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Delegates of the 2012 Pan-African Vulture Summit, Masai Mara, Kenya. Front row (L-R): Nick Williams, Masai moran, Masumi Gudka, Fred Barasa, Munir Virani, Simon Thomsett, Rick Watson, Corinne Kendall, Kerri Wolter, Maria Diekmann, Wendy Borello, Keith Bildstein, Yilma D. Abebe, Ohad Hatzofe, Andre Botha, Dominic Saitoti, Sankai Noonkipa. Back row (L-R): Kariuki Ndang'ang'a, Rupert Watson, Stoycho Stoychev, Peter Mundy, Warren Goodwin, Ivaylo Angelov, Ara Monadjem, Campbell Murn, Sonja Kruger, Holger Kolberg, Derek Pomeroy, Walter Neser, Megan Diamond, Ian Rushworth, Hanneline Smit, Michael Koikai, David Allan, Charles Musyoki, Kenneth Ole Nashu, Sospeter Kiambi, Dominic Mijeje, Darcy Ogada, Ali Kaka, Amos Rono



Dr. Ali Kaka, Regional Director of IUCN Eastern and Southern Africa (left) and Hanneline Smit, BirdLife South Africa (right) addressing delegates



Delegates following the summit proceedings from the venue at Ilkiliani Camp

Summary

Most vulture populations worldwide are in decline and face a range of threats from a number of human-related factors. Over the past 20 years, populations of at least three species of Asian vultures have collapsed primarily as a result of consuming livestock carcasses contaminated with the veterinary drug diclofenac sodium. In Africa, eleven species of vulture occur and their numbers have also considerably declined in most areas over the same period. However, the range and extent of threats facing these species appears to be far more varied compared to that of South Asia with poisoning, habitat loss, collisions with energy infrastructure, and unsustainable harvesting currently thought to be among the main reasons for the declines.

In 2011 the Vulture Specialist Group (VSG) of the IUCN Species Survival Commission was established to advocate and create greater awareness of the plight of these birds, and to coordinate effective conservation activities for their benefit. The Group is divided into five regions: Africa, Asia, Europe, and North and South America, with each region forming its own Steering Committee. The key activities of the VSG include: 1) review IUCN status and updates for all vulture species, 2) promote vulture conservation and management activities, 3) promote vulture research and monitoring, 4) disseminate and communicate information about vultures, and 5) establish regional and international partnerships and advocate on behalf of vultures.

To achieve these goals, the Africa Region of the VSG convened a Pan-African Vulture Summit at Ilkeliani Camp in the Masai Mara, Kenya from April 16–20, 2012. Delegates included vulture specialists, researchers, conservationists and government representatives from across the continent. Delegates presented results of their work and deliberated a number of key topics relevant to African vulture conservation, the results of which are contained in this document and will form the basis of a Pan-African Vulture Strategy. In addition, delegates outlined the way forward, including developing a framework for the implementation of the Vulture Strategy, electing a Steering Committee for the Africa Region of the VSG, and adopting a resolution calling on African governments to take action against threats to vulture populations.

Introduction

Vultures on the African continent are under severe pressure from a range of factors and populations of some species have been in drastic decline over the last 30 years. This is particularly evident in West Africa where an average drop of 42% has been recorded in vulture species occurring in this region with populations of some species declining by as much as 85% (Rondeau and Thiollay 2004). This trend is similar in East Africa where certain species, such as Lappet-faced Vultures *Aegypus tracheliotus*, are now largely restricted to large protected areas and others have shown a serious decline in numbers such as the Egyptian Vulture *Neophron percnopterus* and African White-backed Vulture *Gyps africanus* (Virani *et al.* 2011). In 2011 the Hooded Vulture *Necrosyrtes monachus* was upgraded from Least Concern to Endangered by the IUCN due to large-scale declines in populations of this species across its range in East and West Africa (Ogada and Buij 2011).

Based on extensive monitoring over more than 20 years, it seems that most southern African vulture populations have remained comparatively stable (Monadjem *et al.* 2004), but the identification of a number of new threats, such as the increased demand for vulture parts for the juju or muthi trade, and the precipitous decline in vulture populations in South Asia underlines the fact that there is no room for complacency with regard to vulture conservation on the African continent. In their research, Naidoo *et al.* (2009) have shown that a range of veterinary medicines commonly in use in many African countries are potentially just as lethal a threat to African vultures and could have an impact similar to that of diclofenac sodium on Asian vultures.

The extent of harvesting of vultures for use in the muthi trade in southern Africa (Mander *et al.* 2007) and East Africa (K. Roberts, pers. comm.) are cause for great concern. The use of poison to kill vultures for this and other reasons remains one of the major causes for the decline in vultures. These birds are particularly vulnerable as hundreds can be killed by feeding from a single poisoned carcass.

The growing demand for energy and planned infrastructure developments in Africa also poses a serious threat to the continent's vulture populations. Electrocutions and collisions with overhead power lines and the impact of the establishment of wind energy generation plants in a number of African countries over the next few years will most certainly impact on vulture populations as the power provision network expands. Although a detailed database of such impacts exist for southern Africa, little is known about the impact of this infrastructure elsewhere on the continent.

Through the use of satellite telemetry and patagial tagging to track movement patterns, it is evident that vultures are highly mobile creatures capable of covering distances of several hundred kilometres in a day (Bamford *et al.* 2007). Even large protected areas such as the Selous Game Reserve (Tanzania) and Kruger National Park (South Africa) are not big enough

to provide adequate food and protection to these birds. Vultures do not recognise international boundaries and in order to implement effective conservation actions to protect them in Africa, it is imperative that conservation initiatives are approached from a meta-population perspective and are inclusive of the relevant species' entire range on the continent and, for migratory species, beyond that.

Despite the scale of the threats facing vultures in Africa, little coordinated and comprehensive monitoring of populations has taken place. According to Anderson (2004), very little monitoring of vultures in Africa had been undertaken until 2005, mainly due to a lack of qualified observers, limited funding, logistical challenges, and the lack of a standardized monitoring protocol for either cliff- or tree-nesting species that could be implemented by field workers. Although this situation has improved somewhat over the last five years with monitoring programmes being implemented in at least 15 African countries, there are still vast areas where vultures occur where no monitoring is taking place. In areas where monitoring has been implemented, considerable declines in vulture populations have occurred. The Asian Vulture Crisis has unequivocally shown that without systematic monitoring of vultures a population crash can take place virtually undetected.

The concept of a Pan-African Vulture Conservation Initiative was first raised at a round-table discussion during the 11th Pan-African Ornithological Congress (PAOC) at Djerba, Tunisia in November 2004. During this discussion, which included 27 of Africa's most experienced vulture specialists, it was agreed that there was an urgent need for the establishment of such an initiative which should focus on: 1) implementing appropriate conservation measures to prevent populations in certain areas from reaching critically low levels, 2) establishing and publishing a standardized monitoring programme for vulture populations that can be implemented by all partners, and 3) creating greater awareness of the plight of African vultures worldwide.

As a response to the round-table discussion mentioned above, the Vulture Specialist Group (VSG) of the IUCN Species Survival Commission was formally established in April 2011 to ensure the continued survival and protection of vultures across the globe. The VSG aims to advocate and create greater awareness of the plight of these birds and coordinate effective conservation activities for their benefit. The Group is divided into five regions: Africa, Asia, Europe, and North and South America, with each region forming its own Steering Committee that will report annually to the VSG co-chairs (Andre Botha and Chris Bowden). Broadly the key activities of the VSG include: 1) review IUCN status and updates for all vulture species, 2) promote vulture conservation and management activities, 3) promote vulture research and monitoring, 4) disseminate and communicate information about vultures, and 5) establish regional and international partnerships and advocate on behalf of vultures.

The Africa Region of the VSG convened the first Pan-African Vulture Summit at Ilkeliani Camp in the Masai Mara, Kenya from April 16–20, 2012. Summit coordinators were Andre

Botha of the Endangered Wildlife Trust, and Drs. Munir Virani and Darcy Ogada of The Peregrine Fund. Delegates included a wide range of vulture specialists, researchers, conservationists and government representatives. Although delegates were invited from across the African continent, there were no delegates from West and North Africa due to a lack of capacity in these regions as well as funding constraints. The aims of the summit were to, 1) develop the foundation of a Pan-African Vulture Strategy, 2) create a regional framework to implement the outcomes of the summit through the development of an African Vulture Secretariat, 3) elect a Steering Committee for the Africa Region of the VSG, and 4) amend and adopt a resolution to encourage African governments to address threats to African vulture populations. Funding for the summit was provided by the United States Fish & Wildlife Service, Wildlife without Borders Program and Sasol Limited, South Africa.

Objectives

1) Drafting a Pan-African Vulture Strategy

The Pan-African Vulture Strategy will be an overall guide to improve the conservation status of African vultures. The key areas of focus for the Strategy are:

- identifying research priorities based on individual species, ecosystem services, movements, etc.
- assessing population sizes and mapping extant populations
- reviewing survey methods for different species and developing timeframes for monitoring programmes
- identifying key areas/countries with gaps in monitoring
- establishing an African vulture Red List based upon regional subspecies
- outlining strategies for engaging governments in vulture conservation
- identifying sources of funding to implement the Vulture Strategy
- addressing key threats including poisoning, development of electrical infrastructure, and the trade in vultures for witchcraft, food and zoo specimens/pets
- raising public awareness about the decline of African vulture populations
- educating the public about the importance of vultures
- creating educational opportunities and developing international links to train African nationals in vulture conservation, research and education

Implementation of the Pan-African Vulture Strategy will be the mandate of the African Region Steering Committee.

2) Development of a framework to implement Summit outcomes

As a means to implement recommendations made during the Summit, delegates will develop a framework and reporting structure to include the VSG co-chairs, the

Steering Committee, NGOs, African governments, and other stakeholders. The terms of reference for an African Vulture Secretariat position will be established.

3) Election of Steering Committee

Delegates of the Pan-African Vulture Summit will elect a five-member Steering Committee of the Africa Region of the IUCN Vulture Specialist Group. Members of the committee will represent the various regions of the continent as broadly as possible. One member will be elected as Chairman of the Steering Committee.

4) Adoption of Summit Resolution

Delegates will amend and adopt a Summit Resolution aimed at encouraging African governments to recognise and address the threats facing vulture populations across the continent.

Goals and Outcomes

The Pan-African Vulture Summit had the following goals and outcomes:

- establishing a strong functional network of researchers and conservationists working in partnership to the benefit of vulture populations across Africa
- creating awareness of the plight of African vultures and the threats that impact on them
- building capacity, facilitating transfer of skills, and creating opportunities for African nationals focused on the conservation of vultures
- increasing the ability to identify new threats and potential problem areas where proactive mitigation can be implemented before populations reach critically low levels
- as a partnership, be better able to address threats and reduce impacts on vulture populations and habitats through the sharing of expertise and acting as an informed stakeholder group where necessary

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Drs. Erustus Kanga and Charles Musyoki – Kenya Wildlife Service

Dr. Ali Kaka – IUCN, East and Southern Africa Office

Ms. Masumi Gudka

Mr. Rupert Watson

Mr Azim Rajwani and the staff of Ilkeliani Camp

Mr Anwar Amershi and the staff of Tipilikwani Camp

Mr Jay Sanghavi and Mr John Munoru of Vintage Africa Ltd

Dr. Paula Kahumbu, Wildlife Direct

National Museums of Kenya

Summit Proceedings

Invited speakers

Official opening remarks: Co-chair Vulture Specialist Group

Andre Botha

Official opening remarks: Masai Mara National Reserve

Michael Koikai

Official opening remarks: IUCN East and southern Africa Office

Dr. Ali Kaka

Guest of Honour: Kenya Wildlife Service

Dr. Charles Musyoki

Summit presentations

A review of the conservation status of African vultures

David Allan

This presentation covered some preliminary results of a review of the conservation status of Afro-tropical vultures commissioned by BirdLife South Africa and the Royal Society for the Protection of Birds (RSPB). Key aspects covered in the talk were: 1) a review of the literature on Afro-tropical vultures and publication trends over time; 2) an overview of a continent-wide questionnaire survey, focusing on priorities for vulture conservation actions; and 3) examination of breeding census data using Cape Vulture *Gyps coprotheres* breeding colonies as the prime example. The presentation ended with a brief mention of some of the key threats facing Afro-tropical vultures: poisoning, collisions with, and electrocutions by, overhead electrical infrastructure, and wind farms.

Vulture studies in East Africa – research, capacity, partnerships and awareness

Munir Virani

Vulture research and conservation in East Africa actively began in 2001 and came about as a direct response to the catastrophic collapse of vulture populations in Asia. Since 2001, The Peregrine Fund along with partners in Kenya and Uganda have made significant strides towards obtaining a better understanding of vulture population trends and the threats facing this highly threatened group of birds. Research activities have focused on monitoring breeding pairs and individuals, and wing-tagging and use of GPS-GSM telemetry to understand movements. Conservation activities include developing local capacity and increasing public understanding and awareness through dissemination of results, outreach programmes (International Vulture Awareness Day), and involvement of local communities to reduce the major threat of poisoning. The growth of the energy sector in East Africa via power lines and wind turbines poses additional threats to an already declining and threatened population. We recommend continued monitoring of vultures as well as

fostering partnerships with governments, parastatals (e.g. Kenya Wildlife Service) and power companies to mitigate threats and reduce vulture mortalities.

The Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU)

Nick Williams

The Convention on Migratory Species Raptor MoU aims to conserve migratory raptors in Africa and Eurasia across their entire migratory route. Several potential synergies between this initiative and the Pan-African Vulture Initiative were highlighted including a formal invitation to the VSG to attend the first meeting of signatories to the Raptors MoU in December 2012.

Inter-continental surveys of scavenging birds of prey: an example from the Americas

Keith Bildstein

Inexpensive, continent-wide roadside surveys of common New World vultures are providing critical new insights into the seasonal densities and abundances of these species, and are laying the ground work for practical and effective large-scale monitoring. Large-scale standardized counts of African vultures are likely to provide similar benefits.

The numbers game

Peter Mundy

The first Old World vulture (Cape Vulture) was added to the IUCN Red List in 1979 as vulnerable; in 2011 no less than 12 out of 16 species are now listed though three are just Near Threatened. In 1992 the numbers of African vultures were estimated, with the White-backed, Hooded and Palm-nut Vultures at about 250,000 each, and all the others very much smaller in numbers; none of these come close to past estimates for some vultures in the Indian sub-continent. Currently, the Cape Vulture is estimated at 8000 birds (3000 pairs), which is a slow decline over the past 30 years; this species is the best censused in the Old World. Rüppell's Vulture flies across to Spain, and hybrids have been noted between *coprotheres* and *africanus* (Namibia) and *coprotheres* and *rueppellii* (South Africa).

Conservation management of vultures in Kenya

Simon Thomsett

Is it time for conservation management of vultures in Kenya? This presentation asked the question if micro-management such as single nesting site protection, provisioning of 'clean' food, captive breeding, siblicide rescue, etc, have a place in the conservation of Kenya's vultures. If not now, then when?

Effects of vulture declines and implications for disease transmission

Darcy Ogada

At experimental carcasses in the absence of vultures, carcass decomposition rates nearly tripled. The mean number of mammals at carcasses increased 3-fold and the average time spent by mammals at carcasses increased almost 3-fold. There was a nearly 3-fold increase in the mean number of contacts between mammalian scavengers at carcasses without vultures. These results highlight the role of vultures in carcass decomposition and suggest

that changes in vulture abundance may affect patterns of disease transmission among mammalian carnivores.

Conservation implications of vulture movement studies

Corinne Kendall

Movement studies of vultures offer valuable insights into mortality causes and rates, population range, range size, and habitat use patterns. Because all vulture species frequent the Masai Mara National Reserve during the dry season, this is an ideal area for future monitoring efforts. Expansion of movement studies across the African continent will improve knowledge and the conservation of vultures across their range.

Survival of African White-backed Vultures in eastern South Africa

Ara Monadjem

Analysis of re-sightings data of tagged African White-backed Vultures from the Lowveld in South Africa reflects a high survival rate of birds over time and underlines the importance of large protected areas in the conservation of these birds.

Bearded Vulture conservation in southern Africa

Sonja Kruger

The Bearded Vulture is currently listed as Endangered in southern Africa. Numbers are continuing to decline with only about 100 breeding pairs remaining. The major threats to the species identified through a marking programme are poisoning and collisions with energy infrastructure. A Biodiversity Management Plan is being implemented to conserve the species.

Distribution, range changes and trends in Tanzania vulture populations over 30 years

Neil and Liz Baker

Tanzania has large protected areas, but the human population growth rate is high. Even though there are eight species of vulture in Tanzania, studies of these birds have not been conducted for the last 40+ years. More than 30 years of bird atlas data in Tanzania reflected trends in populations and distribution of vultures.

Population estimates of vultures in Uganda

Derek Pomeroy

Road counts of raptors, including vultures, allow estimates of abundance to be made and, in the case of Uganda, show probably viable populations of White-backed, Rüppell's and Hooded Vultures although only the last is known to breed. With suitable standardisation, the method is cost-effective for monitoring large raptors.

Vultures in Ethiopia

Yilma Dellelegn Abebe

Ethiopia is home to eight of Africa's 11 vulture species. They occupy a range of habitats and their status appears to vary between areas. Though vulture species generally enjoy a peaceful co-existence with local people, this does not mean that they are devoid of threats.

Vultures are increasingly being decimated from non-target poisoning, collision and electrocution from power lines, and loss of habitat. It is recommended that extensive surveys, species-specific research, and awareness measures are crucial for the long-term conservation of vultures in Ethiopia.

Vultures of Namibia

Holger Kolberg

In Namibia there are six species of vulture, all of which are listed in the Red Data Book. Namibia is arguably the stronghold for Lappet-faced Vultures in southern Africa in terms of breeding. The organisation Vultures Namibia does most of the vulture ringing, a lot of extension work, and publicity regarding poisoning and vulture restaurants, etc.

Rare and Endangered Species Trust's contribution of vulture conservation in Namibia

Maria Diekmann

Like most of Africa, Namibia's vulture populations have declined in the past 60 years. Our flagship species, the Cape Vulture is Critically Endangered with an estimated population of 30 individuals. If this species goes extinct it will be only the second recorded extinction in Namibia— the white rhino having been reintroduced. In partnership with government, NGO's and other interested parties, the Rare & Endangered Species Trust (REST) is working to mitigate the problems associated with these declines, and develop sound conservation, research and educational objectives.

LIFE+ project on the survival of Egyptian Vultures in the Balkans: the importance of trans-continental cooperation between African and south-eastern European countries

Stoycho Stoychev

A five-year project striving to save the last of about 100 pairs of Egyptian Vultures on the Balkan Peninsula was launched by BSPB/BirdLifeBulgaria, HOC/BirdLife Greece, WWF-Greece and RSPB/BirdLife UK with the support from EU LIFE program and Leventis Foundation. The project will seek collaboration with African partners since the Balkan population spends half of its lifetime in Africa where significant threats exist. The following are main actions aimed at wintering areas: satellite tracking, maintaining of listserver group, providing small grants for key countries along the flyway, organising international conference in 2014 and developing a Flyway Action Plan.

Egyptian Vulture conservation on the Balkans and flyway conservation strategy

Ivalyo Angelov

Insights into the migratory routes and wintering range of Egyptian Vultures in Africa was presented from tracking data of birds fitted with satellite tags in the Balkans.

Intensive, small-scale studies of the feeding behaviour and movement ecology of island scavenging birds of prey: examples from the Falkland Islands

Keith Bildstein

Field experiments probing the intricacies of scavenging behavior in Striated Caracaras, an endemic species of southern-most South America and the Falkland Islands, along with saturation color banding of a regional population on the Falklands are creating a better

understanding of what limits population size in this globally Near Threatened species. Numerous aspects of these studies can serve as research models for students of African vultures.

Current status and threats facing Nigerian vultures

Ruth Akagu (presented by Kariuki Ntang'ang'a)

The Nigerian Conservation Foundation is currently conducting a review of vultures in the country. Lappet-faced Vulture is believed to be extinct and the Egyptian Vulture has not been reported for more than a decade. Sightings of Rüppell's, White-backed, Eurasian Griffon, and White-headed Vultures are nowadays rare. The Hooded and Palm-nut Vultures are likely the only species with viable breeding populations, although both species have declined. Threats include habitat loss, hunting for traditional medicine and food, and poisoning. It is recommended that support be given for a local post-graduate student to conduct further research on Nigeria's vultures.

Migratory Soaring Birds Project

George Eshiamwata (presented by Kariuki Ntang'ang'a)

The Migratory Soaring Birds Project's objective is to make the Rift Valley/Red Sea flyway a safer route for migratory soaring birds and thereby maintaining globally threatened and significant populations of soaring birds. A total of 37 soaring birds (birds of prey, storks, pelicans, cranes) use this flyway during migration making it the second-most important flyway in the world. To achieve its objective, the project pilots a new, innovative and cost-effective UNDP-GEF approach, termed mainstreaming and 'double-mainstreaming'. It seeks to integrate flyway issues into existing or planned development projects and processes, 'vehicles' of reform or change management in key productive sectors (hunting, energy, waste management, agriculture, and tourism) through the provision of technical tools, content, support and promote sharing of lessons learnt and experiences across Africa.

California Condor conservation and the effect of lead poisoning from hunter-harvested game

Rick Watson

Efforts to restore California Condors (*Gymnogyps californianus*) to Arizona provide an opportunity to answer questions about factors that limit condor population growth. High mortality from lead poisoning is currently the single most important population limiting factor, and if resolved, the condor population could grow without the intense management required now to keep condors alive. Satellite telemetry, ground tracking, observation, capture, and blood-testing of condors have revealed that lead from spent ammunition in hunter-killed game is the source of lead exposure. The majority of condors in Arizona are annually exposed to lead and up to 70% of them have been treated each year to minimize mortality in response to high blood lead concentrations. Condor fatalities from lead poisoning have been few since 2006, in part due to the voluntary lead-free ammunition program begun in 2005 by the Arizona Game and Fish Department.

Sanitation and supplementary feeding: a nationwide programme to reduce the danger of poisoning and the exposure to veterinary drugs

Ohad Hatzofe

In order to prevent human–predator conflict and to control populations of feral dogs and predators to mitigate the risk of secondary or direct poisoning of raptors in general and vultures in particular, it is imperative to keep the carrying capacity of the ecosystem for those species. Carrying capacity is increased by proper disposal of carcasses that might also contain medications that can be as dangerous as pesticides for the health of vultures.

The role of VulPro in vulture conservation in South Africa

Kerri Wolter

VulPro approaches vulture conservation in an integrated, multi-disciplinary fashion, with the benefits from the programme accruing to both vultures and society at large. VulPro combines education and good science, with networking, capacity building and knowledge generation. The veterinary disciplines of toxicology, pharmacology, clinical pathology and medicine are combined with the science of cell-phone telemetry and the banking of genetic resources, with the goal being to positively influence the well-being of our natural resources to the ultimate benefit of society. In this regard, VulPro engages in a number of interrelated activities and uses a variety of resources in endeavouring to meet its objectives.

Update from Kenya's Stop Wildlife Poisoning Taskforce

Paula Kahumbu (presented by Darcy Ogada)

Carbofuran is not banned in Kenya and can still be found in some products. Several new incidents of lion poisoning have been reported around Amboseli National Park and the Masai Mara National Reserve using poisons other than Furadan. A fake Furadan substance is now being used in irrigation schemes. Kenya is waking up to the dangers of pesticides which are now being attributed to the rising cases of cancer. Kenya has recently banned dimethoate another pesticide believed to be causing cancer. The Prime Minister's Office has recently requested a meeting on Carbofuran.

Electrification in Africa – are our vultures being strung along? A synopsis of power lines and their impacts on vultures in South Africa and potential impacts across the continent

Megan Diamond

Although there appears to have been little concern for bird–power line issues in African countries north of South Africa to date, this is likely attributable to the relative lack of power lines. There is good reason to expect that the above mentioned impacts will emerge north of South Africa as increased electrification takes place on the continent. An opportunity exists to ensure that electrification takes place in as 'bird friendly' a manner as possible, thereby avoiding the early mistakes made in South Africa. The Endangered Wildlife Trust has extensive experience in this specialised field and is perfectly placed to partner with NGOs in African countries in order to build capacity and ensure that the impacts of electrification on birds are minimised.

The threats of wind farms to vultures in South Africa

Hanneline Smit

Wind farms are an emergent threat to vultures in Africa, either through direct collision with wind turbines, or through displacement of vultures as a result of the construction of wind energy facilities (WEFs). BirdLife South Africa and the Endangered Wildlife Trust have developed the *Best Practice Guidelines for Avian Monitoring*, as well as an *Avian Wind Sensitivity Map* to guide the industry in their decision making in respect of the placement of WEFs. Immediate action is needed in areas of high sensitivity in Africa, for example in Lesotho. The aforementioned documents can be downloaded from both the BirdLife South Africa (www.birdlife.org.za) and Endangered Wildlife Trust (www.ewt.org.za) websites.

Wind farms predicted to accelerate the decline of mountain vultures in southern Africa

Ian Rushworth

The Kingdom of Lesotho has ambitious plans to develop wind energy facilities in the highlands, which is also home to the largest proportion of the southern African population of the Endangered Bearded Vulture and a sizeable proportion of the southern African endemic Cape Vulture population. Based on recent population estimates, estimates of population trend, and life-history parameters from these populations and the published literature, we undertook Population Viability Analyses using VORTEX to assess the potential impact of wind farm development. Preliminary analyses of satellite tracking data indicates that Bearded Vultures spend at least 42% of flying time within rotor height, and that the areas chosen by engineers for wind farms is the same as that chosen by Bearded Vultures (probably for the same reasons). The current proposals for two farms consisting of a total of approximately 200 turbines are predicted to accelerate the decline of both species, even under the most conservative scenarios. Extinction is virtually assured for both species.

Vulture News – the journal of the IUCN Vulture Specialist Group. Why we have it and why it's important

Campbell Murn

Vulture News is the official publication of the IUCN Vulture Specialist Group. It is an international journal that provides a venue for peer-reviewed research, observations and announcements related to all Old World and New World vultures and condors. Vulture workers are encouraged to support Vulture News with contributions and by promoting its role as the publication of the Vulture Specialist Group.

Summary of Discussion Topics

The major part of the Summit was spent deliberating ten key topics whose outcomes will form the basis of the Pan-African Vulture Strategy. The key topics and related discussions are summarised below.

Topic 1: Research Priorities

Research priorities should focus on conservation problems and not science. The following were identified as priorities:

1) Movement ecology

a) General recommendations

- focus on tracking for priority and migratory species
- use a combination of wing tags and tracking devices (units must have altimeters)
- data should give insights into population expansion problems, effects of vulture restaurants, juvenile distribution, survival and mortality

b) Suggested studies

- 1) Use of spatial/temporal GIS work in each country to focus on external factors of decline, identify threats, hotspots, foraging movements and breeding
- 2) Identify Critical Vulture Areas (CVAs)

2) Chemical loads in food

a) General recommendations

- identify key toxins by conducting screening and tests
- once harmful chemicals have been identified, initiate measures to eliminate or control their use (for example the banning of diclofenac in Asia)

b) Suggested studies

- 1) Research to determine food availability

3) Measuring breeding success

a) General recommendations

- include previous studies and research

4) Ethno-ornithological studies

a) General recommendations

- conduct in collaboration with social scientists

b) Suggested studies

- 1) Investigate trade of both live vulture specimens for the pet trade and for traditional medicine and fetish markets

- 2) Assessment of human perceptions of vulture species

5) Disease ecology of vultures and humans

6) Species-specific research

a) General recommendations

- often little is known about the biology of species and the focus of research can be on basic ecological questions

b) Suggested studies by species

1) White-headed Vulture

- why is breeding restricted to protected areas (compared to White-backed Vultures)? Focus can be on the size of protected area and type of habitat
- feeding ecology
- relationship to other species
- assess habitat preferences
- investigate demand for live bird trade
- conduct genetic studies—partner with IUCN Conservation Breeding Specialist Group

2) Rüppell's Vulture

- update existing data or conduct baseline surveys (Tanzania and Ethiopia)
- identify food availability

3) Bearded Vultures

- conduct genetic studies
- establish captive breeding programs
- identify food availability

4) Egyptian Vulture

- establish captive breeding programs
- study over-wintering ecology

5) Cape Vulture

- establish captive breeding program (priority Namibia)
- identify food availability

6) Hooded Vultures

- why is a common species declining, especially in last 10 years, when populations have been stable in the past?
- are West African populations facing problems due to increases in human populations?
- potential for disease transmission (e.g. West Nile Virus)
- assess potential poisons/chemicals from garbage dumping sites

- 7) White-backed Vulture
 - identify population trends
- 8) Lappet-faced Vulture
 - identify food availability
 - assess habitat preferences
 - conduct genetic studies –partner with IUCN Conservation Breeding Specialist Group
- 9) Palm-nut Vulture
 - implement baseline surveys and collect basic data
 - investigate demand for live bird trade

7) Areas for research collaboration

- Egyptian Vulture – Bulgaria
- universities – develop relevant questions and have a conservation focus
- Association of Zoos and Aquariums (AZA), European Association of Zoos and Aquaria (EAZA), and TRAFFIC – issues regarding bird trade
- national power companies (e.g. Panaf power group) – for studies of how vultures perceive and avoid collisions with energy infrastructure

Countries with knowledge gaps (focus on eastern and southern Africa)

Country	Possible contact person(s)
Ethiopia	Yilma D Abebe, Mengistu Wondafrash
Tanzania	Neil & Liz Baker
Sudan	Sudan Wildlife Society
South Sudan	Wildlife Authority, WCS
Somaliland	Abdi Jama
Eritrea/Djibouti	Hagos Yohannes, Solomon Abraha, David Birhane
Egypt (southern)	Mindy and Sheriff Baha El Din
eastern Chad	Hassan Jozoli , Ministry of Environment
Mozambique	Keith & Coleen Begg
Malawi	Lizanne Roxburgh
Zambia	Lizanne Roxburgh, Moses Nyoni
Angola	Michael Mills (9 months of year)
Lesotho	Trans-frontier park
West Africa	Guy Rondeau, Ralph Buij
Niger	Joost Brouwer
Nigeria	Ruth Akagu

Countries with major gaps in eastern and southern Africa – Ethiopia, Sudan, South Sudan, Somaliland, Eritrea, Mozambique

Identified Gaps

Capacity and training

Funding

Permits and access to parks – (hunting blocks)

Costs to researchers

Comparative studies

Access to existing information

Responsibility

Volunteer network

External partners

National Wildlife Management Authority, IUCN, CMS, PAOC, RRF Peace parks foundation, WWF

PAOC October 2012 meet with Tanzanian stakeholders

Topic 2: Surveys and monitoring

1) Mapping extant populations

a) General recommendations

- only important for areas with limited knowledge
- where abundance sampling is not possible, presence/absence and use of atlases is a good first step
- atlas creation should focus on areas with limited information (particularly Ethiopia and West Africa)
- use historical records to prioritize areas of initial search for creation of new atlases
- for atlases, more information can be used from multiple sources (tourist records, other non-raptor projects, etc)
- if surveyor effort can be measured, then atlases can be used to determine abundance too

2) Assessing population sizes

a) General recommendations

- focus should be on trends rather than size assessments
- focus should be on areas where nothing is known currently
- ideally a secretariat should be formed so that information can be collated in a central database

- where possible, efforts should be made to look at breeding pairs that will give a sense of population size in addition to trends
- surveys will mainly need to be conducted by experts rather than via citizen science

3) Survey methods

a) General recommendations

- need to standardize methods so that results can be compared across countries
- where possible, prioritize using nest counts first
- ideally surveys should be done on an annual basis
- synchronized transect counts across sites could be particularly powerful
- synchronized counts at vulture restaurants across multiple sites would potentially give useful information on population size/trends

a) Suggested methods by order of preference and depending on resources available

1) Nest counts

- particularly useful for Bearded, Cape and Rüppell's Vultures
- currently about 50% of Cape Vulture nests are counted, but less than 5% of Rüppell's nests are counted
- Gol Mountains should be a key area to target for Rüppell's Vultures
- counts can be done aerially where possible (this is particularly important for tree-nesting birds)
- counts can be done on the ground as well
- internet surveys/media could also be used to get leads on where nests may occur

2) Mark-recapture studies

- particularly useful for urban populations of Hooded Vultures or in areas with vulture restaurants
- wing tags can be used when efforts for re-sighting are possible later
- transponders (RF tags) can also be used to remotely record occurrence of tagged birds (these have 50 metre range, cost \$1 per transponder and \$1000 per receiver; attached as patagial tags)
- allow measures of survivorship and population growth rate in addition to population size
- use of walk-in traps is ideal to tag large number of birds

3) Transect counts

- line counts are better than point counts
- need to control for weather, observer bias, type of vehicle, road conditions (and changes in these over time), and position in vehicle

- major concern is misidentification (only record sighting when identification is certain)
- best way to monitor a large number of species at reasonable cost
- 4) Camera traps
 - used effectively at waterholes and carcasses to gain presence/absence information especially if have tagged birds
- 5) Carcass counts
 - helpful for identification issues
 - need further research to understand how these relate to trends as natural carcass availability can significantly alter results
 - generally allow a larger sample size and better at accounting for rare species than other techniques
 - experimental carcasses are best, but natural carcasses can be used if carcass characteristics (time of day, percent of meat remaining, age of carcass) are recorded
 - best to do these when food availability is low

Topic 3: Developing regional Red Lists

1) Background

IUCN threat assessment process is already in place to review global status of species. BirdLife International is the commission to review all 10,000 bird species every four years.

2) General recommendations

- a) Need a single Red List for all 11 species of vultures in Africa
- b) Assessment should be based on separate populations for:
 - Bearded Vulture
 - White-headed Vulture ('low' and 'high' Africa)
 - Lappet-faced Vulture ('low' and 'high' Africa)
 - Hooded Vulture ('low' and 'high' Africa)
 - Egyptian Vulture (migrants and non-migrants)
 - Griffon Vulture

3) Implementation

- a) Tap into the BirdLife-funded review of the status of vultures in Africa being carried out by David Allan
- b) Supplement this with RFIs on the African Raptor and European Raptor Forums
- c) Aim to secure funds for a long-term contract to continually reassess status

- d) VSG to engage with BirdLife Africa office to promote updating of global species assessment factsheets
- e) Need further research into genetics and movements to validate populations
- f) Update *Vultures of Africa* book – particularly sections on Distribution, Population Size and Conservation Status

Topic 4: How to engage governments in vulture conservation?

The following organisations, conferences and sectors were identified as a possible means to engage governments in vulture conservation.

1) Organisations

- a) CMS for migratory species, but can transmit Summit Resolution covering all species to key government contacts in all African countries
- b) IUCN –two Directors covering Africa who meet with Government Environment Ministries on a regular basis – opportunity to make presentations
- c) African Union – Environmental Policy representation
- d) World Bank and IMF – financiers of major development projects because they're required to adhere to the 'Equator Principles' – due diligence reporting for environmental issues of the projects funded

2) Conferences

- a) African Convention on Natural Resources
- b) IUCN World Conservation Congress – opportunity to submit a draft Resolution for the next meeting in May 2012 in South Korea
- c) World Heritage Convention (Paris) – aware of 14 World Heritage Sites where vulture populations are declining. Potential opportunity to raise vulture conservation issues at their next Meeting of Parties.

3) Sectors

- a) Target efforts directly at the energy sector, e.g. Southern African Power Pool
- b) Need to develop a Business Case, including economic values (based on whatever data is available), to present to show benefits to them of preventing vulture mortality (e.g. to prevent outages, obtain green publicity, and credibility)
- c) Need to develop Credit Risk Management Framework for determining, assessing and managing environmental and social risk in project finance transactions

Topic 5: Electrical generation and transmission

1) Key regions of growing infrastructure

a) Eastern Africa

- Kenya – two major power lines planned
- Uganda – hydro-dams in the north
- Tanzania – unknown
- Ethiopia – dams under construction on the Omo and Nile rivers. Planned dams in the north of the country- Gibe I, II and III, and at Melka Wakena. May have obligations under either Convention on Migratory Species and/or African-Eurasian Waterbird Agreement.
- Sudan – single line causing a major problem to be addressed

b) Southern Africa

- Namibia – possible new large dam project, new Uranium mines – major power needs, power line collisions considered the main problem, already working with the national power generator
- Lesotho – major problem is wind farms
- Zambia – large dam planned?
- less clear about other southern African counties

c) West Africa – major unknowns

- Ghana – example of mitigation on a line into Togo

2) Suggested projects

a) Commission a project (2 consultants or students) to review the situation of planned developments for all 50+ African countries and produce a report

- may need to extend this project to include four consultants that can communicate effectively in English, French, Arabic and Portuguese

b) Commission a project to utilise the above information to develop a sensitivity map to identify priority infrastructure activities which most threaten vultures across Africa

3) Outline mitigation measures to reduce power line conflicts with vultures

Establish key principles to address what is clearly a complex problem:

- Two levels of intervention: strategic vs. operational (see suggested actions below)
- Two arenas of engagement: planned vs. existing projects
- Two types of impact: electrocution vs. collisions

Need to remember: Avoidance, mitigation and off-setting (in that order!)

4) Strategic actions

Aim is to influence governments, regional power organisations, national power companies, key sponsors such as the European Union and World Bank, and other interested parties.

- a) Commission a review of obligations or guidance established in the full range of MEAs and appropriate daughter agreements (eg. Raptors MoU)
- b) Aim to link in with CMS, in particular (due to the recent COP10 Resolution), to assist in raising awareness of the issue with all African Governments
- c) Aim to develop Best Practice Guidelines for new projects, particularly in terms of vulture-safe construction designs and Guidelines for EIAs to try to influence construction routes in particular
- d) Aim to review existing data, activities and initiatives operating in South Africa, Europe and Israel to develop a Business Case document setting out the cost-benefit analysis of preventing and avoiding conflicts with vultures
- e) Aim to engage and influence with the African Union, the East African Community, SADEC and ECOWAS
- f) Consider hosting an 'African Energy' Summit to engage key Governments, Organisations, Power Companies and other interested parties
- g) Introduce some sort of Code of Conduct or obligation for developments to include monitoring of 1% of newly constructed power lines

5) Operational actions

- a) Commission a study to review the efficacy of the existing range of new and retrofit devices (O. Hatzofe in Israel may be able to assist with supervising this)
- b) Commission a study to sample the impacts here in Africa by walking or horse riding along selected stretches of power lines
- c) Introduce some kind of competition or incentive schemes to promote new ideas and economically efficient designs
- d) Consider developing some sort of 'accreditation' process for suppliers. Example of utilisation of a particularly vulture-friendly design or recognition of an effective due-diligence approach by companies, etc.
- e) CMS to take the lead in engaging with the Government of Sudan to address the single 'killer' power line near Port Sudan
- f) Aim to train wild vultures in Africa to the risks of power lines!! Really?? Yes, aversion training at Feeding Stations or other congregations?

Topic 6: Proliferation of Wind Farms

1) Priority regions and countries

- a) Rift Valley - Israel, Egypt, Ethiopia, Kenya and Tanzania
 - Ethiopia: growing industry; just started development at two sites

- Tanzania: 3 wind farms – 40 MW, 80 MW, 38 MW – falls within the migratory route of several raptor species and will also impact on resident vulture populations
- b) Less priority
 - Namibia: due to corrosion problems, wind developments in this country are less likely
 - Uganda: no wind farms planned, except possibly at the two largest mountains, will be expensive to build the associated power lines. Hydro-electricity will be preferred

2) General recommendations

- a) Need to log each wind energy development in Africa within a central repository i.e. dedicated website
- b) All new wind projects are likely to be listed on the Commercial Wind Power and Engineering webpage.
- c) If legal support is problematic we need to tap into different resources. This could include using the associated risk to influence the financiers.

3) Suggested actions for key African NGOs

- a) Position Statement - develop position statement that is supported by all key African NGOs. The statement will not be against wind energy developments, but ensure that these developments are placed correctly as to minimise impact on birds/vultures.
- b) Guidelines – modify BirdLife South Africa/Endangered Wildlife Trust *Best Practice Monitoring Guidelines* to make them applicable for Africa
- c) Avian wind sensitivity map for the continent – approach BirdLife International to take the lead
- d) Wind Resource map to be developed for Africa to guide future conservation planning of wind energy developments on the continent
- e) Liaise with government to gazette minimum standards i.e. influence the legislative impact assessment process

4) Develop Thresholds

- a) Find a mechanism (i.e IUCN and national Red Data List of birds) to reject authorisations in areas where species occur with a red listed status of CR
- b) For Endangered and Vulnerable red listed species a threshold would need to be developed based on species modelling e.g. Vortex

5) Research priorities

- a) Movement data needed for critical species most likely to be threatened by wind energy developments - tracking of a number of individuals per critical species in key regions
- b) Visual perception i.e. why are vultures colliding with wind turbines?

6) Mitigation

- a) Japanese concept of turbines enclosed within a circular ring. It is thought that birds/vultures are less likely to collide with this structure. These structures are also possibly more energy efficient.
- b) Explore mitigation for nocturnal flying species (turbine blades containing a phosphorous coating).

7) Offsets

- a) As a last resort offsets might need to be considered. In this case, it should be a minimum of 1:5 or higher.
- b) Captive breeding programme, but would we have the habitat to release captive bred birds?
- c) Mitigation of existing power lines.

8) Capacity and awareness building

- a) Training workshop - scientific, EIA specialists, legal advisors
- b) Regular press releases and media coverage highlighting the negative impacts associated with wind energy developments and specific problematic developments
- c) Need to have a list of good environmental journalists to assist with publicity where needed e.g. Lake Turkana, Tanzania

9) Comments

- prevention is better than cure!
- what will we do when the first threatened bird collide with a wind turbine or significant numbers of non-threatened bird species collide?
- recommended not to start mapping at country scale but to do at continent scale
- corruption remains a problem – after buying the land and paying to do the EIA, industry will do anything it needs to continue development
- power lines are a necessity; wind farms are not
- good environmental lawyers are critical

Topic 7: Vulture poisoning

1) Background

Poisoning is a widespread problem in Africa and therefore very difficult to handle. It occurs for variety of reasons and is prevalent wherever people, their livestock and predators occur together. In these situations vultures are poisoned 'incidentally' in the midst of human/wildlife conflicts and are usually not the target animals.

Deliberate poisoning of vultures occurs in some cases for persecution (i.e. vultures believed to be predators) and in others to supply to the muthi/juju (magic/witchcraft) trade.

Efforts to reduce poisoning are likely to be most effective in core areas, perhaps called Critical Vulture Areas or Vulture Safe Zones. These are usually located within a protected area, and it is at the boundary of these areas that safe zones - extensive work in these areas), protected areas, colonies, restaurants etc. The data on habitat utilization of birds can be used to determine where vultures spend the bulk of their time and this is where actions can be focused.

2) Hotspots

- a) Areas where vultures are directly poisoned – i.e. in human-wildlife conflict areas (e.g. vultures are killed by poachers so that they do not give away the location of carcasses to authorities as happens in East Africa and Botswana)
- b) Areas where people eat vultures
- c) Areas where people use vultures for superstitious reasons
- d) Areas where livestock and predators occur
- e) Specific hotspot areas
 - East Africa- protected areas
 - Masai Mara for 4 months of the year – within 50 km of the reserve
 - entire country of Namibia
 - southern Africa- outside protected areas, e.g. vulture restaurants
 - breeding areas

3) Monitoring

- a) Central database for details on poisoning incidents can be developed on a continent-wide basis, but will be used on a regional basis for implementing actions. Approach existing specialist groups that have developed poison incident databases to learn from their experiences.
- b) Encourage government agencies to report incidents regionally/nationally
- c) Target Wildlife Conservation officials because they have the necessary country-wide influence

4) Problems (lessons from Bulgaria)

- a) Individuals spreading poisonings are problematic because they spread the information quickly amongst others
- b) Even though resources are available (e.g. booklet on how to deal with poison incidents) these are not used

5) Focal areas

- a) Target areas for action are agricultural distributors of problem products
- b) Long term approach is to focus on danger of products to humans rather than wildlife to get quicker responses

6) Developing protocols for sampling and testing

- a) Training is required on the identification of poisoning events. Some protocols are available that can be distributed
- b) Protocols need to be developed for the disposal of poisoned carcasses as well as collection of evidence.
- c) Can use ranger network to collect samples
- d) Good observations on the ground are critical as a first step because, realistically, samples may not be collected and analyzed. Mobile phones are very useful for recording evidence.
- e) Can use local veterinary stations to channel the samples to necessary facilities.
- f) Collaborative links need to be formed to collect and deliver samples to appropriate stations. Institutional arrangements are critical for agencies linking together to deal with problem.
- g) Need to inform labs on what specific products to test- cost implications. Can narrow down the range according to what type of farming is taking place in area.
- h) Distribute a list of products to all delegates of potential poisons

7) Problem pesticides and related issues

- a) Queleatox (resulted in extinction of Bearded Vultures on Mt Kenya in 1981)
- b) How does one find out when patents expire? And when products are available for legal use or have been banned?
- c) Potential prevalence of diclofenac in Africa needs investigation. Is it available and is it being used? Can look at pharmaceutical companies for this information.

8) Some specific 'solutions' to combat poisoning

- a) Better livestock management and protection
 - 1) Livestock protection dogs
 - 2) Better bomas and overnight livestock protection

- 3) Herding stock by day, in kraal overnight
- 4) Avoid areas of high predator density (border of protected areas)
- 5) Focus on quality of stock for sale rather than quantity
- 6) Predator repellants
 - strobe lights
 - collars with bells/smells
- b) Legislative and regulatory actions
 - 1) Have better enforcement of laws
 - 2) Identify specific poisons and regulate them more tightly
 - possibly change them to alternatives
 - ban them completely
 - if banning products, one needs to ban the compound itself and not the trade name to avoid new products being developed in future with same compounds
 - 3) Landowners must register their land use and can only buy pesticides approved for their use
 - 4) Regulated problem animal control
- c) Use of incentives to deter poisoning
 - 1) Compensation/Insurance (after the fact) - no incentive to look after stock if you receive compensation. Therefore any compensation will only be paid if owner has made every effort to protect his stock. Push conservation, then compensation i.e. don't compensate like for like (KWS model)
 - 2) Identify individuals rather than institutions as "champions". If no champions exist, they need to be approached or identified by individuals attending PAVS. Must work with government institutions because they have the correct mandate.
- d) Other
 - 1) Follow responsible disposal of poisoned carcasses (i.e. to avoid secondary poisoning events)
 - 2) Disincentives of offenders (name & shame or public humiliation)
 - 3) Work with chemical manufacturers on topics such as aversion techniques, dilution
 - 4) Vulture restaurants to draw vultures away from high risk zones
 - 5) Create awareness about vultures/carnivores
 - 6) Change social/cultural values (eg. Maasai switch from wealth in cattle to wealth in other investments)
- e) Actions
 - 1) Collaboration
 - land-owners and community leaders
 - government (e.g. Wildlife, Health, Agriculture, Development, etc.)
 - universities and researchers

- NGOs
 - conservancies and private nature reserves
 - IUCN specialist groups for predators
- 2) Incentives (e.g. benefits from protecting vultures)
 - 3) Recognition (e.g. of good work and protectionist behaviour)
 - 4) Prevention (e.g. alternatives to poisoning)

Development of a framework to address vulture poisoning

Is poisoning happening?

Yes



No

→ Is there future potential?

Yes



No



STOP

Is poisoning accidental (not targeted at vultures)?

Yes



No

→ Deliberate poisoning, go to alternative model (trade, muthi, poaching, etc.)

Is human-wildlife conflict present?

Yes



No

→ Investigate suspected non-steroidal drugs, lead, etc.

A series of questions can now be asked:

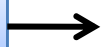
Has the livestock system changed?

Has prey availability for predators changed?

Has the spatial/temporal grazing regime changed?

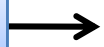
E.g. Has the livestock system changed?

Yes



How and why?

No



Investigate other potential sources of human-wildlife conflict

Topic 8: Trade in vultures

All species are targeted or susceptible in one way or another. Approaches to tackling the problems should be developed for the regional-level once a continent-wide strategy or framework has been developed.

1) Live Bird Trade

- a) Background- the problem is large
 - 1) despite the implementation of a ban on the importation of wild-caught birds into the EU in 2004, the trade continues and a loop hole in the regulation permits some continued trade
 - 2) Tanzania and Senegal are hotspots for live bird trade- import/export
- b) Suggested actions
 - 1) Pressure import authorities to review their legislation to ensure no loop holes exist
 - seek advice and suggestions from more experienced IUCN specialist groups
 - 2) Investigate up-listing some vulture species to CITES Appendix 1
 - caution that this may be obstructive in some other instances relevant to conservation action (transport of tissues, etc)
 - 3) Seek input from TRAFFIC international
 - provide them with relevant data and seek advice on options other than up-listing
 - 4) Provide up-to-date species information to import/export authorities to enable them to make informed decisions.
 - 5) Blacklist companies/individuals or 'first world' markets.
 - 6) Identify source of illegally traded birds
 - possibly use genetic markers and isotope analysis
 - 7) Address the demand end of the scale
 - approach relevant regional zoo associations
 - 8) Get the public involved to lobby against the trade in vultures
 - seek high profile personalities to provide their support

3) Muthi/Juju Trade

- a) Background
 - there is a highly unsustainable use of vultures for this purpose
 - the topic deals with witchcraft, spirits and superstitions therefore it is difficult to seek information about the extent of the trade
 - the muthi culture is being spread to other countries (where it may not have existed very much previously)

- trade has always been present in some areas and is heavily ingrained in some local cultures
- demand has increased with increase in population. Methods of harvest are now more destructive (i.e. poisoning) and on a larger scale
- no longer just traditional beliefs, new superstitions have developed in recent years
- reasons for the need for vulture parts are varied
e.g. Botswana (used for vultures for clairvoyance) and only certain individuals that may harvest vultures. Low demand?
- currently no problem in East Africa, BUT birds in East Africa may be used to meet demands in West and South Africa
- huge issue to tackle and must recognise it exists, but there is little VSG can do about it on its own. However the threat is unsustainable and must be addressed especially with international links of the VSG.
- WSPA and other large NGOs have tried (for many years) to change traditional beliefs without much success

b) Suggested actions

- 1) Avoid lumping traditional healers (generally positive, or at least not negative) with uses for witchcraft (negative)
- 2) Establish whether the traditional healer associations include 'positive' and 'negative' healing in order to focus interactions in correct manner
- 3) Engage with associations of traditional healers
 - option is to offer a legal annual quota (but not considered successful in Zimbabwe or South Africa)
 - associations also deny use of vultures
 - South Africa has decided to tackle the belief system as a solution after much discussion and weighing of options
- 4) Share information about campaigns, solutions and results with all other countries
- 5) Promote research to try and determine how widespread the problem is in Africa, particularly in West Africa and confirm for East Africa
 - form links with and approach appropriate professionals to undertake this research (social scientists, psychologists etc.)
- 6) Regulate commercial trade, collection etc. Impose limits and/or a central repository
- 7) Look at ways of implementing changes in behaviour
 - change the belief system that encourages use of vulture parts
 - inform individuals that consuming poisoned vultures is dangerous to their health
 - in some cases the beliefs have become commercialised
- 8) Identify the 'muthi gatherers' since they are the ones collecting the parts

- 9) Seek advice also from other IUCN Specialist Groups with similar issues
i.e. ivory/rhino horn trade
 - what steps have been taken to demystify the trade and change cultural belief systems
- 10) Look outside Africa for solutions that have been implemented with success elsewhere

4) **Vultures as Food**

- West African problem
- vultures are 'served' to the population who may largely be ignorant of what they are eating

Topic 9: Public awareness, education and training

1) Public awareness would have two target audiences- international (funding) and local (conservation)

a) IVAD – International Vulture Awareness Day

- 1) Can we start it in other African countries using BirdLife partners?
- 2) Need support system/build capacity if no BirdLife partner present in country
- 3) Translate information – French, Portuguese, Spanish and Arabic
- 4) Tools for promoting IVAD and other awareness days:
 - use live vultures from rehabs
 - local museum specimens- but shouldn't encourage the collection (killing) of vultures for specimens
 - vulture puppets or plastic vulture replicates
- 5) Suggested actions
 - use BirdLife Africa Secretariat to identify countries with BirdLife partners that can host and promote IVAD
 - translate information into key languages (French, Arabic, Portuguese and possibly Spanish). Funding proposal to be prepared to get the translation done.

b) Use of social media

- 1) Facebook, You Tube clips, Twitter in countries where feasible
- 2) African Raptor website – log every poisoning event, weekly update of poisoning events
- 3) Translate African Raptor website into French
- 4) Vultures Rock website (Corinne Kendall)
- 5) Suggested actions

- vulture researchers to promote their work through social media to target a wider audience. Support the development of a webpage.
- c) Make vultures attractive and raise awareness through key events/activities – country specific
 - 1) Use key personalities e.g. Nelson Mandela
 - 2) Use sports to drive the message at a local level
 - run for the vulture – marathon linked to migration route of a vulture. Highlight threats on the way (poisoning, power lines etc).
 - 3) Sponsoring miles for cross-continent monitoring.
 - corporate donors to sponsor the event
 - Johannesburg – Kenya – Ethiopia – Senegal and rest of West Africa
 - 4) Filming teams e.g. National Geographic and Animal Planet
 - 5) Vulture movies, songs
 - 6) Overland tours- tour guides to brief guests on game drives
 - 7) UK Birdfair to raise awareness of vultures
 - 8) Host stand at relevant conferences such as PAOC and other events (energy related industry, farming community) – poster, pamphlets and video needed
 - 9) Propagate the impacts of poisoning of African vultures (and therefore killing of African Biodiversity)
 - 10) Public (even birdwatchers) are unaware of the crisis of vultures declining

2) Education

- a) Target school children
- b) Possibly via curriculum? This might not be time effective.
- c) Full time dedicated person responsible for education and to develop a strategy – identify key messages for key groups
- d) BirdLife partners (education officer), other local NGOs, wildlife clubs and park extension officers to assist with education and to include information on vultures when they visit schools
- e) Focus on visual aspects – pictures etc
- f) Highlight the importance of vultures (scavenging role) in the food chain
- g) Suggested action
 - increase collaborations with education officers and government to assist with education

3) Training- there is a shortage of both African vulture biologists and conservationists

- a) Who to train
 - extension officers who will be responsible for education work of school children

- field personnel who undertake vulture monitoring and surveys
 - BirdLife partners who monitor IBAs (Important Bird Areas) specific targeting regions with ‘unknowns’ – i.e. West Africa
 - graduate students in conservation sciences to be informed of the threats faced by vultures
 - training officers in problem areas – including energy related, agricultural and poison regulatory officers.
 - ground –level interaction: train local and field-level officers to interact with farmers
- b) Mode of training
- 1) Focused/intensive training in an African country for those countries where there is limited capacity or include as a pre-conference workshop (where costs travel would already be paid)
 - 2) Module included on vulture monitoring and long-term surveys in conservation training courses (universities and other institutions). Including practical experience e.g. colony monitoring
 - 3) Cross-country collaboration amongst universities. Funding is critical to do these studies through an African university. Funding also attracts students. Need to enrol at least one or two local African students.
- c) Funding for training
- 1) Fund available to sponsor one vulture student every four years to attend and to present at the PAOC – (possibly Leslie Brown grant)
 - 2) Use vultures and their ecosystem services to link to other broader topics that have more funding available for research
 - disease – water quality, human health safety
 - multiple country approach

Topic 10: The way forward

Regions of IUCN Species Survival Commission Vulture Specialist Group (SSC-VSG)

1. Africa
2. Asia
3. Europe
4. North America
5. South America

A framework (see page 39) was developed for the African Region. Each region will need to elect a representative Steering Committee. The African Steering Committee will consist of four or five regional representatives to oversee the Pan-African Vulture Strategy and its implementation. Members are elected to the Committee for a period of four years and can

be re-elected once. The Committee will meet annually with the two co-chairs of the VSG. Specific tasks of the Committee are to:

- fundraise and ensure African Vulture Secretariat position is established
- finalise Pan-African Vulture Strategy in terms of targets, dates and responsibility
- implement Pan-African Vulture Strategy
- communicate and coordinate activities
- endorse new members

Delegates elected the following representatives to the African Steering Committee

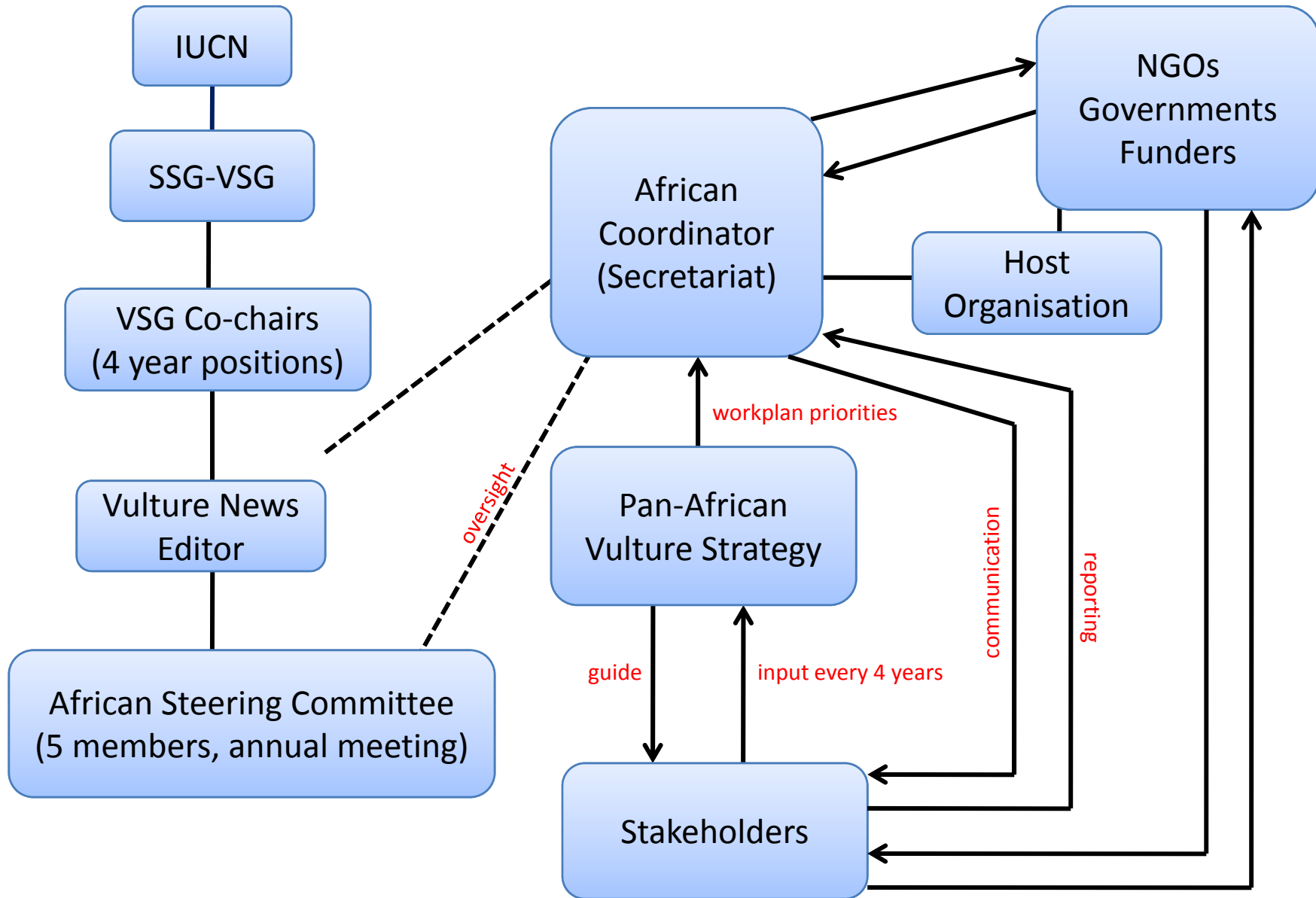
- 1) Munir Virani, East Africa, Regional Chair
- 2) Kariuki Nding'ang'a, East Africa
- 3) Ara Monadjem, South Africa
- 4) Sonja Kruger, South Africa
- 5) held vacant for a West African representative to be identified at the PAOC in October 2012

The Pan-African Vulture Strategy will guide the workplan that will be implemented by the proposed African Vulture Secretariat position. An existing organisation (IUCN or BirdLife) was suggested to recruit and manage the Secretariat position. Specific terms of reference for the proposed position include:

- 1) Communication
 - establishing newsletter(s)
 - identify and communicate with key stakeholders
 - soliciting contributions for Vulture News
 - overseeing email groups (African Raptors, African Vultures)
 - establishing and maintaining international coordination through direct contacts from stakeholders to governments
 - disseminating information to stakeholders and the public
- 2) Data collation and reporting
 - establishing a continental monitoring plan
 - managing databases
 - maintaining bibliography
- 3) Policy and advocacy
 - lobbying governments
- 4) Develop annual workplan and progress report
 - annual assessment of progress on strategy implementation
- 5) Creating greater awareness
 - coordinate International Vulture Awareness Day
 - establishing Champions of vulture conservation
- 6) Address specific issues as necessary

It was suggested that an Advisory Board could be created consisting of representatives of key stakeholder organisations. Also, a Pan-African Vulture Summit should be held every four years, perhaps in conjunction with the PAOC (i.e. two consecutive days).

Proposed framework for the Vulture Specialist Group: Africa Region



Resolution Supporting Vulture Conservation in Africa

Many vulture populations worldwide are in decline and face a range of threats from a variety of human-related factors. Eleven species of vulture occur on the African continent and the range and populations of these species have declined considerably. The range and extent of threats facing these species is varied, but include poisoning, habitat loss, energy infrastructure and unsustainable harvesting.

The Vulture Specialist Group of the IUCN Species Survival Commission aims to ensure the continued survival of vultures across the African continent. The Group will assess the population status of all African vulture species, identify the threats and implement appropriate conservation actions that effectively address the key threats to these birds.

To achieve this, a Pan-African Vulture Summit was convened in the Masai Mara, Kenya from April 16-20, 2012. Input was received from a wide range of vulture specialists, researchers, conservationists and government representatives from across the continent to develop a Pan-African Vulture Conservation Strategy. One outcome of the summit was the drafting of this resolution as a means to urge African governments to conserve and reduce threats to vultures across the continent.

RECOGNISING that vultures provide vital ecosystem services

RECOGNISING that seven of the eleven species of vulture that occur in Africa are listed in the IUCN Red Data Book

WHEREAS the participants of the 1st Pan-African Vulture Summit support the conservation and management of vultures in Africa

WHEREAS populations of vultures in East Africa have declined by > 65% over the last two decades

WHEREAS populations of vultures in West Africa have declined by > 90% over the last three decades

WHEREAS populations of vultures in southern Africa have significantly declined over the last three decades

WHEREAS populations of vultures in North Africa have disappeared from most of their former range

WHEREAS poisoning and the trade in vultures and their body parts cause large-scale mortalities leading to population declines

WHEREAS the proliferation of power lines and development of wind energy facilities are

significant threats to the survival of vultures

THEREFORE the participants of the 1st Pan-African Vulture Summit resolve to respectfully urge the governments of countries in Africa, and particularly the national custodians of wildlife in these countries to:

- recognise that vultures provide vital ecosystem services and are a critical component of ecosystems
- effectively regulate the import, manufacture, sale and use of poisons, including agricultural chemicals and pharmaceutical products known to be lethal to vultures
- legislate and enforce stringent measures to prosecute and impose harsh penalties on perpetrators of poisoning and those illegally trading in vultures and/or their body parts
- ensure appropriate levels of protection and management for vultures and their breeding sites
- ensure that all new energy infrastructure is vulture-friendly and that existing unsafe infrastructure is modified accordingly
- support research, capacity building and outreach programmes for the conservation and survival of healthy vulture populations.

Unanimously adopted on the 20th of April 2012 at Ilkeliani Camp, Masai Mara, Kenya by the delegates

Name

Organisation

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Andre Botha	Co-chair: SSC VSG, Endangered Wildlife Trust, South Africa
Campbell Murn	Hawk Conservancy Trust, UK
Corinne Kendall	Princeton University/ National Museums of Kenya
Darcy Ogada	The Peregrine Fund/Raptor Working Group, Kenya
Derek Pomeroy	Makerere University, Uganda
David Allan	Durban Natural Science Museum, South Africa
Erustus Kanga	Kenya Wildlife Service
Fred Barasa Munyekenye	Nature Kenya
Hanneline Smit	Birdlife South Africa
Holger Kolberg	Ministry of Environment and Tourism, Namibia
Ian Rushworth	Ezemvelo KZN Wildlife, South Africa
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Keith Bildstein	Hawk Mountain Sanctuary, USA
Kerri Wolter	VulPro, South Africa

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Masumi Gudka	Independent, Kenya
Megan Diamond	Endangered Wildlife Trust, South Africa
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Simon Thomsett	National Museums of Kenya
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Wendy Borello	Botswana
Warren Goodwin	SELF (Raptor repairs), Zimbabwe
Walter Naser	VulPro, South Africa
Yilma Dellelegn Abebe	Ethiopian Wildlife & Natural History Society



André Botha
Co-Chair
IUCN SSC Vulture Specialist Group



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