LIFE14 PRE/UK/000002 Project

European Species Action Plan for the Conservation of the Cinereous Vulture *Aegypius monachus* (2018 – 2028)

European Union (EU)

European Single Species Action Plan for the Conservation of the Cinereous Vulture

Aegypius monachus

LIFE14 PRE/UK/000002 Project

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Produced by
Vulture Conservation Foundation (VCF)

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EuroSAP (LIFE14 PRE/UK/000002) LIFE preparatory project, coordinated by BirdLife International and co-financed by the European Commission Directorate General for the Environment, the African-Eurasian Migratory Waterbird Agreement (AEWA), and each of the project partners.

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This Action Plan was developed in parallel with the preparation of the Multi-species Action Plan to Conserve African and Eurasian Vultures (Vulture MsAP) and the Flyway Action Plan for the conservation of the Cinereous Vulture, both CMS initiatives. More information about the Vulture MsAP here.

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- European Vulture MsAP Workshop in Monfragüe, Spain: October 2016.
- Workshop session at the Vulture Conservation Foundation Scientific Board meeting: April 2017.
- First draft: April 2017
- Second draft: May 2017
- Final draft: April 2018

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Picture on the front cover: Cinereous Vulture pair (*Aegypius monachus*) © Fermi Martinez.

This publication can be downloaded from the Species Action Plan Tracking Tool (http://trackingactionplans.org/SAPTT/downloadDocuments/openDocument?idDocument=52)

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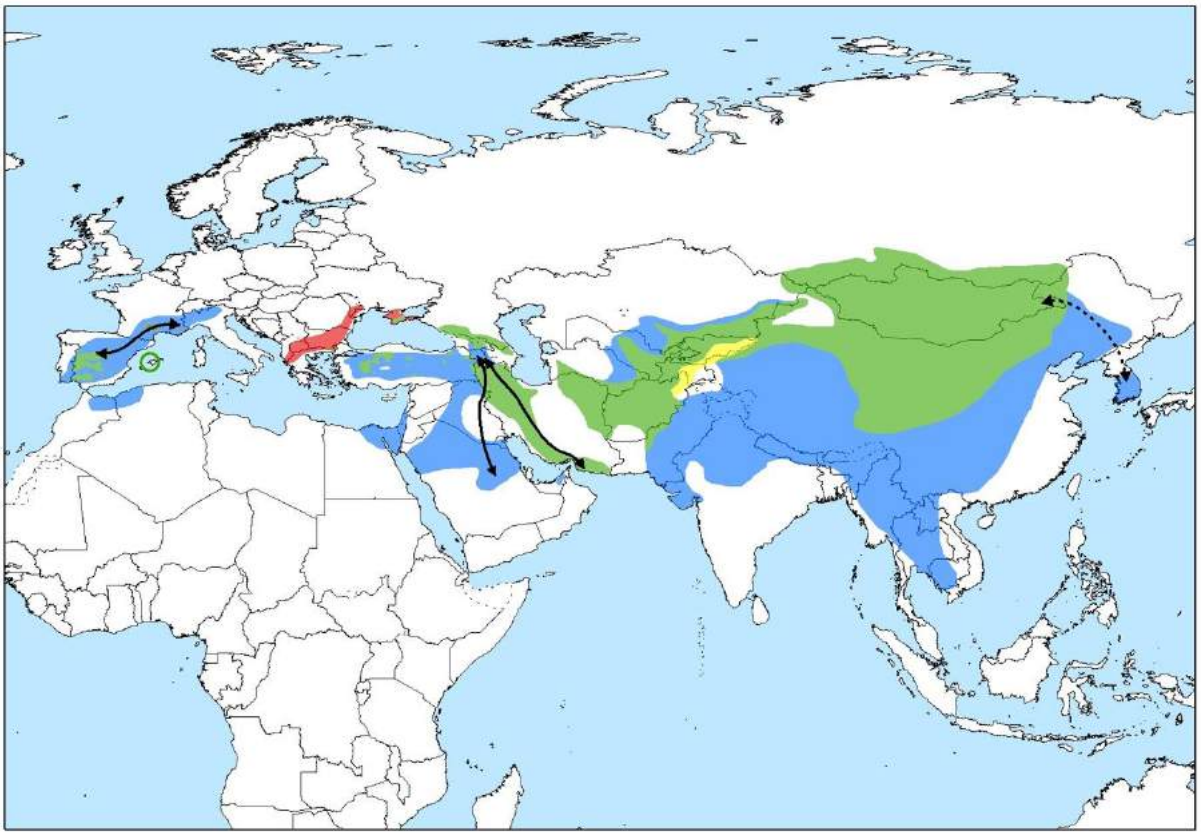
1 - BASIC DATA

Taxonomy and bio-geographic populations

The species belongs to the *Accipitridae* family, and is the only species in the genus *Aegypius*. Scientific name: *Aegypius monachus* (*Linnaeus, 1766*). Common names: Cinereous Vulture, Eurasian Black Vulture, European Black Vulture, Monk Vulture. No subspecies are identified (*Global Raptor Information Network.* 2016), although there is a debate and intentions to separate the European and Asian populations due to some population differences – there is a limited genetic variation in the species, and body size increases from west to east, with the birds from southwest Europe being on average about 10% smaller than the vultures from Central Asia (*Ferguson-Lees et al.* 2001).

The species is a partial migrant (*Bildstein 2006*). It is mostly sedentary in Europe, but many individuals from the Caucasus (Eastern Europe and Central Asia) winter south of the breeding range, and there is also generally a good deal of nomadism (vagrancy). Gavashelishvili and McGrady (2006) recorded long range movements by juvenile and subadult birds which fledged in Georgia, travelled south to Saudi Arabia and Iran, and then headed north into Russia (Gavashelishvili et al. 2012). In Europe, the adults are mostly sedentary while the juvenile birds disperse over larger areas. In Spain, the movements of the juveniles are mostly limited to the western part of the Iberian Peninsula and in the surroundings of the breeding colonies (*Moreno-Opo 2009*). Reports of Cinereous Vultures as regular winter visitors to Africa (Egypt and Sudan) appear to be unfounded, at least at the present time, although very small numbers have been recorded (less than annually) in Egypt. Few birds are recorded crossing the Gibraltar Strait yearly.

Movements of individuals from/to Spain, France and Italy have been recorded in recent years. Also, birds from the Dadia-Lefkimi-Soufli Forest National Park colony in North-eastern Greece regularly visit the nearby vulture feeding sites in southern Bulgaria, disperse in the wider range of Rhodope Mountain (Vasilakis e al. 2008, Vasilakis et al 2016, Vasilakis et al. 2017) and even go to Turkey (Skartsi pers. com 2016). In the last few years an individual with unidentified origin has been regularly visiting Serbia and Macedonia.



Legend for distribution map	
	Resident: resident throughout the year and breeding
	Breeding visitor: occurs regularly only during the breeding season and known to breed
	Non-breeding visitor: occurs regularly during the non-breeding season. In the Eurasian context, this encompasses 'winter'. For vultures, this covers all non-breeding movements outside the breeding range
	Extinct: formerly occurred, but it is almost certain that the species no longer occurs and there have been no records of breeding in the last 30 years
	Arrows indicate approximate migration routes where there may have been few actual observations, but data clearly indicate regular occurrence, even if only for a relatively short period of the year, on migration between breeding and non-breeding ranges

Figure 1. Global distribution range of the Cinereous Vulture (BirdLife International 2017)

The geographical scope of both the previous Action Plan for the Cinereous Vulture in Europe and the current one covers Albania, Armenia, Azerbaijan, Bulgaria, Croatia, France, Georgia, Greece, Italy, Portugal, Romania, Russia (Europe only), Spain, Serbia, Macedonia (FYR of), Turkey and Ukraine.

Table 1. Range states of the Cinereous Vulture covered by the current Action Plan

Country	Status
Albania	extinct as breeder
Armenia	breeding
Azerbaijan	breeding
Bulgaria	extinct as breeder
Croatia	extinct as breeder
France	breeding
Georgia	breeding
Greece	breeding
Italy	extinct as breeder
Portugal	breeding
Romania	extinct as breeder
Russia (Europe)	breeding
Spain	breeding
Serbia	extinct as breeder
Macedonia (FYR of)	extinct as breeder
Turkey	breeding
Ukraine (Crimea)	breeding

Relevant policy and legislation

In 2017, the global IUCN Red List Category (since 2004) for the Cinereous Vulture was *Near Threatened* (C1), as the species has a moderately small population which appears to be suffering an ongoing decline in its Asiatic strongholds, despite the fact that in parts of Europe numbers are now increasing. In Europe, the species does not meet regional IUCN Red List criteria, and its European Red List Category is *Least Concern* (BirdLife International, 2017). The species is listed in Annex I of the European Commission Birds Directive and in Appendix II of the Bern Convention. The species is legally protected in all range states covered by the plan.

Table 2. Summary of international conservation and legal status of the Cinereous Vulture

IUCN Red List status	
IUCN Global assessment	Near Threatened (NT)
IUCN European regional assessment	Least Concern (LC)
IUCN EU27 regional assessment	Least Concern (LC)
International legal status	
Convention on Migratory Species (Bonn Convention)	Appendix II
Convention on International Trade in Endangered Species (CITES)	Annex II: a, b
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)	Appendix II
Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU)	Annex I
Commission Regulation (EU) No 1320/2014 (EU regulation of trade of fauna and flora)	Annex A
EU Birds Directive	Annex I

Table 3. International protection policy and legislation by Cinereous Vulture range state

- *Source: Vulture MsAP online questionnaire 2016.*

Country	**Convention on Biological Diversity**	**Convention on Migratory Species**	**Raptors MoU**	**CITES**	**Rotterdam Convention**
Albania	✓	✓	✗	✓	✓
Armenia	✓	✓	✓	✓	✓
Azerbaijan	✓	✓	✗	✓	✗
Bulgaria	✓	✓	✗	✓	✓
Croatia	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓
Georgia	✓	✓	✗	✓	✓
Greece	✓	✓	✗	✓	✓
Italy	✓	✓	✓	✓	✓
Macedonia (The FYR)	✓	✓	✗	✓	✓
Portugal	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓
Russia	✓	✗	✗	✓	✓
Serbia	✓	✓	✗	✓	✓
Spain	✓	✓	✓	✓	✓
Turkey	✓	✗	✗	✓	✗
Ukraine	✓	✓	✗	✓	✓

Table 4. National policies and legislation

- *Source: Vulture MsAP online questionnaire 2016.*

Country	Protection status	Conservation status	Legally protected - killing	Legally protected - poisoning	Maximum legal coverage in national leg.	National Species Action Plan
Albania	Protected	Extinct in the wild	Yes	Yes	No	No
Armenia	Protected	Near threatened	Yes	No	Partly	No
Azerbaijan	Protected	Endangered	Yes	No	Partly	No
Bulgaria	Protected	Extinct in the wild	Yes	Yes	Yes	In devel.
Croatia	Protected	Extinct in the wild	Yes	Yes	Yes	No
France	Protected	Endangered	Yes	Yes	Yes	Yes
Georgia	Protected	Endangered	Yes	Yes	Partly	No
Greece	Protected	Endangered	Yes	Yes	Yes	No
Italy	Protected	Extinct in the wild	Yes	Yes	/	No
Macedonia (FYR)	Protected	Extinct in the wild	Yes	Yes	Yes	No
Portugal	Protected	Critically Endangered	Yes	Yes	Partly	In devel.
Romania	Protected	Extinct in the wild	Yes	Yes	/	No
Russia	Protected	Vulnerable	Yes	Yes	Yes	No
Serbia	Protected	Extinct in the wild	Yes	Yes	/	No
Spain	Protected	Vulnerable	Yes	Yes	Yes	No*
Turkey	Protected	Near threatened	Yes	Yes	Yes	Yes
Ukraine	Protected	Near threatened	Yes	Yes	Yes	No

Table 5. Highest responsible national authority in the species' range states

Country	Institution
Albania	Ministry of Environment
Armenia	Ministry of Nature Protection of Republic of Armenia
Azerbaijan	Ministry of Ecology and Natural resources
Bulgaria	Ministry of Environment and Water
Croatia	Ministry of Environment and Energy
France	Ministry in charge of environment
Georgia	The Ministry of Environment and Natural Resources Protection
Greece	The Ministry of the Environment and Energy
Italy	Ministry for the Environment
Macedonia (The FYR)	Ministry of Environment and Physical Planning
Portugal	ICNF - Instituto da Conservação da Natureza e Florestas
Romania	Ministry of Environment, Waters and Forests
Russia	Federal Service for Supervision of Nature (Rosprirodnadzor)
Serbia	Ministry for Environment, Institute for Conservation Nature of Serbia
Spain	Spanish Ministry of Agriculture, Fisheries, Food and Environment / Regional Governments
Turkey	Ministry of Forestry and Water Affairs
Ukraine	Federal Service for Supervision of Nature

* *Regional Species Action Plans are prepared in the Spanish regions relavant to the species.*

2 - FRAMEWORK FOR ACTION

Goal

To restore the Cinereous Vulture *(Aegypius monachus*) population to its original distribution range and to maintain the current populations at favourable conservation status.

High Level Objective

To enhance the recolonization of the former range by reducing the threats in all relevant range states and establish safe corridors and links between populations.

The development of the following framework of actions, proposed for the conservation of the Cinereous Vulture is based on the outcomes from the Species Status Report for the Cinereous Vulture, the Implementation Review Report of the Action Plan for the Cinereous Vulture in Europe and the European Vulture Multi-species Workshop (October, 2016). This framework for action is nearly the same as the one proposed in the Flyway Action Plan for the Cinereous Vulture (for its global distribution range) and fully compatible with the framework for action proposed in the Multi-species Action Plan to Conserve African and Eurasian Vultures (Vulture MsAP).

The detailed Framework for Action of this SAP is presented in Table 7 below.

Table 6. Framework for action
Time scale: Immediate – launched within the next year; Short – launched within the next 3 years; Medium – launched within the next 5 years; Long – launched within the next 5-10 years; Ongoing – currently being implemented and should continue; Rolling – to be implemented perpetually (any action above from immediate to ongoing can be also qualified as rolling)

Result	Action	Time-scale	Priority	Organisations responsible
Objective 0: Improve knowledge about Cinereous Vulture populations				
Better quality population figures available for the whole the range and trends accurately estimated	0.1 Promote a European census across the range and monitor the breeding productivity of the most significant populations	Long	High	NGOs and Governments
Objective 1: Reduce poisoning with poison baits				
Significant decrease in mortality by poisoning by 50% at least in Europe, when compared to 2000-2015 data	1.1 Review of legislation to make poisonous substances illegal, clarify competences of the authorities and/or create new punitive measures/sanctions (some countries)	Short	Essential	Governments
	1.2 Use conventions (CMS + Bern) to pressure governments to follow/implement the guidelines	Short	High	Governments, NGOs
	1.3 Create capacities (training of law enforcement agencies, judges, prosecutors, anti-poisoning detection units, etc.) to fight against poison use	Short	Essential	Governments (with NGO support)
	1.4 Establish adequate toxicological screening (sampling protocols, etc.)	Short	Essential	Governments (with NGO support)
	1.5 Awareness campaign about the negative impacts of poison to several target groups (general public, police, hunting managers, etc.)	Short	Essential	NGOs/hunting organizations

	1.6 Establish national and regional databases (European) of poisoning incidents and list of poisons used.	Short	High	Governments, NGOs
	1.7 Promotion of effective livestock and crop management methods that reduce human-wildlife conflict	Long	Medium	Governments, NGOs
	1.8 Establish and improve effective compensation schemes to solve human-wildlife conflict when relevant	Long	Medium	Governments
	1.9 Adequate enforcement of legal procurement rules for hazardous substance and control trade on illegal substances	Long	Medium	Governments
	1.10 Enhance adequate legislation and/or management of feral dogs	Long	Medium	Governments
	1.11 Implement a positive campaign on the role of scavengers, including the ecosystem services they provide	Short	High	NGOs
Objective 2: Reduce poisoning by agrochemicals				
Increase knowledge on the role of agrochemicals on Cinereous Vulture mortality	2.1 Establish regular biocide screening in vultures	Long	Medium	NGOs, Universities, Reference Laboratories
	2.2 Implement awareness campaign about misuse of biocides and their negative effects on vultures (or wildlife in general)	Short	Medium	NGOs
Objective 3: Reduce poisoning by veterinary (vet) drugs				
Reduce risk of Cinereous Vultures mortality from vet drugs	3.1 Establish adequate screening for vet drugs (incl. Diclofenac) in Europe	Short	High	Governments
	3.2 Develop toxicity tests for new vet drugs to be introduced into the market	Medium	High	Researchers/Universities
	3.3 Develop rapid-reaction kit to detect vet drugs	Medium	Medium	Researchers/Universities
	3.4 Develop guidelines for adoption of good risk assessment procedures for new vet drugs	Medium	High	Industry/NGO/Governments
	3.5 Ban Diclofenac and other eventual toxic substances in range states	Short	High	Governments
	3.6 Implement awareness raising campaigns with veterinarians about the potential toxic effects of vet drugs on Cinereous Vultures	Short	High	NGOs
Objective 4: Reduce poisoning by lead				
Knowledge on the impact of lead poisoning on Cinereous Vulture populations is improved and the use of lead ammunition in some key sites for the species reduced or eliminated	4.1 Quantify impacts of lead poisoning on populations of Cinereous Vulture and conduct regular lead and other heavy metal screenings in Cinereous Vultures.	Medium	High	Researchers/Universities/NGO/Governments
	4.2 Implement awareness raising activities amongst hunters about negative effects of lead and about the non-lead alternatives which can be used in some key sites for the species	Long	High	NGO/Hunters
	4.3 Secure a ban on the use of lead ammunition in the EU.	Medium	High	Governments

	4.4 Promote voluntary local/regional lead ammunition bans across the range states	Long	High	NGO/Hunters
Objective 5: Improve the quality and availability of food resources for Cinereous Vultures				
Sufficient food resources available to sustain the different populations	5.1 Develop and apply scavenger-friendly vet regulations about carcass disposal where relevant (supplementary feeding sites, abandonment of carcasses, etc.)	Medium	Essential	Veterinary and conservation/environmental authorities
	5.2 Establish adequate control of feral dog populations (some countries)	Long	Medium	Vet services - state municipality authority
	5.3 Improve waste management (some countries)	Long	Medium	Municipalities, NGOs, Governments
	5.4 Promote policies that favour pastoralism, including removing incentives that lead to grassland/pastoralism loss and increasing the value of grazing related productions	Long	High	Agricultural authorities, conservation authorities, tourism agencies
	5.5 Promote scavenger-friendly traditional land use practices such as mobile pastoralism	Long	High	National authorities/NGOs
	5.6 Promote vultures as free sanitary agents providing a valuable ecosystem service	Short	High	National authorities/NGOs
Supplementary feeding established adequately to help sustain the growth and connectivity of Cinereous Vulture populations	5.7 Develop specific guidelines for supplementary feeding for Cinereous Vultures	Short	High	Conservation and vet authorities
	5.8 Implement adequate and relevant supplementary feeding where needed (site, timing and quantity of food provided)	Medium	Essential	Conservation and vet authorities
Self-sustaining breeding populations of Cinereous Vulture dependent on natural food resources as much as possible	5.9 Conserve habitat features important for Cinereous Vultures in key sites, including by the adequately managing and/or establishing protected areas	Long	High	Wildlife authorities, NGOs, EU Commission
	5.10 Promote good hunting management at key Cinereous Vulture sites	Long	High	Hunting Associations
	5.11 Reintroduce/restore wild ungulate and rabbit populations (or other small mammal species) in key sites for the Cinereous Vulture	Long	High	Wildlife authorities
Objective 6: Reduce the impact of the energy infrastructures on Cinereous Vultures populations				
Knowledge on the impact of collision and electrocution on Cinereous Vultures populations is improved and the associated mortality reduced or eliminated	6.1 Sensitivity mapping of key priority areas for the species and power lines – identify high risk areas for Cinereous Vulture electrocution, and provide protocols to be used during development, planning and management of existing and new lines, including the promotion of new underground lines	Medium	High	Researchers/NGOs/ Government/ Electricity companies
	6.2 Sensitivity mapping of priority areas for the species and power lines – identify high risk areas for Cinereous Vulture collision with powerlines and windfarms, and provide protocols to be used during development, planning and management of existing and new infrastructure	Medium	High	Researchers/NGOs/ Government/Wind farms investors/electricity companies

	6.3 Capacity building on legislation/regulation and implementation of mitigation measures to public officers and industry	Medium	Medium	Private sector/ NGOs/ Legal prosecutors
	6.4 Promotion/review of existing legislation/regulation (national and international)	Short	Medium	Governments and NGOs
	6.5 Definition and implementation of communication and awareness on this issue	Medium	High	NGOs and Governments
	6.6 Correction of existing problematic power lines and use of safe pylons at new power lines in priority areas for Cinereous Vulture	Medium	Essential	NGOs/Government / electricity companies
	6.7 Definition and implementation of standard protocol for data collection on electrocution	Short	High	Researchers/ electricity companies/ ministries
	6.8 Definition and implementation of standard protocol for data collection on collision with powerlines and windfarms	Short	High	Researchers/ electricity companies/ ministries
	6.9 Increase monitoring of powerlines including assessing effectiveness of mitigation measures	Medium	Medium	Governments/NGOs/ electricity companies
	6.10 Ensure maintenance of mitigation measures against electrocution and collision	Long	High	electricity companies/ ministries
	6.11 Develop research on the economic benefits of mitigating measures against collision and electrocution	Medium	Medium	NGOs / CMS / electricity companies
	6.12 For new and existing energy infrastructure, promote the implementation of CMS guidelines by phasing out energy infrastructure designs that pose collision risk to vultures and other birds, and advocate retro-fitting with known bird-friendly designs within current maintenance schedules	Long	High	Government/Industry /NGOs/CMS
Objective 7: Improve breeding productivity by adequate protection and management of breeding habitat				
Key Cinereous Vulture nesting and roosting sites adequately protected and managed	7.1 Investigate and identify key nesting and roosting areas and assess vulnerability in relation to habitat destruction – working with local communities to show importance and impact on Cinereous Vulture populations.	Medium	High	Research Institutions, Universities and NGOs
	7.2 Review legislation and promote recognition and conservation of key breeding and roosting sites for Cinereous Vulture (including potential establishment of new protected areas)	Medium	Medium	Government, NGOs, Wildlife authorities, local communities
	7.3 Establish reforestation schemes and woodlots to increase vulture nesting habitat and reduce human pressure for fuel and construction timber	Long	High	Government, NGOs, Wildlife authorities
	7.4 Increase nest surveillance during fire season or high risk of fire periods in order to combat fire or rescuing birds in nest	Long	Medium	National authorities, NGOs
Objective 8: Improve breeding productivity by decreasing human disturbance to breeding Cinereous Vultures				
Breeding success increased by reducing	8.1 Implement public awareness campaigns to highlight activities that cause disturbance to Cinereous Vultures	Long	High	International, national/regional authorities, NGOs

disturbance at key sites	at breeding and/or roosting sites and how to avoid or mitigate them			
	8.2 Determine scientifically-based guidelines to reduce the impact of disturbance to Cinereous Vulture	Long	High	Governments, NGOs, Universities, Research Institutions
	8.3 Improve legislation, policies and law enforcement on anthropomorphic disturbance (some countries)	Long	High	International and national authorities
	8.4 Enhance wardening around priority and/or vulnerable sites for Cinereous Vulture	Long	High	NGOs, national and regional authorities
	8.5 Establish new protected areas and/or adequately manage existing network of protected sites with important populations of Cinereous Vulture	Long	High	National and regional authorities
Objective 9: Reduce mortality of Cinereous Vultures through direct persecution				
Cinereous Vulture is fully legally protected in all range states	9.1 Ensure that appropriate species protection legislation is in place and effectively enforced to prevent direct persecution of Cinereous Vultures in all range states	Long	High	International and national authorities
Mortality of Cinereous Vultures caused by direct persecution minimised in key sites	9.2 Increase public awareness on the impacts and legality of direct persecution of Cinereous Vultures	Long	High	NGOs/media / livestock breeders / hunting assoc.
	9.3 Assess the motivation behind the direct persecution of Cinereous Vultures and engage with relevant stakeholders to promote alternative approaches or interventions	Long	Medium	NGOs/ national and international authorities
Appropriate policy instruments and legal measures are established to reduce trade on Cinereous Vultures	9.4 Increase public awareness on illegal trade of Cinereous Vulture	Long	Medium	National authorities/ NGOs
	9.5 Train customs and law enforcement officers to identify vultures and their body parts to enable effective confiscation and enforcement actions, particularly at borders	Medium	Medium	National authorities/NGOs/ CITES
Objective 10: Promote linkages between Cinereous Vulture populations to restore the species into its former range				
Cinereous Vulture populations restored through reintroduction in some key areas where currently extinct and/or restocked where there is danger of extinction	10.1 Establish priorities for Cinereous Vulture reintroduction/restocking on a global scale	Short	High	NGOs/national authorities/ Universities
	10.2 Develop and implement a reintroduction strategy using the IUCN guidelines and criteria for reintroduction of species	Long	High	NGOs/national authorities
	10.3 Engage with governments for securing or releasing Cinereous Vulture within reintroduction/restocking projects	Medium	High	NGOs/governments
	10.4 Support and involve the already established Cinereous Vulture EEP (captive breeding programme of EAZA) in reintroduction/restocking projects	Long	Medium	NGOs/national authorities/EAZA
Objective 11: Coordinate conservation actions for the Cinereous Vulture across the global range through the implementation of the EU Species Action and the Flyway Action Plan				
The Action Plans are endorsed by range states and	11. 1 Establish coordination system for pushing and reporting on the implementation of the Cinereous Vulture SAP and FAP	Long	Essential	EC/NGOs/ Governments

effectively implemented	11.2 Establish working group with representatives from the key Cinereous Vulture range states to advise on implementation of Cinereous Vulture SAP and FAP	Long	High	CMS/NGOs/ Governments/ Researchers
	11.3 Monitor the implementation of the Cinereous Vulture SAP and FAP	Long	High	CMS/NGOs/Governments
	11.4 Fundraise for the implementation of the Cinereous Vulture SAP and Cinereous Vulture conservation in general	Long	Essential	CMS/NGOs/ Governments/other donors

Annex 1 - BIOLOGICAL ASSESSMENT

Distribution throughout the annual cycle

The Cinereous Vulture has a large distribution range across Europe, Asia and North Africa. This species breeds in Portugal (recent recolonization), Spain (including the only island population, in Mallorca), France (reintroduced population now self-sustainable), Greece, Turkey, Armenia, Azerbaijan, Georgia, Ukraine, Russia, Uzbekistan, Kazakhstan, Tajikistan, Turkmenistan, Kyrgyzstan, Iran, Afghanistan, northern Pakistan (A. Khan, A. Parveen and R. Yasmeen 2005), Mongolia and mainland China (Heredia et al. 1997, Skartsi et al. 2008, Skartsi et al. 2010, V. Galushin 1999). The wintering range includes additional states to the south of the breeding range, in Saudi Arabia, Iran, northern India, Nepal, Bhutan, Bangladesh, DPR Korea and Republic of Korea. It appears to be very rare and of irregular occurrence in Africa (e.g. Egypt: Goodman and Meininger 1989), with no reliable records in Sudan (Nikolaus 1987). At least two birds from Spain and France respectively have been recovered in Senegal and Mali after being marked at their respective breeding colonies (Cantos and Gómez-Manzaneque 1996).

Habitat requirements

The species inhabits forested areas in hills and mountains at 300-1,400 m in Spain, but occurs at higher altitudes in Asia, where it also occupies scrub, arid and semi-arid alpine steppe and grasslands up to 4,500 m (Thiollay 1994). As nesting-sites in the westernmost part of its distribution range (Iberian Peninsula to Caucasus) it generally selects steep and south-facing slopes, with great cover of large trees and at a wide distance from human activities (Moreno-Opo et al. 2012). Cinereous Vulture nests are located in various tree species such as oaks in the Iberian Peninsula (*Quercus suber* and *Q. rotundifolia*), and pines, which are the most widely used nesting tree by this species. In its easternmost range, it prefers arid hilly and montane habitats, including semi-desert, establishing its nests in rocky ledges and on the ground.

It spends much time soaring overhead in search of food, above various types of habitats such as treeline, agricultural habitats with patches of forests, bare mountains, steppe and open grasslands. It is a central-place forager around the breeding colonies (Carrete and Donázar 2005) being more common in areas with a higher prey abundance, especially extensive livestock, wild ungulates and lagomorphs (Moreno-Opo and Guil 2007). Moreover, non-breeding individuals tend to concentrate on other areas where food is likely predictable such as supplementary feeding sites and hunting estates (Moreno-Opo et al. 2015). It perches more often on trees than on cliff faces or on the ground. In places where abundant food is present the species may occasionally congregate in large flocks (Flint 1984).

Diet

Like all vultures (except the Palm-nut Vulture *Gypohierax angolensis* (Carneiro 2017)), the Cinereous Vulture eats mostly carrion. Its diet consists mainly of carrion from medium-sized or large mammal carcasses, although snakes and insects have been recorded as food items as well. Live prey is rarely taken (Batbayar et al. 2006). It mainly feeds on the carcasses of rabbits, sheep and wild ungulates (Hiraldo 1976, Corbacho et al. 2007). However, changes in the availability of prey over the last 30 years have led to a decrease in the number of rabbits in its diet and an increase in the consumption of domestic ungulates (Corbacho et al. 2007, Costillo et al. 2007, Moreno-Opo et al. 2010). In Mongolia at least, the species is reliant on livestock numbers for successful nesting (Batbayar et al. 2006). Studies in Spain show that the species prefers individual, medium-sized muscular pieces and small peripheral scraps of meat and tendon (Moreno-Opo et al. 2010) and non-adult individuals are showing preference to carcasses from ovine and caprine species (Moreno-Opo et al. 2015). Studies in Greece show that terrestrial tortoises consist the 15% of its diet (Skartsi et al. 2015) and in Turkey show an important consumption of wild boars while wolves and foxes were also identified (Yamac & Günyel E. 2010). Detailed knowledge of its diet and which specific anatomic parts of a carcass it prefers may constitute a fundamental tool for the design of conservation strategies (Margalida et al. 2009, Moreno-Opo et al. 2015).

Productivity and survival

The Cinereous Vulture has the longest breeding period of all raptors in Europe. The incubation period is on average 57 days but can vary from 50 to 68 days. Only one egg is laid. The young spend between 110 and 120 days in the nest (with extreme ranges from 88 to 137 days) (Moreno-Opo and Guil 2007). After leaving the nest, for a while the young still return to the nest to obtain food from the adults and to spend the night (Mebs and Schmidt 2006). In Spain most eggs are laid during the end of February and the first half of March, with some eggs laid earlier and the last eggs in April (Moreno-Opo and Guil 2007). In Turkey, the breeding season begins between the second week of February and April. The first young hatch on the third week of March and the first young fledge the nests on the second week of August (Kirazlı and Yamaç 2013). Nests are normally built in trees, sometimes on cliffs or even on the ground (Mebs and Schmidt 2006). In Spain, nests are built either on different species of oaks or different species on pines (Moreno-Opo and Guil 2007). The nest is huge and can have a diameter of up to 254 cm and a height of 129 cm though normally they are a little smaller. In Spain, nests on oaks were on average 160 cm wide and 93 cm high (Moreno-Opo and Guil 2007).

Breeding parameters of the species are not well known for the entire breeding range. In Spain, the latest national coordinated census (in 2006) revealed an overall productivity (number of chicks reared/total observed pairs) of 0.60 and a breeding success (number of chicks reared/pairs starting incubation) of 0.68 (De la Puente et al. 2007). These values could be considered as sustainable for maintaining a positive population trend, if no serious threats such as poisoning, shooting or electrocution impact regionally, and reflect a possible minimum reference for well-managed breeding areas of the species (Moreno-Opo and Margalida 2014). The breeding success values, which are the most accurate for studying the demographic traits of the species, vary in other regions from 0.27 to 0.55 (2001-2003) in France, 0.57 in Uzbekistan (Dobado and Arenas 2012) and from 0.52 to 0.95 (1993-2005) in Greece (Vlachos et al. 1999, Skartsi et al 2008). Survival / mortality rates have not been studied for the species in a detailed way.

Population size and trend

According to the recently collected data (questionnaire, workshops, literature) the European population of the Cinereous Vulture can be estimated at 2,381 – 2,654 breeding pairs (in the range countries subject to this report). The Cinereous Vulture population in Europe has an increasing trend (especially in the western part), mostly due to the increase of the Spanish population, but the population on the eastern part have stable or negative trend.

Table 7. Breeding population size and trend by country/territory (recent estimates from the questionnaire results)

Country	Status	Breeding pairs	Quality	Year(s)	Population trend in the last 10 years (2006-2016)	Quality
Albania	extinct	0	G	2016	/	
Armenia	breeding	50	M	2007-2009	stable	M
Azerbaijan	breeding	20-100	M	2000-2016	stable	M
Bulgaria	extinct	0-1	M	2016	stable	M
Croatia	extinct	0			/	
France	breeding	36	G	2017	increase	G
Georgia	breeding	50	G	2016	stable	G
Greece	breeding	21-35	G	2006-2015	stable	G
Italy	extinct	0	G	2016	/	
Portugal	breeding	18	G	2016	large increase	G
Russia (Europe)	breeding	63-102	M	2004	small decline	M
Spain	breeding	2068	G	2016/2012	moderate increase	G
Macedonia	extinct	0	G	2015		
Turkey	breeding	80-200	M	2013	decline	M
Ukraine (Crimea)	breeding	15-19	G	2015	stable	G
Overall	/	2381-2654	G	2017	increase	M

G - Good (Observed) - based on reliable or representative quantitative data derived from complete counts or comprehensive measurements.
G - Good (Estimated) - based on reliable or representative quantitative data derived from sampling or interpolation.
M - Medium (Estimated) - based on incomplete quantitative data derived from sampling or interpolation.
M - Medium (Inferred) - based on incomplete or poor quantitative data derived from indirect evidence.
P - Poor (Suspected) - based on no quantitative data, but estimates derived from circumstantial evidence

Table 8. Cinereous Vulture breeding population size estimate by range state – comparative table

Country	Population in SAP (1993) [breeding pairs]	Population in 1st review (2004) [breeding pairs]	Population in 2nd review (2010) [breeding pairs]	Population in 3rd review (2017) [breeding pairs]
Albania		-	-	0
Armenia	15-25	8-15	7-10	50
Azerbaijan	100	(10-30)	30-100	20-100
Bulgaria	0-1	0	0-1	0-1
Croatia	0	0	0	0
France	0	8-10	22	36
Georgia	10-20	20-30	20-30	50
Greece	20-21	21	24-31n 20-28bp	21-35
Italy	0	0	0	0
Macedonia	0	0-4	0	0
Portugal	0	0-5	0-3	18
Russia	30-50	30-70	no data	63-102
Spain	1,050-1,150	1,358	1,845-2,440 pairs	2068
Turkey	100-500	300-400	50-200 pairs	80-200
Ukraine (Crimea)	4-6	2-3	2-20 pairs	15-19

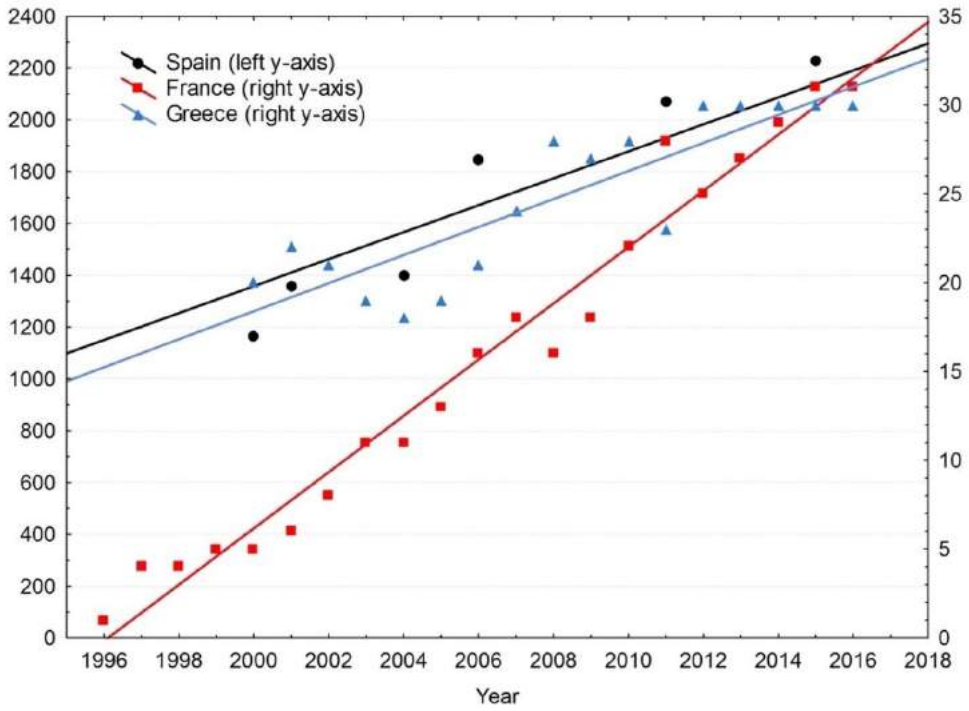


Figure 3. Estimated number of Cinereous Vulture breeding pairs in Europe (Spain,[1] France[2] and Greece[3])

[1] Moreno-Opo, R. and Margalida, A. (2014). Conservation of the Cinereous Vulture *Aegypius monachus* in Spain (1966–2011): a bibliometric review of threats, research and adaptive management. Bird Conservation International, 24, pp 178-191 and 2015 update (Moreno-Opo unpublished data).
[2] VEB-LPO PACA-LPO GC-PNA Vautour moine.
[3] Skartsi, T., Elorriaga, J. and Vasilakis, D. 2008. Population size, breeding rates and conservation status of Eurasian Black Vulture in the Dadia National Park, Thrace, NE Greece. – Journal of Natural History 42: 345-353.
and WWF Greece unpublished data

Annex 2 - PROBLEM ANALYSIS

Threats

Regarding the threats to the species, those identified as the most important in previous review (*Barov, B. & Derhé, M. et all.* 2010) were: the decline of herbivores, the loss of nest sites due to forestry and disturbance, and the reduction of animal carcasses in the wild due to the modernisation of agriculture. Persecution and especially poisoning have played a critical role leading in the reduction of populations or even extinction in some countries. The illegal use of poisons is the most important threat to the species at present, followed by collision with energy infrastructures (cables and windfarms) and electrocution, and food shortage. Precisely these three groups of threats were prioritized by the online questionnaire. The questionnaire results are presented in **Table 10.** Threat maps were also prepared and are presented below.

Table 9. Importance/priority of Cinereous Vulture threats by range country (information collected through the Vulture MsAP questionnaire)

Country	Poisoning	Collision & Electrocution	Food availability
Armenia			
Azerbaijan			
Bulgaria			
Croatia			
France			
Georgia			
Greece			
Italy			
Portugal			
Russia (Caucasus)			
Spain			
Macedonia The FYR			
Turkey			
Ukraine (Crimea)			

Unknown	Local	Low	Medium	High	Critical

The threat prioritization presented in **Table 10**, and the threat maps presented in **Annex II** are part of the implementation review of the previous Action Plan and the preparation process for the Vulture MsAP Workshop in Monfragüe, October 2016.

Overview of major threats

Unintentional poisoning (by poison baits)

Birds are killed when feeding on carcasses or on poison baits deliberately laced with pesticides (mostly insecticides) to kill wild predators, badgers, feral/hunting/shepherd dogs or rodents across the entire species' range. In Spain, within the 1992-2013 period, a total of 578 Cinereous Vultures were found poisoned (Cano 2016). Another study, also from Spain, shows that this kind of poisoning mainly affects adult individuals (83% from 464 affected individuals), something that can have important effects on population dynamics (Hernández and Margalida 2008). In Greece, based on WWF data, during 1994-2005 86% of poisoned Cinereous Vultures were adults (Skartsi at al. 2010). Eleven different poison compounds were identified in the same study, although three compounds accounted for up to 88% of the poisoning cases: carbofuran, aldicarb, and strychnine (Hernández and Margalida 2008). In Greece, carbamates, carbofuran, methomyl and methamidofos were identified as poisoning compounds on dead Cinereous Vultures (Skartsi et al. 2010).

Electrocution and collision

Electrocution and collision are important threats exerted by infrastructure used in power generation and distribution: electrocution normally caused by the electricity utility poles (adjacent wires or conductors at the top), and collision caused by distribution lines or wind-turbines. There is no doubt about the severity of these threats to raptors or soaring birds, although little substantive data is available for this species. In Spain, there are records of at least 30 dead birds due to electrocution and collision (Moreno-Opo and Guil 2007). The Cinereous Vulture population in Greece is also affected by these threats (Vasilakis et al. 2017, Vasilakis et al. 2016).

The development of wind farms can be a serious threat in the future. In Spain, so far only two victims have been found (Moreno-Opo and Guil 2007), but one reason for this might be that most wind farms in Spain have been built outside the core areas of the species' distribution. This may change in the future as more wind farms are planned in Spain, including within the species' breeding areas.

Decline of food availability

In Eastern Europe, particularly in the former Soviet Union, changes in agricultural practices and human migration from the countryside to the cities have greatly reduced numbers of domestic livestock. In Georgia and Armenia, declines may be linked to the loss of subsidies for sheep-herding in the post-Soviet era (McGrady in litt. 2007). Additionally, there have been steep declines in many populations of wild ungulates which provide a major food source for the species. In Europe, a lack of naturally available food followed the introduction in the early 2000s of highly restrictive veterinary sanitary regulations (due to Bovine Spongiform Encephalopathy, Regulation CE 1774/2002). The application of this sanitary legislation greatly restricted the availability for vultures of animal by-products not intended for human consumption, and deprived scavenger populations of the resources they depended on to survive. It has been estimated that in some parts of Spain, 80% of animal carcasses generated on farms were being removed for industrial disposal; in the case of cows this figure reaches 100% (Donázar 2009, Margalida 2010). These highly restrictive regulations have been now corrected in Spain (but not elsewhere in Europe), with farmers in many parts of Spain now being able to leave dead sheep, goats and free-range pigs dead in the fields.

The decline in extensive farmed livestock in Spain, especially sheep and goat, has also been remarkable in the last 30 years (about 40% of their populations), thus reducing the availability of a key prey for the Cinereous Vulture (Moreno-Opo and Margalida 2014).

Habitat degradation

The impact of habitat degradation on vulture populations is difficult to evaluate, but it surely has negative effects. To distinguish from disturbance, under habitat degradation we are considering permanent habitat changes or losses. This may concern large nesting and foraging areas. More specifically, tree-nesting vultures such as the Cinereous Vulture have specific breeding site requirements, which are easily affected by human activities: deforestation for clearance of large trees in agricultural areas, logging, quarrying, widening of roads and highways, etc. (Poirazidis et al. 2004). The logging of large trees in the Mediterranean forest is considered to be a serious problem for the species (Mebs and Schmidt 2006). Also, forest fires, often caused by humans, can kill juveniles in the nest before they can fledge (several cases recorded in Spain and Portugal).

Human disturbance

There are many forms of human disturbance, for example, forestry operations, hunting activities, cork harvesting, construction on roads and firebreaks.

The human presence, which generally involves activities that are likely to have a negative impact on the species' breeding cycle, affects the number of chicks fledged, even if the disturbance occurs once (González et al. 2006, Zuberogoitia et al. 2008, Margalida et al. 2011). Disturbances not only influence breeding success during a breeding attempt, but can also lead to changes in distribution patterns and even changes in individual behaviour (Sutherland 2007).

Variables related to this effect were only reported to influence breeding success in the two Cinereous Vulture colonies studied by Donázar et al. (2002). They found that less human presence had a positive effect on breeding success. This factor is generally seen to be important for nesting habitat selection by the Cinereous Vulture (Fargallo et al. 1998, Poirazidis et al. 2004, Gavashelishvili et al. 2006, Morán-López et al. 2006). Pairs in an area of the colony exposed to intrusive anthropogenic activity had 20% lower breeding success than those in the same colony that were not exposed to these disturbances (Margalida et al. 2010). In Spain, cork harvesting is considered to be one of the main causes of disturbance to the Cinereous Vulture during its breeding period, because this activity is carried out in June–July while

chicks are being reared (Moreno-Opo and Guil 2007, Margalida et al. 2010). Disturbance has been also 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.

Direct persecution

In the past, direct persecution was one of the main threats for the species in Europe. Nowadays this threat appears only sporadically, although it seems to be a significant threat for the species in Central Asia. Batbayar (2005) reports an increase in the deliberate persecution of the Cinereous Vulture in Mongolia and the trapping or shooting of birds in China for their feathers. In China, there is certainly some persecution of vultures for direct meat consumption, but this also extends to belief-based use and is considered a significant threat (MaMing et al. 2017).

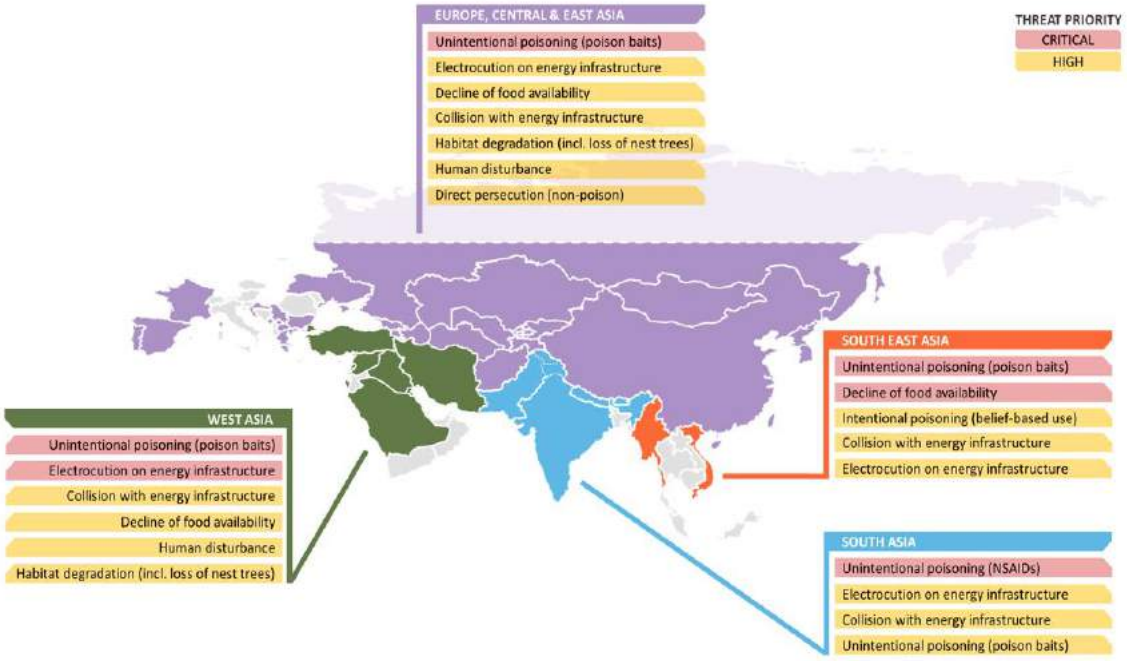
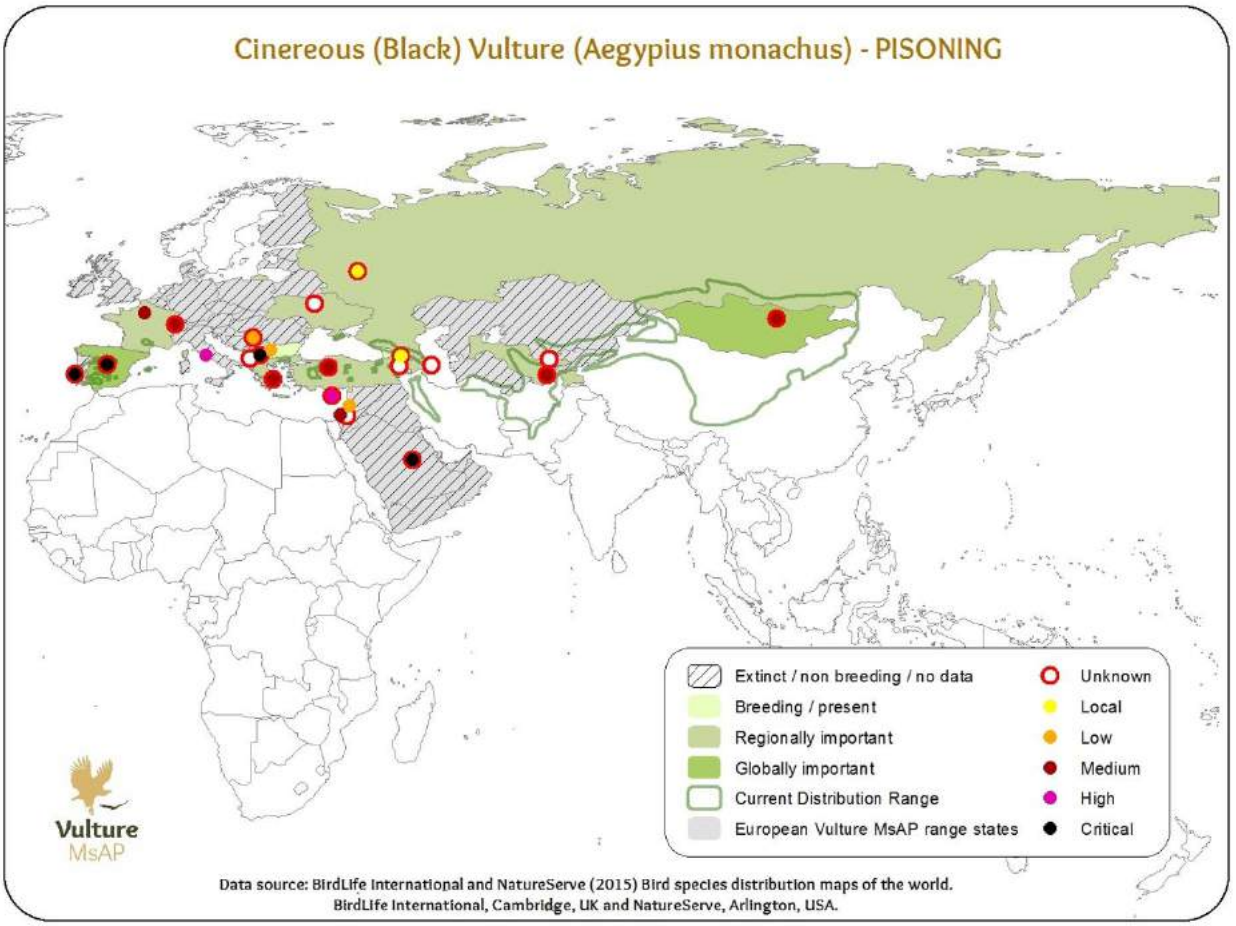


Figure 4. High priority threats to the Cinereous Vulture at global level by regions[4] (regions relevant for the current Species Action Plan: Europe, Central and East Asia & West Asia)

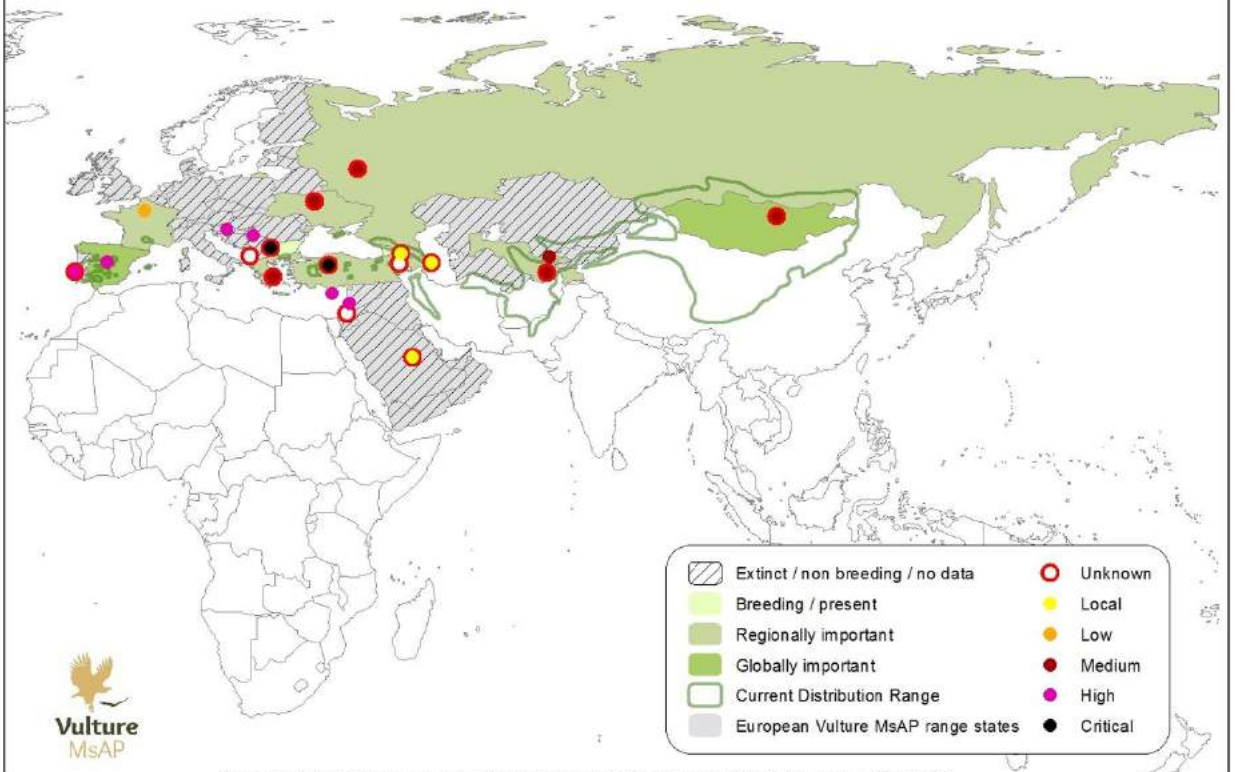
[4] Source: Multi-species Action Plan to Conserve African and Eurasian Vultures (Vulture MsAP)

Cinereous Vulture threat maps

The threat maps presented below were produced under the Vulture MsAP.

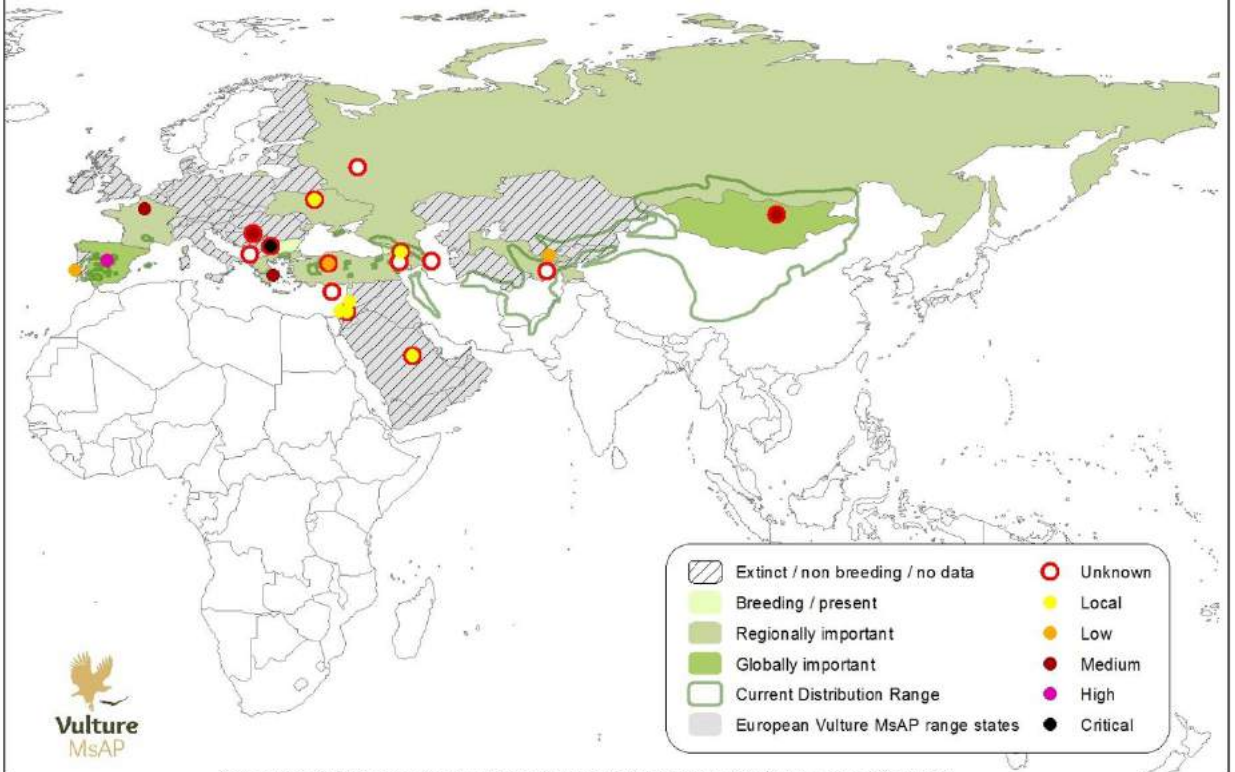


Cinereous (Black) Vulture (Aegypius monachus) - FOOD AVAILABILITY



Data source: BirdLife International and NatureServe (2015) Bird species distribution maps of the world.
BirdLife International, Cambridge, UK and NatureServe, Arlington, USA.

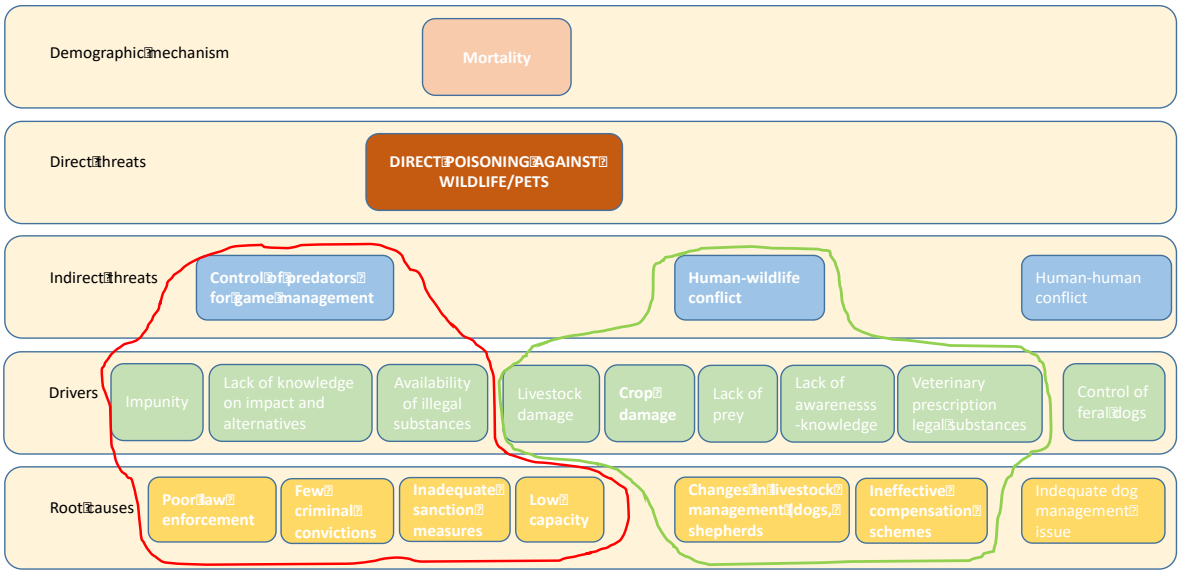
Cinereous (Black) Vulture (Aegypius monachus) - COLLISION & ELECTROCUTION



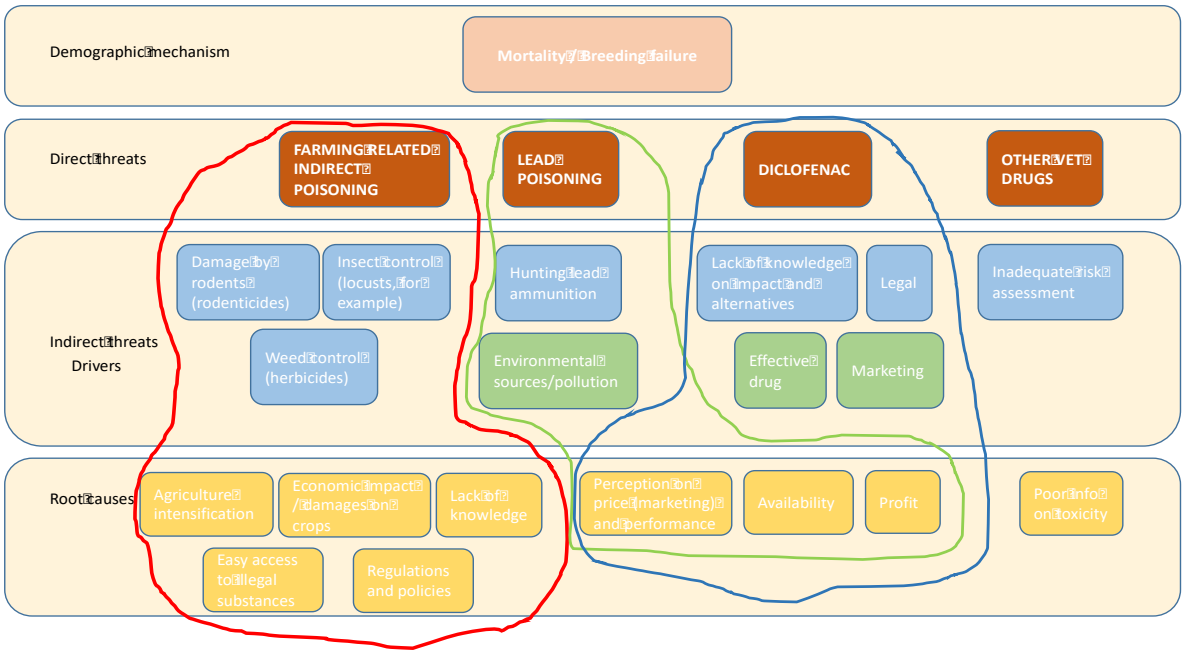
Data source: BirdLife International and NatureServe (2015) Bird species distribution maps of the world.
BirdLife International, Cambridge, UK and NatureServe, Arlington, USA.

Problem trees

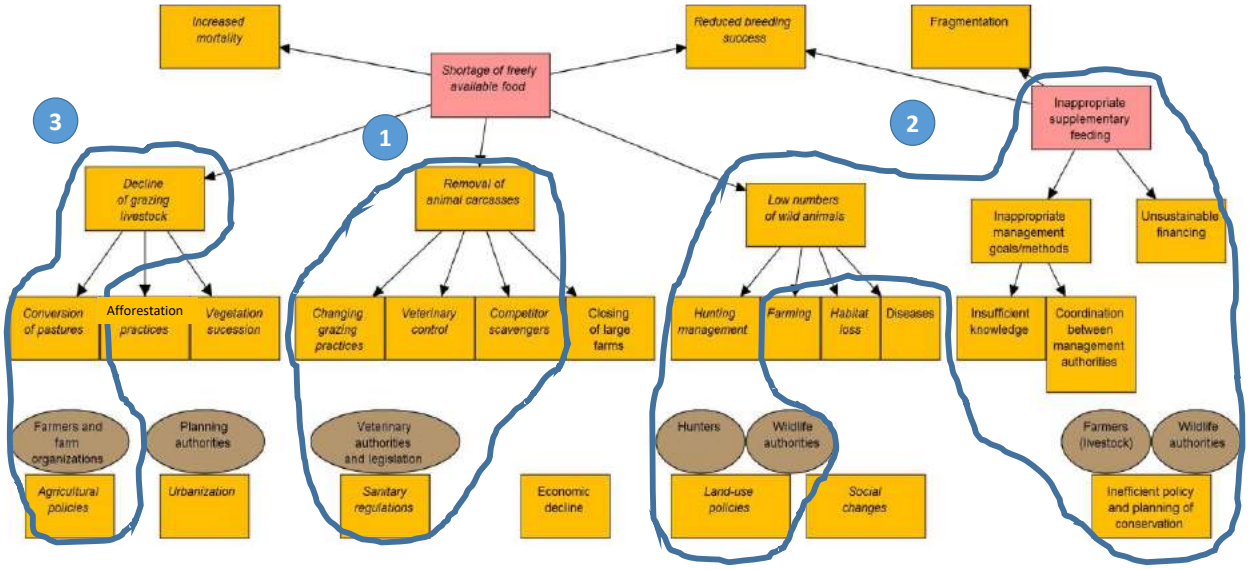
Problem tree – Direct poisoning against wildlife and pests



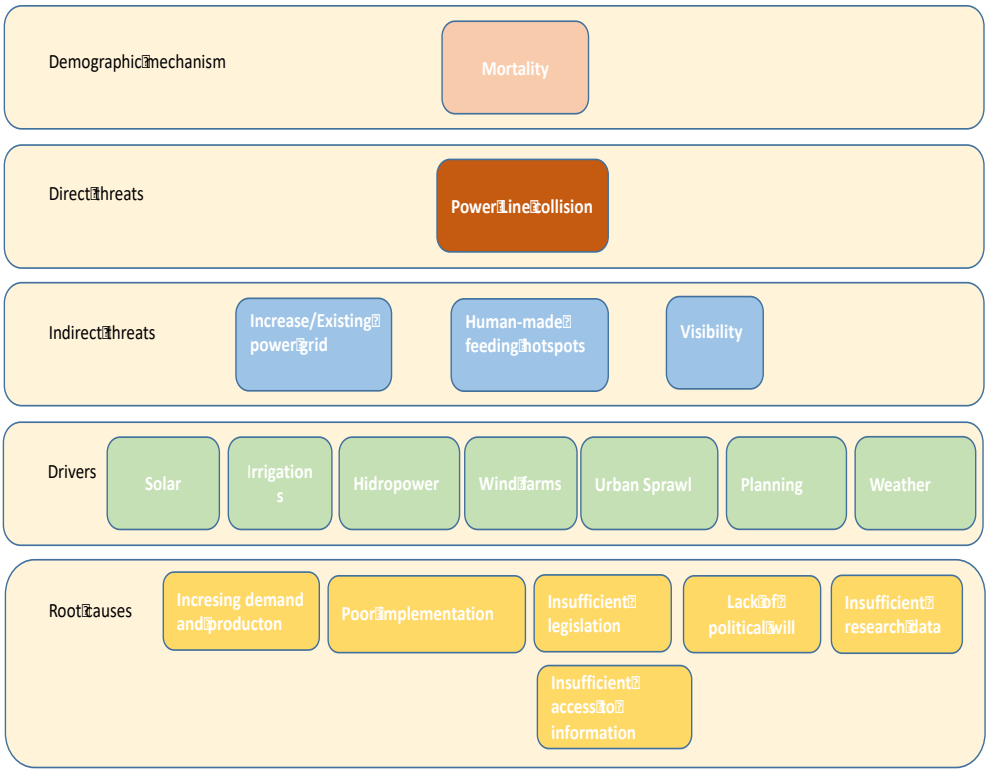
Problem tree – Indirect poisoning



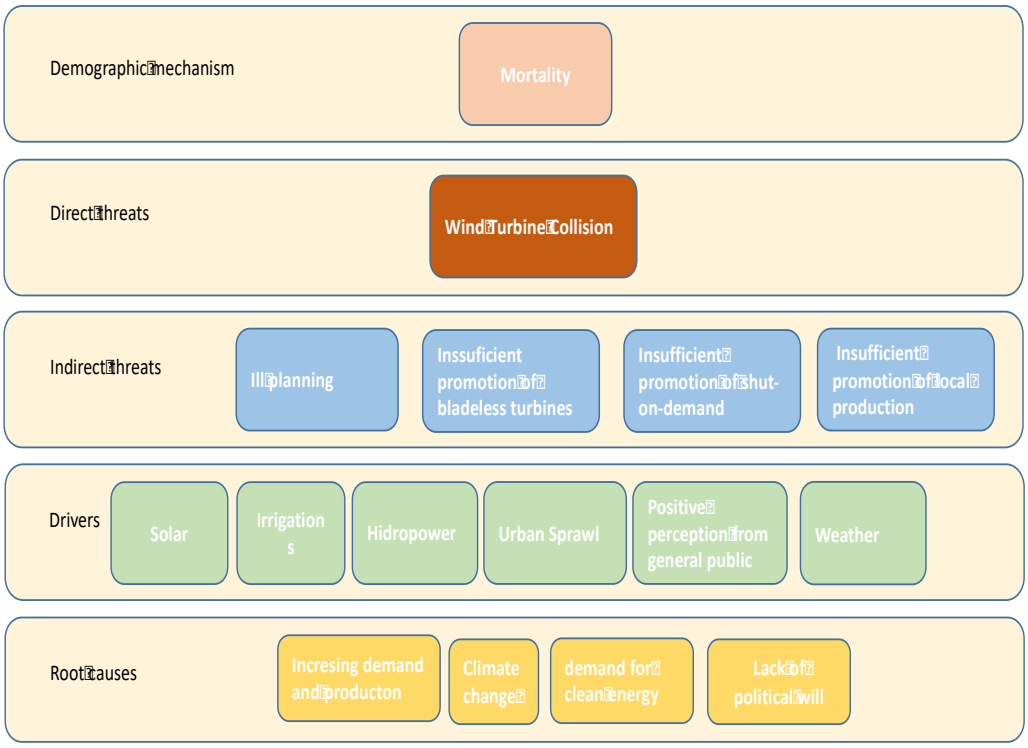
Problem tree – Shortage of freely available food and inappropriate feeding



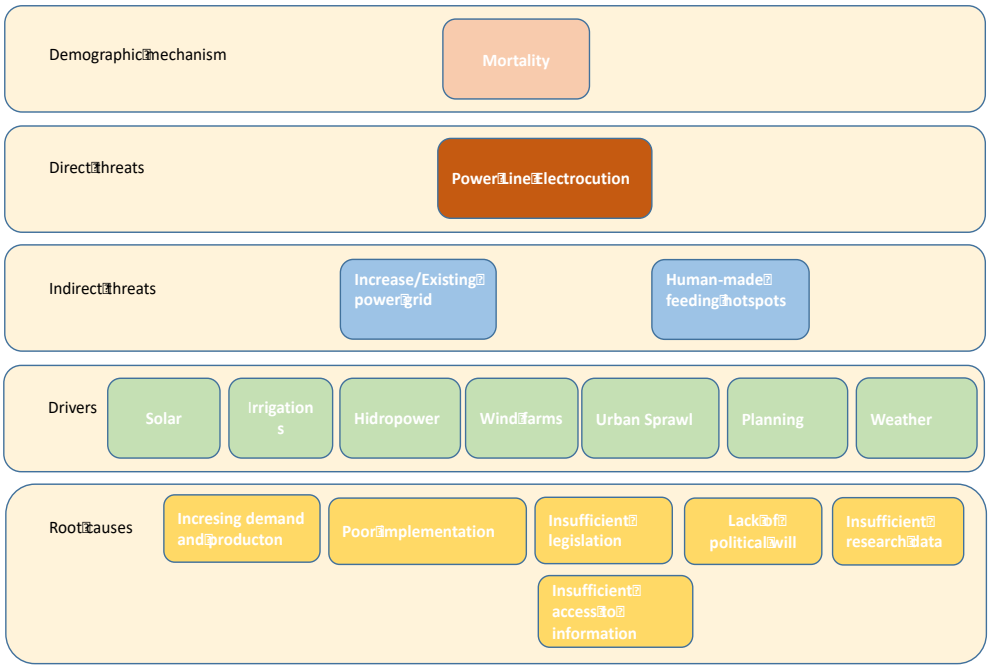
Problem tree – Power line collision



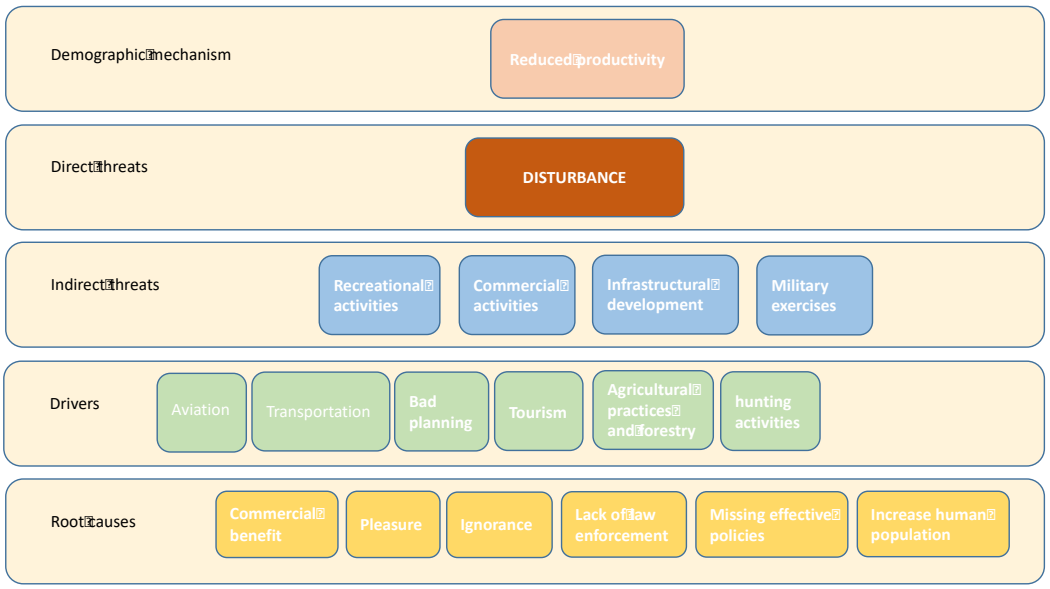
Problem tree – Wind turbine collision



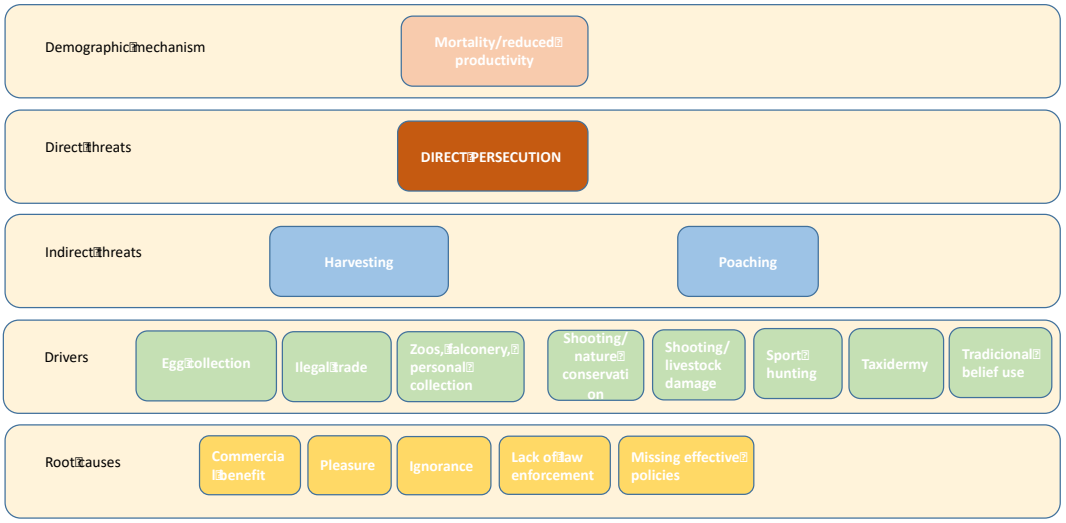
Problem tree – Power line Electrocution



Problem tree – Human disturbance



Problem tree – Direct persecution



Annex 3 – PAST AND PRESENT CONSERVATION EFFORTS FOR THE CINEREOUS VULTURE IN EUROPE

The previous Action Plan for the Cinereous Vulture in Europe (Heredia, 1996) was developed in 1993 and adopted in 1996 by the European Union and the Bern Convention. Its implementation has been reviewed three times – in 2000 (Gallo-Orsi, 2001), 2004 (Nagy & Crockford, 2004) and in 2010 (Barov and Derhé, 2010).

Its geographical scope covered Albania, Armenia, Azerbaijan, Bulgaria, Croatia, France, Georgia, Greece, Italy, Macedonia (FYR of), Portugal, Russia (Europe only), Spain, Serbia, Turkey and Ukraine.

Table 10. List of conservation actions according to the Action Plan for the Cinereous Vulture in Europe (1996)

Action	Measure	Priority
1.1.1	**Forestry policy is based on principle of sustainability and ensures long-term survival of all native forests and takes into consideration the presence of the species.**	High
	a. Management activities fully account for the presence of CV and another threatened species	High
	b. Guidelines for forest management in areas of exceptional natural value prepared at the national level.	High
1.1.2	**Agricultural policies are sympathetic to wildlife and are compatible with the conservation of the Cinereous Vulture**	Medium
	a. Agriculture policy ensures the sustainability of livestock raising and long-term survival of traditional extensive livestock practices. Thus favourable conditions for key prey (e.g. rabbit) are maintained.	Medium
	b. Agricultural practices in general are favourable to the preservation of suitable habitats for the species.	Medium
1.1.3	**International cooperation from wealthier countries and organisations to strengthen institutions and support NGOs**	Critical
	International cooperation has involved your country in conservation action for the species (e.g. raising of funds and equipment for countries lacking financial resources, exchange of knowhow, etc.)	Critical
1.2.1	**The Cinereous Vulture and its habitat receive maximum legal coverage in national legislation**	High
	a. The species is fully protected.	High
	b. All breeding colonies are in protected areas.	High
	c. National recovery plan established.	High
	d. Environmental impact assessment law exists and takes into consideration the species.	High
2.1.1	**Protected area status conveyed to all existing breeding colonies and isolated nests**	Critical
	Management plans for the protected areas take into account the presence of the species and provide specific recommendations for its conservation.	Critical
2.1.2	**Prevention of damaging or disturbing developments and activities near nest-sites**	Medium
	All damaging or disturbing activities affecting the breeding colonies have been successfully prevented.	Medium
2.1.3	**Protection of breeding colonies and nests from forestry operations**	Medium
	a. Forestry operations prohibited near the colonies between January and September.	Medium
	b. All trees containing a nest protected from cutting.	Medium
	c. Plans to prevent wildfires developed and implemented.	Medium
2.2.1	**Encourage a continuing livestock economy**	Medium
	Dead stocks are left for the vultures under careful veterinarian supervision.	Medium
2.2.2	**Encourage repopulation of native wild ungulates**	Low

	Reintroduction or restocking of ungulates carried out following the IUCN criteria and avoiding overgrazing and competition with other key prey species such as rabbits.	Low
2.2.3	**Provide supplementary food at specific sites**	Low
	Schemes for supplementary feeding have been set up where necessary. They are organized and managed by professionally trained staff.	Low
2.3.1	**Prevent the use of toxic chemicals for predator control**	Critical
	a. Use of poisons for predator control prohibited.	Critical
	b. Enforcement of legal restrictions on the use of poisoned baits is fully effective.	Critical
2.4.1	**Restore Cinereous Vulture populations to previous range areas**	Low
	a. A natural re-colonisation of the former range of the species has occurred in your country.	Low
	b. A reintroduction programme has been successfully carried out in your country (if relevant).	Low
3.1.1	**Regular national monitoring schemes in place in all range states**	Medium
	a. At least one national survey has been carried out in the last four years.	Medium
	b. Colonies in protected areas are monitored annually.	Medium
3.1.2	**Surveys to establish the status of Cinereous Vultures**	Medium
	a. Status and distribution of the species known.	Medium
	b. A national inventory covering all breeding colonies established.	Medium
3.1.3	**Monitor causes of mortality**	Medium
	Representative information on the causes of mortality within your national population is available.	Medium
3.1.4	**Monitor results of reintroduction efforts**	Low
	a. All released birds are marked (rings, wing tags, etc.)	Low
	b. Individual survival and movements are monitored.	Low
	c. Breeding parameters are monitored.	Low
3.2.1	**Undertake studies on the ecological requirements of the Cinereous Vulture**	Medium
	a. Successful research is carried out on home range	Medium
	b. Habitat use	Medium
	c. Dispersal patterns	Medium
4.1.1	**Inform the public and increase awareness of the ecological role played by the CV and need to protect CV and its habitat**	Low
	a. Education and awareness campaign on the species carried out.	Low
	b. Cinereous Vulture used as a flagship for the conservation of forests and traditional farming practices.	Low
4.2.1	**Undertake national and international anti-poisoning awareness campaigns, preferably led by Government**	Critical
	a. Anti-poisoning awareness campaigns carried out.	Critical
	b. Effective prevention measures are in place.	Critical
	c. Institutional capacity for effective enforcement is ensured.	Critical

Prior to the preparation of the current Species Action Plan, an implementation review of the previous Action Plan (1996) was undertaken in order to evaluate the implementation of the conservation actions proposed and the effectiveness of the Plan.

The implementation review report is mainly based on data collected though an online questionnaire distributed in late October 2016 (Implementation Review of the Species Action Plan for the Cinereous (Black) Vulture - *Aegypius monachus*), but it also includes information collected through the Vulture MsAP online questionnaire distributed in mid-August 2016 among vulture experts and governmental

representatives from the species' range countries and from the European Vulture Multi-species Action Plan Workshop held in Monfragüe 25-29 October 2016, where 80 participants attended. The results of this implementation review are presented below.

These are the objectives presented in the previous Action Plan:

- In the short term, to maintain and enhance the existing Cinereous Vulture populations in Europe.
- In the long term, to encourage the recolonization of the former range.

The short term target of the plan has been achieved (was also achieved in the last review (2010)), as the European breeding population has increased overall from 1,330-1,874 in 1993-1996 to 2,375 – 2,648 in 2010-2016. The population increase for the last decade in the previous review was considered from 10% to 20%, now should be considered as an increase of 50%.

The major part (80-90%) of the European Cinereous Vulture population is in Spain (with a stronghold in the following autonomous regions: Extremadura, Andalusia, Castilla la Mancha and Castilla y Leon) (*De la Puente et al.* 2007), with an increase of 48% in the last decade (2,068 breeding pairs in 2012/2015 (*Moreno-Opo & Margalida et al.* 2014)). The populations from the Spanish neighbouring counties Portugal (18 pairs in 2016) and France (36 pairs in 2017) are also increasing, due to successful conservation practices (reintroduction project in France), but also facilitated by the connection with Spanish population (confirmed by marked birds). In the eastern part of Europe, the smallest populations are found in Georgia (up to 25 pairs (Abuladze 2013) and Greece (up to 31 pairs (Zakkak 2015)) with a stable trend, but the species has negative trend in Russia (Caucasus) (up to 102 pairs in 2004 (Belik 2004)) and Turkey (up to 200 pairs in 2013), from where precise and recent data is not available.

Regarding the long term objective, to recolonize former range some progress has been made, mainly due to reintroduction activities. The reintroduction project in France is marking extraordinary success – this project is close to be finalized due to the already settled population of 36 breeding pairs in 2017. The situation is similar in Cataluña, where a stable population has also been established there (14 territorial pairs). New projects related to reintroduction of this species have been initiated in Burgos (Spain) and in Bulgaria (following the successful reintroduction of Griffon Vultures) – projects that will contribute achieving this long term objective of the previous Action Plan. As this objective is not fully achieved it is also considered for the current Species Action Plan.

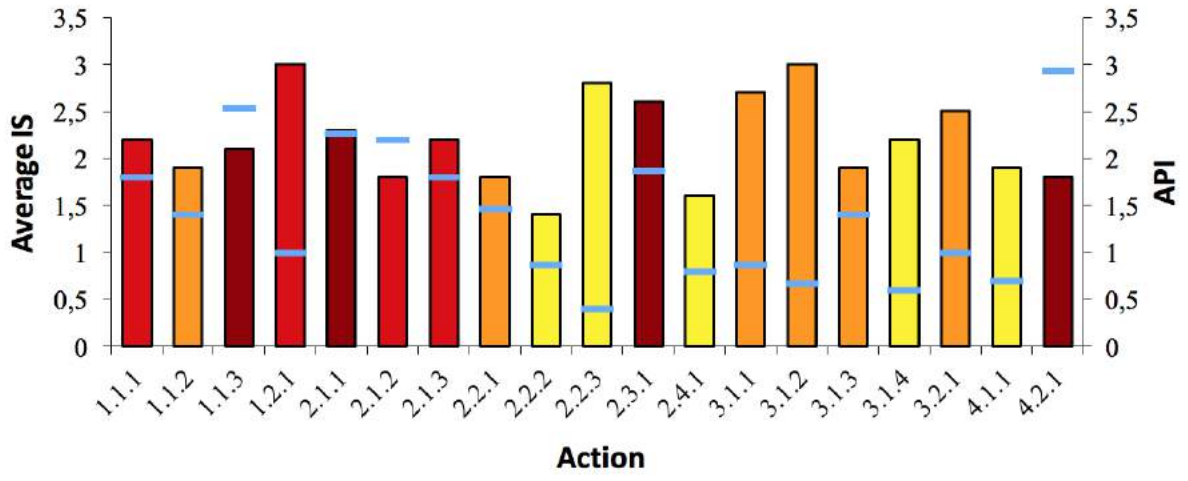


Figure 5. Average Implementation Score (AIS) for each action within the previous Action Plan, across all range countries

The previous Action Plan has been implemented well across all range countries (AIS=2.2), slightly better than when compared to the previous implementation review (2010). Good implementation of the plan is noted in the countries with significant populations (France, Greece and Spain) where significant number of actions have been fully implemented. On the other hand, the species population has been increasing since the adoption of the plan and continues to do so since the last review (2010). Some of the key threats have been addressed with legal measures and with designation of protected areas, but mainly through active conservation actions on the ground (related to food availability and the illegal use of poison). At the same time, poisoning remains a critical threat to address for this species (as for all vulture species in general). The complete restoration of the population to previous levels and the recolonization of countries where it is extinct is unlikely due to the permanent loss of suitable habitat or significant distance from native existing colonies (something that can be addressed with reintroduction activities). Therefore, especially in Eastern Europe the species remains dependent on conservation activities (reintroduction activities where extinct).

The species population size registered in Spain (from 206 pairs in 1973 to over 2000 pairs in 2015) shows that there is a lot of room for growth in Cinereous Vulture populations, if the appropriate conservation measures are put in place.

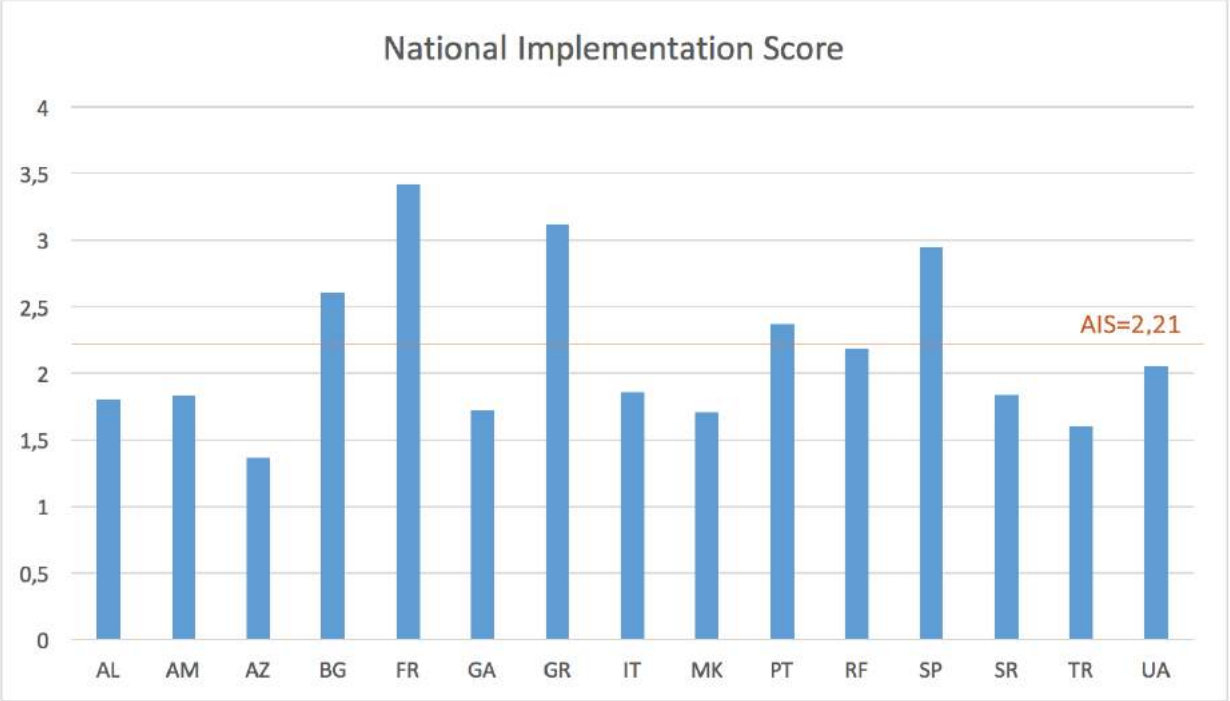


Figure 6. National Implementation Score (NIS) for each range state and the average score across all States

Very good implementation of the Action Plan (NIS close or over 3) have been recorded in France, Greece and Spain, countries that actually holding the mayor part of the European Cinereous population. Good implementation of the Action Plan (NIS above the AIS) is recorded in Bulgaria and Portugal, also important rage Stats for the species. Overall, the implementation level of the previous Action Plan has been significantly higher in the EU countries compared to non EU countries, mainly due to the funding opportunities. Most of the conservation projects that supported the implementation of the previous Action Plan are supported by the EU Life funding programme (see Table 2.).

Table 11. List of LIFE projects related to Cinereous Vulture conservation approved by the European Commission (2000-2014)

Project N°	*Year of finance*	*Country*	*Total budget*	*EU contribution*	*Species*
LIFE00 NAT/E/007340	2000	Spain	1,036,378.00	621,827.00	*Aegypius monachus /*
LIFE00 NAT/E/007348	2000	Spain	1,853,176.00	1,297,223.00	*A. monachus / N. percnopterus*
LIFE02 NAT/E/008624	2002	Spain	683,142.00	364,878.00	*Gypaetus barbatus /*
LIFE02 NAT/GR/008489	2002	Greece	1,248,000.00	936,000.00	*None or non applicable /*
LIFE02 NAT/GR/008492	2002	Greece	2,286,108.00	1,371,665.00	*Gypaetus barbatus /*

LIFE02 NAT/GR/008497	2002	Greece	1,566,345.00	939,807.00	*Aegypius monachus /*
LIFE03 NAT/E/000050	2003	Spain	3,286,882.00	1,972,129.00	*Aegypius monachus /*
LIFE03 NAT/F/000100	2003	France	1,726,194.00	1,035,716.00	*Gypaetus barbatus /*
LIFE03 NAT/F/000103	2003	France	2,256,971.00	1,128,485.00	*Neophron percnopterus /*
LIFE04 NAT/ES/000034	2004	Spain	2,082,923.00	1,249,754.00	*None or non applicable /*
LIFE04 NAT/ES/000036	2004	Spain	1,237,532.00	618,766.00	*None or non applicable /*
LIFE04 NAT/ES/000056	2004	Spain	1,649,250.00	1,236,937.00	*Gypaetus barbatus /*
LIFE04 NAT/ES/000067	2004	Spain	829,937.00	414,968.00	*Neophron percnopterus /*
LIFE05 NAT/IT/000009	2005	Italy	866,062.00	649,546.00	*Neophron percnopterus /*
LIFE06 NAT/E/000214	2006	Spain	1,826,559.00	913,279.00	*Gyps fulvus /*
LIFE06 NAT/IT/000026	2006	Italy	955,631.00	716,723.00	*Neophron percnopterus /*
LIFE07 NAT/E/000742	2007	Spain	3,699,135.00	1,625,400.00	*Aegypius monachus /*
LIFE07 NAT/E/000762	2007	Spain	3,869,850.00	1,934,925.00	*Aegypius monachus /*
LIFE07 NAT/IT/000436	2007	Italy	1,411,144.00	705,572.00	*G. barbatus / G. fulvus / N. perc.*
LIFE08 NAT/BG/000278	2008	Bulgaria	1,332,328.00	666,164.00	*A. monachus / G. barbatus / G. f*
LIFE08 NAT/E/000062	2008	Spain	1,672,020.00	646,737.00	*A. monachus G. barbatus G. ful.*
LIFE08 NAT/P/000227	2008	Portugal	2,640,556.00	1,980,417.00	*Aegypius monachus /*
LIFE09 NAT/ES/000533	2009	Spain	5,660,886.00	2,730,790.00	*A. monachus/G. barbatus/N. p.*
LIFE10 NAT/BG/000152	2010	Bulgaria	2,625,742.00	1,312,871.00	*Neophron percnopterus /*
LIFE11 NAT/BG/000363	2011	Bulgaria	376,891.00	188,445.00	*A. monachus /C lupus /G. f./N. p*
LIFE11 NAT/FR/000734	2011	France	2,128,061.00	1,060,532.00	*Neophron percnopterus /*
LIFE12 NAT/ES/000322	2012	Spain	1,582,854.00	1,061,936.00	*Gypaetus barbatus /*
LIFE12 NAT/ES/000595	2012	Spain	2,103,209.00	1,049,627.00	*A. monachus / N. percnopterus /*
LIFE13 NAT/ES/001130	2013	Spain	759,811.00	455,886.00	*Aegypius monachus / N. percnopterus /*
LIFE13 NAT/FR/000093	2013	France	1,810,276.00	905,136.00	*Gypaetus barbatus /*
LIFE13 NAT/IT/000311	2013	Italy	2,414,270.00	1,265,077.00	*G. barbatus /G. fulvus /N. percnopterus*
LIFE14 NAT/BG/000649	2014	Bulgaria	3,483,411.00	2,607,648.00	*Aegypius monachus /*
LIFE14 NAT/FR/000050	2014	France	5,632,328.00	4,157,440.00	*Gypaetus barbatus /*
LIFE14 NAT/IT/000484	2014	Italy	1,733,385.00	1,039,985.00	*Gyps fulvus /*
LIFE14 NAT/IT/001017	2014	Italy	2,877,095.00	2,071,508.00	*Neophron percnopterus /*
LIFE14 NAT/NL/000901	2014	Nederland	2,198,572.00	1,648,015.00	*Aegypius monachus / Gyps fulvus /*
LIFE14 NAT/PT/000855	2014	Portugal	3,578,924.00	2,672,481.00	*Aegypius monachus / N. percnopterus/*
LIFE14 PRE/UK/000002	2014	UK	837,995.00	500,000.00	

** Source: http://ec.europa.eu/environment/life/project/Projects/index.cfm*

Since 2000, 38 Life Projects have been approved for vulture conservation (15 targeting specifically this species) – projects that directly supported the implementation of the Cinereous Vulture SAP, with total budget of 79.819.833 €, from which 47.254.295 € EU contribution.

Reintroduction Projects in Europe

Very good experience and results have been achieved by means of implementing reintroduction and restocking activities in Europe, following the IUCN guidelines for reintroduction and financially supported mostly by the EU, but also by national governments and private funding. Below is an overview of the successful European reintroduction projects implemented in Europe:

Restocking Project in Majorca, Spain

The first Cinereous Vulture restocking project in the world started in 1986 on the island of Majorca - Spain, where the population had decreased to 22-24 birds and 7 breeding pairs in 1982 (Mayol, 2012, Muntaner 2015). These restocking activities were part of the "*Recovery Programme for the Cinereous Vulture in Majorca*" promoted by the Regional Government of the Balearic Islands in 1983 and implemented with the support of the Black Vulture Conservation Foundation (BVCF) since 1986. Up to the beginning of the 1990s thirty-five birds were released coming from both Spanish Wildlife Rehabilitation Centres and a specific captive breeding programme for this project. According to the latest census (2017), the Cinereous Vulture population is estimated to be around 37 pairs in 2016 (Muntaner 2017), indicating the success of this restocking exercise.

Reintroduction project in France

By the 1900s, the Cinereous Vulture was extinct in France and by the 1940s the other 3 vulture species were declining drastically. After the world's first successful Griffon Vulture reintroduction in the Grands Causses, a Cinereous Vulture reintroduction was initiated. The first birds were released in the Grands Causes from 1992 to 2004, while in 2004 and 2005 two other reintroduction sites were established, in the Baronnies and Verdon respectively. Releases have stopped in the Grands Causses, after 53 birds were released there. So far, about 46 birds have been released in the Baronnies, and about 31 in Verdon (with

11 more to be released by 2019 and 8 more to be provided). Most of these vultures come from Spain through rehabilitation centres, and are sent to France when fully recovered. Some other birds come from captive breeding programmes performed by European zoos within the EEP network. In 2017, a total of 36 breeding pairs were recorded in France, 27 in the Grands Causses, 8 in the Baronnies and 1 in Verdon. These programs have been very successful and the releases should conclude by 2019/ 2020 (LPO France (Grands Causses technical office)).

Reintroduction Project in Catalonia, Spain

Although feasibility studies and other preparatory actions were initiated in 2004, the Reintroduction Project in the Pyrenees started in 2007 with two release points: RNC de Boumort and Espai Natura Muntanya d'Alinyà, implemented by GREFA (Grupo de Rehabilitación de la Fauna Autóctona y su Hábitat), Association Trenca, Fundació Catalunya-La Pedrera, Generalitat de Catalunya and the Black Vulture Conservation Foundation (BVCF). A total of 71 individuals were released, most of them coming from Spanish wildlife recovery centres and some from captive breeding.
The first reproduction in the wild was recorded in 2010 and so far (2017), out of 23 fledged chicks, 18 remain alive and form part of the colony. By 2017, the population reached 56 resident individuals and 14 territorial pairs. Almost a dozen individuals from the Iberian Peninsula and France have been recruited, demonstrating the role of a corridor connecting native Spanish Cinereous Vulture populations with the reintroduced population in France (GREFA 2017 unpublished data).

Reintroduction Project in Burgos, Spain

The project activities in the Iberian Mountain chain, core of actions located in the Sierra de la Demanda (Burgos) have started in 2015, led by GREFA (Grupo de Rehabilitación de la Fauna Autóctona y su Hábitat). The objective of this program is to recover the species in the area, more than half a century since it became extinct, encouraging its expansion towards the northeast, encouraging connectivity between the Pyrenean colony and the French population. In 2017, the first group of 15 Cinereous Vultures was released. To date, through a monitoring system with video surveillance cameras, a total of 682 observations of Cinereous Vultures have been recorded at the feeding site next to the release aviary. Small numbers of individuals from a colony close to Madrid have settled in this area for more than a year, so the project even in its early days is already giving positive results (GREFA 2017 unpublished data).

Reintroduction Project in Balkan Mountains, Bulgaria

After more than 15 years of intensive vulture conservation work and the successfully implemented Griffon Vulture Reintroduction project in the Balkan Mountains, Bulgaria, a new project started in 2016 targeting the recovery of the Cinereous Vulture in the same area. The species was declared extinct as a breeding bird in Bulgaria more than 30 years ago. The project is implementing conservation measures before aiming to release about 50 individuals within the next 4 years, starting in 2018. Most of the birds will come from Spanish wildlife recovery centres (mostly from Extremadura), but also birds from the captive breeding programme will be released. All these activities are part of a LIFE Project: “Bright Future for Black Vulture in Bulgaria” LIFE14 NAT/BG/000649, led by Green Balkans.

Cinereous Vulture Captive Breeding Programme

The original name of the programme is ‘Eurasian Black Vulture EEP’, and is a coordinated breeding network of zoos and animal parks under the umbrella of EAZA, the European Association of Zoos and Aquaria and hosted by Planckendael Zoo (Belgium). The programme was initiated in 1986 by the Black Vulture Conservation Foundation and turned into an EEP breeding program one year later. It aims to breed this threatened species in captivity to build a sustainable back-up population and eventually release young into the wild. Captive-bred birds from the EEP are particularly important at the start of a new release site as three-month old birds adapt more readily, increasing the chances that they will stay and eventually settle in an area.
Breeding a Cinereous Vulture in captivity is challenging, to be successful, breeding pairs need to have a very strong pair bond and the species is very sensitive to disturbance. Breeding success in captivity is very low, although there have been improvements in recent years. The breeding program holds 43 pairs and has an average of 7 hatches per year. To date 55 chicks have been released in Spain (Mallorca and Catalonia) and at the three release sites in France (Grands Causses, Baronnies and Verdon) (Marleen Huyghe, 2017 pers. com.).

Annex 4 - JUSTIFICATION OF CONSERVATION ACTIONS

The main conservation efforts for the species so far have been (successfully) implemented in Europe, especially in Western Europe. This experience is very positive and can be used as best-practice for the conservation of the species elsewhere (Eastern Europe, Caucasus, The Middle East, Central Asia, etc.).

According to the implementation review of the previous Action Plan (see Annex 3) very good implementation of the plan is noted in the countries with significant European Cinereous Vulture populations (France, Greece, Portugal and Spain) where a considerable number of actions have been fully implemented (see **Figure 2** and **Figure 3**). The successful implementation of these actions is essentially due to the funding opportunities (e.g. LIFE fund, European Regional Development Fund & Implementation-EPPERAA). Most of the conservation projects that supported the implementation of the previous Action Plan and Cinereous Vulture Conservation in general were funded by the EU LIFE programme (see **Table 6**).

The range states with higher NIS=(3) (National Implementation Score), namely France, Greece, Portugal and Spain, were actually the countries that received/invested most of the funds available for vulture conservation (73.6% from the total Life Projects funds) within the last 15 years, Spain leading with 42.4% from the total (see **Figure 5** for percentage from total Life Projects funds by Member State). It's expected, as these four countries hold most of the European Population of the Cinereous Vulture (the whole of the EU species population, if we only consider EU Member States).

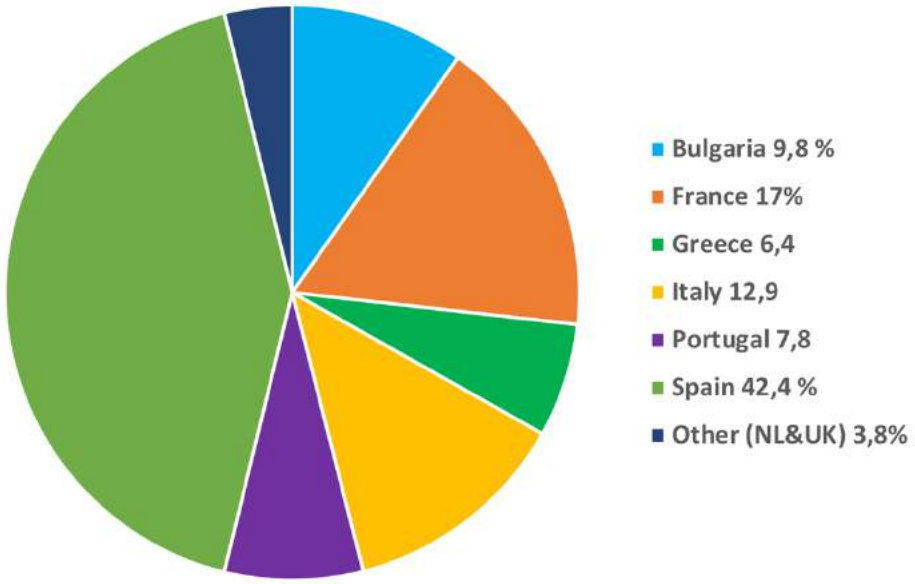


Figure 7. Percentage of total funds available for vulture conservation through LIFE Projects by EU Member State[5]

The increase that the species registered in **Spain** (from 206 pairs in 1973 to over 2000 pairs in 2015) shows that there is a lot of room for growth in Cinereous Vulture populations, if the appropriate conservation measures are put in place.

A highly successful reintroduction project has been undertaken in **France** (from zero pairs in the 1950s to 31 pairs in 2016), that has been able to restore the species to an area where it disappeared a hundred years ago.

The species has also naturally recolonised **Portugal** (from zero pairs in 2007 to 18 in 2016), from the nearby Spanish breeding colonies.

[6] Source: http://ec.europa.eu/environment/life/project/Projects/index.cfm

Despite all the threats in the Balkans and the extinction of all surrounding colonies, the Cinereous Vulture breeding colony in Dadia-Lefkimi-Soufli Forest National Park, North-East **Greece** (from 21 to 35 pairs in the period 2006-2015) maintained with a positive trend over the years.

In **Bulgaria** and **Italy** (Member States with high NIS and significant investment in vulture conservation), the species is extinct (more than 30 years ago) and occurs only as vagrant, so we cannot see clear positive effects to the status of the breeding populations. Nevertheless, in the case of Bulgaria this is very much encouraging for the upcoming reintroduction project for this species.

Hence the positive population status of the species in these particular four countries, the effectiveness of the good SAP implementation and vulture conservation in general is clearly demonstrated.

Member states are also required to designate Special Protection Areas for the Cinereous Vulture as part of the EU Natura 2000 network. Currently there are 195 Natura 2000 sites designated for the protection of the Cinereous Vulture (the sites and information about their conservation objectives etc. could be seen on).

The EU Birds Directive[6] requires Member States to establish a general system of protection for the Cinereous Vulture, prohibiting in particular deliberate killing or capture by any method, deliberate destruction/damage/removal to its nests and eggs, deliberate disturbance during breeding or rearing and keeping individuals of the species.

The significant increase of the European Cinereous Vulture population (France, Greece, Portugal, and Spain) has largely been due to the implementation of the EU Birds and Habitats[7] directives and implementation of targeted conservation measures. About 90% of the species' breeding territories in France, Greece, Portugal, and Spain are in protected areas (including Natura2000 sites). Although the designation of protected areas is not enough to guarantee the survival of such dispersed species which exploit a variety of biotopes, the level of protection it affords through more careful land planning and detailed scrutiny of impact of construction of new infrastructure definitely helps to protect breeding habitats and to reduce disturbance.

The species has been increasing since the adoption of the previous Action Plan and continues to do so since the last review (2010). Some of the key threats have been addressed with legal measures and with the designation of protected areas, but mainly through active conservation actions on the ground (related to food availability and the illegal use of poison). At the same time, **poisoning, collision, electrocution, food shortage, habitat loss, human disturbance, etc. remain critical threats to address for this species. Sharing best practices with other range states, enhancing recolonization of the former range and establishing corridors and links with Asian populations are also key activities for the conservation of the Cinereous Vulture.**

It is unlikely that the population can be completely restored to previous levels and that it will recolonizes naturally all the countries where it is extinct, due to, essentially, the permanent loss of suitable habitat or significant distance from existing colonies.

The most effective conservation actions implemented in Europe have been targeting the high priority threats listed in this SAP: thefight against the use of poison, the correction of electricity infrastructure, the improvement of food recourses, and habitat protection.

[6] http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm
[7] http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

Annex 5 – IMPLEMENTATION OF THE ACTION PLAN

Any species action plan is only as good as its implementation and the respective outputs monitored for impact and results – because species action plans are supposed to be dynamic and live documents that can at any moment incorporate new information, or respond to a changing situation.

In this context, for a Species Action Plan to be successfully implemented and monitored, it is absolutely essential to secure two things:

I. A certain level of coordination that drives the SAP implementation and monitoring, the continuous engagement with partners, and the necessary fundraising for specific actions or components – in other words, a SAP 'owner'.
II. A formal mid-term review that measures impact and implementation and takes into consideration any changing contexts and new information

For the implementation of this SAP, the existence of the two other relevant Action Plans should also be taken into consideration: The Cinereous Vulture Flyway Action Plan and the Multi-species Action Plan to Conserve African and Eurasian Vultures (Vulture MsAP), both developed simultaneously with this SAP and in absolute coherence.

We consider that the coordinator position is essential for the successful SAP implementation, a person that will have as part of his/her working portfolio and job description the duty to push and promote the implementation of this SAP across the range states. This coordinator would also help fundraise for particular actions of the SAP or range states (including non-EU countries), effectively implement Objective 11 of this SAP, monitor the implementation and make an implementation review of the SAP in 2026/28.

This coordinator would be assisted by a working group, including representatives from the key Cinereous Vulture range states and prominent Cinereous Vulture experts, that would advise when needed. This working group would have its own Terms of Reference and would meet (remotely) once a year to review progress.

This coordinating position must be linked to the coordination of the Cinereous Vulture Flyway Action Plan and the Vulture Multi-species Action Plan or can be even integrated into the coordination of the implementation of these two Action Plans.

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Annex 7 - LIST OF ACRONYMS/ABBREVIATIONS

AIS	Average Implementation Score
AOS	Albanian Ornithological Society
BSPB	Bulgarian Society for the Protection of Birds
CITES	Convention on International Trade in Endangered Species
CMS	Convention for Migratory Species
EC	European Commission
EU	European Union
IUCN	International Union for Conservation of Nature
LPO	Ligue pour la Protection des Oiseaux
MoU	Memorandum of Understanding
MsAP	Multi-species Action Plan
NGO	Non-Governmental Organization
NIS	National Implementation Score
SAP	Species Action Plan
SEO	Sociedad Española de Ornitología
UNEP	United Nations Environment Programme
VCF	Vulture Conservation Foundation

Annex 8 - EUROPEAN RANGE STATE CODES

AL	Albania
AM	Armenia
AZ	Azerbaijan
BG	Bulgaria
CR	Croatia
FR	France
GA	Georgia
GR	Greece
IT	Italy
MK	FYR of Macedonia
PT	Portugal
RF	Russia
SP	Spain
SR	Serbia
TR	Turkey
UA	Ukraine