016.  
El veneno en España 1992-2013.

# WIND FARMS

Wind farm development increasing in northern Spain and key areas (Strait of Gibraltar)



23,000 MW  
5° world ranked

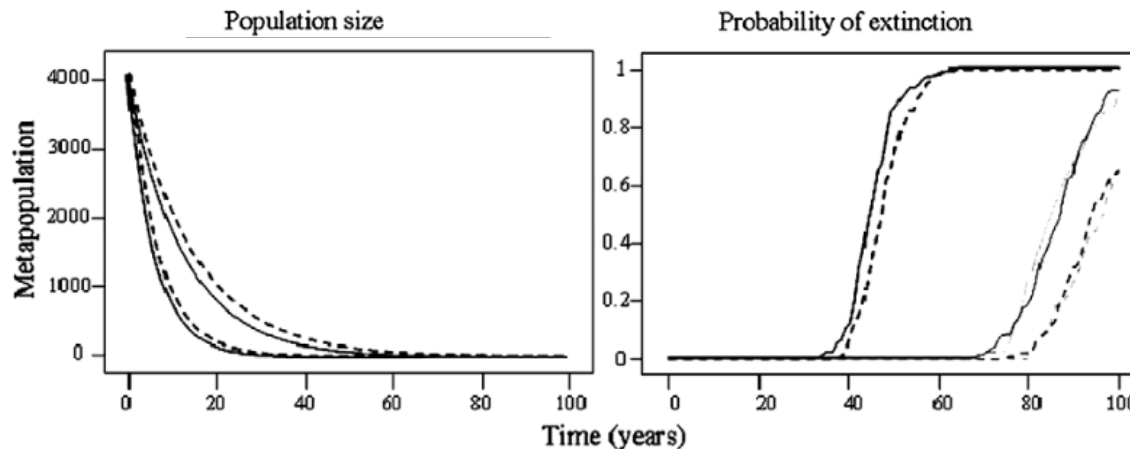


# WIND FARMS

Scarce of databases, not global nationally

Estimates:

- **Griffon vulture: 600-1000 deaths/year**
  - Strait Gibraltar: 110 d/y (De Lucas et al. 2012. Biol. Conserv.)
  - Northeastern Spain: 108 d/y (Camiña. 2007. Manual Buitre Negro)
  - Navarra (1 wind farm, Salajones): 232 d/y (Tellería. 2009. Bird Cons. Int.)
- **Egyptian vulture:**



Carrete et al. 2009.  
Biol. Conser v.



# FOOD AVAILABILITY ALTERATION



Dependence on human management of food sources

Increase of vulture restaurants in Spain (1980-2000) →

Population increase of griffon (Tellería & Parra. 2004. Bird Conserv. Int.)

Regulation 1774/2002: reduction 80% (Margalida et al. 2014. Ecol. Appl.) → detrimental effects:



- Dietary shifts (GV)
- Changes in behavioural ecology
- Demographic parameters
- Increase of greenhouse emissions
- Interactions with alive livestock

# FOOD AVAILABILITY ALTERATION



11  
ts



# **FOOD AVAILABILITY ALTERATION**



## Implemented measures

### - National legislation:

1. Supplementary feeding sites: 339 authorized (2015)
2. Carcass provision in extensive farms within Special Protection Areas (ZPAEN): 7,009 farms authorized (2015)

**Biomass required by scavenger species: 14.1 TM**

**Provided biomass: approx. 7.8 TM (55.3%)**



# **FOOD AVAILABILITY ALTERATION**



# FOOD AVAILABILITY ALTERATION



## Other specific management:

- **Changes in SFS for Bearded vulture: increase expansion of breeding range** (Margalida et al. 2013. Plos ONE)
- **Use of carrion from hunted ungulates in extensive areas: reconcile veterinary requirements (TB) and vulture preferences during winter** (Margalida & Moleón 2016. Frontiers Ecol. Envir.)
- **Attraction of Egyptian vultures to communal roosts to replace lost members of breeding pairs** (Grande et al. 2009. Munibe)



# DICLOFENAC



## 1. Approval in 2013 by Spanish Medicines Agency

First trial to withdraw the authorization

## 2. Release of a risk assessment in Spain (2014): mortality of 15-39 griffon vultures/year if farmers administer the drug correctly

## 3. Discussion at EU level:

- EMA assessment (dec. 2014)
- European Commission (2015): implementation of monitoring & awareness program by States

## 4. Monitoring of the impact:

- Birds admitted to rescue centers
- Analyses of pig carcasses provided to SFS (5 regions)



## **OTHERS**

### **1. Lead intoxication**

- **Especially worrying for Bearded and Egyptian** (Hernández & Margalida 2009. Env. Res; Gangoso et al. 2009. Env. Pollut.)
- **Next step: substitution of lead bullets to aluminium in big game**

### **2. Electrocution and collision in power lines: approx. 28M€ invested retrofitting during 2009-2015**

### **3. Disturbances during breeding season in critical areas**

### **4. Reintroduction projects: BV in Cazorla and Picos (others coming?), CV in Pyrenees and Sistema Ibérico**

### **5. International cooperation: Portugal**

- **Griffon vulture: France, Italy, Bulgaria, Israel... others interested?**
- **Cinereous vulture: France, Bulgaria**



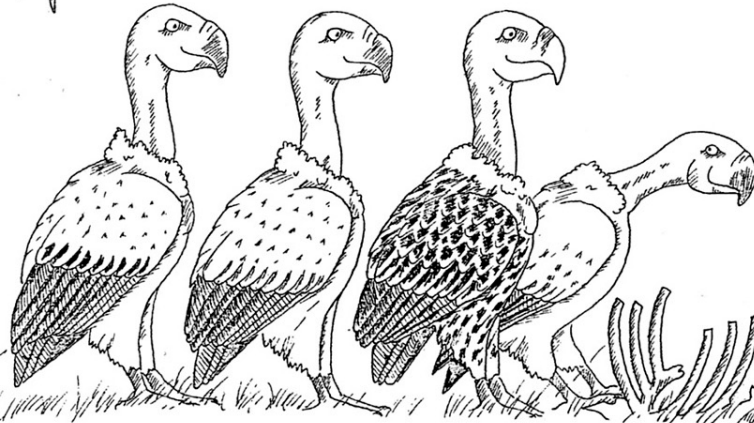
# Thank you, vultures people!!



O FIM



THE END

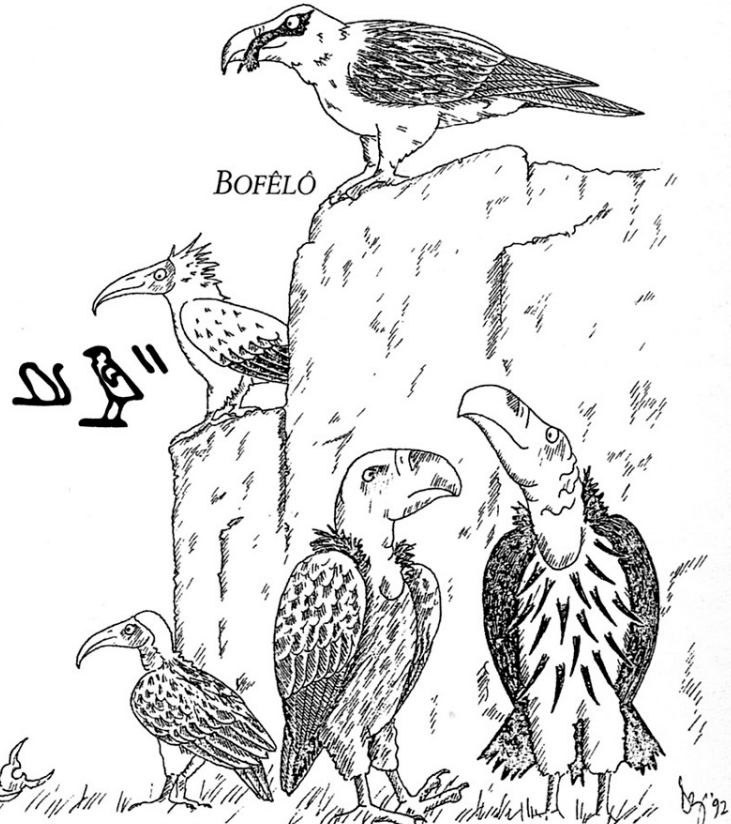


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