

## Bonelli's eagle *Aquila fasciata*<sup>44</sup>

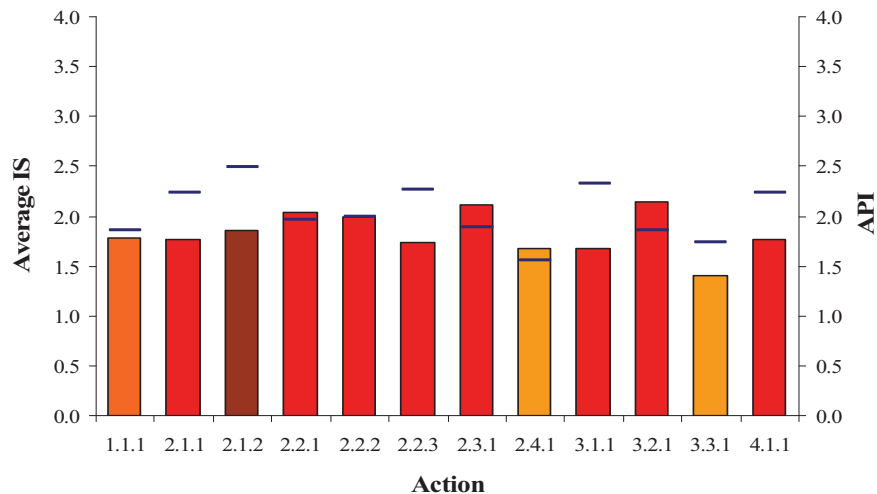
### *Background*

The Bonelli's Eagle Action Plan was developed in 1997, adopted in 1999 (Arroyo & Ferreiro, 1999) by the Ornithological Committee and endorsed by the Bern Convention. This is the first review of the implementation of the action plan.

Its geographical scope covers Albania, Bulgaria, Croatia, Cyprus, France, Greece, Italy, Portugal, Spain and Turkey. No information has been provided by Albania, however this country holds only a very small population.

### *General overview*

The SAP has been moderately well implemented by the range countries (overall IS=1.8), most successfully in Cyprus, France and Portugal where actions have been well implemented and have been reported to have contributed to the increase in the population size. The most work has been carried out on developing national recovery plans (due to work carried out by France, Castilla y Leon (Spain), and Cyprus), conducting research on the biology, ecology and habitat requirements of the species, and designating SPAs and protected areas for the species. The actions reported to have the most positive impact on the species' populations are those that prevent mortality (due to direct persecution) and improve habitat. However, these actions have received only a moderate amount of work, despite being high priorities.



**Figure v Average implementation score (IS) and Action Priority Index (API) for each Action listed in the Bonelli's eagle species action plan. Colours represent Priority Score.**

<sup>44</sup> The taxonomic name of the species at the time of adoption of the action plan was *Hieraetus fasciatus*

### *Status review*

Europe holds a relatively small proportion of the global population, estimated at around 1,032-1,223 breeding pairs<sup>45</sup> (Table 1). Spain holds about 65% of the European population (Del Moral, 2006), the rest having an irregular distribution in the Mediterranean.

Overall, the European population trend of the Bonelli's eagle is at least stable and possibly increasing. However, the species has gone extinct in Croatia recently. Although the current population in Turkey appears to have decreased, this is due to previous estimates being based on poor or incomplete quantitative data, and the current estimate being more accurate.

**Table 18 Breeding population estimate and trend by country**

Country	Population at the time of the 1999 SAP (pairs)	Year	Population in 2004 (pairs) <sup>46</sup>	Year	Current population (pairs)	Year	Breeding trend	Reference
Albania	0-2	1963	2-10	1995-2000	-	-	-	-
Bulgaria	1-5	1991	1-3	2001-2003	2-4	2007	Unknown	<sup>47</sup>
Croatia	5-10	1994	1-5	2002	0	2008-2010	Extinct as a breeder	
Cyprus	10-15	1994	20-40	1994-2002	33-42	2000-2010	2% Increasing	<sup>48</sup>
France	29	1997	23	2003	30	2010	2% Increasing	<sup>49</sup>
Greece	85-105	1997	85-105	1997	100-140	1998-2008	Stable	<sup>50</sup>
Italy	12-15	1997	13-18	2003	18-24	1990-2008	Fluctuating	<sup>51</sup>
Portugal	83-96	1997	85-100	2002	116-120	2010	23% Increasing	<sup>52</sup>
Spain <sup>53</sup>	627-695	1997	650-713	1998-2002	733-788	2005	Fluctuating	<sup>54</sup>
Turkey	10-100	1994	30-40	2001	5-15	2006	Stable	

<sup>45</sup> From data obtained through this review.

<sup>46</sup> BirdLife International, 2004.

<sup>47</sup> Yankov, 2007. Demerdzhiev & Iankov, in press.

<sup>48</sup> Kassinis & Miltiadou, 2010.

<sup>49</sup> Plan national d'action de l'Aigle de Bonelli. Synthèse et bilan de la reproduction en France en 2010

<sup>50</sup> Bourdakos & Xirouchakis, in press.

<sup>51</sup> Di Vittorio & Sarà, 2001; Di Vittorio et al., 2000 ; Di Vittorio, 2007.

<sup>52</sup> Hernández, in press.

<sup>53</sup> Recent regional estimates are also available for Spain. Andalusia: 334-348 pairs (Consejería de Medio Ambiente, 2009), breeding trend stable. Castilla y León: 15-19 pairs (2002-2010), breeding trend 53% decreasing.

<sup>54</sup> Del Moral, 2006.

## **Objective(s)**

1. In the short term, to maintain the existing populations of Bonelli's eagle in Europe.
2. In the medium to long term, to increase the population size of the Bonelli's eagle and to encourage recolonization of the former range.

## **Evaluation**

Although the overall population numbers have been stable or increasing, the short term target has not been met fully as the species has gone extinct in one more country (Croatia) since the adoption of the SAP.

The medium to long term objective of increasing the population size has been only partially met, as the population is increasing (Cyprus, France and Portugal) or stable, but recolonization of the former range has not happened..

The European range has contracted since the breeding population in Croatia has gone extinct and hasn't yet been recolonised. Local populations have declined between 1970 and 1990 (Hagemeijer & Blair, 1997) and overall the population hasn't yet recovered to a state were these areas have been recolonised.

## **Conservation and Legal Status**

The Global IUCN Red List Category of the Bonelli's eagle is Least Concern because it has a very large range.

The species was listed as Lower Risk/ Least Concern in 2000 when such category existed.

The species is listed as Endangered (SPEC 3) under criteria C1 in the European IUCN Red List (BirdLife International, 2004), and is listed in Annex I of the EU Council Directive on the Conservation of Wild Birds (79/409/EEC, 'Birds Directive'), in Appendix III of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and in Appendix II in the CMS and the Appendix II in CITES.

## Overview of past and current threats

**Table 19** Table of importance of Bonelli's eagle threats. The current level of importance of threats listed in 1999 SAP and newly identified threats in 2010 are listed. The original importance level of the threats as listed in the 1999 SAP are included in brackets.

Country	Threats identified in 1999						Threats identified in 2010			
	Persecution (critical)	Electrocution (critical)	Habitat destruction (high)	Shortage of food (high)	Human disturbance (medium)	Interspecific competition (low)	Wind farms	Collision with power lines	training of hunting dogs near nests	Stolen for falconry
Bulgaria	Medium	Medium	Medium	High	Med/High	Medium	Potentially high			
Croatia	Critical/High	Critical/High	High	Critical	Medium	Low	Critical			
Cyprus	Low	Low	Med/High	Low	Medium	N/A			Medium	
France	High	Critical	High	Medium	Medium	Low			Low	Low
Greece	High		High	Medium	Low		High			
Italy	Critical	Low	High	High	High	Low	Medium	Low	Medium	High
Portugal	Medium	Medium	Med/High	Medium	Medium	Low				
Spain	Medium	Critical	High	Med/High	Medium	Med/Low		Medium		
Turkey	Low	Medium	High	N/A	Medium	N/A				

## *Assessment of the implementation*

### National and regional species action plans

Only France has developed a national action plan for the species. However, there is a regional action plan for the Bonelli's Eagle conservation in Castilla y León, Spain, since 2006<sup>55</sup>. This plan is being implemented and is financed by the Regional Government and other external supporters. In France, 2 plans have been implemented for the species, one from 1999-2003 and another from 2005-2009. All recovery plans in Cyprus were developed and implemented before Cyprus entered the EU and so there is an old recovery plan (from 1995) in place in Cyprus, but it is not drafted along the lines of an action plan.

National working groups coordinate the activities in France and Spain (Spanish Ministry of Environment).

<sup>55</sup> Decreto 83/2006, de 23 de noviembre, por el que se aprueba el plan de conservación del águila perdicera en Castilla y León

### **Species conservation**

Species conservation measures (where relevant) were implemented poorly by Greece, Italy and Turkey, whereas significant progress was made by Spain, Portugal, Cyprus and France. The banning of hunting in game reserves where birds of prey are killed, trapped or poisoned received very little work by all countries.

### ***Persecution***

The prevention of mortality due to direct persecution is a priority action which has been well implemented in Cyprus and France, leading to a reported improvement in the population due to this action in these countries.

In Cyprus, the population of Bonelli's Eagles decreased during the early 1980's to 1990's due to human persecution, primarily by hunters and farmers involved in vermin control programs (including poison campaign). Actions have been carried out in Cyprus by the Game Fund wardens to prevent poisoning and shooting of the birds.

In France, there is a high level of wardening to prevent persecution of the species, however, this is done on a voluntary basis as none of the wardens are paid.

As part of the regional action plan in Andalusia, Spain, actions have been implemented to encourage a positive attitude of various groups (especially hunting) to the Bonelli's eagle.

There are no relevant actions against persecution of the species in Portugal besides awareness raising (aimed at improving hunter's attitudes towards the eagles) and routine wardening in protected areas and SPAs.

### ***Electrocution***

In Andalusia, work has been carried out to correct power lines to prevent electrocution in dispersal areas, under the regional action plan. Under the LIFE project (LIFE02 NAT/E/008598) in Castilla y Leon, important advances were achieved in dealing with dangerous electrical lines, in particular by close collaboration with the electric company. In Portugal, nature conservation authorities together with NGOs have contributed significantly to leading the public electricity company EDP to correct many dangerous electricity lines and pylons. The LIFE project (LIFE06 NAT/P/000194) in Portugal has contributed significantly to reducing and avoiding significant impact of new powerlines and improving visibility of existing ones in high density breeding areas. The public electricity company REN, responsible for the very high tension powerlines is a co-funding entity of the project and has a technical collaboration agreement with the LIFE beneficiary (CEAI).

Although EIAs are carried out in Cyprus, in practice, no concrete policy or guidelines to avoid collisions with powerlines or electrocution exist.

Insulation of some dangerous pylons has been started in Bulgaria as well as a ban on building of powerlines hazardous for birds included in the designation orders of several SPAs. In France, electrocution has been identified as the main threat for the population and a program of powerline correction has been initiated but it only focuses on SPA perimeters and problem areas, despite requests for powerline correction in all important eagle areas.

### ***Protection of breeding areas against disturbance***

The protection of breeding territories and nest sites has received moderate implementation, with the most progress made by Portugal, Spain and Cyprus.

The restriction of disturbance, forestry and recreational activities around nest sites is gradually being implemented in Portugal, under direct responsibility of managers/ nature conservation authorities, with technical advice and control of NGOs, forestry and nature conservation officers. However, no legal regulations exist concerning these matters.

Different measures have been taken in two long term projects developed in Castilla y León (LIFE project LIFE02NAT/E/8598 and project "Developing Actions of the Bonelli's Eagle Action Plan in Castilla y León") to reduce disturbance to the species, predominantly forming agreements with hunters and land owners

In Cyprus, the Forestry Department closes any forest tracts adjacent to nesting trees during the breeding season, maintaining a 1km protective zone around the nests. Any forestry activity close to the nesting tree is prevented. However, there have been some cases of forestry personnel creating fire-breakers alongside nesting trees. If nests are found to be close to hunting grounds the Game Fund will usually close these areas.

The majority of work carried out in France to prevent disturbance to breeding sites has been in the form of awareness raising materials to inform land-users, hunters, etc about the threat affecting Bonelli's eagle in France.

#### **Site conservation**

There 102 are IBAs designated for the species in Europe, of which 99 in the EU. The 179 SPAs in the EU designated for the species includes less than 50% of the European breeding population. All the territories used by Bonelli's eagles for breeding in Catalonia are included in SPAs and the most important areas have conservation management actions defined in the Regional Action Plan.

The designated SPAs in Portugal are in the most important dispersal areas but do not cover all relevant parts of those areas, and do not cover all high density areas. Also, the limits of some of the SPAs in dense subpopulations do not follow the natural limits of the breeding range and so exclude many breeding territories.

In Cyprus, the most important breeding/feeding habitat for the species is protected through the establishment of SPAs in which are included about 80% of the breeding population. In Paphos Forest SPA, Cyprus, the Game Fund has initiated a management plan that will lead to the preparation of Action Plans for Key forest species including the Bonelli's Eagle (to be ready in 2010-2011).

Although SPAs include around 60-70% of the national population in Greece, there is no management plan accounting for the Bonelli's eagle, and so no relevant actions are applied.

#### **Habitat conservation**

Some work has been carried out on maintaining and improving the species' habitat, but more work is needed, particularly in preventing large-scale land use changes in main breeding and dispersal areas (with the exception of Portugal) and the establishment of game preserves or implementation of special game management regulations in breeding and dispersal areas (with the exception of Cyprus).

Bonelli's eagle is one of the main species considered in environmental assessments of infrastructures in Portugal and has motivated the abandonment/changes in layout of smaller infrastructures (eg windfarms and powerlines). Traditional practices have largely

been maintained in breeding and dispersal areas in Portugal, due to economic and social reasons, as well as due to agri-environmental schemes. Large scale land-use changes have in part been prevented by the designation of SPAs, national regulations and regional/municipal land management planning. The majority of the species' population in Portugal are within game estates and so this contributes to prey enhancement through internal game estate regulation and game habitat improvement.

In Cyprus, Paphos Forest SPA includes about 64% of the total breeding pairs of the species and it is a Permanent Game Reserve Area (no hunting allowed). Although an agri-environment program has been discussed by the relevant government departments in Cyprus, nothing concrete has yet been done.

As part of the regional action plan in Andalusia, Spain, actions have been implemented to establish collaboration agreements with private landowners to encourage the maintenance of optimal habitat in areas important to the species.

Agri-environmental measures encouraging preservation of pastures and keeping mosaic landscape have been proposed to be included in the National Rural development Program in Bulgaria.

#### **Other specific conservation measures**

Additional conservation measures have been taken in the two long term projects developed in Castilla y León including improvement of prey (rabbit) habitat and restoration of pigeon houses (dovecotes). In Andalusia, a relocation project was implemented to reinforce neighbouring populations.

One of the actions taken in Cyprus by the Game Fund wardens since 1993 was to provide additional prey to breeding pairs with captive bred chukar (from Jan-Feb). This had beneficial results with good productivity.

Captive breeding has been abandoned in France as genetic analysis showed that the population was stable. Two breeding programs exist but with currently low success. The French national action plan does not include any actions for captive breeding in the close future even if a breeding program should be maintained in order to evaluate the potential of reproduction in captivity.

Captive breeding is not deemed necessary by the range countries.

#### **Monitoring and Research**

Monitoring programmes exist in most countries at a national level and in protected areas in Spain, South Portugal (~70% of the national population), Cyprus and France. The majority of work has focussed on monitoring the breeding population and conducting national annual censuses (Spain: every 5 years nationally; variable frequencies regionally).

In addition, regular monitoring of the species is carried out in Northeast Portugal and was previously carried out in the central East until recently.

Monitoring of a small percentage of Bonelli's Eagle population in Greece takes part mainly through the monitoring of IBAs and other projects of HOS and Natural History Museum of Crete. In Bulgaria, sites where the species has been recorded for the past five years are monitored during the Egyptian Vulture breeding monitoring.

Under the LIFE project in Castilla y Leon, existing monitoring equipment was improved and relevant training was delivered to all staff involved in species conservation. Adult birds were marked to determine movement and distribution of the species along with a GPS tracking campaign (radio-tracking of young individuals was not feasible).

In Andalusia, marking and radio-tracking of adults and chicks, identification/monitoring of main threats and determination of the probability of lead poisoning resulting from ingestion of lead shot was carried out. The results of these studies and methods used were disseminated.

Several research projects have been carried in South and Northeast Portugal. The Southern subpopulations have been studied continuously since the early 1990s and significant data have been collected and analysed.

Studies investigating the species' reproductive biology/habitat selection, diet and dispersal (including radio-tracking since 2002) are carried out by the Game Fund Research Unit in Cyprus. A telemetry program was launched in France in 2009 to identify areas used by the species throughout the year. Genetic analyses are continually conducted following ringing campaigns (all chicks ringed since 1990) and the population dynamics of the species are being studied.

#### **Public awareness and stakeholder involvement**

Awareness raising measures have received the most implementation in Cyprus, France, Spain and Portugal. Targeted programmes have been carried out in Cyprus to raise awareness with hunters through the Game Fund, involving the production of posters and talks to hunting clubs and schools, along with a compulsory course for new hunters in order to obtain their hunting license which includes protected species conservation and identification.

In France, information is freely available on the Bonelli's eagle and the national action plan in the form of publications, a website (<http://www.aigledebonelli.fr/>) conferences, etc.

Under the Andalusian regional action plan efforts have been made to encourage a positive attitude of various groups (especially hunting) to the Bonelli's eagle, and the 2009-2012 Spanish LIFE project (LIFE07/NAT/E/000742) is yielding informative documents which are freely available online<sup>56</sup>.

The Southern Portuguese LIFE project (LIFE06 NAT/P/000194) has developed a wide variety of awareness activities at different levels. Other NGOs have also contributed to raising public awareness in other areas, especially in the Northeast. Officers of some Natural Parks have also contributed to public awareness during routine work, but no official campaign exists.

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<sup>56</sup> <http://www.priorimancha.es/documentoslife.html>

As part of the LIFE Nature project (LIFE04NAT/GR/101), a publication has been produced to inform people of the natural history and conservation management of the island of Tilos.

### **Community financial support**

Twelve LIFE projects<sup>57</sup> that benefit the Bonelli's eagle have been implemented in Bulgaria (1), France (1), Greece (1), Portugal (1) and Spain (8) since 2000, with a total budget of more than 15.5 million Euros, of which the EU contribution is more than 8 million Euros. In addition, over 3 million Euros of other funding has been invested in research and monitoring and management actions (particularly for the modification of powerlines in Spain).

### **Conclusions**

The progress in the implementation of the action plan is moderate (Average IS=1.8) with the country holding the largest proportion of the population (Spain) making good progress in the conducting of research on the biology and conservation of the species and establishment of international cooperation, but very little progress on the development and implementation of a national recovery plan- an area of high priority which should be the focus of future work. Overall the designation of breeding areas as SPAs or protected areas has been well implemented, but still needs further work, particularly focussing on the development and implementation of management plans in these areas.

National implementation scores (NIS) are highest in Portugal and Cyprus, average in France and Spain, and lowest in Bulgaria, Italy, Greece, Croatia and Turkey.

Further measures/work still needed especially in the field of:

- Modification or removal of electricity pylons that cause electrocution of birds.
- Strict implementation of legal sanctions for those caught killing/persecuting the birds and wardens specialising in raptor conservation employed.
- Designation of the most important dispersal areas as SPAs, new reserves or similar protected areas.
- Effective management plans in place in SPAs.
- Development and implementation of national species recovery plans in all range countries.
- Implementation of a co-ordinated European programme to monitor population status and trends.
- Promotion and implementation of awareness raising campaigns by regional and national administrations.

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<sup>57</sup> LIFE project codes: LIFE 07/NAT/BG/000068; LIFE 05/NAT/F000139; LIFE 04/NAT/GR/101; LIFE06 NAT/P/000194; LIFE 02/NAT/E/8598; LIFE07/NAT/E/000742; LIFE97 NAT/E/004188; LIFE00 NAT/E/007327; LIFE98 NAT/E/005308; LIFE99 NAT/E/006419; LIFE97 NAT/E/004161; LIFE06 NAT/E/000213.

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*Appendix 1*

**Table 20 Implementation of the action plan in the European range states<sup>58</sup>. PS = Priority Score; Ave. IS = Average Implementation Score; API = Action Priority Index; National IS = National Implementation Score.**

Action	Measure	PS	BG	HR	CY	FR	GR	IT	PT	ES	TR	Ave. IS	API
<b>1.1.1</b>	<b>Promote national and international policies to ensure the conservation of the Bonelli's Eagle and its habitat</b>	<b>2.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1</b>	<b>0</b>	<b>1.25</b>	<b>1.5</b>	<b>2.5</b>	<b>2</b>	<b>1</b>	<b>1.7</b>	<b>1.9</b>
	a. Agricultural policies that encourage the maintenance of traditional mixed farming practices adopted.	2	2	1	1	2	1.5	1	3	1.5	1	1.6	1.6
	b. New legislation and regulations to avoid the installation of powerlines and poles that risk electrocution of birds of prey enacted.	3	1	2	1	2	1	2	2	2.5	1	1.9	2.1
<b>2.1.1</b>	<b>Prevent mortality due to direct persecution</b>	<b>3</b>	<b>1.33</b>	<b>1</b>	<b>3.25</b>	<b>2.4</b>	<b>1.3</b>	<b>1.2</b>	<b>1.2</b>	<b>1.6</b>	<b>1.25</b>	<b>1.8</b>	<b>2.2</b>
	a. Legal sanctions for offenders strictly implemented.	4	2	0	4	2	2	1	1	2	1	2.0	2.7
	b. Numbers of forestry/nature wardens and funding increased.	3	0	1	4	3	1	1	1	1.5	2	2.0	2.1
	c. Wardens specialised in raptor conservation employed.	3	0	1	2	3	1	1	1	2	1	1.6	2.4
	d. Hunting banned in game preserves where birds of prey are killed, trapped or poisoned.	2	1	1	0	1	1	1	1	1	0	1.3	1.8
	e. Educational programmes for hunters and forestry/nature wardens undertaken.	2	1	0	3	3	1.5	2	2	1.5	1	2.0	1.3
<b>2.1.2</b>	<b>Prevent mortality due to electrocution</b>	<b>3.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1.9</b>	<b>2.5</b>
	a. Electricity pylons that cause the electrocution of birds are removed or modified.	4	2	1	1	2	1	0	3	2	1	1.9	2.8
	b. Construction of new powerlines in high density breeding and dispersal areas prevented.	3	1	2	1	2	1	1	3	2	1	1.9	2.1
<b>2.2.1</b>	<b>Protection of breeding territories and nest sites</b>	<b>3</b>	<b>1.2</b>	<b>0</b>	<b>2.2</b>	<b>2</b>	<b>1.5</b>	<b>1</b>	<b>2.6</b>	<b>2.2</b>	<b>1</b>	<b>2.0</b>	<b>2.1</b>
	a. Road/ track building and installation of new quarries, dams and built developments near the breeding areas prevented.	3	1	0	1	2	1	1	2	2	1	1.7	2.3
	b. High density breeding areas designated as SPAs and new reserves (or similar protected areas) designated on areas with low numbers of pairs.	4	2	0	4	3	3	1	3	3	1	2.7	1.7

<sup>58</sup> BG = Bulgaria; HR = Croatia; CY=Cyprus; FR=France; GR=Greece; IT=Italy; PT = Portugal; ES = Spain; TR=Turkey.

Action	Measure	PS	BG	HR	CY	FR	GR	IT	PT	ES	TR	Ave. IS	API
	c. Human activity prevented within 1 km of nests.	3	1	0	3	1	1	1	3	2	1	1.8	2.2
	d. Forestry operations or similar activities prohibited within 2 km of nests during the breeding period.	3	1	0	2	2	0	0	3	2	1	2.1	1.9
	e. Recreational activities that disturb the species regulated in the breeding areas (climbing, angling, aerial and mountain sports).	3	1	0	1	2	1	1	2	2	1	1.6	2.4
<b>2.2.2</b>	<b>Protection of the dispersal areas</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>2.0</b>	<b>2.0</b>
	The most important dispersal areas are designated as SPAs, new reserves or similar protected areas.	3	2	2	4	1	1	1	3	2	1	2.0	2.0
<b>2.2.3</b>	<b>Management and habitat improvement</b>	<b>3</b>	<b>1.25</b>	<b>1</b>	<b>2.2</b>	<b>2</b>	<b>1.2</b>	<b>1.33</b>	<b>2.75</b>	<b>1.4</b>	<b>1.4</b>	<b>1.7</b>	<b>2.3</b>
	a. Traditional agriculture practices in the most important breeding and dispersal areas maintained.	3	2	1	1	3	1.5	2	3	2	1	2.0	2.0
	b. Large-scale changes in land use prevented in main breeding and dispersal areas.	3	1	0	2	2	1	1	3	1.5	1	1.7	2.4
	c. Prey populations (rabbits, pigeons) enhanced by habitat improvement and regulation of hunting activities.	3	1	0	3	1	1.5	0	3	1.5	2	2.0	2.0
	d. Game preserves established or special game management regulations implement in breeding and dispersal areas.	3	1	0	4	1	1	0	2	1	2	1.7	2.3
	e. Favourable breeding sites that were previously abandoned preserved or recreated.	2	0	0	1	3	1	1	0	1	1	1.4	1.7
<b>2.3.1</b>	<b>Develop national recovery plans in EU member states</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>1.5</b>	<b>1</b>	<b>0</b>	<b>2.1</b>	<b>1.9</b>
	a. National recovery plans developed in EU member states.	3	2	0	3	4	1	0	2	1	0	2.3	1.8
	b. National recovery plans implemented in EU member states.	3	2	0	3	4	1	0	1	1	0	2.0	2.0
<b>2.4.1</b>	<b>Establish international co-operation to provide funds, equipment and expert advice to undertake basic surveys and initiate conservation measures</b>	<b>2</b>	<b>1.5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1.25</b>	<b>1.5</b>	<b>2</b>	<b>2.5</b>	<b>0</b>	<b>1.7</b>	<b>1.6</b>
	a. International co-operation in place between range states.	2	2	0	1	1	1	2	1	2	0	1.7	1.6
	b. Funds, equipment and expert advice provided to appropriate countries to undertake basic surveys and initiate conservation measures.	2	1	1	1	1	1.5	1	3	3	0	1.8	1.5
<b>3.1.1</b>	<b>Develop and implement a co-ordinated European programme to monitor population status and trends</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>2.5</b>	<b>1</b>	<b>1.5</b>	<b>2</b>	<b>2</b>	<b>1.25</b>	<b>1</b>	<b>1.7</b>	<b>2.3</b>
	a. Co-ordinated European programme to monitor population status and trends implemented.	3	1	0	1	1	1	0	1	1	0	1.1	2.9
	b. Annual censuses conducted in countries with reduced	3	1	0	4	1	2	2	3	1.5	1	2.3	1.8

Action	Measure	PS	BG	HR	CY	FR	GR	IT	PT	ES	TR	Ave. IS	API
	populations, and census conducted every five years in countries with healthy populations.												
<b>3.2.1</b>	<b>Conduct research on the biology, ecology and habitat requirements of the species</b>	<b>3</b>	<b>1.25</b>	<b>1</b>	<b>3</b>	<b>2.25</b>	<b>1.5</b>	<b>1.75</b>	<b>3</b>	<b>2.75</b>	<b>1</b>	<b>2.1</b>	<b>1.9</b>
	a. Dispersal areas identified and surveyed.	3	2	1	4	2	1	1	4	3	1	2.3	1.7
	b. Studies conducted on the biology of the species.	3	1	0	3	3	2	2	3	3	0	2.6	1.4
	c. Species habitat requirements and the factors influencing population trends fully understood.	3	1	0	3	2	2	2	3	3	0	2.4	1.6
	d. Dispersive strategies and factors influencing populations in the main dispersal areas fully understood.	2	1	0	2	2	1	2	2	2	0	1.9	1.4
<b>3.3.1</b>	<b>Implement an internationally planned and coordinated programme of captive breeding in countries with small populations of Bonelli's Eagle</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1.4</b>	<b>1.7</b>
	International programme of genetic research, creation of a pool of breeding pairs, etc co-ordinated to improve success of captive breeding programmes.	2	1	0	0	1	0	0	0	1	0	1.4	1.7
<b>4.1.1</b>	<b>Raise public awareness and support for protection of the Bonelli's Eagle and its habitat</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>2.5</b>	<b>2.5</b>	<b>1.5</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1.7</b>	<b>2.3</b>
	a. Awareness/educational campaign addressed to both the general public and conservation administration bodies developed and implemented.	3	1	1	3	3	1.5	1	3	2	1	2.0	2.0
	b. Regional and national administrations promote and implement these campaigns with support from NGOs.	3	1	1	2	2	1.5	1	1	2	1	1.5	2.5
	<b>National IS and Average IS</b>		<b>1.39</b>	<b>1.26</b>	<b>2.37</b>	<b>1.98</b>	<b>1.27</b>	<b>1.31</b>	<b>2.34</b>	<b>1.81</b>	<b>1.07</b>	<b>1.8</b>	

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