

# **Aquila adalberti -- Brehm, 1861**

ANIMALIA -- CHORDATA -- AVES -- ACCIPITRIFORMES -- ACCIPITRIDAE

**Common names:** Spanish Imperial Eagle; Adalbert's Eagle; Aguila Imperial Ibérica; Spanish Eagle

## **European Red List Assessment**

### **European Red List Status**

VU -- Vulnerable, (IUCN version 3.1)

### **Assessment Information**

Year published:	2015
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Assessor(s):	BirdLife International
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### **Assessment Rationale**

**European regional assessment: Vulnerable (VU)**

**EU27 regional assessment: Vulnerable (VU)**

This species has a very small population, which is increasing but is dependent on on-going intensive management measures to mitigate the impact of threats such as poisoning, electrocution and insufficient food availability, as well as the increasing cooperation of land-owners. It is endemic to the EU27 and is therefore listed as Vulnerable in both Europe and the EU27.

## **Occurrence**

### **Countries/Territories of Occurrence**

#### **Native:**

Portugal; Spain

#### **Vagrant:**

France; Gibraltar (to UK)

## **Population**

The European population is estimated at 370-380 pairs, which equates to 740-750 mature individuals. The entire population is found in the EU27. For details of national estimates, see [Supplementary PDF](#).

## **Trend**

In Europe and the EU27 the population size is estimated to be increasing. For details of national estimates, see [Supplementary PDF](#).

## **Habitats and Ecology**

This species occurs in alluvial plains and dunes in the Guadalquivir marshes, plains and hills in central Spain, and high mountain slopes in the Sistema Central and other areas of Portugal, where there is an absence of irrigated farmland (Fernández et al. 2009). It nests only on trees, typically in the crown (Meyburg and Kirwan 2013). Data from Doñana National Park in Spain show that the most important variables explaining nest site selection are height of tree and distance from human activity (Bisson et al. 2002). Both adults construct the nest, a large structure of twigs with a cup lined with green twigs, fur, grass and debris. Each pair has between two to six nests, but reuse of same nest in consecutive seasons fairly common. Clutch size is between one to four eggs (Meyburg and Kirwan 2013). The abundance and distribution of rabbits, its favoured prey, influences population density, range (Fernández et al. 2009) and reproductive performance. Indeed, its evolutionary dependence on rabbits has been suggested as permanently limiting its abundance and distribution (Ferrer and Negro 2004), although a recent study has suggested the species exhibits a certain dietary plasticity, at least during the non-breeding season, adapting its diet when rabbits are scarce (Sánchez et al. 2010). Many recently-colonised territories are in marginal areas, and several of the occupying pairs include at least one sub-adult bird (González and Oria 2004, González et al. 2006b, Margalida et al. 2007). Adults are sedentary but young birds, when they become independent disperse in all directions (strongly influenced by prevailing winds at time of departure), regularly travelling up to 350 km (Meyburg and Kirwan 2013).

<b>Habitats &amp; Altitude</b>			
Habitat (level 1 - level 2)		Importance	Occurrence
Forest - Temperate		major	resident
Grassland - Temperate		suitable	resident
Shrubland - Mediterranean-type Shrubby Vegetation		suitable	resident
Shrubland - Temperate		suitable	resident
Wetlands (inland) - Permanent Freshwater Lakes (over ha)		suitable	resident
Wetlands (inland) - Permanent Freshwater Marshes/Pools (under ha)		suitable	resident
Altitude	0-1600 m	Occasional altitudinal limits	

## Threats

The analysis of 267 records of non-natural mortality in this species over a 16-year period (1989-2004) shows an average annual rate of 15.1 individuals found dead annually, and that electrocution (47.7%) and poisoning (30.7%) were the most frequent causes of mortality (González et al. 2007). Juveniles are frequently killed through electrocution by powerlines, and this has increased in recent years (L. M. González in litt. 2005). This remains the primary threat in Andalucía, with six birds found to have died this way in 2011 and three found dead in 2012 where mitigation measures had been attempted (J. R. Garrido in litt. 2013). Renewable energy development poses another potentially significant threat. Habitat fragmentation has occurred as a result of deforestation for agriculture and timber, having negative impacts on nest site preferences in particular. Suitable habitat in breeding and dispersal areas has also declined as a consequence of urban development and land-use changes (e.g. new irrigation schemes in Huelva (B. Sánchez in litt. 2007)). Mortality from intentional poisoning has risen sharply, particularly in hunting reserves where game is commercially exploited. Between 1990 and 1999, 57 birds died from poisoning and this is thought to be the primary cause of declines in the late 1990s (J. Criado in litt. 1999). In Doñana National Park in particular, the population has been seriously affected by the illegal use of poisoned bait, especially during the 1990s (Ortega et al. 2009). Rabbit populations have declined in both Spain and Portugal, as a result of viral haemorrhagic disease, and this is believed to have reduced breeding success (Margalida et al. 2007; S. Cabezas-Díaz, J. C. Atienza et al. in litt. 2013). In addition, changes in the management of hunting estates in both Spain and Portugal to favour larger quarry species, such as deer and boar, rather than rabbits and partridges, has further reduced prey availability (B. Sánchez in litt. 2007, S. Cabezas-Díaz, J. C. Atienza et al. in litt. 2013). In spring 2009, a male bird was shot and killed in Portugal, highlighting the current threat of hunting to this species. Human activities in the vicinity of active nests can disturb incubating adults and reduce hatching success (González et al. 2006, Margalida et al. 2007). The ingestion of lead shot embedded in the flesh of prey items may be a problem in certain areas (González and Oria 2004, Pain et al. 2005). Recent modelling suggests no subpopulations are currently at risk of extinction, provided that active management is maintained (L. M. González in litt. 2005).

<b>Threats &amp; Impacts</b>					
Threat (level 1)	Threat (level 2)	Impact and Stresses			
		Timing	Scope	Severity	Impact
Agriculture & aquaculture	Agro-industry farming	Ongoing	Minority (<50%)	Unknown	Unknown
		Stresses			
		Ecosystem conversion; Ecosystem degradation			
Agriculture & aquaculture	Agro-industry plantations	Past, Unlikely to Return	Majority (50-90%)	Slow, Significant Declines	Past Impact
		Stresses			
		Ecosystem conversion; Ecosystem degradation			
Biological resource use	Hunting & trapping terrestrial animals (persecution/control)	Ongoing	Whole (>90%)	Rapid Declines	High Impact
		Stresses			
		Species mortality			
Biological resource use	Hunting & trapping terrestrial animals (unintentional effects - species is not the target)	Ongoing	Minority (<50%)	Unknown	Unknown
		Stresses			
		Species mortality			

<b>Threats &amp; Impacts</b>					
<b>Threat (level 1)</b>	<b>Threat (level 2)</b>	<b>Impact and Stresses</b>			
Energy production & mining	Renewable energy	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Majority (50-90%)	Unknown	Unknown
		<b>Stresses</b>			
Ecosystem conversion; Ecosystem degradation; Species mortality; Species disturbance					
Human intrusions & disturbance	Recreational activities	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Minority (<50%)	Unknown	Unknown
		<b>Stresses</b>			
Species disturbance; Reduced reproductive success					
Invasive and other problematic species, genes & diseases	Avipoxvirus	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Majority (50-90%)	Slow, Significant Declines	Medium Impact
		<b>Stresses</b>			
Ecosystem degradation; Reduced reproductive success					
Natural system modifications	Other ecosystem modifications	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Minority (<50%)	Negligible declines	Low Impact
		<b>Stresses</b>			
Ecosystem degradation					
Residential & commercial development	Housing & urban areas	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Minority (<50%)	Unknown	Unknown
		<b>Stresses</b>			
Ecosystem conversion; Ecosystem degradation					
Transportation & service corridors	Utility & service lines	<b>Timing</b>	<b>Scope</b>	<b>Severity</b>	<b>Impact</b>
		Ongoing	Minority (<50%)	Slow, Significant Declines	Low Impact
		<b>Stresses</b>			
Species mortality					

## **Conservation**

### **Conservation Actions Underway**

CITES Appendix I. CMS Appendix I and II. EU Birds Directive Annex I. There are 24 Important Bird Areas identified for the species, 22 in Spain and 2 in Portugal. Altogether, there are 107 areas protected by Law (national and EU Special Protected Areas,) containing c.70% of the total breeding population (Barov and Derhé 2011). Since 1987, national and regional governments have been implementing a coordinated conservation plan for the species. A European action plan was published in 1996 and updated in 2008 (Sánchez et al. 2008), and a national plan is being implemented. From 1991-1999, 14,370 dangerous electric towers were modified, considerably reducing deaths from electrocution (L. M. González in litt. 2005) and more recently, work has been carried out to isolate dangerous powerlines on private farms (Cabezas 2011). It is thought that nearly €2.6 million were spent on the mitigation of bird electrocution in Andalucía during 1992-2009, although not all mitigation measures have proved to be totally effective for this species (J. R. Garrido in litt. 2013). A supplementary feeding programme has been established to mitigate the effects of rabbit decreases, and has significantly increased breeding success (L. M. González in litt. 2005). Nest monitoring has reduced disturbance and improved reproductive success. The Flying High Programme created by SEO/BirdLife in 2006, begun its second phase in 2009 until 2012, based on a large land stewardship network (of municipalities, land-owners and schools). This network focuses on habitat management, species conservation, awareness and information activities covering the species's entire distribution. So far, 54 municipalities have joined the network. Work is on-going to raise awareness and support on private land where the species breeds, including improving habitat management (García 2007), and nearly 50% of breeding pairs are covered by such projects (L. M. González in litt. 2005). From 2002 to 2011, 73 young birds were released in Cádiz as part of a reintroduction project, and by 2012 five breeding pairs had become established in the province; however, mortality associated with powerlines appears to be high amongst these birds (M. Pandolfi in litt. 2003, B. Sánchez in litt. 2007, J. R. Garrido in litt. 2013). Nevertheless, the establishment of a breeding population in Cádiz further reduces the overall probability of extinction (Muriel et al. 2011). Two birds originating from a reintroduction project in Andalucía are known to have bred in Portugal (J. R. Garrido in litt. 2013).

### **Conservation Actions Proposed**

Continue with actions to reduce mortality, particularly from poisoning and electrocution (González and Oria 2004). Survey the breeding population annually. Approve regional recovery plans (González and Oria 2004). Maintain an adequate area of legally protected habitat (e.g. within the Natura 2000 network (González and Oria 2004)). Protect and manage breeding sites and key dispersal areas. Continue the successful nest monitoring and supplementary feeding programmes and develop a captive breeding programme to support future reintroduction and supplementation efforts. Promote the recovery of the rabbit population (González and Oria 2004). Modify dangerous powerlines. Avoid the construction of wind farms in key areas for the species (B. Sánchez in litt. 2007). Increase coordination between private landowners, NGOs and government (González and Oria 2004, B. Sánchez in litt. 2007).

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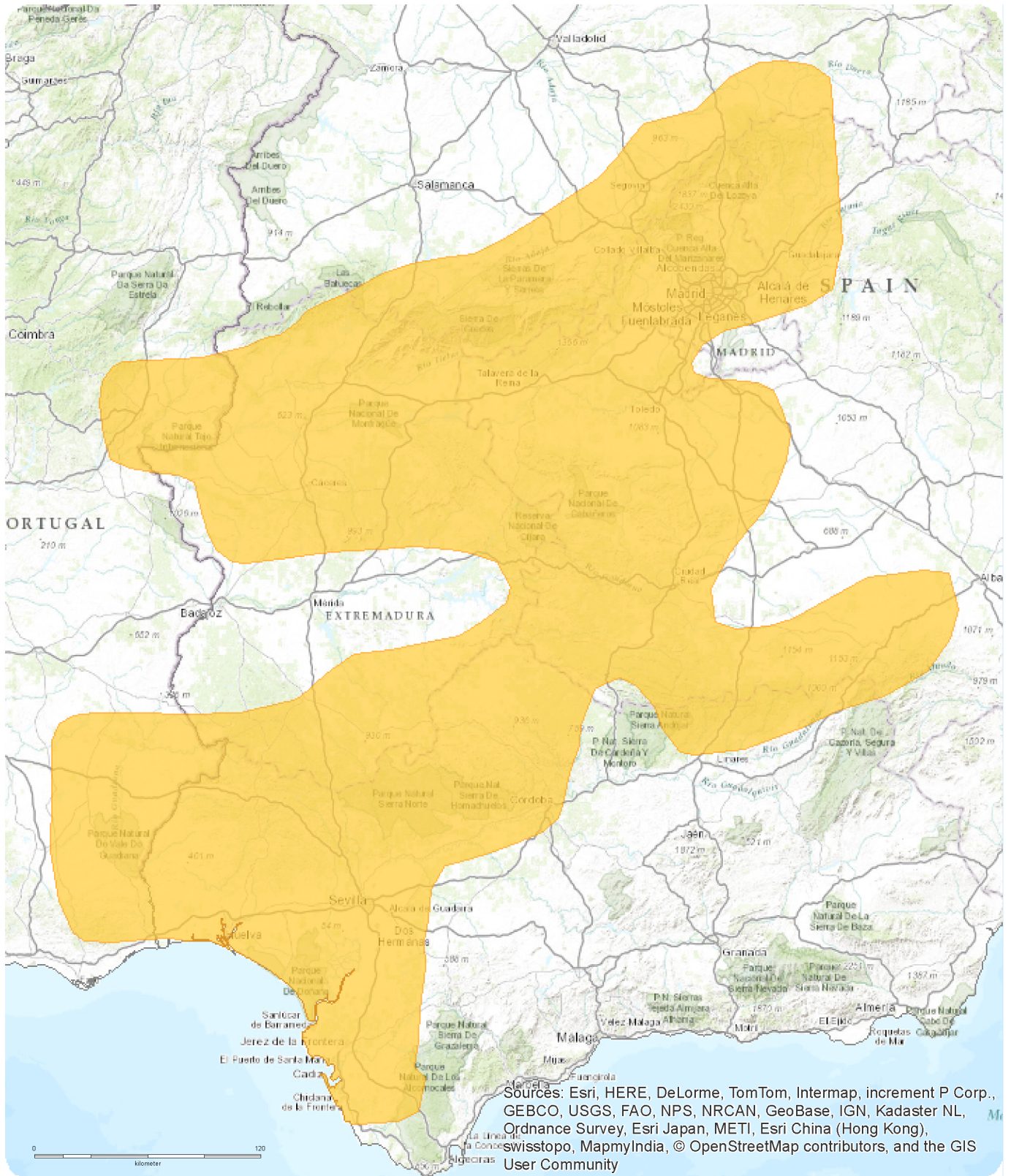
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Map (see overleaf)

# European Regional Assessment



## *Aquila adalberti*

### Range

■ Extant (resident)

Citation:  
BirdLife International (2015)  
European Red List of Birds



Map created 05/12/2015



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