

DEVELOPMENT OF A FLYWAY ACTION PLAN FOR THE CONSERVATION OF THE BALKAN AND CENTRAL ASIAN POPULATIONS OF THE EGYPTIAN VULTURE

WORKSHOP REPORT

LIFE+ PROJECT
“THE RETURN OF THE NEOPHRON”
LIFE10 NAT/BG/000152





- **Organizers:** Bulgarian Society for the Protection of Birds/BirdLife Bulgaria ([BSPB](#)), together with its partners Hellenic Ornithological Society/BirdLife Greece ([HOS](#)), World Wildlife Fund ([WWF Greece](#)) and the Royal Society of the Protection of Birds ([RSPB](#)) in the LIFE+ project “The Return of the Neophron” ([LIFE10 NAT/BG/000152](#)), and the Coordinating Unit of the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia ([CMS Raptors MoU](#)).
- **Date and place:** 6-9 July 2015, Vitosha Park Hotel, Sofia, Bulgaria
- **Reported and edited by:** Boris Barov (BirdLife International), Robert Vagg (CMS), Stoyan Nikolov (BSPB/BirdLife Bulgaria) and Nick P. Williams (CMS Raptors MoU).

Disclaimer

This report reflects the opinions and views of the participants at the Workshop and does not necessarily represent the views of the organisers. The Workshop was an important step towards the development of a Flyway Action Plan for the Egyptian Vulture, which also involves contributions by experts and additional consultations. The report does not constitute the Flyway Action Plan.

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1. List of abbreviations

A – Answer

AIS – Average implementation score

BSPB – Bulgarian Society for the Protection of Birds/BirdLife Bulgaria

CBD – Convention on Biological Diversity

CITES – Convention on International Trade in Endangered Species of Wild Fauna and Flora

CMS – Convention on the Conservation of Migratory Species of Wild Animals

CERM – Endangered Raptors Centre

COP – Conference of the Parties

DD – Doga Dernegi/BirdLife Turkey

FAP – Flyway Action Plan

FYR of Macedonia – Former Yugoslav Republic of Macedonia

FWFF – Fund for Wildlife Flora and Fauna/Bulgaria

EAZA – European Association of Zoos and Aquaria

EEP – European Endangered Species Programme

EIA – Environmental Impact Assessment

EU – European Union

EV – Egyptian Vulture

GEF – Global Environmental Facility

GTRS – Birds of Prey Working Group in Sicily

HOS – Hellenic Ornithological Society/BirdLife Greece

IKB – Illegal killing, taking and trade in migratory birds

MBZ – Mohamed bin Zayed Species Conservation Fund

MEA – Multilateral Environmental Agreement

MME – Hungarian Ornithological and Nature Conservation Society/BirdLife Hungary

MMNH – Macedonian Museum of Natural History

MOEW – Ministry of Environment and Water, Bulgaria

MOS – Meeting of Signatories

MOU – Memorandum of Understanding

MSBs – Migratory Soaring Birds

NABU – Nature and Biodiversity Conservation Union/BirdLife Germany

NBSAPs – National Biodiversity Strategies and Action Plans

NDVI – Normalized difference vegetation index (an indicator of primary productivity)

NMNH – National Museum of Natural History

NPA – Nature and Parks Authority

NSAID – Nonsteroidal anti-inflammatory drug

Q/C – Question /comment

PVA – Population viability analysis

Raptors MoU – Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia

RSPB – Royal Society of the Protection of Birds/BirdLife UK

SAP – Species action plan

SCF – Sahara Conservation Fund

SEA – Strategic Environmental Assessment

SEO – Spanish Ornithological Society/BirdLife Spain

SPNL – Society for the Protection of Nature in Lebanon/BirdLife Lebanon

ToR – Term of Reference

UAE – United Arab Emirates

UzSPB – Uzbek Society for the Protection of Birds/BirdLife Uzbekistan

VCF – Vulture Conservation Foundation

WG – Working group

WWF – World Wildlife Fund

2. Opening statements

- **Mrs. Radostina Galitionova** (Senior Expert, National Nature Protection Service Directorate, **Ministry of Environment and Water, Republic of Bulgaria**):

“On behalf of the Ministry of Environment and Water (MOEW) I would like to welcome all participants to the workshop. Thank you for sharing your experience and knowledge to prepare a strategy for the protection and the conservation of the Egyptian vulture. We would like also to express our gratitude to our colleagues from BSPB for their great work in organizing this meeting and to the European Commission, to the “A. Leventis” Foundation and the Coordinating Unit of the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (CMS Raptors MoU) for their valuable assistance and support. The participation of Bulgaria in the protection the Egyptian vulture contributes to conservation of global biodiversity.

MoEW fully supports the initiative and the efforts to develop a Flyway Action Plan for conservation of the Balkan, Caucasian and Central Asian populations of Egyptian vulture on its migration route and wintering sites. Our support is based on the good results obtained by LIFE + project “Return of the Neophron” aimed at the preservation of one of the most endangered birds on the planet. The results achieved by the project so far are impressive: 110 dangerous electricity poles in Bulgaria have been secured. This reduces the risk of electric shock in 7 active breeding areas of the species; Through International cooperation, a very dangerous electricity line in a wintering site of the Egyptian vulture in Sudan has been secured; During the project 50% of the breeding pairs in Bulgaria and Greece were provided with supplementary food and the nests have been protected every year; A Wildlife Crime Identification Handbook has been published.

MoEW is grateful for all these achievements. I wish you a fruitful work.”

- **Mr. Stoycho Stoychev** (Conservation Director, **BSPB/BirdLife Bulgaria**):



“Conserving the Egyptian Vulture was not considered a priority issue just 15 years ago. BSPB was then focused on other vultures and eagles. Now the species faces global extinction. While we are fully focused on it now, lots of conservation work has been done, clearly more efforts and better targeting are needed if we are to be effective. I am optimistic that we can save the EV and this meeting will contribute. One of the most important outcomes of the meeting will be concrete ideas for actual cooperation work on the ground among

the represented participants across the vast range of the species. Our special thanks to the organizers and donors, especially to the EU LIFE Programme, the A.G. Leventis Foundation and the CMS Raptors MoU.”

- **Mr. Nick P. Williams (CMS Raptors MoU)** [presentation available in [PDF](#)]



“The CMS Raptors MoU is a legally non-binding international agreement which came into effect on 1 November 2008. The Coordinating Unit is based in the United Arab Emirates (UAE), due to the generous support of Environment Agency – Abu Dhabi, on behalf of the government of the UAE. The Raptors MoU covers 76 species of migratory birds of prey and extends to 131 Range States, of which 52 are now Signatories.

Birds of prey are in serious trouble throughout the world. In 2005, a specially commissioned study showed 50% of migratory species in the African-Eurasian region were either threatened or had an unfavourable conservation status. Migratory species can only be conserved effectively if all Range States work together to deliver collaborative and coordinating actions. This is the fundamental basis on which CMS and its instruments are established. Signatories to the Raptors MoU commit to applying the precautionary principle in relation to conserving populations of migratory birds of prey.

The Egyptian Vulture is the most threatened species listed on the MoU. There is an urgent need to develop a clear set of conservation actions to be implemented all along its flyway. The Coordinating Unit is delighted to be co-sponsoring this Workshop with BSPB (Birdlife Bulgaria), and I wish to take this opportunity to express our warm welcome to the 70 participants from 33 Range States present. This is a unique opportunity to develop the Flyway Action Plan in a positive collaborative way and ultimately to conserve the species in the long term.”

3. The need for a Flyway Action Plan

Dr. Stoyan Nikolov (Project Manager, **BSPB/BirdLife Bulgaria**) [presentation available in [PDF](#)]



The LIFE+ project “The Return of the Neophron” (LIFE10 1NAT/BG/000152) started in 2012, funded by the European Commission and the “A. G. Leventis” Foundation, and implemented by the Bulgarian Society for the Protection of Birds/BirdLife Bulgaria (BSPB), together with its partners Hellenic Ornithological Society/BirdLife Greece (HOS), World Wildlife Fund (WWF Greece) and the Royal Society of the Protection of Birds (RSPB). The project aims to secure the Balkan breeding population of the Egyptian vulture and its actions are focused on 27 Natura 2000 sites in Bulgaria and Greece (both countries holding about 60% of the Balkan population), but is also relevant to other countries in the region (FYR of Macedonia, Albania and Western Turkey) and to the flyway of the target population (i.e. Middle East and Africa). It is clear that the success depends on the situation along the entire flyway and in the wintering grounds. In the preliminary stages of the project, the efforts were focused on research to understand the problems involved. We conducted studies on the trends in the population numbers and distribution, mortality factors, migration, diet and territory occupancy, genetics, toxicology and pathogens (some of them still under implementation). Results revealed that 80% of the population in the Balkans was lost over the last 30 years, and the trend was similar across countries suggesting that negative factors are operating outside of the breeding grounds. The species has a broad diet which is not directly related to productivity but to territory occupancy. The major mortality factors are poisoning, electrocution and direct persecution, but for juveniles also sub-optimal navigation and predation.

Direct conservation actions include supplementary feeding, anti-poison work (incl. dog-units), nest guarding, and work against bird crime. We were able to initiate conservation work and train collaborators in some of the key flyway countries, especially the wintering grounds in Ethiopia and Sudan but also in other African countries (Niger, Nigeria, Djibouti, Chad and Somalia). Communication and public awareness-raising are a substantial part of project, as we need the support local communities and authorities on board for effective conservation.

Finally, work in the breeding grounds is not enough to secure the Balkan population. Still there are substantial gaps in our knowledge regarding the priority areas, nature and magnitude of the mortality factors along the flyway. As the populations from Central Asia and Caucasus (which shelter hundreds of pairs compared

to the Balkans where only 70 pairs are left) have been shown to partly share the same flyway, this issue is equally relevant to them.

Transcontinental cooperation is urgently needed along the flyway in the fields of research, conservation and productive communication with authorities and other local stakeholders. Considering the short time left to secure the species urgent actions need to be undertaken to provide the needed financial and human resources for this.

The development of the current EV FAP resulted from these needs. The goal of the FAP is to secure the breeding range and flyway of the eastern EV population. The range includes the Balkans, Central Asia, the Caucasian region, the Middle East, Central and Eastern Africa and hence the participation in this workshop (for the list of meeting participants *see Annex 16.1*).

The planned milestones in the FAP development process are as follows:

- EV FAP Workshop (6-9.7.2015)
- EV FAP Draft developed (2015)
- EV FAP Draft consulted with contributors and range states (early 2016)*
- Establish EVFAP Working Group (2016)
- Dissemination & implementation
- Final adoption by CMS at COP12 (as key component of Multi-species Action Plan for migratory African – Eurasian Vultures (Vulture MsAP) (2017)*

Inputs are needed and the draft Plan is open for comments.

4. Workshop programme

DAY 0 (5 July 2015)

19:00 - 21:00 **Welcome cocktail**

DAY 1 (6 July 2015)

08:30 - 09:00 **Registration**

Morning Plenary 1

09:00 - 10:00 **Opening of the Workshop**

09:00-09:05 Official statement by the Bulgarian Ministry of Environment and Water

Radostina Galitionova, MOEW

09:05-09:10 Welcome by BSPB/BirdLife Bulgaria

Stoycho Stoychev, Conservation Director

09:10-09:15 Welcome by the Coordinating Unit of CMS Raptors MoU

Nick P. Williams, Programme Officer

09:15-09:30 From research to conservation: challenges to secure the future of the Egyptian Vulture (lessons learned from Spain)

Dr Jose-Antonio Donazar

09:30-09:45 LIFE The Return of the Neophron – framework, progress and the need of FAP

Dr. Stoyan Nikolov, Project Manager

* [NB: Milestones updated following [MoS2 of the Raptors MoU](#), October 2015, Norway.]

- 09:45-10:00 Purpose of the workshop. Introduction to the methodology. Expected outcomes and expected contribution from the participants.
Boris Barov, Workshop Moderator
- 10:00-10:30 Coffee/Tea break**
Morning Plenary 2
- 10:30-10:45 The Egyptian Vulture: status of its populations - a global review
Vladimir Dobrev, BSPB
- 10:45-11:00 Conservation efforts for the Egyptian Vulture in the West Palearctic breeding range
Jovan Andevski, VCF
- 11:00-11:15 Conservation efforts for the Egyptian Vulture along the flyway and in the non-breeding range
Elzbieta Kret, WWF Greece
- 11:15-12:30 Discussion / Question and answers to the panel
Boris Barov, Workshop Moderator
- 12:30-14:00 Lunch**
Afternoon Session 1
- 14:00-14:15 Egyptian Vulture, traditional knowledge and links to human culture
Volen Arkumarev, BSPB
- 14:15-14:30 Reasons for the decline in the Egyptian Vulture: What do we know about the threats facing the species?
Victoria Saravia, HOS
- 14:30-14:45 Stakeholders identification: Who are the stakeholders upon which the conservation of the EV depends?
Alkis Kafetzis, WWF Greece
- 14:45-15:30 Discussion / Question and answers to the panel
Boris Barov, Workshop Moderator
- 15:30-16:00 Coffee/Tea break (Lobby bar, 2nd floor)**
Afternoon Session 2
- 16:00-16:15 Reasons for the decline in the Egyptian Vulture: What we still don't know about the species and how does this limit its effective conservation?
Dr. Stoyan Nikolov, BSPB
- 16:15-16:30 Ex situ conservation of the Egyptian Vulture: What are perspectives and potential role to support higher productivity of the population? Status and perspectives of the species EEP.
Dr. Jose Tavares, VCF
- 16:30-16:45 Population Viability Analysis of some key populations (review of the knowledge). What are they telling us?
Dr. Metodija Veleviski, MMNH
- 16:45-17:25 Discussion / Question and answers to the panel
Boris Barov, Workshop Moderator
- 17:25-17:40 Review of the day, preparation for tomorrow and closing.
Boris Barov, Workshop Moderator
- 17:40 Closing of the day**

DAY 2 (7 July 2015)

09:00-11:00 Morning Session

09:00-09:10 Preparation for the day

Boris Barov, Workshop Moderator

09:10-09:25 Addressing poisoning of migratory birds: (Guidelines to prevent the risk of poisoning to migratory birds and their relevance to EV).

Konstantina Ntemiri, HOS

09:25-09:40 Addressing the threats to migratory soaring birds caused by energy infrastructure. Review of the experience and priorities

Alvaro Camina, Acrena S.L.

09:40-09:55 Lessons learned from the Imperial Eagle action plan process: identification, analysis and prioritization of the threats

Marton Horvath, MME

09:55-10:40 Discussion / Question and answers to the panel

Boris Barov, Workshop Moderator

10:40-11:00 Threats to the Egyptian Vultures: how to analyse and prioritise them?

Boris Barov, Workshop Moderator

11:00-11:45 Coffee/Tea break

Working Groups 1

11:45-12:30 Threats identification and prioritisation by region.

WG Facilitators

12:30-14:00 Lunch

14:00-15:30 Working Groups 2

14:00-15:30 Linking threats to root causes and stakeholders

WG Facilitators

15:30-16:00 Coffee/Tea break

16:00-17:30 Afternoon Session

16:00-16:15 SWOT analysis of the existing framework for international coordination of the conservation actions for the EV

Nick P. Williams, Raptors MoU

16:15-16:35 Reporting back to plenary

WG Facilitators

16:35-17:30 Discussion: What are the realistic objectives for the Flyway action plan?

Boris Barov, Workshop Moderator

17:30 Closing of the day

18:30-22:30 Social event: Evening field trip and dinner .

DAY 3 (8 July 2015)

Morning Session 1

09:00-09:20 Review of Day 1 and 2 and explanation of the tasks for the day

WG Facilitators

Working Groups 1

09:20-11:00 Developing FAP actions

WG Facilitators

11:00-11:30	Coffee/Tea break
	Working Groups 2
11:30-12:00	Securing stakeholder support <i>WG Facilitators</i>
	Morning Session 2
12:00-12:30	Reporting from the WGs <i>WG Facilitators</i>
12:30-14:00	Lunch
	Afternoon Session 1
14:00-14:40	Implementation arrangements for the action plan: proposal for International EV Working Group <i>Boris Barov, Workshop Moderator</i>
14:40-15:20	Adoption of a Message from the meeting <i>Boris Barov, Workshop Moderator</i>
15:20-15:30	Next steps for the EV Flyway action plan <i>Stoyan Nikolov, BSPB</i>
15:30-16:00	Coffee/Tea break
	Afternoon Session 2
16:00-16:30	Review of the Workshop achievements <i>Boris Barov, Workshop Moderator</i>
16:30-18:30	Presentations by guest speakers and documentaries
16:30-16:45	Dog units: An efficient tool in anti-poison work in the Balkans <i>Elzbieta Kret, WWF Greece & Dimitris Vavilyis, HOS</i>
16:45-17:15	Documentary about raising awareness for vulture conservation in Niger <i>Thomas Rabeil, SCF</i>
17:15-17:30	Documentary about bird crime in Bulgaria <i>by Maria Salabasheva, Journalist</i>
17:30-17:45	Migratory Soaring Birds project <i>Osama Al Nouri, BirdLife International</i>
17:45-18:00	Lessons learned from Israel <i>Ohad Hatzofe, NPA</i>
18:00-18:15	Lessons learned from Italy <i>Massimiliano Di Vittorio, GTRS</i>
18:15-18:30	Lessons learned from France <i>Marie Pierre Puech, LPO</i>
18:30	Closing of the workshop

5. Workshop objectives

Boris Barov (Facilitator of the workshop, **BirdLife International**) [presentation available in [PDF](#)]



The objectives of the workshop are as follows:

- To draft a Flyway Action Plan (FAP) for the conservation of the Egyptian vulture (*Neophron percnopterus*)
- Create momentum for the development of the action plan and collaboration along the flyway.
- Establish a Working Group to coordinate implementation of the plan.

Process:

1. Information on current status, trends, threats and conservation actions has been collected via questionnaires issued in June 2015 and 29 questionnaires have been returned.
2. The first Draft will be compiled following the workshop using the workshop results.
3. After that, a formal consultation on the first Draft will be carried out.
4. Revised Draft will be submitted to the CMS Raptors MoU.

Summary on workshop schedule:

- Day 1: sharing experience and review current knowledge and effectiveness of current conservation work.
- Day 2: onus on participants with the team of facilitators in smaller groups. Two blocks – threats prioritisation and problem trees. Develop shared strategy for addressing them.
- Day 3: developing the activities of the AP, their coordination, implementation and prioritisation.

For the list of meeting participants **see Annex 16.1.**

6. Status and conservation of the EV: lessons learned from Western Europe

FROM RESEARCH TO CONSERVATION: CHALLENGES TO SECURE THE FUTURE OF THE EGYPTIAN VULTURE (LESSONS LEARNED FROM SPAIN) – by Prof. Dr. José-Antonio Donazar (CSIC) [presentation available in [PDF](#)]



The species has been widespread and abundant until the last century and there is an ancient relationship between man and this emblematic bird. Now it is declining. Spain is the last refuge of EV in Europe (currently about 1500 are breeding in Spain which is 90% of the European population).

Population trends: global long-term estimations are not very accurate, especially for the migratory and wintering populations. Census work has been done but data are sketchy (some figures are good, others are poor). There are a lot of limiting factors and viability for the census and evidence based conservation is a challenge. However, skills are improving.

In general, the trend seems to be good on the islands and in north-eastern Spain, but less good in central, northern and southern Spain.

Lessons learned (applicable to Turkey and Asian countries):

- EV census is not an easy task (especially when dealing with large and unknown populations accurate census is difficult).
- Regional long-term studies may shed light to this issue.

Migration and wintering: Birds from Spain winter in West Africa and Mali. Balkan birds winter mainly in Eastern Africa. For the Spanish population high mortality occurs during migration when birds are crossing the Sahara (survival and NDVI in Sahel are positively related), but not over the sea (the Straits of Gibraltar is narrow). This is also relevant to many other species of birds of prey.

Cost of being a migrant: higher survival rates for sedentary populations (e.g. on islands Menorca and Canaries), while mainland migratory populations have higher mortality. The conditions in Sahel are a factor but not 100% determinant as the major threats to different populations vary. The rates of natural mortality for migrants also vary, especially for juveniles. There is a need to mark more birds to get better estimates and to

maintain the marking effort.

Lessons learned:

- High mortality during migration is natural, being biased to juveniles;
- Sedentary populations have higher survival rate;
- There is not a common factor driving the extinction of all the Iberian populations (as would be expected if mortality in Africa were determinant);
- Local factors are important and perhaps decisive;
- Do not generalize!

Limiting factors and viability: Adult mortality is the main factor driving declines and it is dependent of factors operating at the breeding sites. The main known threats are poisoning, wind turbines and power lines (the latter relevant especially to the Canary Islands). But the negative factors are not independent. For instance, the loss of prey (e.g. 90% loss of wild rabbits) force birds to leave the locality to find other sources of food and increase the risk to become victims of poisoning and wind farms. In the same line, the highest mortality was evidenced for subadult birds (5 year old) as at this age they are looking to establish a territory which may entail leaving the safe zones.

Lessons learned:

- Main factor driving population dynamics and negative trends is non-natural mortality;
- Poison > wind farms > others;
- Factors may be not independent;
- Local factors are important (again);
- Prospecting birds are more susceptible to unnatural death;
- If we want to know more, we need to mark and individualize birds.

Conservation in practice: often should address several negative factors at the same time. For instance, in Andalusia the negative population trends are mainly due to poisoning, while in Canary population was close to extinction mainly because of collisions with power lines. In general in Spain the anti-poison work is well addressed (especially in Catalonia). In the Canary Islands, the negative trend was reversed through a LIFE project modifying power lines and mortality due to collisions was decreased (e.g. there were 35 marked chicks from last year and all are still alive).

Evaluation of conservation measures:

- Stopping non-natural mortality:
 - Variable cost
 - Variable popularity
 - Very effective to recover populations
- Supplementary feeding:
 - Cheap
 - Popular
 - Help to maintain communal roosts and territories
 - Many negative effects if not aimed to specific objectives
- Reducing disturbances during the breeding sites:

- Cheap
 - Unpopular
 - Help to maintain territories and productivity
 - Little demographic relevance (but depending on scale)
- Captive breeding:
 - Very expensive
 - High public appeal
 - Help to maintain territories and productivity
 - Little demographic relevance (but depending on scale).

Future is hard to predict as unknown factors emerge. Some 30 years ago, the lack of food (rabbits) was a main issue. Later, Mad Cow and other diseases on livestock resulted in change of the regulations for disposal of carcasses, which became a major concern for the conservation of scavengers in Spain. Poisoning and wind farms were priority for conservation work in the last decade, while nowadays the issue with licensed Diclofenac in Europe is in focus.

Lessons learned:

- It is possible to reverse negative population trends;
- Counteracting synergistic factors is imperative;
- Efforts needed depend on local conditions (again focal populations?);
- LIFE projects may be the “inflection point”.

The future is never assured in a changing world. The knowledge is the key to success.

7. Review of the status of EV target populations and conservation efforts in its West Palearctic breeding range and along the flyway



REVIEW OF THE STATUS – by Vladimir Dobrev (BSPB/BirdLife Bulgaria) [presentation available in [PDF](#)]

This presentation is based on the information collected through a questionnaire that has been circulated to meeting attendees (we are very thankful for the responses).

Global status:

The EV is a globally endangered according to the IUCN criteria. It is a Palearctic species distributed from India to Spain in Eurasia to Africa on the south.

The global population is estimated at 21,000 – 30,000 adult individuals, with decreasing population trend. From those, the estimations per region so far are as follows:

- 3,300-5,000 pairs in Europe (including Turkey)
- 2,000 pairs in Central Asia
- 2,000 pairs in India
- 1,000 pairs in the Middle East
- 1,000– 2,000 pairs in Africa

Status of the Eastern population:

The focus of the current FAP is on the Eastern part of the population. The rapid decline is evident.

- **Balkans:** Long term data on breeding population in the Balkans demonstrate currently there are no more than 80 pairs, with about 80% decline in the last 30 years.
- **Caucasus and Central Asia:** The estimation is 700 – 1,300 breeding pairs in the region. However data reliability is not consistent. There are no long-term monitoring programmes and there are gaps in knowledge. Regarding the population trends, some countries have decreasing populations, while others stable or even increasing. There is a need to collect more robust data.
- **Middle East:** New data collected through the questionnaires showed that the current population in the region is over 1,500 breeding pairs. Again, there are differences in the trends from country to country.
- **Africa:** trends very much down 90% declines, with national stats unknown in most countries.

CONSERVATION EFFORTS IN THE WESTERN PALEARCTIC BREEDING RANGE – by Jovan Andevski (VCF) [presentation available in [PDF](#)]

The presentation is based on the evaluation of the EU SAP and there are some good results so far.

In 2008, after up-listing the Egyptian vulture to Endangered, the EU SAP was initiated by BirdLife International and SEO (BirdLife Spain) and developed with contributions from European experts.

The Coordinating Unit of the Raptors MOU commissioned VCF to review and evaluate implementation of the existing EU SAP for three reasons:

- a) to provide an up-to-date status report of Egyptian Vulture populations in Europe;
- b) to evaluate progress towards implementation of the SAP at national and regional levels; and,
- c) to identify key lessons learned to feed directly into the development of the EV FAP.

The VCF carried out the review following a simple methodology developed by BirdLife (Gallo-Orsi, 2001). A questionnaire in English and Spanish was sent to 60 respondents, and 40 replies were received.

Based on the results, the map with distribution range and status was updated (the map is illustrative only and made with the aim only to compare the situation with the BirdLife International map from 2008).

The average implementation score (AIS) was 1.64 (out of 3), which was a low score. There are some positives too: like better monitoring, but the overall aim to down-list the population to Vulnerable by 2018 is not being achieved (in Western Europe the population is stable, but in Central and Eastern Europe the population is in decline - e.g. population declined by further 7% in the Balkans since 2008).

For the analysis, the conservation actions were grouped in three categories according to their aims:

- To reduce mortality in Europe to levels that will allow population growth.
- To improve food availability and habitat quality.
- To gather up-to-date and precise knowledge about the population numbers and trends from all countries with breeding populations in Europe.

The analysis shows primarily weak achievement but some progress especially in the third category.

Regarding the threats, deliberate killing is not considered as an important threat in most of the countries, except Georgia and Turkey. Poisoning is estimated as a low threat in Albania, France, Serbia and Turkey.

Legal protection levels – universally protected but there is a need of improved enforcement. EU countries had all developed a national plan, but none of the non-EU countries had one.

LIFE projects are the source where most of the funding for species research and conservation came from. Spain, Italy and France benefited the most from LIFE. € 25 million over past few years have been spent on projects involving the EV, from which € 9 million spent on projects concerned with food availability and anti-poisoning (for vultures in general), and €4 million specifically for EV. Funding in non-EU countries has been very low (less than € 0.5 million).

National AIS scores by Range States: Spain, France and Bulgaria do comparatively well (scores: 2.2) (in Italy, a captive breeding and release programme is not part of international plan, so its success did not boost the score). Why are Spain and France doing so well? This is due to reduced mortality, increased food availability and knowledge. But why then is the Bulgarian population declining, while in Spain and France - stable? There is significant difference between the scores of the work on EV mortality between Spain (score: 2.7) and France (score: 2.0) in one hand, and Bulgaria (score: 1.7) on other hand, which might indicate where Bulgarian conservationists might consider focussing their efforts.

In Spain, the anti-poison work was a top priority for the period 1980s to 2010 (about 200 cases were investigated, and greater awareness on this problem was achieved).

Conclusions:

- The species continues to decline in Europe;
- Overall, the EU SAP implementation was not very good;
- By countries – good implementation in Spain, France and Bulgaria;
- Where SAP implemented – has been effective: in terms of tackling poison, food availability and disturbance;
- Significantly better implementation in countries where EU funding is available;
- No differences in the threats and their respective priorities for the period of implementation.

CONSERVATION EFFORTS ALONG THE FLYWAY – by Elzbieta Kret (WWF Greece) [presentation available in PDF]

This presentation is a short review of conservation efforts in the non-breeding range of the species based on

the questionnaires returned.

Background:

In Greece, Bulgaria and FYROM, poisoning is the major threat. The actions to prevent the negative effect of illegal use of poison baits are creation and maintenance of feeding stations, stakeholder involvement in anti-poisoning campaigns and dog units (2 dogs trained to sniff out poison baits in Greece). Who is doing the work? NGOs and local and official bodies (e.g. National Parks). In Bulgaria, the work to limit the effect of the widespread use of pesticides and rodenticides in the agricultural lands is related to development of agri-environment measures, workshops, training and seminars for farmers and relevant authorities.

Other limiting factors identified are the reduction of food, disturbance and poaching.

The conservation actions implemented so far are as follows:

- For limited *food availability*: supplementary feeding (vulture restaurants and feeding of individual pairs) and agri-environmental measures. These activities are conducted by NGOs and authorities.
- *Disturbance*: public awareness, nest guarding as part of LIFE project in Bulgaria and Greece and rescue of chicks fallen from the nests.
- *Poaching*: capacity building for authorities and nest guarding.
- *Other*: Insulating pylons and research (satellite telemetry, health status, habitat ecology, diet and others). National SAP is available for Bulgaria and pending for Greece.

Identified threats along the flyway, per regions:

- *Caucasus*: poaching, poisoning, food availability. There are no particular conservation measures in place. Some monitoring is ongoing in Georgia and Armenia, implemented mainly by NGOs, and national SAP is pending for Georgia.
- *Central Asia*: same threats as mentioned for Caucasus plus electrocution and disturbance. There are no particular conservation measures in place. Regional monitoring is ongoing in some of the countries, plus public awareness and fragmented studies. All these actions implemented by NGOs. National SAP is available for Uzbekistan. No actions in Kazakhstan.
- *Middle East*: poaching, poisoning, electrocution and habitat change (threats in Yemen are unknown as no reply from this country and not much information available on the subject in the literature). Feeding stations are maintained in Israel and UAE. In Israel, main work is focused on the control of the numbers of feral dogs and predators, captive breeding programme (10 chicks produced this year) and insulation of powerlines. In Iran - higher penalties for illegal shooting. In Oman there are socio-economic incentives related to EV. Public awareness, monitoring and research are implemented in many countries in the region. Most conservation activities are implemented by the authorities, except for the socio-economic incentives, public awareness and studies which are run by the NGOs.
- *Africa*: electrocution, poaching, decrease in food availability, poisoning, habitat loss and lack of awareness. Conservation actions in the region include development of policies for conservation (Ethiopia and Niger), insulation of dangerous powerlines (e.g. in Port Sudan, a very dangerous in long term power line was replaced), awareness campaigns (Ethiopia and Niger), monitoring (Egypt and Niger) and research (Djibouti and Ethiopia). There are no conservation actions in Nigeria and Chad.

Overall conclusions:

- We need to focus on the major threats (poisoning, poaching, electrocution, decrease of food availability) and their effect on the EV;
- Achieve efficient policy;
- Better involvement of stakeholders (incl. authorities) in the conservation of the species;

- Support research, capacity building and international programmes.

Need to make effort across the whole range and share our knowledge.

DISCUSSION:

Q/C: *Levent Erkol (DD/BirdLife Turkey):* Discussion on the national numbers in Turkey regarding the status, as there is a mistake in the questionnaire provided. The correct estimation of population in Turkey is 1500 pairs. Also the map for Turkey in the presentation about the review of the EU SAP is not complete and need to be updated. Regarding the threats, illegal killing is also an issue for Turkey.

Q/C: *Theodora Skartsi (WWF Greece):* regarding the LIFE project in relevance to the presentation about the review of the EU SAP – the poisoning is not EV specific, therefore project funding benefits many species and all countries in the region.

Q/C: *Salim Javed (Environment Agency, Abu Dhabi):* it seems that the EV is extinct as breeding species in UAE based on the Questionnaires (i.e. available information) but this data need to be updated with more current research.

Q/C: *Chris Bowden (RSPB):* What concerns the food availability as a threat, clear evidence is needed to support this suggestion. This is a known problem in India.

A: *Jovan Andevski (VCF):* There are projects in Spain and France addressing this issue, which are showing results.

Q/C: *Sadegh Zadegan (Department of Environment, Wildlife Bureau of Iran):* EV in Iran currently seems to depend more on garbage sites, than on carcasses. What could be the benefits from supplementary feeding projects?

A: *Jose Donazar (Doñana Biological Station - CSIC, Spain):* Gives overview of the results, however it is hard to provide a general answer. In general, feeding stations help to fix pairs to a particular locality. But many populations depend on small prey (e.g. rabbits, lizards, snakes) and livestock plays smaller role.

Q/C: *Alvaro Camiña Cardenal (Acrena S.L.):* What is the evidence that juveniles need to learn the migration route by adults?

A: *Stoyan Nikolov (BSPB/BirdLife Bulgaria):* evidence is provided from the migration study in Turkey (see Opper et al. 2014), where juveniles were always observed flying in small groups with other conspecifics or other species of birds of prey (never alone; N = 552 individuals).

Q/C: *Josean Donazar (Doñana Biological Station - CSIC, Spain):* Is the flyway across the Aegean Sea?

A: *Stoyan Nikolov (BSPB/BirdLife Bulgaria):* There are birds migrating over the land but others are crossing the sea. The survival is higher for those birds migrating over the land and not over the sea (see Opper et al. 2015).

Q/C: *Stoyan Nikolov (BSPB/BirdLife Bulgaria):* Regarding the results from the review of the implementation of the EU SAP - in Bulgaria we currently do more research than evidence based conservation. In Spain and France, this has been done years ago and now it is possible to efficiently apply evidence based conservation – i.e. the efforts have results but this is visible just now.

A: *Jovan Andevski (VCF):* Agrees – in Spain research has started years ago.

Q/C: *Boris Barov (BirdLife International):* This methodology does not allow accurate country to country comparisons. Internal comparison within each country is better.

Q/C: *Roman Kashkarov (UzSPB):* Supports Spanish view on food basis as a major factor for habitat selection. Studies in Uzbekistan evidenced that nest selection and food availability are related. EV status in Kyrgyzstan needs updating – seems unlikely to be several hundreds pairs breeding there as it is a mountainous country. UzSPB has corrected this figure downwards during the latest research. Regarding the direct persecution mentioned as a threat for Caucasus – data comes from study in south Uzbekistan which is not Caucasus.

A: *Stoyan Nikolov (BSPB/BirdLife Bulgaria):* We tried to be objective and figures are based on the Questionnaire replies. For sure there is information that needs to be updated in the FAP draft. For instance, the estimates for the breeding population in Ethiopia is 3-30 pairs, while we recorded two pairs only by one spot in Debre Lebanos area. This is to say that we are happy to take corrections if there are better data.

A: *Boris Barov (BirdLife International):* Action point for all here – send to Stoyan the updates in writing over next week rather than go through country by country here.

Q/C: *Ghassan Jaradi (SPNL/BirdLife Lebanon):* Comment to the presentation of Vladimir Dobrev – the species is not breeding, but still migrants do pass through Lebanon, so it is not extinct. Looking at why the population in Bulgaria is still declining while others doing better. You should look at different migration routes outside of Bulgaria (Spanish and French populations migrate differently).

A: *Jovan Andevski (VCF):* The review of the EU SAP is based on the territories of the breeding populations. Comparisons with Menorca, where the population is not migratory, help to see if anti-poisoning measures work or not. Certainly we need to look at migration routes and the Balkan population might have a more dangerous route, but other factors may play a role too – e.g. disturbance.

Q/C: *Shiiwua Manu (APLORI):* The situation is bad across Africa – and not just for EV but for all vultures. Wildlife is not a priority. There is little action on the ground and few ornithologists. There is a need some actions that we can implement. There are problems with direct persecution in Nigeria and elsewhere. Animals being used by people exploiting these species.

Q/C: Status of efforts varies from country to country. Level of research should be considered. Also it should be specified what “absence of data” means – data not provided or not incorporated yet?

Q/C: *Houssein Abdillahi Rayaleh (Djibouti Nature):* Comment to the presentation of Jovan Andevski – it was shown that there is lots of action in Europe. The question is how to expand this beyond the breeding grounds and what to do elsewhere?

A: *Jovan Andevski (VCF):* Surely there is a need to work elsewhere where there is high mortality. LIFE has had a focus on European range. Work in breeding areas is having an effect but we need to look elsewhere too, including the wintering grounds.

A: *Boris Barov (BirdLife International):* This workshop is aiming to look at wintering grounds, too.

Q/C: *Nick P. Williams (CMS Raptors MoU):* We should perhaps be cautious about using the terms “right” and “wrong” migration routes. Cuckoos make their migration without learning the route and many consider raptors to be smarter than cuckoos. Other species routinely use the Aegean migration route so perhaps there are some recent changes along that route that are negatively affecting the EVs that select to follow it? At least one of the satellite tracked EVs followed this route and reached Africa safely so this proves it is a viable option.

A: *Stoyan Nikolov (BSPB/BirdLife Bulgaria):* An interesting comment. Under the LIFE project we tracked juveniles over a few years. One year one juvenile migrated that way and the next year more individu-

als did so. Apart of this, CREEM recently reported an experiment with captive bred birds originating from Spain and Turkey, released in Italy that were evidenced to follow the same routes as Italian birds (nevertheless their origin).

A: *Emilian Stoynov (FWFF)*: picks up cuckoo migration point from Nick P. Williams. Larger birds do more learning than smaller ones. EV does not migrate entirely by instinct but follows older birds. Jovan Andevski mentioned the Menorca case – these are discrete case studies from smaller areas. Island case does not necessarily read across to continent but easier to oversee.

Q/C: *Ohad Hatzofe (NPA Israel)*: Captive birds naturally want to migrate. Birds fitted with GPS disappeared over other countries. Some individuals have been caged over winter to prevent migration but when released they did it. Artificial feeding keeps them away from power lines and places they are persecuted.

A: *Theodora Skartsi (WWF Greece)*: Our observations show that even where food is provided every week birds still looked for insects on the ground near the feeding station.

A: *Marie-Pierre Puech (LPO)*: Feeding stations are a successful practice in Spain and France. Near Montpellier, the food availability for EV was limited by closing the rubbish dumps, so we have established feeding stations associated with a slaughter house. The Black and Griffon vultures also returned. A rich country like France also needs to find a space for these species.

Conclusive comment: Boris Barov (BirdLife International): The presenters summarised the knowledge we currently have for EV conservation. There is growing experience and evidence thanks to intensified conservation efforts. A lot of gaps remain. We cannot generalize – horses for courses – we should take account of local circumstances. These local expert opinions need to be taken into account in the working groups during this Workshop.

8. Evaluation of knowledge for the decline of the target EV populations and capacity to implement adequate conservation actions

Dr. Stoyan Nikolov (Project Manager, **BSPB**/BirdLife Bulgaria) [presentation available in [PDF](#)]

It is easier to say what we know than what we do not know. Regarding the cultural aspects – be aware that we originate from different countries and continents. The EV eco role is different there. Could have a major effect on agri-lifestyles in Africa if they disappeared.

The key elements of effective conservation:

- Time
- Knowledge
- Human capacity (all stakeholders not just fieldworkers)
- Funding
- Prioritization

Separate slides are shown for knowledge of the flyway, survival rates, productivity, threats in breeding grounds, threats along the flyway, ecology, human capacity, funding and prioritization.

In general, the state of the knowledge by regions is as follows:

- *Western Europe*: good knowledge, evidence based
- *Eastern Europe*: good knowledge, evidence based

- *Central Asia and Caucasus*: poor knowledge, based on estimations
- *Middle East*: moderate knowledge
- *Africa*: mostly poor knowledge, based on estimations

Balance between these elements is important – e.g. imagine the effort needed to monitor 1000 nests in Turkey!

Regarding the study on the migration of the Balkan population we have better understanding about the flyway and mortality factors of juveniles but poor data concerning adults. We have little idea of what is happening along the flyway of the Central Asian population. In Africa, we know something about congregation sites but need to know more, especially on the threats (e.g. in Ethiopia because of activities to combat rabies in feral dogs, poisons are used and dead (poisoned) dogs are dumped at garbage pits).

Human capacity by regions:

- *Western Europe*: very good
- *Eastern Europe*: good
- *Central Asia and Caucasus*: poor
- *Middle East*: poor
- *Africa*: poor

Prioritization by regions:

- *Western Europe*: good knowledge on the priorities
- *Eastern Europe*: priorities still unclear
- *Central Asia and Caucasus*: no prioritization
- *Middle East*: good knowledge in some countries, in others – not available
- *Africa*: no prioritization

9. PVA and ex-situ conservation

EV CAPTIVE BREEDING – by Dr. Jose Tavares (VCF) [presentation available in [PDF](#)]

Captive breeding will not save the species alone but it may be a useful conservation tool in some circumstances. Captive breeding and releases have helped the Bearded Vulture (*Gypaetus barbatus*) in Austria – last one killed in 1913, but now there are 30 birds again. Griffon Vulture (*Gyps fulvus*) brought back in 1983 to France and currently there are 2,000 pairs in the country. There is a LIFE project for reintroduction of Griffon Vultures in the Balkan Mountains in Bulgaria as well, and the first successful breeding happened this year in the wild. Black Vulture (*Aegypius monachus*) has returned to France thanks to the captive breeding and releases (over 1000 individuals) and currently there are 31 pairs in 3 nuclei.

Origins: Indirect through wild birds (injured birds from rehabilitation centres not taken direct from wild). Birds are released not in area of origin (in Spain) but in France and Bulgaria for instance. Or alternatively the origin is through captive breeding of injured birds that cannot be released. There is a big network for captive breeding of Bearded Vultures. There were recent releases in Alps Maritimes. In Andalusia the species was extinct as a breeding species but after 38 individuals were released since 2006, a breeding pair was formed this year (the male is 9 years old and the female - 5 years old) and the chick has been ringed and should fledge soon.

Regarding the EV: Would have to rely on captive breeding. European stud book started in 2002 and EEP pro-

programme was established in 2012 within EAZA network and coordinated from Prague Zoo (Anton Vaidl – coordinator) to maximize breeding and pairing. Currently there are 121 EVs spread across 42 EAZA members. For the last 10 years this pool has produced 69 chicks bred mainly in zoos (69%) or breeding centres (30%; mainly CERM in Italy) and 3% in private collections. So far there have been about 5 chicks produced per year, but up to 16 in recent years because of Anton's efforts (due to better arrangement of timing for EV captive breeding, not the same in wild, and pairs not kept in adjacent cages – EVs are not like Bearded Vultures). Outside EEP: captive programmes operate in Israel and Canaries. Israel releases 10 captive bred chicks per year. CERM – first year that there was a surplus allowing release of 6 birds in September 2015. Of 12 released individuals, three had GPS tags fitted and two reached Africa (they followed the route of Italian population although parents were Spanish and Turkish). There is a need for more deployment of GPS tags - we would like to have/borrow some tags!

Conclusions:

- Captive breeding of EVs now organized and coordinated by EEP;
- Developing guidelines and technical experience;
- EEP starting to produce enough juveniles in recent years, to support restocking and reintroduction;
- There is a need for further testing of reintroduction techniques;
- There is a need for feasibility and viability studies to inform future projects.

PVA FOR EV – by Dr. Metodija Veleviski (NMNH, FYR of Macedonia) [presentation available in [PDF](#)]

PVA – estimates the probability of survival of the population for a certain time period. Very useful in comparing different management scenarios but we need lots of data and it is hard to obtain these for rare species. It is stochastic - deals with probabilities of survival, sex at birth, productivity rates and effect of catastrophes on virtual individuals.

EV species profile:

- Long-lived
- Territorial
- Strong natal philopatry
- Long-distance migrant
- Slowly reproducing
- Opportunistic diet

Most of the PVAs use Vortex for modelling (including the PVA for the Balkan population).

Findings: the Balkan population is facing extinction. Securing the juveniles (e.g. through nest guarding) is not a game saver at the moment. For example in both FYR of Macedonia and Andalusia, even if the threats are eliminated, the populations will not be able to recover without supplementing wild populations with released individuals. Only when combining the supplementing and reducing mortality, then the trend turns upwards.

Gaps in the knowledge:

- How do productivity and survival parameters vary among subpopulations?
- What are the real emigration and immigration rates? Are populations connected?
- Is there any inbreeding depression already? Where?

- Where are the sinks?
- What are/might be the future threats?

Conclusions:

- Most populations are expected to (continue) to decline;
- Productivity has little effect on probability of survival;
- Improving survival of adults & sub-adults only is not enough;
- Improving total survival only is not enough;
- Supplementation only is not enough;
- Supplementation numbers should be high (10-50% of the breeding pairs/females annually);
- Improving survival AND supplementation seems the only way forward.

What we need:

- Learn more (underway);
- Develop improved models;
- Mitigate threats (hard going);
- Have plan B - sedentary populations?
- Do not give up! ("There are no hopeless cases, only people without hope, and expensive cases" – Soulé 1987)
- Establish captive population (underway);
- Start (experimental) releases, double focus: knowledge & (some) supplementation;
- Secure funding.

DISCUSSION:



Q/C: *Ghassan Jaradi (SPNL/BirdLife Lebanon):* Falcon with broken wing cannot be used for falconry. Can rescued EVs be reintroduced?

A: *Anton Vaidl (Zoo Praha)*: They can be used for captive breeding but not released. If the birds live in captivity for too long, they learn captive habits and are not appropriate for releasing.

A: *Ohad Hatzofe (NPA Israel)*: It depends on what bone was broken and the speed of recovery. In Israel we use birds for restocking only in the region where they originated. The success of breeding, nevertheless depends on the individual birds. Griffon Vulture was a vanguard for EVs, with a 10 year history of releases and a sedentary wild population (there are already a lot of insulated pylons).

Q/C: Regarding the EVs in zoos – is there any difference between birds originating from the Western and Eastern populations?

A: *Anton Vaidl (Zoo Praha)*: birds from two subspecies are kept in EAZA zoos and some birds from Africa are Tanzanian sedentaries (non-migratory). However, in Italy birds from different populations were released and they used the Italian migration route.

A: *Elena Kmetova (Green Balkans)*: In Sofia zoo there is a mixed pair from Tanzanian male and Bulgarian female. They have produced 4 chicks in total and the proposal release experiment of a chick did not proceed.

Q/C: What is the best release strategy – in groups or individually? Target numbers and timescales?

A: *Jose Tavares (VCF)*: VCF has 20 years' experience with the Bearded Vulture – better to release in pairs.

A: *Metodija Veleviski (NMNH)*: Model shows long-term decline of the Balkan population, so releasing just few individuals will not work.

A: *Anton Vaidl (Zoo Praha)*: We need to find good zoos or breeding areas ready to take the young. Surplus birds are not needed for EEP and should be released.

A: *Massimiliano Di Vittorio (GTRC)*: It should be considered that the release in Italy in September coincides with the hunting season.

A: *Anton Vaidl (Zoo Praha)*: The captive birds breed later so young fledge later.

A: *Emilian Stoyanov (FWFF)*: Back to 2013 discussion about removing second chicks from wild nests is currently not appropriate for captive breeding. However, if we see the telemetry data, since 2012 only one marked bird survived crossing the sea. We should help young birds to migrate safely.

A: *Jose Donazar (Doñana Biological Station - CSIC, Spain)*: Need to know where we can and where we cannot restore population to historic levels. Carrying capacity of the landscape may have reduced. Griffon Vultures reintroduced to an area with no livestock may survive only by feeding stations.

A: *Ohad Hatzofe (NPA Israel)*: In Israel we firstly applied methods used in Bearded Vulture release on EV and it did not work. Some new techniques for EVs did not work in Israel either. Because of their feeding habits, EVs adapt quickly and eat lots of things (risk of poisons) and this also leads to EVs being killed on roads.

Q/C: *Levent Erkol (DD/BirdLife Turkey)*: What is the cause of mortality in the model?

A: *Metodija Veleviski (NMNH)*: Two approaches from the literature were inputted in the model. Need to consider the factors that add to the negative side of the balance. OK to play with the numbers or adjust the model – some factors are hard to estimate.

A: *Marton Horvath (MME/BirdLife Hungary)*: Is it possible to collect feathers from below nests or from the chicks for the aim of the analysis?

A: Metodija Veleviski (NMMNH): The model is like making a pie with lots of ingredients in different amounts and balance. We may add new data and re-run the model. Model can reflect changing carrying capacity – FYROM used to have 100s individuals in the past, but now down to 40.

Q/C: Shiwua Manu (APLORI): Models are based on a number of factors determining the viability of the populations. How do you put factors into a model when you cannot quantify them?

Q/C: Massimiliano Di Vittorio (GTRC): Regarding the releases in Italy – is this a new project or a test? Have Italians agreed to tag the birds because before they were adamantly against?

A: Jose Tavares (VCF): Italian project was not approved by LIFE but it will be resubmitted. Now Anton has some extra birds for releases. Italians have agreed to tag the birds. Also considering releases in South Italy and a couple in the Balkans. Agreed that the Balkans release in 2015 was not feasible but reconsider this if next year's productivity again reaches 16 chicks. And ensure maximum data collection. Permits are all lined up.

A: Anton Vaidl (Zoo Praha): EEP is currently working with Green Balkans. There are captive birds from the Bulgarian bloodline.

10. Threats, root causes and stakeholders relevant to EV conservation

CULTURAL VALUE – by Volen Arkumarev (BSPB/BirdLife Bulgaria) [presentation available in [PDF](#)]



The cultural value of the EV is a key issue related to the problem and motivation for conservation of the species. The EV is one of few species of major cultural value – it is a living legend in Europe, Asia and Africa. Lots of tribes have legends – sacred, brings in the spring, Pharaoh's chicken, symbol of wisdom, purity and motherhood, etc. Will be under threat for years to come but we hope to keep it going for 1000s of years although local extinction in the Balkan regions is a possibility.

Vultures are used in traditional medicine and magic in Africa. 2000 individuals of 200 species found being used in Nigeria (just in one study). Hunters from Nigeria go to neighbouring countries. Vultures are believed

to provide protection against evil, enhance fertility, magic (often buried in ground near new houses), combat malaria, and are also used for clairvoyance and contacts with ancestors. Nigeria has a growing human population so demand is increasing.

The story of Paschalis – the only tagged juvenile that crossed the Mediterranean Sea was killed by a Nigerian hunter in Niger. Need to address persecution in other places as well.

Request from Boris Barov: Bear these issues in mind when we come to discuss stakeholders.

PROBLEM WITH POISONS – by Konstantina Ntemiri (HOS/BirdLife Greece) [presentation available in [PDF](#)]

Poisoning is a major threat for many birds and thousands of individuals die every year because of it. There is a CMS Resolution 11.15 “Preventing Poisoning of Migratory Birds” including guidelines, adopted at COP 11 in Quito, 2014. Current presentation is based on these guidelines.

The poison baits are targeting other predators (example: [the story of the Egyptian vulture Lazaros](#) which was poisoned twice for one calendar year and died the second time).

Types of poisoning:

- Poison baits
- Vet drugs (when scavengers are eating livestock)
- Lead ammunition (when scavengers are eating shot animals)
- Pesticides (insecticides and rodenticides)

Drivers:

- Mainly human wildlife conflict (for predator control – livestock protection, game management, etc.)
- Means to harvest birds for consumption and traditional medicine (some places in Africa)
- Control of feral dogs (vendettas between people poisoning each other’s dogs – e.g. between farmers and hunters).

The EV can fall victim to all these types of poisoning.

Recommendations to tackle poisoning:

- *Poison baits* (many FAP range countries identify poison baits as a major threat; strychnine is still legal in Ethiopia, where major congregation of Eastern EV population occurs, to control feral dogs):
 - Need to compile a database and a standard methodology of data collection;
 - Identify the drivers of the problem and publish regular reports;
 - Alert authorities that this is a problem not only for vultures but also for human health and there are sanitary consequences;
 - Resolve the problem by stakeholder engagement (participation in local communities is essential for success);
 - Education to make use of poison socially unacceptable: Public awareness on illegality and conservation issues related to use of poison baits; Promote best practice and lessons learned; Implement effective compensation schemes and run anti-poison campaigns;
 - Enforcement of legislation with effective deterrent mechanisms and infringement penalties: availability of national anti-poison strategies; good examples – reduce access of landowners to governmental subsidies, suspend hunting licenses for areas where illegal poisoning takes place, restrict

access and increase controls on highly toxic pesticides, etc.

- *Veterinary drugs* - Non-steroidal anti-inflammatory drugs (NSAIDs): the case of Diclofenac in South Asia - very toxic to vultures and eagles, leading to 99% decline in populations of Gyps species in India, Pakistan and Nepal; this drug is being licensed in some EU countries (Spain and Italy):
 - Need to ban Diclofenac and promote the use of available safe alternatives (run awareness campaign for stakeholders);
 - Introduce mandatory test of NSAIDs that may pose risk to scavengers;
 - Where diclofenac is used, establish safe areas for vultures and enhance surveillance of ungulate carcasses.
 - Situation by regions: There is no evidence that Diclofenac is used in the Balkans and the other FAP target regions, but further research on this issue is needed.
- *Lead ammunition* - also a threat through ingestion from prey ([the case with the EV Castor](#) with lead poisoning). Although non-toxic alternatives are available, most shot is still manufactured from lead:
 - Enforcement of the legislation to restrict sale, possession and/or use of lead ammunition;
 - Most common restriction is the ban of lead shot over wetlands (limited benefit for EV);
 - Non-toxic ammo is available and hunters need to be convinced but are reluctant;
 - CMS-COP12 in 2017: Phase-out the use of lead ammunition across all habitats and substitution with non-toxic alternatives;
 - Raise awareness of lead poisoning and create supporting resources to encourage use of lead substitutes;
 - Lead poisoning and its effects to the EV populations are largely unknown throughout the FAP range.
- *Insecticides* (most common organophosphate and carbamates), scavengers like the EV non-intentionally poisoned when they consume contaminated prey:
 - Improve global governance and risk assessment (include migratory birds criteria in Rotterdam Convention to reduce risk of imports of products highly toxic to birds);
 - Substitute substances of high risk to birds;
 - Adopt integrated pest management at national level and provide incentives to farmers (e.g. certification schemes);
 - Identify local risk hot-spots and work with local stakeholders to reduce risks.
 - In most of the FAP range, the effect of insecticides for the EV populations is unknown (except for Bulgaria, where it is recognised as a strong negative factor).
- *Rodenticides* - EVs potentially vulnerable when poison deployed in rodent outbreaks:
 - 2nd generation anticoagulant rodenticides (SGARs), which are the most dangerous rodenticides, should be banned for use in open field agriculture and be avoided whenever possible;
 - Stop the routine practice of permanent baiting and apply rodenticides only when infestations are present followed by bait removal;
 - Raise users' awareness of best practice guidelines (e.g. Pacific Invasive Initiative, CRRU UK code of best practice, etc.);
 - In FAP range, the effect of rodenticides for the EV populations is unknown.

PROBLEM WITH INFRASTRUCTURES TO MSBS – by Dr. Alvaro Camina (Acrena S.L.) [presentation available in [PDF](#)]

Main issues: wind farms, power lines and waste management (and the interaction of different sectors).

Wind energy

Wind energy development along the EV migration routes: much more intensive in Western Palearctic (especially in Spain) than along the Rift Valley Flyway (relatively high number of wind farms in Turkey and Bulgaria).

Fatalities:

- Over 440,000 soaring birds migrate across Spain and the number of collisions is high (mainly Griffon Vultures, but also some EVs);
- There are also collisions of breeding EVs in Spain (see Carrete et al. 2010);
- Post construction monitoring is very important to estimate the number of species likely to collide.

Lessons learned:

- Mitigation should begin at early planning stage (avoid breeding areas and concentrations);
- No buffer zones;
- Shutdown on demand – only at migration points;
- Long-term post-construction monitoring;
- Radar is not a single solution.

The situation in the Rift Valley Red Sea Flyway countries:

- Lack of baseline data about the species;
- Lack of capacity (people to do the monitoring);
- Poor assessments;
- Conflicts between Governments and financial institutions;
- Difficult to do post construction monitoring (because of human resources, remote areas, large facilities).

The Migratory route (from Europe to Africa):

- Data from Jordan presented - map and table with species numbers and timing with peaks. There is a consistency in migration dates between years for different species. There are two wind energy projects (Tafila & Fujeij). Bird numbers are linked to wind speed – useful indicator to shut down of turbines on demand.
- The EV is a difficult species to establish a clear mitigation strategy (figures for EV's migration in Jordan, Egypt or Turkey: over 1 individual per hour in Turkey, 1 individual per 10 hours in Jordan, and 1 individual per 100 hours in Egypt).

Power lines

- Need to establish protocols in many areas without data;
- Concern about pole construction in Eastern Africa (case study: Angelov et al. 2013 – EV mortality in Port Sudan due to electrocution).

Waste management

- MSB project - [best practice guidelines](#);
- Situation with the dump sites in Ethiopia.

Interactions:

- Positive and negative effects on vultures (e.g. civil aviation interactions – collisions);
- Home range changes;
- Failure of pre-construction predictions at wind farms because change in environmental conditions.

Conclusions:

- Many sites where the threat is high still remain undiscovered;
- This issue is too wide over a great area to monitor (i.e. difficult to coordinate);
- Should not generalize, but focus at local scale, quantify, and prioritize;
- Need for better law enforcement;
- Need for much more fieldwork for accurate and updated data collection.

STAKEHOLDER ANALYSIS – by Alkis Kafetzis (WWF Greece) [presentation available in [PDF](#)]



The results presented are based on literature review, EVFAP questionnaires and some field experience.

We consider two groups of stakeholders:

- (1) Involved in direct EV conservation - conservation authorities (this covers all sorts of good and bad policies), researchers and conservationists;
- (2) Those whom activities affect EV survival – livelihood land users (e.g. livestock breeders, foresters, poachers, hunters, etc.), local communities, developers (public and private projects), recreational land users, militaries, etc.

Tools:

- Incentive based tools: long term, win/win and bottom-up approach.
- Command and controls tools: short term and top-down approach.

Livelihood land users:

- Livestock owners and shepherds: related to poison baits, shooting and disturbance, changes in habitat and food abundance. Their drivers are cultural and economic. Easiness of the job and usefulness to society. Health regulations about leaving dead animals in the open and better vet care. To combat poison baits, law enforcement is needed (more controls and harsher penalties).
- Poachers: related to direct persecution and aiming at profit by selling the birds (alive or dead) or their parts, eggs or chicks. There is a need to challenge the profitability, restrict demand, reduce social accept-

ability, and enforce international cooperation.

- Farmers and loggers: relate to use of poison (for farmers), disturbance (for loggers) and habitat change (for both). These are business people seeking a better living, so profit is an effective tool to influence their behaviour. To win over farmers they need financial motivation to keep habitat as it is. Also need to promote green practices (e.g. retaining hedgerows for biodiversity).

Recreational land users:

- Hunters: related to direct (poison baits) and indirect (lead) poisoning. Often targeted at wolves that kill their dogs. Not so much motivated from financial profits than from leisure issues (but hunting dogs, if killed, are expensive to replace). Some hunters deliberately shoot EVs – whether or not they have identified the species. Lead shot has been always used in the Balkans. Incentives: substitution of lead ammunition with alternatives, public information campaigns, law enforcement.
- Tourists, adventure sports, treasure hunters: related to disturbance (mainly because due to lack of awareness).

Local communities: related to diverse threats (mainly because due to lack of awareness and control).

Developers (both private and public projects): related to the infrastructure (roads, power lines, wind farms, airports, closure of garbage sites, etc.). New public health rules means that open garbage sites are being closed down. Poison used to control other pests at tips. There is a need to start public campaigns and to increase political pressure for greener policies.

Conclusions:

- Main stakeholders to work with: livelihood land users (incl. livestock breeders), recreational land users (incl. hunters), developers;
- Main threats: poison baits, disturbance, shooting;
- Tools and conservation efforts: law enforcement, information campaign, improved practices and economic incentives, nest guarding and control on disposal of dangerous food.

OVERVIEW OF THE THREATS – by Victoria Saravia (HOS/BirdLife Greece) [presentation available in [PDF](#)]



What do we know about the threats?

The population decline is evident: 50% in Europe, 90% in India and 80% in Western Africa. In Spain the population is more or less stable, is an exception.

Drivers: poor adult survival due to poisoning and other human introduced factors. The information provided is based on published literature and the questionnaires.

The three top threats: direct mortality – poison, persecution and collisions (electrocution and wind farms).

- *Poisoning* is rarely directed at EVs – non-intentional mortality. These are mainly poison baits (mostly illegal but not in some countries), pesticides and rodenticides, and lead poisoning.
- *Direct persecution* – intended to kill EVs: traditional medicine in Africa, shooting for taxidermy and illegal collections, nest robbing (cases: In Uzbekistan - livestock owners kill it as they believe it is dangerous to their herds; in Sudan - birds with satellite transmitters are targeted because the fear of spying). Direct persecution is a significant threat also in Europe (e.g. Sicily).
- *Electrocution and windfarms:* electrocution because of poorly designed poles (e.g. the case of Port Sudan mentioned earlier); collisions with turbines because of wrongly located windfarms (not sure what is the magnitude of the problem in Greece for EVs, but it seems to be a problem in Spain). More research is needed – the impact is regionally significant (Egypt seems to be a problem in terms of the threat from windfarms).
- *Natural causes:* mortality of juveniles crossing the sea during their first migration (only 1 out of 10 birds survived; Opiel et al. 2015) and nest predation (fox killed a chick in Greece recently).
- *Decreased productivity:* food shortage (reduction of livestock kept in the open and better vet care reduces death of livestock, decline of tortoises and ungulates; closure of open air rubbish dumps); habitat loss and degradation (agricultural intensification and abandonment of traditional livestock practices); desertification (localized problem mentioned for Iran, Georgia, Niger and Nigeria); Human disturbance (infrastructure development close to breeding sites - large scale or energy related; quarrying and logging, treasure hunting; military activities and exercises; tourism and aviation).
- *Reduced health status:* bioaccumulation (chemicals, heavy metals, drugs) and natural causes (diseases and problems related to low population numbers).
- *Policies* – missing or not effective: insufficient level of protection of species and its habitats; need for action plans or other supportive legislation; lack of law enforcement and surveillance.
- *Lack of public awareness and human resources for conservation.*

DISCUSSION:

Q/C: Boris Barov (BirdLife International): Uneven spread of knowledge. Threats involve multi stakeholders with different motives and interests. Good introduction to complex issues for more discussion.

Q/C: Josean Donazar (Doñana Biological Station - CSIC, Spain): People in the Canaries are on board and supportive - this helps chances of success.

Q/C: Levent Erkol (DD/BirdLife Turkey): Advice on countering established customs e.g. eating vulture meat thought to be healthy.

Q/C: Boris Barov (BirdLife International): Example with the traditional hunting of raptors in Georgia and the attempts to change the behaviour of local hunters – communication work.

Q/C: Case in India where awareness was raised regarding the falcons - hunters turned to conservationists.

And bald ibis in Syria - hunters made money from tourism.

Q/C: *Ohad Hatzofe (NPA Israel)*: The EV is associated with mercy in religion.

Q/C: Regarding the Paschalis story – it is possible that the bird has been tired after migration. Another cause of mortality was overlooked – deaths along the highways.

A: *Victoria Saravia (HOS/BirdLife Greece)*: It is not a key factor but it is in the problem tree – it is worse in some places than in others (examples: Ethiopia and Sudan).

Q/C: *Boris Barov (BirdLife International)*: Many birds fly through Egypt. After 5 years of the MSB project, have energy companies changed their approach?

A: *Osama Saadawy (Egyptian Environmental Affairs Agency)*: A new project is starting at a key bottleneck on the Red Sea coast (200 MegaW project EIA and highest mitigation measures, shut down system and safe design of the power lines).

Q/C: *Shiiwua Manu (APLORI)*: Why is the name Egyptian Vulture? And then what does this mean in Bulgarian? No direct translation in other languages.

Q/C: *Chris Bowden (RSPB)*: Parallels with other Gyps species – Indian vulture deaths through diclofenac and what about the EVs? There is circumstantial evidence and similar population trends. There is interest to test the effect of Diclofenac on the EVs, but does anyone want to sacrifice an EV to prove the case?

Q/C: *Ghassan Jaradi (SPNL/BirdLife Lebanon)*: Expecting to hear more details on specifics about EV and not the wider Gyps issues. Most of threats described are generally applicable.

Q/C: *Petar Iankov (BSPB/BirdLife Bulgaria)*: There is increased demand for EVs in private zoos and for use in birds of prey displays.

Q/C: *Boris Barov (BirdLife International)*: Most comments relate to breeding range rather than further south.

11. Threats analysis – group work sessions

11.1. Identification and evaluation of the direct threats affecting the Egyptian vulture populations

The process described below was used to list and prioritise the applicable threats to the target population of the Egyptian Vulture.

The participants were divided in four regional groups:

- WG1 Balkans and Turkey (breeding)/Facilitator: Lenke Balint (RSPB)
- WG2 Central Asia and Caucasus (breeding)/Facilitator: Elizabeth Ball (RSPB)
- WG3 Middle East and Turkey (migratory)/Facilitator: José Tavares (VCF)
- WG4 Africa (non-breeding)/Facilitator: Ian Fisher (RSPB)

Each group dealt with a biogeographic sub population and the stage of the life cycle applicable to their region.

1) Each group received as a starting kit predefined cards listing the direct threats included in the preliminary draft of the FAP, circulated to the delegates. The participants discussed and agreed on a clear and specific definition for each threat. If needed, they modified the wording to find consensus. Additional cards (direct threats) could be added if required. The facilitators ensured that there was no duplication (e.g. same threat

expressed with different words).

2) The groups listed the 5-10 most clearly defined and presumably key regional direct threats.

3) The groups evaluated the Scope of each direct threat as % of the population/range/habitat affected.

- Entire (>90%) 3
- Most (50-90%) 2
- Some (10-50%) 1
- Few/little (<10%) 0

4) Then the groups evaluated the Severity of each threat as the effect on the affected population.

- Rapid deterioration (crash) 3
- Moderate deterioration (persistent decline) 2
- Slow deterioration (reducing over time) 1
- No deterioration (fluctuation, no change) 0

5) Next they evaluated the Timing in which the threat is likely to occur.

- Happening now 3
- Likely in short term (<4 years) 2
- Likely in long term (>4 years) 1
- Past and no longer applies 0

6) Then the Impact was calculated for each threat as the Sum of Scope + Severity + Timing.

- NB: if score = 0 for either Scope, Severity or Timing, then Impact = 0.
- Precautionary approach: in case of insufficient evidence but strong case for any of the Scope, Severity or Threat, the worst was assumed.

7) Finally, the Overall ranking of threats was calculated, in inverse order of Impact score. i.e sum of the scores.

- Score = 8-9 = top priority = A
- Score = 6-7 = high priority = B
- Score = 4-5 = medium priority = C
- Score = 0-3 = low priority = D

NB: If any threats ended up having an equal score/rank, they were analysed against each other and a priority order decided by the group.

11.2. Cause – effect analysis of the threats (Problem Trees)

- **Balkans and Turkey (breeding)**



WG1 Balkans and Turkey (breeding)/Facilitator: Lenke Balint (RSPB)

Main threats scored were poisoning (in different forms), electrocution and windfarms. The Problem Tree for this region is presented on **Figure 1**.

Poisoning is considered a main issue for the region (some bias is possible because of the small population in Balkans vs much larger population in Turkey) and split into 5 subgroups: predators, dump sites, vet drugs (incl. NSAIDs), lead and agrichemicals (incl. pesticides).

Electrocution and turbine collisions are identified as second rank factors, but also very significant.

Comments:

Indirect threats are leading to direct threats. Stakeholders are mainly farmers and other land users. Poison on rubbish dumps are used to eradicate rats for human health reasons. Hunters are using lead ammunition (there are alternatives so that should be adopted but not yet implemented). The problem with agrichemicals exists mainly because the lack of enforcement. The collisions and electrocution happen because of poor design and planning (location) – stakeholders are government, planners and developers.

What is the evidence that there is poison at dumps? Case in FYROM with 60% of the population poisoned at one time in the 1990s. There is also a problem with unregulated illegal dumps.

A proposed major airport construction in Turkey could be a problem for EVs (and other migrating soaring birds) - This was identified as an open question for further discussion.

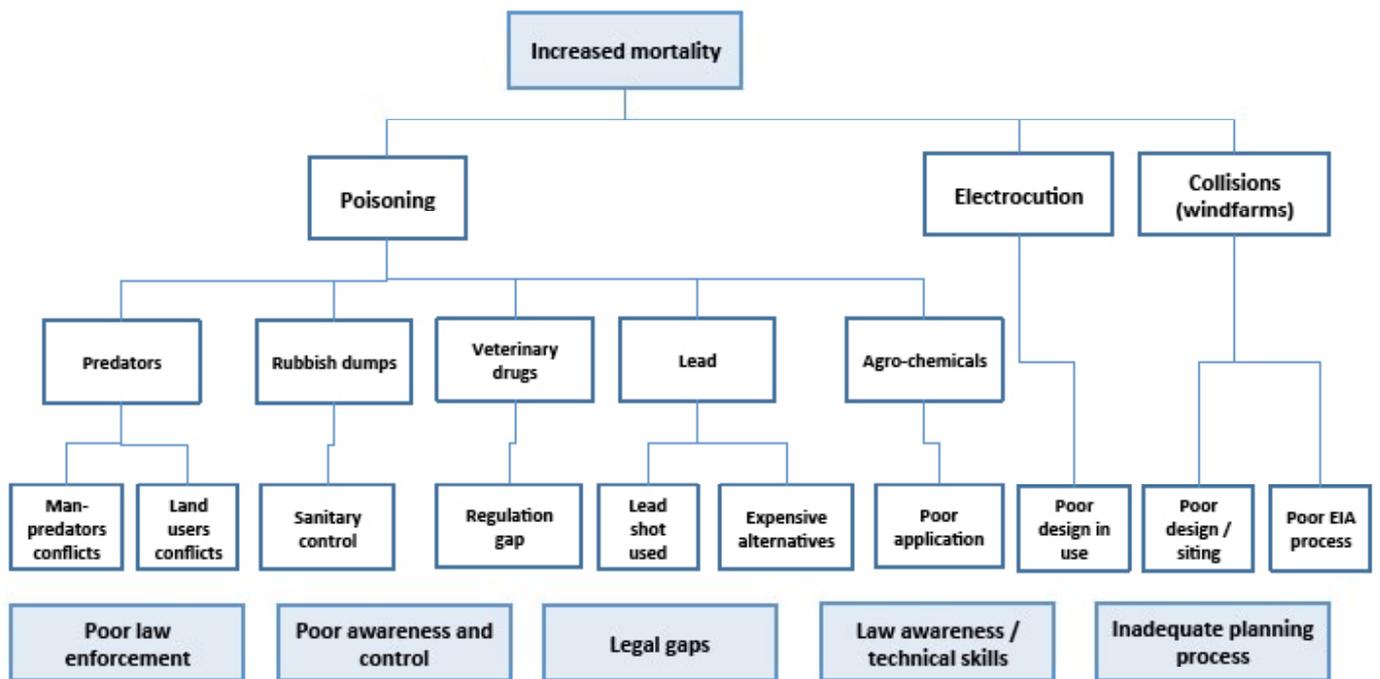


Figure 1. Problem Tree for the Balkans and Turkey (breeding).

- **Central Asia and Caucasus (breeding)**



WG2 Central Asia and Caucasus (breeding)/Facilitator: Elizabeth Ball (RSPB)

Threats: killing/shooting, windfarms, nest robbery, poisoning, food shortages and road traffic. Main threats according to the scoring was direct persecution, secondary poisoning, nest robbery and starvation (C Asia only). However, it should be noted that there is large lack of data and results are based on a series of educated guesses. The Problem Tree for this region is presented on **Figure 2**.

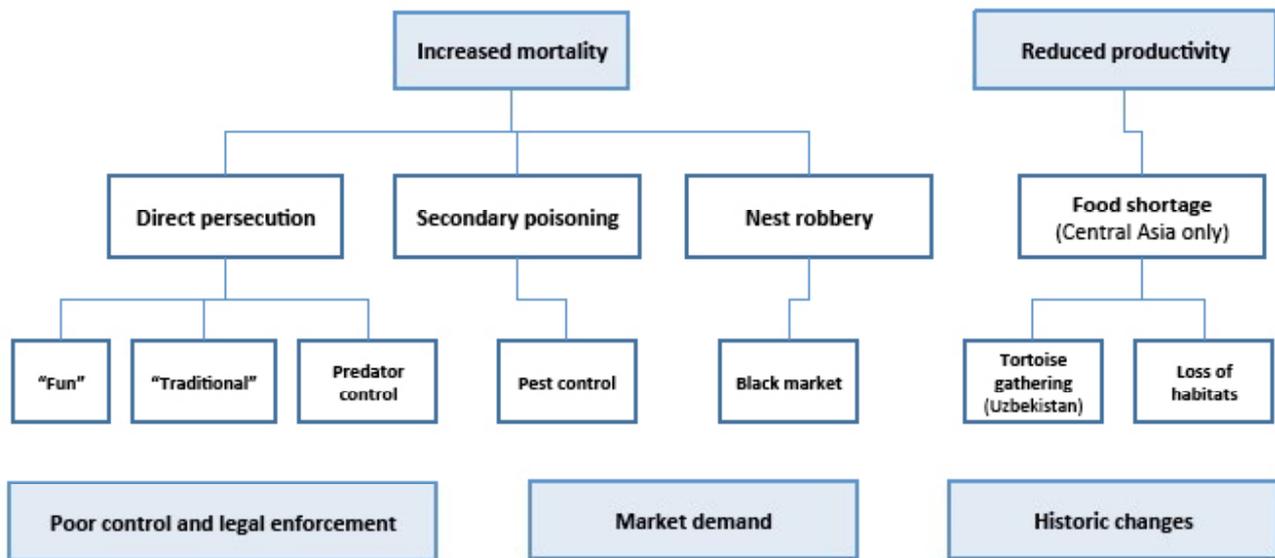


Figure 2. Problem Tree for Central Asia and Caucasus (breeding)

Killing: for fun, or boredom, hobby, tradition, protecting livestock and for profit. Root: people unaware of role of vultures in the ecosystem, and lack of knowledge on the law (poor enforcement).

Poisoning: pest control and human health.

Nest robbery to supply collectors and zoos.

Food shortages: change of land use, overgrazing, new farming practices, demand for tortoises for pet trade, CITES rules ignored and not followed, etc.

Comments:

It seems unlikely starvation be a major threat because the species has a wide diet and is highly opportunistic.

This problem is confirmed in Georgia, where a lot of tortoises are collected, but not a CITES issue there. The diet in Uzbekistan is well studied. It consists mainly of reptiles (lizards and tortoise) and carrion (such as road kill).

- **Middle East and Turkey (migratory)**

NB: Three range countries were missing Saudi Arabia, Iraq and Yemen.



WG3 Middle East and Turkey (migratory)/Facilitator: José Tavares (VCF)

Main threats scored: shooting, poisoning (predator control and secondary poisoning), electrocution and collisions with wind turbines (more relevant to the migratory than the sedentary population). Problem Tree is presented on **Figure 3**.

Electrocution and collision: Electric cables (poorly designed and badly located on poles) are recognized as a worse risk than wind turbines. There is poor awareness and lack of expertise in power companies and planners, including poor EIAs and poor EIA legislation.

Shooting: By shepherds, hunters, taxidermists and collectors. Some people shoot as they want to protect their livestock – others because of tradition (but not a long established one as guns are relatively new) or for fun.

Poisoning: Mainly because of knowledge gaps. Assumed to be an issue to protect livestock but main root cause is the stray dog control that allows poison. Solution: compensation schemes for losses.

Secondary poisoning with legal substances (pesticides and rodenticides) is of concern, but also with some illegal substances. Root cause: farmers not adequately trained in use of poisons. There is lack of awareness and law enforcement is needed (poor legislation and agriculture practices). Another factor is the disposal of “old” poisons on the black market.

Stakeholders include NGOs – their role in lobbying power companies and providing solutions to electrocution. Also include Government which should administer compensation schemes.

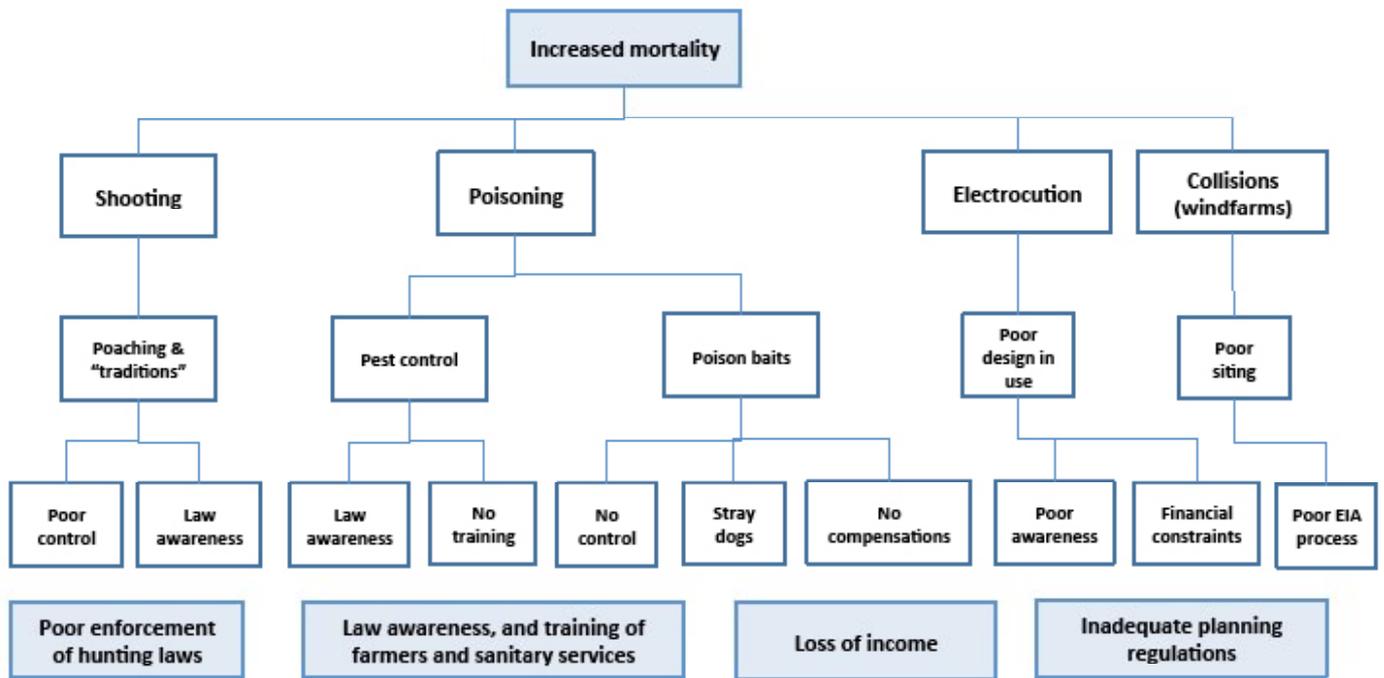


Figure 3. Problem Tree for the Middle East and Turkey (migratory).

- **Africa (non-breeding)**

NB: Only the migrating populations were considered here, not the sedentary ones.



WG4 Africa (non-breeding)/Facilitator: Ian Fisher (RSPB)

Lack of data is a big problem in this region. The main threats scored were hunting, poisoning (different

forms), electrocution and wind farms. The Problem Tree is presented on **Figure 4**

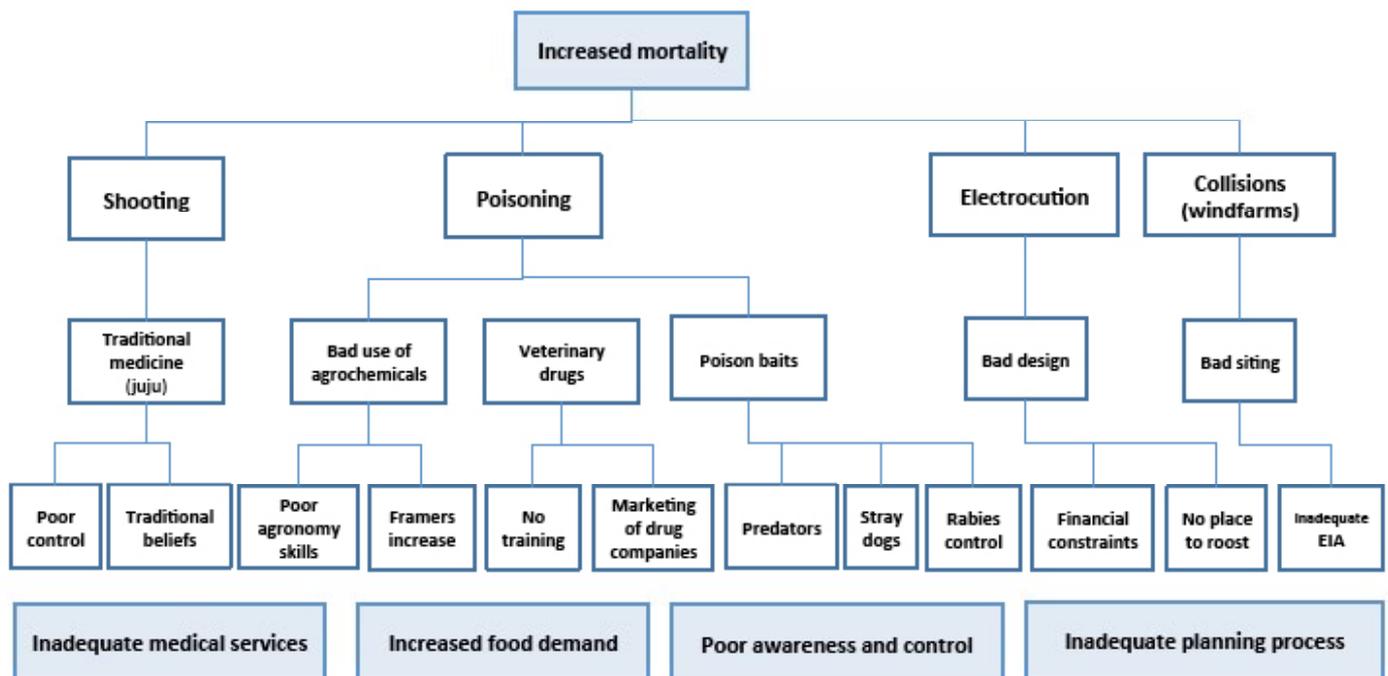


Figure 4. Problem Tree for Africa (non-breeding).

Comments:

Hunting: mainly because of traditional medicine.

Killing vultures by poachers could be an issue (as evidenced in Kenya). Demand for traditional medicine results in a lower population base which increases demand and profits.

Poisoning is related mainly to the control of feral dogs and uncontrolled use of chemicals. Vultures or their parts are used in traditional medicine in some areas (e.g. Nigeria) and provides a source of income. Diclofenac could be considered potential problem as well. Different legislation and practices in different countries is an issue.

Electrocution and collisions: EVs congregates at communal roosts in the wintering grounds and more get electrocuted (because of poor planning and design of pylons – e.g. cheap equipment). There is a lack of knowledge about the roosting sites.

Food availability is more an issue in Ethiopia and where there is better abattoir management. The group had a clear West/East split. Localized risk of electrocution exists (particularly concerning district level cables) but some of the newer installations are bird safe. Cables and vet drugs have a clearer potential solution than the problem with traditional medicine.

There is a large increase in demand for bush meat which limits the available food for vultures (there is better hygiene around dumps and abattoirs; more animal parts being used so less for EVs).

How is food availability an issue in Africa and poaching increased? Vet drugs - there is evidence of use in E Africa and urgent action needed to prevent wider use. The threats were scored by importance and the feasibility of solutions.

Conclusions:

The four regional Working Groups identified some common issues – e.g. poison, electrocution and collisions. Identification and prioritization of threats is required to understand where we need to know more and is also crucial to design the necessary conservation actions. We need to find solutions that cure the causes and not just address the symptoms.

12. Objectives, results and actions

12.1. Methodology

The following action framework was followed:

- What are the indicators showing a reduction of threats?
- What actions should be taken (inputs, cost)?
- What is the required result (delivery indicator)?
- What are the objectives and targets (population number for example)?
- What is the effect at the population level (overall goal)?

12.2. Results

12.2.1. Actions

- **Balkans and Turkey (breeding)**

The seven identified priorities could not be reduced and solutions should be found to cover EU and non-EU states:

- To mitigate the problem of illegal poisoning related to human-carnivore conflict, the following actions are proposed:
 - Research to collect more evidence for some countries (e.g. Bulgaria, Albania);
 - Strong enforcement of the law;
 - Direct anti-poison actions (such as anti-poison dog patrols);
 - Find effective compensation mechanisms for the damage suffered by local stakeholders from large carnivores.
- To reduce the problem of the lead poisoning, the following actions are proposed:
 - Improvement of the legislation (hunters should be obliged to use non-lead alternatives not only around wetlands but also in general);
 - Introduce serious consequences in case of violation of this regulation (e.g. fine and removal of hunting licence).
- To reduce the problem of poisoning by agro-chemicals the following actions are proposed:
 - Collect more evidence;
 - Control the list of substances on the market and also the list of agrochemicals every farmer uses and keeps at his farm;
 - Produce and promote guidance for vets on which NSAIDs should be avoided.
- To reduce the risk of poisoning at garbage sites the following actions are proposed:
 - Awareness campaign for local stakeholders and authorities;

- Enforcement of the legislation.
- To reduce bird deaths related to electrocution and collisions, the following actions are proposed:
 - Produce sensitivity maps of wind farms and powerlines;
 - Improve the procedure for EIAs and SEAs;
 - Identify migration bottlenecks;
 - Produce and promote guidance for good practice and design of the relevant infrastructure.

In general, data is lacking on the extent and danger posed by these threats. Also there are gaps in capacity and technical skills within the relevant authorities.

Q/C: *Ohad Hatzofe (NPA Israel):* How many windfarms have been rejected through EIA? Some suggestions for modifications of investment proposals have been done by NGOs (the NGOs provided data and questioned the EIA results) but these were overruled by authorities as the NGO was a third party with no direct legal interest in the development.

- **Central Asia & Caucasus (breeding)**
- To reduce the problem of direct persecution (shooting and nest destruction) the following actions are proposed:
 - Increase awareness of the protected status;
 - MEAs and international treaties;
 - Low enforcement (e.g. more agents);
 - Review incentives (e.g. address the shooting through boredom problem)
 - Control weapon and hunting licenses;
 - Develop alternative livelihoods (e.g. develop ecotourism to create jobs);
 - Encourage more people to become involved in conservation (e.g. farmers and hunters, as people on the ground have the local knowledge).
- To reduce the secondary poisoning the following action are proposed:
 - More research (we need to know the amount of substances being used);
 - Promote alternative pest control measures;
 - Campaign to raise awareness of the effects of improper and inappropriate use.
- For nest robbery reduction, the following actions are proposed:
 - Better control (e.g. vultures as restaurant attractions to be stopped);
 - Mapping of the nests by NGOs and state authorities.
- To reduce starvation actions in the following directions are proposed:
 - Carcass use;
 - Land use and spatial use;
 - Livestock policies;
 - Reduce tortoise quotas under CITES and enforce border control.
- Overall directions for conservation:
 - National Action Plans and international treaties and INGOs (e.g. BLI);
 - Better implementation (and funding);
 - Exchange information;

- Common survey methods and protocols.
- Additional comments:
 - Should not publish locations of nests but just work with local people and share the information with conservationists.

- **Middle East and Turkey (migratory)**

The objective is to down-list the Red List status to vulnerable and goals are (1) a stable breeding population in region and (2) reduced mortality of migratory populations.

- To reduce the problem of illegal shooting, long-term work is needed (will take longer than 5 years; MSB Programme is addressing this) and the following actions are proposed:
 - Better cooperation with organizations (e.g. EU to add clauses to its funding, CMS Task Force on illegal killing, taking and trade in migratory birds, Arab League, Interpol and NGOs; BirdLife International published a [study of illegal hunting in Eastern Mediterranean](#)) and local communities (cultural and religious aspects);
 - Low enforcement and capacity building in authorities.
- To reduce the problem of poisoning (pest control and poison baits), the following actions are proposed (unlikely that battle against poisoning will be won in 10 years):
 - Awareness campaign (to improve our understanding of the issue);
 - Capacity building for authorities and organizations (training relevant Ministries and enforcement agency staff; protocols exist and should be adapted/translated, and distributed to NGOs, officials, park rangers and other relevant authorities; build capacity in laboratories to do chemical analyses);
 - Law enforcement (criminal cases need to be taken forward);
 - More evidences collected and centralized database of poisoning incidents located in an appropriate organisation (e.g. Coordinating Unit for the Raptors MOU);
 - Alternative methods to mitigate human-carnivore conflicts.
- To reduce the problems of electrocution and windfarms, the following actions are proposed:
 - Awareness (communication and media work, and meetings with energy companies);
 - Mitigation (insulation; modify existing lines and better planning for future ones; aim at a certain % of new and existing lines being bird-friendly);
 - Fact sheets (e.g. in different languages Arabic, Turkish and Farsi);
 - Law enforcement (consider starting legal procedures against energy companies flouting the law; improvement and better control of EIA and SEA procedures, providing guidance and best practice)
- Additional comments:
 - In general, research and monitoring actions are needed (e.g. breeding population census in 2016-2017; measure change in migratory population; a demographic study of Turkish population - the bulk of the sub-region; and a winter census in Oman).

- **Africa**

The goal is to reduce mortality across the African Range with two objectives: (1) increased survival on migra-

tion and (2) protection of EVs across its full geographic range.

- To reduce the problem with veterinary drugs the following actions are proposed:
 - Attend relevant meetings to prevent licensing of drugs like diclofenac (solutions are well known but application in Africa needs access to knowledge and experience; drugs remain illegal);
 - Simple monitoring to fill knowledge gaps (understanding use across African range).
- To reduce the problem with poison baits (mainly for dogs, jackals and hyenas) the following actions are proposed:
 - Closer collaboration with local and national authorities and capacity building (experience sharing/networking; effective guidance/protocols in all countries, e.g. guidance for disposal of dead (poisoned) dogs);
 - Legislation improvement and enforcement (ban dangerous substances; lesson 'conflict' between farmers and predators; pre- and post-implementation assessments);
 - Public awareness programme, training and workshops ("x" people through the programme; "x" workshops; pre- and post-implementation questionnaires);
 - Development of cheap local predator control methods ("x" implementations locally).
- To reduce the problem with pesticides (poison use in agriculture) the following actions are proposed:
 - Enforcement of legislation; experience sharing/networking and capacity building in authorities (effective guidance/protocols in all countries e.g. guidance on use of pesticides etc.; pre- and post-implementation assessments);
 - Support for autopsy and analysis to inform monitoring (fill gaps in knowledge; guidance and protocols on autopsy; publish papers; build capacity within NGOs, universities and Conservation Centres/Departments working on natural pest control methods);
 - Work with authorities to de-list key problem chemicals (ban dangerous substances, with cheaper alternatives identified; implement appropriate legislation);
 - Public awareness programme, trainings and workshops. e.g. raising awareness of links between pesticide use and human health ("x" people through the programme; "x" workshops; pre- and post-implementation questionnaires);
 - Integrate pest management and collaborate with other NGOs on traditional agriculture methodologies ("x" projects active using pesticide-free farming)
- To reduce the problem with traditional medicine and juju the following actions are proposed:
 - Education and awareness programmes, including piggy-backing on other NGO programmes ("x" people through the programme; "x" workshops; pre- and post-implementation questionnaires);
 - Push for stronger laws to protect vultures (appropriate legislation; high profile examples);
 - Influence traditional hunting groups (traditional stakeholders targeting the clan chiefs; agreements signed with "x" groups; "x" people through the programme; "x" workshops; pre- and post-implementation questionnaires);
 - Research on extent and impact of threat, and ongoing monitoring (publish results; fill knowledge gaps);
 - Investigate alternative livelihoods for hunters/poachers (sharing options/best practice/ideas between regions and organisations; movement of the income source from poaching to protection);
 - Stronger border controls where feasible (checks included for vultures/vulture parts).
- Additional comments:
 - Electrocutation and windfarms also key threats, although at more local level, so other group's solutions should be relevant for Africa and rolled out (threats like windfarms and electrocutation are cur-

rently relatively minor across much of Africa, but the coding system used does not build in a mechanism to record potential future threats, including where a threat is considered likely to be higher in the future).

- A major issue across Africa is the lack of data, and this needs to be reflected in a programme of work to enable longer-term monitoring against a baseline. There is an overall requirement to better understand population sizes, trends and movements – big gaps in knowledge (and related to all threats). For most of the threats the effects are being estimated and assumptions are being made.
- There are highly localised effects, for example re traditional medicines, which does not currently occur in north and east Africa.
- Lead poisoning no doubt occurs, but the impact and extent is completely unknown. The number of birds killed on roads is also not recorded. There is also shooting of birds because tags are thought to be spying equipment, and while this is likely to have a very small impact on the population, it potentially has a very large impact on the ability to carry out research and monitoring.
- Finally, some birds are shot around water wells as part of animal control, but the extent is unknown.
- There is a need for baseline figures for useful targets on mortality (needs many years to build up datasets and difficult to set smart targets).

13. International instruments for EV conservation: gap analysis

- **Mr. Nick P. Williams (CMS Raptors MoU)** [presentation available in [PDF](#)]

Common threats:

- Poisoning – all types
- Illegal killing
- Electrocutation and collisions with wind turbines

Conservation priorities:

- Reduce threats from all types of poisoning
- Reduce illegal killing, trade and disturbance
- Prevent electrocutation and collisions (wind turbines)
- Build capacity in C. Asia, Africa and Middle East
- Promote research (outside breeding areas)
- Improve exchange of information

Existing instruments:

- Convention on Biological Diversity (CBD) - NBSAPs
- CITES (International Consortium on Combating Wildlife Crime)
- Convention on Migratory Species (CMS) - Raptors MoU
- CMS Resolution 11.15 – Preventing Poisoning of Migratory Birds
- CMS Resolution 11.16 – Preventing 'IKB' (migratory birds)
- CMS Resolution 11.27 – Multi-stakeholder Energy Task Force
- EU LIFE Programme (can now include actions outside of the EU)
- EU African Wildlife Strategy (European Commission DG DEVCO)
- Bilateral donors, GEF, Foundations (MBZ), Grants (USF&WS), etc.

Potential gaps:

- Long-term research and monitoring
- Designation of protected areas (non-EU)
- Building conservation capacity
- Improving exchange of information
- Coordination of NGO driven initiatives
- Partnerships with industry (e.g. energy, agriculture)
- Improving awareness-raising and publicity

The following should be considered to effectively promote conservation priorities:

- What coordination mechanism(s) are needed?
- How can we improve information exchange?
- What are the roles of: MEAs, Governments, NGOs, etc.?

14. Proposed delivery and coordination mechanism: Working Group

- Description of proposed Working Group, Coordination Group and Chair:

It was agreed that a Working Group be established to consist of all EV FAP meeting attendees, but also of other experts and representatives of relevant authorities in different Range States, who did not have the opportunity to participate, but are willing to contribute to implementation of the EV FAP.

The Working Group will be facilitated and coordinated by Officers for each of the targeted regions (from organizations or institutions with experience in conservation of the species). The elected Officers in the Coordination group were as follows:

- Lead facilitating organization – Coordinating Unit of Raptors MoU, represented by Nick P. Williams;
- Coordinating organization for the Balkans and Turkey, the migratory population - BSPB/Birdlife Bulgaria, represented by Stoyan Nikolov;
- Coordinating organization for the Middle East and Turkey, the breeding population - BirdLife Middle East, represented by Sharif Jbour;
- Coordinating organization for Central Asia – ACBK/BirdLife Kazakhstan, represented by Sergey Sklyarenko;
- Coordinating organization for Africa – BirdLife Africa, represented by Kariuki Nganganga.

Once established (once the EV FAP is finalised), the Working Group should elect a Chair and Vice-chair, ideally a government official from a key EVFAP Range State.

NB: The Terms of Reference will be provided supplementary once the EV FAP is finalised.

15. FAP Workshop Declaration

A formal statement highlighting the outputs of the Workshop and including a message from all the meeting participants was unanimously agreed (**see Annex 16.2**). This is not intended to be a political statement.

16. Annexes

16.1. List of participants

Title	Name of the delegate	Country	Organization/Institution	Role	E-mail
Mr	Mirjan Topi	Albania	Association for Protection and Preservation of Natural Environment in Albania (PPNEA)	Participant	m.topi@ppnea.org
Dr	Mamikon Ghasabyan	Armenia	Armenian Society for the protection of Birds (ASPB/BirdLife Armenia)	Participant	armbirds@yahoo.com
Dr	Mike McGrady	Austria	International Avian Research (IAR)	Participant	mcgrady.mike@gmail.com
Dr	Elchin Sultanov	Azerbaijan	Azerbaijan Ornithological Society (AOS)	Participant	elchin_sultanov@aos.az
Mr	Boris Barov	Belgium	BirdLife International	Main Facilitator	Boris.Barov@birdlife.org
Mrs	Radostina Galitionova	Bulgaria	Ministry of Environment and Waters (MOEW)	Participant	rgalitionova@moew.government.bg
Dr	Stoyan Nikolov	Bulgaria	Bulgarian Society for the Protection of Birds (BSPB/BirdLife Bulgaria)	LOC - Chairman	stoyan.nikolov@bspb.org
Mr	Stoycho Stoychev	Bulgaria	Bulgarian Society for the Protection of Birds (BSPB/BirdLife Bulgaria)	Participant	stoycho.stoychev@bspb.org
Ms	Vanya Georgieva	Bulgaria	Bulgarian Society for the Protection of Birds (BSPB/BirdLife Bulgaria)	LOC - Secretary	vanya.georgieva@bspb.org
Mr	Vladimir Dobrev	Bulgaria	Bulgarian Society for the Protection of Birds (BSPB/BirdLife Bulgaria)	Participant	vladimir.dobrev@bspb.org
Mr	Volen Arkumarev	Bulgaria	Bulgarian Society for the Protection of Birds (BSPB/BirdLife Bulgaria)	Participant	volen.arkumarev@gmail.com
Dr	Petar Iankov	Bulgaria	Bulgarian Society for the Protection of Birds (BSPB/BirdLife Bulgaria)	Interpreter - Russian	petar.iankov@bspb.org
Ms	Iordanka Goranova-Lukanova	Bulgaria	Bulgarian Society for the Protection of Birds (BSPB/BirdLife Bulgaria)	LOC - Technical assistant	iordanka.goranova@bspb.org
Mrs	Yana Barzova	Bulgaria	Bulgarian Society for the Protection of Birds (BSPB/BirdLife Bulgaria)	LOC - Technical assistant	ybarzova@gmail.com
Mr	Dimitar Gradinarov	Bulgaria	Bulgarian Society for the Protection of Birds (BSPB/BirdLife Bulgaria)	LOC - Technical assistant	dimitar.gradinarov@bspb.org
Mr	Emilan Stoynov	Bulgaria	Fund for Wildlife Flora and Fauna (FWFF)	Participant	pirin@fwff.org
Ms	Elena Kmetova	Bulgaria	Green Balkans	Participant	ekmetova@greenbalkans.org
Ms	Ivaylo Klisurov	Bulgaria	Green Balkans	Participant	iklisurov@greenbalkans.org
Mr	Stoyan Yotov	Bulgaria	NEEMO	NEEMO Monitor	stoyan.yotov@neemo.eu
Ms	Natasha Petters	Canada	BSPB	LOC - Technical assistant	natashapeters44@yahoo.com
Mr	Mahamat Hassane Idriss	Chad	Ministry of Environment Quality of Life and National Parks	Participant	mhi1962@yahoo.fr
Mr	Antonin Vaidl	Czech Republic	Prague Zoo	Participant	vaidl@zoopraha.cz
Mr	Houssein Abdillahi Rayaleh	Djibouti	Djibouti Nature	Participant	naturedjibouti@gmail.com
Mr	Osama Saadawy	Egypt	Egyptian Environmental Affairs Agency	Participant	oss.elgebaly@yahoo.com
Mr	Yilma Abebe	Ethiopia	Ethiopian Wildlife and Natural History Society (EWNHS/BirdLife Ethiopia)	Participant	ydabebe@yahoo.co.uk
Ms	Marie-Pierre Puech	France	Ligue pour la Protection des Oiseaux (LPO/BirdLife France)	Participant	mapimop34@gmail.com
Dr	Metodija Veleviski	FYROM	National Museum of Natural History (NMNH)	Participant	m.velevski@musmacscinat.mk
Mr	Jovan Andevski	FYROM	Vulture Conservation Foundation (VCF)	Participant	j.andevski@4vultures.org
Mr	Guille Mayor	Georgia	Society for Nature Conservation (SABUKO/ BirdLife Georgia)	Participant	gmguijarro@gmail.com

Ms	Victoria Saravia	Greece	Hellenic Ornithological Society (HOS/BirdLife Greece)	Participant	vsaravia@ornithologiki.gr
Mr	Tasos Bounas	Greece	Hellenic Ornithological Society (HOS/BirdLife Greece)	Participant	tasoos7@yahoo.gr
Mr	Stavros Xirouchakis	Greece	Hellenic Ornithological Society (HOS/BirdLife Greece)	Participant	sxirouch@nhmc.uoc.gr
Ms	Konstantina Ntemiri	Greece	Hellenic Ornithological Society (HOS/BirdLife Greece)	Participant	kntemiri@ornithologiki.gr
Mr	Dimitris Vavylis	Greece	Hellenic Ornithological Society (HOS/BirdLife Greece)	Participant	vavylis@yahoo.gr
Mr	Lavrentis Sideropoulos	Greece	Hellenic Ornithological Society (HOS/BirdLife Greece)	Participant	lavrentis.sidiropoulos@gmail.com
Ms	Theodora Skartsi	Greece	WWF Greece	Participant	d.skartsi@wwf.gr
Ms	Elzbieta Kret	Greece	WWF Greece	Participant	e.kret@wwf.gr
Mr	Dimitris Vasilakis	Greece	WWF Greece	Participant	divasilakis@hotmail.com
Mr	Alkis Kafetzis	Greece	WWF Greece	Participant	a.kafetzis@wwf.gr
Mr	Dominik Sopart	Germany	Nature and Biodiversity Conservation Union (NABU/BirdLife Germany)	Participant	Dominik.Sopart@nabu.de
Mr	Robert Vagg	UK	CMS Secretariat	Report Writer	robert.vagg@cms.int
Dr	Marthon Horvath	Hungary	Hungarian Ornithological and Nature Conservation Society (MME/BirdLife Hungary)	Participant	horvath.marton@mme.hu
Mr	Sadegh Sadeghi Zadegan	Iran	Department of Environment, Wildlife Bureau	Participant	sadegh64@hotmail.com
Mr	Alireza Hashemi	Iran	Tarlan Birding and Ornithology Group	Participant	hashemi@birdwatching.ir
Mr	Ohad Hatzofe	Israel	Nature and Parks Authority (NPA)	Participant	ohad@npa.org.il
Mr	Massimiliano Di Vitorio	Italy	Gruppo Tutela Rapaci Sicilia, (GTRS)	Participant	divittoriomassimiliano@gmail.com
Mr	Osama Alnouri	Jordan	Royal Society for the Conservation of Nature (RSCN/BirdLife Jordan)	Participant	Osama.Alnouri@birdlife.org
Mr	Sharif Jbour	Jordan	BirdLife International, Middle East Division	Participant	sharif.jbour@birdlife.org
Dr	Sergey Sklyarenko	Kazakhstan	Association for the Conservation of Biodiversity of Kazakhstan (ACBK/BirdLife Kazakhstan)	Participant	sergey.sklyarenko@acbk.kz
Dr	Ghassan Jaradi	Lebanon	Society for the Protection of Nature in Lebanon (SPNL/BirdLife Lebanon)	Participant	gghassan.jaradi@gmail.com
Mr	Thomas Rabeil	Niger	Sahara Conservation Fund (SCF)	Participant	thomas.rabeil@saharaconservation.org
Dr	Shiiwua Manu	Nigeria	A. P. Leventis Ornithological Research Institute (APLORI)	Participant	manushiiwua@gmail.com
Ms	Maia Sarrouf Willson	Oman	Environment Society of Oman (ESO)	Participant	maia.sarroufwilson@eso.org.om
Dr	Mansoor Al Jahdhami	Oman	Office for Conservation of the Environment	Participant	mhjahdhami@gmail.com
Mr	Waheed AlFazari	Oman	Office for Conservation of the Environment	Participant	waheed.alfazari@gmail.com
Dr	Jose Antonio Donazar	Spain	Doñana Biological Station - Spanish Council for Scientific Research (CSIC)	Participant	donazar@ebd.csic.es
Mr	Alvaro Camiña Cardenal	Spain	Acrena S.L.	Participant	alvaro.camina.cardenal@gmail.com
Prof	Ibrahim Hashim	Sudan	Sudene Wildlife Society (SWS)	Participant	ibramaha35@hotmail.com
Mr	Levent Erkol	Turkey	Doga Dernegi (DD/BirdLife Turkey)	Participant	levent.erkol@dogadernegi.org
Ms	Evrin Tabur	Turkey	Doga Dernegi (DD/BirdLife Turkey)	Participant	evrim.tabur@dogadernegi.org
Dr	Jose Tavares	Turkey	Vulture Conservation Foundation (VCF)	Facilitator - WG Middle East	j.tavares@4vultures.org
Mr	Yashin Atajanov	Turkmenistan	State reserve in Turkmenistan	Participant	yashin-tm@mail.ru
Mr	Nick P. Williams	UAE	Coordinating Unit of the CMS Raptors MoU	Participant	nwilliams@cms.int
Dr	Salim Javed	UAE	Environment Agency - Abu Dhabi	Participant	sjaved@ead.ae

Ms	Lenke Balint	UK	Royal Society for the Protection of Birds (RSPB/BirdLife UK)	Facilitator - WG Balkans	lenke.balint@rspb.org.uk
Ms	Elizabeth Ball	UK	Royal Society for the Protection of Birds (RSPB/BirdLife UK)	Facilitator - WG Central Asia & Caucasus	Elizabeth.Ball@rspb.org.uk
Mr	Ian Fisher	UK	Royal Society for the Protection of Birds (RSPB/BirdLife UK)	Facilitator - WG Africa	ian.fisher@rspb.org.uk
Dr	Chris Bowden	UK	Royal Society for the Protection of Birds (RSPB/BirdLife UK)	Participant	chris.bowden@rspb.org.uk
Dr	Roman Kashkarov	Uzbekistan	Uzbekistan Society for the Protection of Birds (UzSPB)	Participant	roman.kashkarov@iba.uz

16.2. Statement of EV FAP Participants

DECLARATION

By participants at the Egyptian Vulture Flyway Action Planning Workshop held in Sofia, Bulgaria from 5 - 8 July 2015

We, seventy representatives of Governments, local authorities, nature conservation organizations and universities from 33 countries gathered in Sofia, Bulgaria in the framework of the Egyptian Vulture Flyway Action Planning Workshop, jointly hosted by the Bulgarian Society for the Protection of Birds (BirdLife Bulgaria) and the Coordinating Unit of the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU);

Recognizing that the Egyptian Vulture (*Neophron percnopterus*) is one of our region's most threatened bird species (classified by the IUCN Red List as 'Endangered') due to rapid and continuing population declines for over 20 years.

Further recognizing the valuable ecosystem services provided by scavenging birds such as the Egyptian Vulture, particularly in relation to reducing the spread of diseases (such as anthrax and rabies), and the significant associated benefits for human health.

Aware of a range of international instruments, the activities and decisions of which are relevant to vulture conservation, and which include:

- the Convention on Biological Diversity (CBD)
- the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the International Consortium on Combating Wildlife Crime
- the Convention on Migratory Species (CMS) and its Raptors MoU
- CMS Resolution 11.15 – Preventing Poisoning of Migratory Birds
- CMS Resolution 11.16 – Prevention of Illegal Killing, Taking and Trade of Migratory Birds
- CMS Resolution 11.27 – Renewable Energy and Migratory Species (establishing a Multi-stakeholder Energy Task Force)

Calling on the European Union, national governments, INGOs, NGOs, partners and other stakeholders in the Range States of the Egyptian Vulture to provide and/or seek resources for and opportunities to collaborate on vulture conservation activities through relevant financial mechanisms, such as:

- EU LIFE Programme (esp. actions outside of the EU)
- EU African Wildlife Strategy (European Commission DG DEVCO)
- Bilateral donors, the Global Environment Facility and charitable foundations

- International NGOs

Have identified that a combination of the following threats has caused serious declines in Egyptian Vulture populations:

- poisoning, due to persecution of predators or inappropriate use of agricultural chemicals and veterinary drugs (such as Diclofenac) and the use of lead shot;
- insufficient amounts of accessible food caused by habitat degradation and undesired side effects of sanitation practices necessary for maintaining human health;
- electrocution on power line poles and collision with wind turbines and power lines;
- disturbance at breeding sites
- illegal harvesting (for example for use in traditional medicine and to meet demand from collectors).

Have also identified the following priorities requiring coordinated and concerted action at international level:

- Reducing threats from all types of poisoning
- Reducing illegal killing, taking, trade and disturbance of breeding pairs
- Preventing electrocution and collisions with wind turbines and power lines
- Building capacity in Central Asia, Africa and the Middle East
- Promoting research (particularly outside of the breeding areas along the flyway and in wintering areas)
- Improving the exchange of information
- Establishing a network of safe areas for vultures along the flyway
- Monitoring the impact of the implementation of EU legislation concerning the disposal of livestock carcasses

We hereby call on all stakeholders concerned with Egyptian Vulture conservation to do the following:

- Play their part in promoting and implementing the Flyway Action Plan for the Conservation of the Egyptian Vulture (due to be published before the end of 2016)
- Allocate the required human and financial resources for the implementation of the actions therein
- Improve coordination and scale up conservation efforts for the species
- Crack down on the illegal use of poisons for any type of animal control, develop national anti-poisoning action programmes and improve international coordination and sharing of best practice
- Pay special attention to secure safe migration flyways for the Egyptian Vulture by eliminating and avoiding dangerous developments of infrastructure and facilities
- Ensure that important energy infrastructure development conforms to best practice standards of safety and design at the planning, construction and monitoring stages
- Keep in mind the possibility of using ex situ conservation initiatives to support higher productivity within the wild population.