Action plan for
the Cinereous Vulture (Aegypius monachus) in Europe

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Timetable

Workshop: September 1993 - Dadiá, Greece
First draft: November 1993
This version: February 1996

Reviews

This action plan should be reviewed and updated every four years. An emergency review will be undertaken if sudden major environmental changes, liable to affect the population, occur within the species' range.

Geographical scope

The action plan needs active implementation in: Albania, Armenia, Azerbaijan, Bulgaria, Croatia, France, Georgia, Greece, Italy, Former Yugoslavian Republic of Macedonia, Portugal, Russia (Europe only), Spain, Turkey and Ukraine.

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SUMMARY

The Cinereous Vulture Aegypius monachus formerly known as the Black Vulture is classified as Near-threatened at world level (Collar et al. 1994) and Vulnerable at European level (Tucker and Heath 1994). It has a discontinuous distribution in Europe, where it is present in the Caucasus mountains (190 pairs shared among Russia, Georgia, Armenia and Azerbaijan), Greece (20), Spain (1,000), Turkey (100–500) and Ukraine (6). Populations are considered to be increasing in Spain and Greece, stable in Turkey and declining in Ukraine and the Caucasus.

Threats and limiting factors

* Habitat alterations in the breeding areas - critical

* Poisoning - high

* Food shortage - medium, potentially high

* Forest fires - medium

* Persecution and illegal trade - low

* Human disturbance - low

Conservation priorities

* Prevent the use of toxic chemicals for predator control and undertake a public awareness campaign about the dangers of this practice - essential

* Protected area status for breeding areas and prevention of damaging developments or disturbance - essential/high

* International and national forestry policies and practices which are compatible with the conservation of the Cinereous Vulture - high

* National legislation which includes provisions for the protection of the species and key sites - high

INTRODUCTION

The Cinereous Vulture Aegypius monachus, formerly known as the Black Vulture, is classified as Near-threatened at world level (Collar et al. 1994) and as Vulnerable at a European level (Tucker and Heath 1994). It is included in Annex I of the EU Wild Birds Directive and in Appendix II of the Bern, Bonn and CITES Conventions.

Being a predatory bird with a long life-span and a huge home-range it needs vast areas of unspoiled landscape, and these are becoming increasingly rare in Europe. The designation of protected areas is not enough to guarantee the survival of such dispersed species which exploit a variety of biotopes. Broad policies which are sensitive to the environment are

necessary to ensure that the countryside outside protected areas retains the capacity to sustain Cinereous Vulture populations.

The recovery that the species has undergone in Spain shows that it is still possible to have large numbers of Cinereous Vultures if the appropriate conservation measures are put in place. A highly encouraging experiment has been undertaken in France to restore the species to an area where it disappeared a hundred years ago; if this succeeds, as it has with the Griffon Vulture Gyps fulvus, the future of the Cinereous Vulture in other European countries where it is now extinct may rely on similar reintroduction schemes, as long as the required habitats for breeding and foraging still exist and persecution is no longer a significant threat.

In September 1993 a workshop took place in Dadiá (Greece) to discuss the conservation of the Cinereous Vulture in Europe and adjacent regions. This action plan relies largely on the results of that workshop and on a process of wide consultation among experts and competent authorities. It intends to provide a general framework for future work and to stimulate active conservation management at national level.

PART 1. BACKGROUND INFORMATION

Distribution and population

The global range extends from the Iberian peninsula across southern Europe and through the central Asian plateau to Mongolia and China.

In Europe Cinereous Vulture breeds in Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Russia, Spain, Turkey and Ukraine. It may occasionally breed in Portugal, Former Yugoslavian Republic of Macedonia and Albania. It is now extinct in France (1800s), Italy (1950), Poland (1800s), Slovakia (1800s), Austria (1800s), Croatia (early 1900s), Yugoslavia (1956), Romania (1964), Moldova (1929) and Cyprus (1960) (Cramp and Simmons 1980; Meyburg and Meyburg 1984). The population status is given in Table 1.

Table 1. Breeding population of the Cinereous Vulture in Europe, 1994. Based on Tucker and Heath (1994), Galushin and Abuladze (in press) and data gathered during the Dadiá workshop (1993).

No. of pairs	
Armenia: 15–25	Russia: 30–50
Azerbaijan: 100–100	Spain: 1,050–1,150
Bulgaria: 0–1	Turkey: 100–500
Georgia: 10–20	Ukraine: 4–6
Greece: 20–21	**Total: 1,329–1,873**

Life history

* Breeding

The Cinereous Vulture breeds in loose colonies or solitarily. Age of first breeding is usually 5–6 years. It builds a huge nest on top of a tree (Pinus, Quercus, Juniperus, etc.) where it lays one egg. Laying usually starts at the beginning of February and finishes at the end of April, with the maximum number of clutches between the last week of February and the beginning of March. Incubation is by both adults and lasts 50–54 days. The chick usually spends more than 100 days in the nest and remains with the adults 2–3 months after fledging before moving away. Breeding success is very high (up to 90%) in areas with low human disturbance. The chick is fed with meat regurgitated by the adults. The maximum daily energy requirements of a breeding pair, between the end of June and the beginning of July, are 2,200 g; the yearly needs of a successful pair would be approximately 600 kg (Hiraldo 1983). Cinereous Vultures breed regularly in captivity in several European and North American zoos.

* Feeding

Birds feed on medium to large carcasses, only rarely taking live prey. They search at lower altitudes and often over more wooded country than do Griffon Vultures (Cramp and Simmons 1980). In southern Spain the Cinereous Vulture feeds basically on mammals, specially rabbits and sheep (90%), but insects and lizards also appear in the diet; the remarkable increase of populations of wild ungulates such as deer and wild boar has changed its diet towards these (González 1994). Individual pairs nesting no more than 3 km apart can show differences in diet, suggesting different foraging areas (Hiraldo 1976). Tortoises Testudo are also eaten, and in the Caucasus a significant part of the diet consists of dead sheep and other livestock which die in large numbers following overgrazing (Galushin 1995).

* Habitat requirements

Breeding requires quiet slopes covered with forest in open valleys and low sierras, occasionally in open parkland; also subalpine forests of Pinus spp., up to 2,000 m. Birds forage over forested areas, but also in many types of open terrain from steppe to upland grasslands.

Threats and limiting factors

* Habitat alterations in the breeding areas

These are usually related to forestry operations, including destruction of native forest for afforestation with exotic species, tree-felling during the breeding season, undergrowth clearing, construction of new tracks to extract timber, opening up of fire breaks, etc. Apart from the direct effect on the habitat, these activities cause disturbance to the breeding pairs and facilitate access to otherwise inaccessible areas.

Importance: critical

*** Forest fires**

The dry weather which has predominated in Europe in recent years has led to an increase in forest fires, especially in the Mediterranean region. Socio-economic changes and abandonment have also affected the frequency of forest fires. Fire can have a devastating effect on the habitat of the Cinereous Vulture; one fire in 1992 in Andalucía destroyed eight nests containing young, as well as 21 empty breeding platforms (Andalus 1993).

Importance: medium

*** Poisoning**

Unintentional poisoning resulting from the use of poison baits for vertebrate control is responsible for the loss of a number of Cinereous Vultures every year. Although prohibited by the Bern Convention, this method of killing is occasionally applied throughout the species' range in Europe. Chemicals used include strychnine, luminal and pesticides. In 1993 an official poisoning campaign was launched in Bulgaria for wolf control by the Committee of Forestry but this was stopped thanks to actions by the Ministry of Environment and NGOs.

Importance: high

*** Shortage of food**

There is a correlation between the distribution and relative abundance of the Cinereous Vulture and cattle. Changes in traditional farming practices are likely to have a negative effect on this species, e.g. a decrease in the numbers of livestock, the keeping sheep and cattle inside during winter, and removal of carcasses by man. Wild ungulates and rabbits also play an important role in the diet and should be promoted.

Importance: medium, potentially high

*** Persecution and illegal trade**

Direct persecution from hunters and collectors was a problem in the past. Nowadays some Cinereous Vultures are still occasionally shot but not in significant numbers. In post-USSR countries the illegal trade of live specimens taken from the wild for zoos or private collections in western Europe is becoming a particular problem.

Importance: low

*** Human disturbance**

This has been described as a limiting factor in the Caucasus, where mountain tourism has been very popular. Human disturbance during incubation often results in loss of the egg due to predation by crows. Recently the region has not been attractive to tourism because of the existing conflicts, but soldiers have replaced tourists in mountain forests.

Importance: low

Conservation status and recent conservation measures

* Armenia

Included in the Armenian Red Data Book (1987) as Rare. It occurs in Khosrov forest south of Yerevan and in the far south along the borders with Iran and Azerbaijan.

* Azerbaijan

The population has been decreasing over the last 10 years. It occurs in the north-western districts along the borders with Georgia and Armenia, as well as in the central mountains and in the north-east, near the border with Russia. A preliminary inventory of Important Bird Areas lists the species as being present at the following sites: 003 Alty Agach (Nature Reserve), 006 Mount Babadag (partly a Game Reserve), 009 Bosdag Mountains (unprotected), 013 Mount Giamish (unprotected), 024 Lachin (Game Reserve), 034 Shahbuz (unprotected) (Patrikeev 1993).

* Bulgaria

The Cinereous Vulture is listed as Extinct as a breeding species in the Red Data Book (1985). However, it occurs regularly in the eastern Rhodope mountains, where two pairs probably bred for the last time in 1980–1982. In 1993 a nest was found and a chick fledged successfully (S. Marin pers. comm. 1993), and 10–13 birds are regularly seen at the feeding stations which are maintained in the area (Iankov et al. 1994). Within the area there are two protected sites for birds: Nature Reserve "Valchi Dol" (IBA 013) and the Protected Natural Landmark "Kovan Kaia". During 1992 and 1993 Cinereous Vultures have been seen in the Sakar Mountain and eastern Balkan Range, which is more than 200 km north of the eastern Rhodope area.

The Bulgarian Society for the Protection of Birds is carrying out a conservation project in the eastern Rhodope mountains, with special emphasis on the Cinereous Vulture. The project started on a voluntary basis but has been financed by the Bulgarian-Swiss Biodiversity Conservation Programme since the end of 1994 and 3 staff are now employed. In 1984 a feeding station was started and two Cinereous Vultures poisoned with barbiturates were successfully treated and released. There are now two feeding stations in operation, and 10 artificial nests have been built to attract the vultures. A poster calling for the protection of birds of prey has been printed and distributed, and a documentary about Bulgarian vultures has been produced (Iankov 1993).

* France

In 1992 the Fonds d'Intervention pour les Rapaces started a reintroduction programme in the Grand Causses (Cevennes National Park), at the request of the Black Vulture Conservation Foundation. In that same year six young born in captivity were released, as were three more in 1993 (Tariel 1993). A pair has been observed building a nest in 1995.

* Georgia

The Cinereous Vulture is included in the national Red Data Book. It occurs in the south-eastern part of the country where it breeds in Vashlovani State Reserve (8–14 pairs) and

Chachuna Game Reserve (2–5 pairs). A reservoir on the Iori river has recently flooded 11 nests (A. Abuladze pers. comm. 1993). The total number in Georgia is estimated to be 17-19 pairs (A. Abuladze, pers. comm. 1994).

*** Greece**

It is listed as Endangered in the Greek Red Data Book (Handrinos 1992) and occurs only in the north-eastern part of the country, in the forest of Dadiá, district of Evros. The habitat is an open pine forest of Pinus brutia and P. nigra with a dense undergrowth of oak brushwood. The present population amounts to over 100 individuals with about 20 active breeding pairs. Breeding also occurred in the mountains of Olympos and Kato Olympos until 1987 (two pairs), and seven birds were present in the area up to 1989 but had all gone by 1991 (Hallmann in prep.).

Dadiá Forest was given protection by the Greek Government in 1980 as an outstanding biotope for birds of prey. Actual conservation management started in 1987 with the appointment of two guards, the opening of the feeding station, the construction of a hide for observing the vultures on the feeding station, and the building of a visitor centre and ecotourism hostel near Dadiá. In 1992, WWF Greece undertook a new project for the management and wardening of the Reserve, and the development of ecotourism there; an operational management plan is currently being prepared (Katsadorakis et al. in prep.). This work has benefitted from EU funds through the ACNAT programme.

In 1994 the Specific Environmental Study for Dadiá Reserve was completed. This study has focused on the conservation of the site's biodiversity and of its population of birds of prey in the whole of the protected area (core areas and buffer zone), with particular emphasis on the Cinereous Vulture.

The population of the Cinereous Vulture has increased from nine pairs in 1988 to 20 pairs in 1994 (WWF Greece in prep.). The main reasons for this increase have been:

1. The absolute protection of the main breeding colonies in Dadiá Reserve.

2. The operation of the feeding place and the regular supply of carcasses.

3. The positive attitude of the local people towards the protection of the birds of prey as a result of the development of ecotourism and its resulting social and financial benefits.

*** Italy**

A feasibility study on the reintroduction of the Cinereous Vulture in Sardinia is underway. This project is being carried out under an agreement between LIPU, the Black Vulture Conservation Foundation and the Junta de Extremadura (which will provide birds to be used in the reintroduction programme).

*** Portugal**

The Cinereous Vulture is classified as Endangered in the Portuguese Red Data Book, although considered probably to have become extinct as a breeding species in recent years (Cabral et al. 1990).

*** Russia**

Classified as Endangered in the Red Data Book of 1983 and recommended for inclusion in the next edition which is now being prepared. It occurs along the north slope of the Caucasus, mostly in its eastern part but some pairs are also recorded in the centre and west of the range. There are c.10 pairs in Dagestan Autonomous Republic and probably a few pairs in Chechen and Kalmikia Autonomous Republics; a small population has recently been discovered in the Caucasus Nature Reserve (Abuladze 1994, Khokhlov 1995). It is declining due to habitat destruction, human disturbance, persecution and poisoning (Galushin 1995).

*** Spain**

Classified as Vulnerable in the Red Data Book (Blanco and González 1992). It occupies the south-western part of the country, breeding in lowland sierras and subalpine forests. The population has increased from 200 pairs in 1970 to c.1,000 in 1992 (Hiraldo 1974, González 1994). National surveys were also carried out in 1982 (370 pairs) and 1989 (774 pairs) (González 1990). In Mallorca the population has increased from 20–22 individuals in 1986 to 57 birds in 1991, thanks to the release of rehabilitated birds from continental Spain and captive-bred chicks from several European zoos and other institutions; a total of 33 birds has been released over eight years (Tewes 1994). Supplementary feeding and a reduction in the number of birds poisoned also contributed to the increase in the Mallorcan population.

The main reasons for the recovery in Spain have been: (1) the protection of the breeding colonies and the regulation of forestry activities, (2) the reduction in mortality due to a ban on poisoning, and (3) the undertaking of awareness campaigns by the administration and local NGOs (González 1990).

Most of the breeding population (87%) is included in Special Protection Areas under the Birds Directive. These include: Encinares Río Alberche y Río Cofio, Alto Lozoya (Madrid); Valsaín, Valle de Iruelas, Batuecas, Arca y Buitrera (Castilla–León); Cabañeros (Castilla–La Mancha); Monfragüe, Sierra de San Pedro (Extremadura); Sierra de Hornachuelos, Sierra Pelada y Ribera del Aserrador (Andalucía); Sierra de Alfabia (Mallorca). In the Sierra de Gata (Extremadura) there has been a project funded by ACNAT for habitat restoration and food restocking.

Key sites for the Cinereous Vulture in Spain are Monfragüe Natural Park in Extremadura with c.230 pairs, and Cabañeros National Park in Castilla–La Mancha with c.190 pairs (Jiménez 1990). In November 1995, under law 33/95, Cabañeros was delared a National Park, the first in Spain to cover Mediterranean forest habitat.

There is a worrying return of poisoning as a method of predator control in Spain, as shown by the numbers of birds of prey found poisoned in the regions of Madrid, Castilla–La Mancha and Castilla–León in the years 1990–1994.

*** Turkey**

It is classified as Endangered in the Draft Red List of Threatened Animals of Turkey (1991), and is legally protected. It is confined mainly to the large forests of northern Anatolia, the Kizilcahamam area to the north of Ankara, the eastern Pontic Mountains and the Uludag (M. Kasparek in litt. 1993). It is present in the following Important Bird Areas: 010 Uludag

(presumably breeds), 012 Ilgaz Daglari, 013 Kackar Daglari (presumably breeds), 014 Kizilcahamam Mountains including Soguksu National Park (6 nests), 043 Acigol and Calti Golu (possibly breeds) (Grimmett and Jones 1989). Three new breeding areas were discovered during a small survey in 1995 (Murat Yarar in litt.)

*** Ukraine**

Included in the national Red Data Book as Endangered. The only place where it occurs is in the Crimean Game Reserve (IBA 045), including the northern and southern slopes of the main Crimean range. In the beginning of the 1980s the population was estimated at 5–8 breeding pairs (Meyburg and Meyburg 1984). In 1990 six pairs bred, each raising one chick, and a further 13 non-breeding individuals were observed in the area. Nests are built in Pinus spp. and Juniperus foetidissima, on steep slopes. The main threats are: (1) lack of food, (2) shooting and poisoning outside the reserve, and (3) disturbance related to forestry (Appak 1992). Exceptionally cold winters such as that in 1988/89 reduce the breeding performance. The Cinereous Vulture is considered to be decreasing in Crimea, whereas the Griffon Vulture appears to be stable (Appak 1992).

PART 2. AIMS AND OBJECTIVES

AIMS

1. In the short term, to maintain and enhance the existing Cinereous Vulture populations in Europe.

2. In the long term, to encourage the recolonisation of the former range.

OBJECTIVES

1. POLICY AND LEGISLATIVE

1.1. To promote national and international broad policies which are compatible with the conservation of the Cinereous Vulture and its habitat

1.1.1. Forestry

The conservation of the Cinereous Vulture in Europe is intimately related to the conservation of forests. Forestry policies, at both national and international levels, should guarantee that forest management is based on the principles of sustainability and ensure the long-term survival of all native forests. Management activities should take full account of the presence of Cinereous Vultures and other threatened species, avoiding disturbance of them during the breeding period. Guidelines for forest management in areas of exceptional natural value should be prepared at the national level.

Priority: high

Time-scale: short

1.1.2. Agriculture

Agriculture policies can have an influence on Cinereous Vulture conservation as far as livestock is concerned. As an example, the EU Agri-environment Regulation 2078/92 sets up aid schemes to farmers who undertake a reduction in stocking levels of sheep and cattle. Overall, this Regulation will be beneficial for steppe and dry grassland birds, but it could be detrimental to vultures and other scavengers. In the long term, agricultural policies must ensure the sustainability of stock-raising and the long-term survival of traditional extensive livestock practices and conditions which favour adequate populations of other key prey species such as rabbits.

The Cinereous Vulture is one of the species included as dependent on agricultural habitats in the European Agricultural Habitats Conservation Strategy currently being prepared by BirdLife International (Tucker et al. in press).

Priority: medium

Time-scale: medium

1.1.3. International cooperation

Most of the remaining Cinereous Vulture populations in Europe are located in countries which lack the financial resources needed to undertake comprehensive conservation measures. It is not so much the know-how, but rather funds and equipment (computers, telescopes, vehicles, etc.) that are urgently needed. International help from wealthier countries and organisations is essential to strengthen institutions and support NGOs.

Priority: essential

Time-scale: short/ongoing

1.2. To ensure maximum legal coverage of the Cinereous Vulture and its habitat in national and international legislation

1.2.1. National legislation

Where appropriate, the range-states should review their legislation on nature conservation to include provisions for the conservation of species and sites, in addition to conservation measures in the wider environment. It is recommended that a species listing process is established and that recovery plans or action plans are foreseen for the most threatened taxa. In parallel with nature conservation law, impact assessment regulations should also be developed.

Importance: high

Time-scale: short/medium

2. SPECIES AND HABITAT PROTECTION

2.1. To protect all the existing breeding colonies and isolated nests against habitat alterations and human disturbance

2.1.1. Protected area status

The breeding colonies should be included as core zones in larger protected areas, in order to ensure the long-term conservation of these areas. The declaration as a protected area allows the administrators to establish a protection regime and to regulate the uses of the land and the access of people. The management plans of existing protected areas should take into account the presence of the Cinereous Vulture and provide precise recommendations for its conservation.

Priority: essential

Time-scale: short/medium

2.1.2. Prevention of damaging or disturbing developments and activities near nest-sites

If a breeding colony cannot be legally protected, any proposed activities in its immediate vicinity must be carefully evaluated for impacts on Cinereous Vultures. During the breeding season, all motorised activity and blasting should be restricted within 2.5 km of nest-sites. The minimum distance between lightly used dirt roads and nests should be 1.5 km. All human activity within 1 km of the nests should be restricted, including tourism and recreation.

Priority: high

Time-scale: short/ongoing

2.1.3. Forestry operations

As the Cinereous Vulture breeds in forests there can be a conflict between the species and forestry operations. As a rule, forest exploitation should not be allowed during the period January–September within 1 km of any nest. If forest management operations are necessary around the nest, these should take place during October–December. As a rule, trees containing nests should never be cut down. Plans should be developed for preventing and controlling wildfires in areas inhabited by Cinereous Vultures.

Priority: high

Time-scale: short/ongoing

2.2. To provide optimum food availability

2.2.1. Encourage a continuing livestock economy

The preservation of an extensive livestock economy is essential to the survival of the Cinereous Vulture in the wild. At the local level, regular contacts with land managers and stockbreeders should be maintained to encourage them to leave dead stock for the vultures, although this has to be done under careful supervision of local veterinarians.

Priority: medium

Time-scale: medium/ongoing

2.2.2. Encourage repopulation of native wild ungulates

Wild ungulates such as red deer Cervus elaphus, roe deer Capreolus and fallow deer Dama dama constitute a valuable source of food for the Cinereous Vulture, especially during the hunting season when the remains of game animals are regularly left out in the wild. Any reintroduction or restocking schemes with wild ungulates should involve native species, and should be done according to the IUCN guidelines for reintroductions (Kleiman et al. 1994). Particular attention needs to be given to avoiding overgrazing and competition with other key prey species such as rabbits.

Priority: low

Time-scale: long

2.2.3. Provide supplementary food at specific sites

Supplementary feeding has proved to be a very useful way of boosting vulture populations. It has the advantages of providing both extra and safe, poison-free, food supplies. Experiments carried out in Spain show that Cinereous Vultures prefer feeding sites which are in areas of open forest with undergrowth brush rather than in open space (Jiménez 1990). Also, they prefer small carcasses of the size of a sheep or goat rather than large carcasses such as those of cows or horses. These characteristics are of importance when providing additional food in regions where the Griffon Vulture is still numerous, as that species generally prefers feeding on large carcasses in open areas.

Priority: low

Time-scale: ongoing

2.3. To prevent the use of toxic chemicals for predator control

The use of poisons such as strychnine, barbiturates and other chemicals for predator control programmes, largely against wolves and foxes, has been one of the factors responsible for the disappearance of the Cinereous Vulture from large areas of Europe. The use of poisoned baits for predator control is now illegal in most European countries and is also prohibited by the Bern Convention. If it is suspected that poisoning is taking place it is necessary to gather information about the products being used and the individual people using them illegally. The

competent authorities should be encouraged and assisted to enforce the existing regulations. Public awareness should be raised about the unacceptability of poisoning (see 4.2.).

Priority: essential

Time-scale: short/ongoing

2.4. To restore the Cinereous Vulture to those areas from which it has disappeared

Reintroduction schemes should be considered in those countries which can guarantee suitable conditions for supporting the species. These conditions should comply with the IUCN criteria for reintroductions (Kleiman et al. 1994), which can be summarised as follows: (1) there has to be good historical evidence of former presence, (2) the factors responsible for the extinction should no longer be operating and (3) the habitat has to be adequate in area and quality to meet the species' requirements. The Cinereous Vulture is bred in captivity in several European zoos, and the techniques for the reintroduction of captive-bred birds have been greatly refined and successfully applied in recent years (Tariel 1993, Tewes 1994). Countries that, in principle, could be considered for reintroduction include Italy (Sardinia, where a feasibility study is already in progress), Croatia and Romania.

Priority: low

Time-scale: long

3. MONITORING AND RESEARCH

3.1. To monitor regularly the status and population trends of Cinereous Vultures in Europe

3.1.1. Regular national monitoring schemes

A complete national survey should take place at least every four years in each range-state, and colonies situated in protected areas should be monitored annually. Usually it is sufficient that one visit is made to each nest-site at the end of the breeding season when the chicks are well grown. National surveys should be coordinated internationally by BirdLife International.

Priority: medium

Time-scale: short/ongoing

3.1.2. Surveys to establish the status of Cinereous Vultures

All the range-states should establish a clear idea of the population size and distribution of the species. There is an urgent need for an inventory of all breeding colonies within the range, including data on location, habitat, number of breeding pairs, protection status, threats, etc. If necessary, these surveys could be carried out by international teams involving nationals and expatriates. These surveys can also take place within the framework of broader Important Bird Area surveys.

Priority: medium

Time-scale: short/medium

3.1.3. Monitor causes of mortality

Whenever a Cinereous Vulture or any other bird of prey is found dead or with symptoms of poisoning, it should be taken to the appropriate institution for examination, including X-ray and toxicological analysis. The statutory nature conservation authorities of each country should pay for these analyses.

Priority: medium

Time-scale: short/ongoing

3.1.4. Monitor results of reintroduction efforts

In all cases where Cinereous Vultures have been released in a particular area with the aim of establishing a new population it is essential that the birds are individually marked and monitored. The results should be well documented and evaluated, including a description of the techniques used and success achieved. Information about ongoing efforts will greatly enhance the likelihood of success for new initiatives.

Priority: low

Time-scale: ongoing

3.2. To undertake studies about home-range, habitat use and dispersal

There is very little information about the ecological requirements of the Cinereous Vulture especially with regard to home-range and habitat use. Individual marking of young and adults with radio-transmitters, wing tags, colour rings or decoloration of feathers would provide very useful information about activity patterns, habitat selection, home-range, foraging areas and movements of the young after leaving the nest, as well as pointing out some causes of mortality. These studies should be done in countries where the Cinereous Vulture still enjoys a favourable conservation status.

Priority: medium

Time-scale: medium

4. PUBLIC AWARENESS AND TRAINING

4.1. To inform the public and increase general awareness of the need to protect Cinereous Vultures and their habitat

Education and awareness campaigns about the ecological role of scavengers as sanitarians of the environment, and their vulnerability to poisoning and land-use changes, should be carried out nationally according to the requirements of each country. Successful reintroduction and restocking projects, such as the ones in Mallorca and France, should be widely publicised and used as a means of increasing the public's appreciation of this species. The Cinereous Vulture should be considered as a "flagship" species to promote the conservation of forests and traditional farming practices throughout its range in Europe.

Priority: low

Time-scale: medium/ongoing

4.2. To undertake national and international anti-poisoning awareness campaigns

These campaigns, led by Government where possible, should seek to increase public opinion against persecution and also encourage peer pressure amongst farmers against poisoning. Where appropriate, any prosecutions should be used to raise public awareness through media coverage. The scientific facts about the devastating effects that illegal poisoning is having on Cinereous Vultures and other wildlife should be promoted. Alternative safe, target-specific methods of vertebrate predator control, and improved methods of stock control to reduce predation risk, should also be promoted to farmers in target areas.

Priority: essential

Time-scale: short/ongoing

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ANNEX 1. RECOMMENDED CONSERVATION ACTIONS BY COUNTRY

*** Armenia**

Under the existing economic and social conditions field research is virtually impossible in the country. In future, when conditions improve, international help will be needed.

*** Azerbaijan**

As above.

*** Bulgaria**

1.1.3. Provide long-term support for the work in the Rhodope mountains being carried out by BSPB. Funding is currently available until 1997.

2.1.1. Promote the declaration of the core part of the eastern Rhodope mountains as a Nature Park, according to the new Nature Protected Areas Law. The local population must be consulted and involved in the process to establish protected areas, and "green tourism" should be considered as a priority for the sustainable development of the whole region.

2.1.3. Encourage the Forest Committee and the local forest service to avoid clearance of the forest and the cutting of the old trees in the areas which have already been identified as former breeding grounds of the Cinereous Vulture, as well as other suitable areas which may be identified in the near future.

2.3. Constant monitoring of the Cinereous Vulture population is needed in order to detect any poisoning incident. The authorities should be encouraged to implement a strict ban on this kind of activity and to take immediate action should the problem reoccur.

*** Georgia**

Under current conditions field research is practically impossible. Nevertheless, this action plan acknowledges the research and monitoring carried out up to 1991 by the Institute of Zoology and A. Abuladze in particular. Once the social and economic situation in the country has settled this work should continue. In future, when conditions improve, international help will be needed.

*** Greece**

1.2.1. The authorities responsible for nature conservation should draw up a recovery plan for the Cinereous Vulture with the aim of re-establishing the species throughout its former range in the country. This recovery plan should be officially endorsed, and a specific budget allocated for its implementation.

2.1.1. Promote the provisions of qualified staff and wardens for protected areas.

2.1.1. Promote the completion and implementation of the management plan for the Dadiá Forest being prepared by WWF Greece and the Ministry of Environment.

2.1.3. Promote forestry operations in Dadiá Forest that are fully compatible with the conservation of the Cinereous Vulture. No forestry activities have been undertaken within the core areas since 1980. The Specific Environmental Study delimits the highly sensitive zone,

which includes those sections of the core areas and the buffer zone where the main nesting habitats of the Cinereous Vulture (and also Griffon Vulture and Golden Eagle Aquila chrysaetos) are known to exist. It is recommended that all human activities, except traditional grazing and bird monitoring, be forbidden in these areas throughout the year. For the two isolated nests which lie in the southern buffer zone, outside the highly sensitive zone, it is recommended that no forestry activity takes place during the breeding season within 1 km of the nests.

The following measures are recommended to conserve suitable forests for the breeding of the Cinereous Vulture and other raptors in the Evros Prefecture:

1. Definition of areas with particular ecological value for nesting, in which strict protection measures should be enforced.

2. Management for the creation of uneven-aged forest areas while preserving mature stands at all times.

3. Special management of evergreen broad-leaved stands with large isolated pine trees; these trees must be safeguarded as nest-sites.

3.1.1. Continue the yearly monitoring of the population as it has been since 1987 by the local team at Dadiá.

*** Russia**

3.1.2. Undertake national surveys to draw up a precise distribution map, including the relevant breeding nuclei. Field surveys should concentrate in the Nature Reserves (Zapovedniks) and other protected areas along the Caucasus. These surveys could be carried out within the framework of broader Important Bird Area surveys. NGO development in Russia should be promoted.

*** Spain**

1.2.1. Promote completion of the National Catalogue for Threatened Species under Law 4/89 for the Conservation of Natural Areas and Wildlife. This should include those species in need of specific protection measures. The Cinereous Vulture is currently classified as Of Special Interest in the preliminary Catalogue (Royal Decree 439/90), which means that management plans should be prepared at regional level. However it should be reclassified to a more appropriate category of threat according to the national Red Data Book.

2.1.1. Ideally all breeding colonies should be included within protected areas, and these should have management plans to regulate forestry and hunting. Some new protected areas need to be declared.

2.1.2./

2.1.3. Private landowners should be provided with precise guidelines to prevent disturbance and alterations of the breeding range. These include forestry activities such as the establishment of tracks for cork or timber extraction, clearance of woodland and cutting of scrubland. In some areas the habitat is intensively managed for game species such as red deer

and wild boar, and new tracks are made to permit easy access for hunting which can increase disturbance.

2.1.2. Monitor the use of EU Structural and Cohesion Funds. Planned infrastructural and hydrological development in Spain continues to threaten nesting and feeding habitat of Cinereous Vultures through flooding, increase of disturbance and ease of access to the breeding colonies.

2.3./4.2. Careful surveillance by official wardens and NGOs is necessary to detect instances of poisoning, and each case should be thoroughly investigated and fines imposed as appropriate. If a particular hunting estate offends, the required hunting permit should be withdrawn by the regional authorities. A study of the socioeconomic factors inducing gamekeepers to use poison for predator control should be undertaken, as should an awareness campaign about the risks of poisoning for protected wildlife and human welfare.

3.1.1. A national survey should be carried out every four years, which could be coordinated by DGN. Colonies in protected areas should be monitored yearly.

3.2.1. A comprehensive research project should be undertaken to determine food and habitat requirements, home-range, dispersion, survival rates and patterns of colonisation of new territories, with the help of individual marking. The expanding population of the Cinereous Vulture now offers ideal conditions for such a study, which would permit better management of the population and establish principles for reintroduction schemes in other countries.

*** Turkey**

3.1.2. There is a lack of baseline information about population status, distribution and trends. Field surveys are necessary to locate the main breeding areas and assess population size. These surveys could be carried out in the framework of broader Important Bird Area surveys. A comprehensive inventory of all the existing colonies and isolated pairs is urgently needed.

3.1.3. In parallel with the surveys above, information needs to be gathered about the factors likely to affect the population: poisoning, destruction of forests, habitat alterations, persecution, etc.

*** Ukraine**

2.2.3. A feeding station should be set up in the Crimea Game Reserve and supplied regularly.

3.1. Being the only population in the Ukraine it is essential that monitoring of numbers, breeding success, causes of mortality and population trends is carried out yearly.