

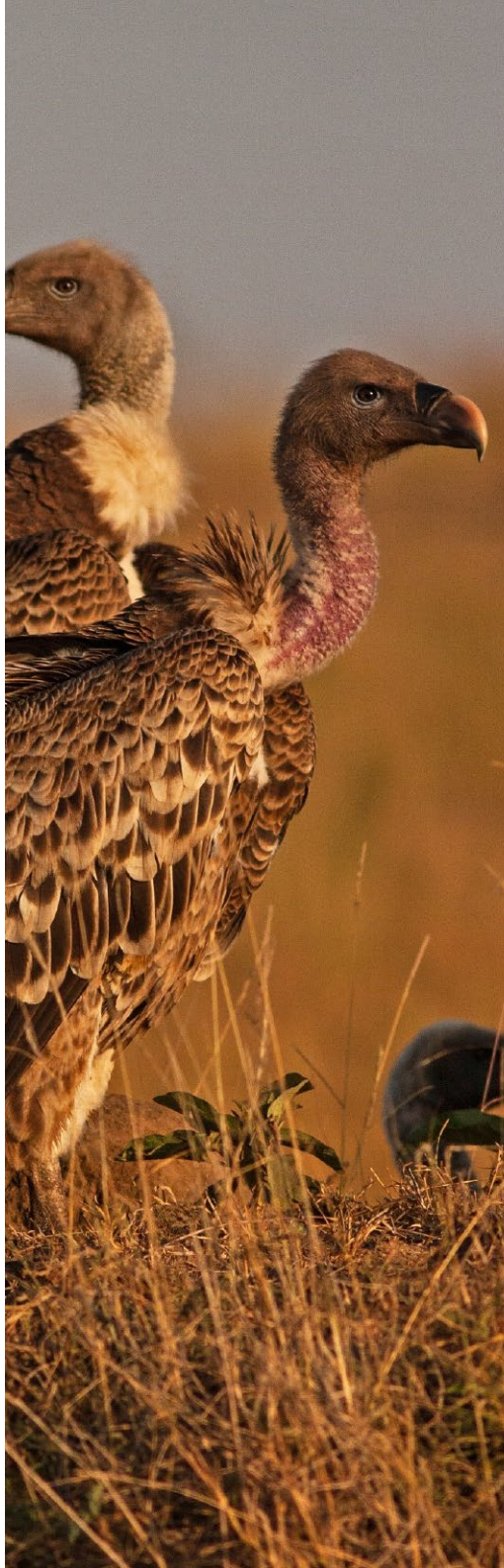


WEST AFRICAN VULTURE CONSERVATION ACTION PLAN 2023 - 2043



LIFE16 NAT/EG/00874





The Convention on the Conservation of Migratory Species of Wild Animals (CMS) is an environmental treaty of the United Nations that provides a global platform for the conservation and sustainable use of migratory animals and their habitats. CMS brings together the Range States of migratory animals and lays the legal foundation for internationally coordinated conservation measures throughout their migratory range.

The Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MOU) is an international agreement established under the framework of CMS. It aims to promote internationally coordinated actions to achieve and maintain the favourable conservation status of migratory birds of prey throughout their range in the African-Eurasian region, and to reverse their decline when and where appropriate.

BirdLife International is the oldest international conservation organisation and the largest global partnership of conservation organisations (NGOs). BirdLife has a total of 115 Partners worldwide operating in 115 countries/territories and still growing. BirdLife's Vision is of a world rich in biodiversity with people and nature living in harmony, equitably and sustainably. Our Mission is to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources.

The International Union for Conservation of Nature (IUCN) encourages meetings, workshops and other fora for the consideration and analysis of issues related to conservation and believes that reports of these meetings are most useful when broadly disseminated.

The designation of geographical entities in this report, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. Further, the information and views set out in this report do not necessarily reflect the official opinion of the IUCN. The IUCN, nor any person acting on the IUCN's behalf, including any authors or contributors, may be held responsible for the use which may be made of the information contained therein.

IUCN Species Survival Commission (SSC) is the largest of IUCN's six volunteer commissions with a global membership of thousands of experts. SSC advises IUCN and its members on the wide range of technical and scientific aspects of species conservation and is dedicated to securing a future for biodiversity. SSC has significant input into the international agreements dealing with biodiversity conservation.

IUCN SSC Conservation Planning Specialist Group (CPSG) was established in 1979. Its mission is to increase the effectiveness of conservation efforts worldwide through scientifically sound, collaborative planning processes that bring together people with diverse perspectives and knowledge to catalyse positive change for species. CPSG provides species conservation planning expertise to governments, other SSC Specialist Groups, zoos and aquariums, and other wildlife organisations. CPSG follows a core set of Species Conservation Planning Principles and Steps which underpin all its planning processes.

Contributors

Lists of participants at the workshop and of other contributors can be found in Appendix I.

The following contributors provided country-level summaries of work undertaken to study and conserve vulture species within the West African subregion: Violeta Barrios (for Chad and Niger), Fagimba Camara (The Gambia), Geoffroy Citegetse (Guinea Bissau and Senegal), Clement Dabone (Burkina Faso), Justus Deikumah (Ghana), Samson Dognimon (Benin) and Joseph Onoja (for Nigeria).

Milestones in the Production of the Plan

Threat Assessment – [September 2022]

Planning Workshop – [October 2022]

First Draft – [December 2022]

Second/Final Draft – [July 2023]

Geographical Scope

16 West Africa countries, which host populations of one or more of the species that are the focus of the West African Vulture Conservation Action Plan: Benin, Burkina Faso, Cameroon, Chad, Côte D'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

Species Scope

This Plan covers the following threatened species breeding in the subregion: Egyptian vulture (*Neophron percnopterus*), Hooded vulture (*Necrosyrtes monachus*), Lappet-faced vulture (*Torgos tracheliotos*), Rüppell's vulture (*Gyps rueppelli*), White-backed vulture (*Gyps africanus*), and White-headed vulture (*Trigonoceps occipitalis*).

Reviews

This plan should be reviewed and updated in 2030. At that time, a decision shall be made on when to undertake the in-depth review of the Action Plan. An emergency review could be undertaken if there is a significant change to the species' status before the next scheduled review.

Recommended citation

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Authority for Taxonomy, Sequence and Species Names

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Front Cover Photo

Rüppell's Vultures © André Botha

Acknowledgements

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The Nigerian Conservation Foundation led the in-country coordination of the workshop that birthed this Action Plan. This involved the invitation of the critical stakeholders – government representatives, academia, traditional healers and NGOs within the West African sub-region.

BirdLife International coordinated the development of the Action Plan and pulled together the contribution of its partners with their experience, knowledge and implemented actions to address threats in West Africa helped to shape the current Action Plan.

The Conservation Planning Specialist Group (CPSG) of the IUCN Species Survival Commission led on planning process design, facilitation, and acted in an editing capacity to help produce the Action Plan itself.

Lastly, funding kindly provided through the IUCN SSC Integral Grants Programme was instrumental in the development of the threat analysis report which contributed foundational information to the production of this Action Plan.



Foreword

The decline of African vultures is a heart-wrenching reality that has plagued our world since the 1990s. These magnificent creatures play a key role in ecosystems and their loss would have devastating consequences for us all.

West Africa is home to six species of vultures, all of which are classified as Endangered or Critically Endangered: Egyptian vulture *Neophron percnopterus*, Hooded vulture *Necrosyrtes monachus*, Lappet-faced vulture *Torgos tracheliotos*, Rüppell's vulture *Gyps rueppelli*, White-backed vulture *Gyps africanus*, and White-headed vulture *Trigonoceps occipitalis*.

Over the past decade, there have been concerted efforts to understand the threats that vultures face in West Africa. Research has revealed that the demand for vulture parts for belief-based use is at the root of the decline of the species across the subregion, fuelling illicit trade in all six species. In addition, vultures in West Africa are also threatened by indirect poisoning through the consumption of poisoned carcasses, direct killing for their meat, and habitat destruction and degradation.

To turn the tide, the first discussions towards an Action Plan to save West African vultures took place in Abuja, Nigeria in 2022. Finalised thereafter, the West African Vulture Conservation Action Plan (WAVCAP) provides a 20-year vision (2023-2043) to restore vulture populations to sustainable levels across the subregion. This Action Plan, which is linked to the Convention on Migratory Species Vulture Multi-species Action Plan (CMS Vulture MsAP), aims to reduce the killing and trade of vultures for belief-based use, protect them from indirect persecution and direct killing, develop a legal framework to enforce a ban on vulture trade, and promote a positive perception of these species among the public.

The decline of West African vultures is a wake-up call for us all and the WAVCAP is our opportunity to take action. Let us rise to the challenge and safeguard the future of these magnificent creatures and that of the generations to come that will depend on them.

March, 2023



Barr. Mohammed H. Abdullahi
Honorable Minister of Environment,
Abuja, Nigeria.

Executive Summary

In October 2022, 32 stakeholders from 12 West African States gathered in Abuja, Nigeria for a three-day workshop to develop the West African Vulture Conservation Action Plan (WAVCAP). The plan was needed to respond to the imminent threat posed by belief-based use, i.e. use of whole vultures or their body parts for believed medicinal or mystical purposes. The workshop was facilitated by the IUCN Species Survival Commission's Conservation Planning Specialist Group (CPSG) and was based on an internationally recognised core set of Species Conservation Planning Principles and Steps, with a focus on maximising collaboration and consensus-building among the stakeholders involved.

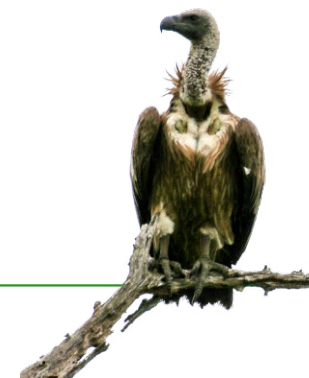
This WAVCAP focuses on six species of vulture found in West Africa: Egyptian vulture (*Neophron percnopterus*), Hooded vulture (*Necrosyrtes monachus*), Lappet-faced vulture (*Torgos tracheliotos*), Rüppell's vulture (*Gyps rueppelli*), White-backed vulture (*Gyps africanus*), White-headed vulture (*Trigonoceps occipitalis*). The Action Plan focuses on 16 nations, 14 of which are members of the Economic Community of West African States (ECOWAS): Benin, Burkina Faso, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo, with Cameroon and Chad included. Cases of vultures killed, and their parts traded for belief-based use have been reported in all these nations, with some, such as Nigeria and Benin, serving as regional "hubs" for cross-border vulture trading.

The WAVCAP is a subregional Action Plan to guide West African states in reducing the risks posed to these six vulture species. By 2043 it is hoped that the WAVCAP will have resulted in vulture population recovery to sustainable levels, protected by effective legal frameworks and living in a healthy environment, in harmony with people.

Removing threats to a level where vulture populations can recover will be a complex and lengthy process. It will involve the implementation of the actions contained in this plan, learning from their impact and adapting accordingly, so that future actions can be more effective and efficient.

The 2043 vision is supported by a seven-year Action Plan, designed to tie in with the completion of the existing Convention on Migratory Species Multi-species Action Plan to Conserve African-Eurasian Vultures (CMS Vulture MsAP) in 2029. It is expected that more action planning will be necessary beyond this point to realise the 2043 vision and that such planning will benefit the lessons learnt globally from the implementation of the 2017-2029 CMS Vulture MsAP.

The WAVCAP includes five strategic goals each with its own required set of actions. These goals focus on reducing killing and consumption of vultures for belief-based use and reducing the threat posed by unintentional killing across the subregion, in particular, using poisons. These goals recognise the cross-border nature of trade in these species and aim to substantially reduce it, resulting in the stabilisation and then recovery of vulture populations across the subregion. The Action Plan recognises the need for clear and purposeful governance to ensure its effective implementation, and the formation of both national and subregional committees (each with their own focal points) to realise this end.



Overview of the West African Vulture Conservation Action Plan 2023–2043

Vision

By 2043, vulture populations across West Africa have achieved sustainable levels, are protected by effective legal frameworks, and live in a healthy environment in harmony with people.

Success Indicators

Vulture populations achieve sustainable levels

- IUCN conservation status of the six species moves to non-Threatened categories.
- Improved availability of safe sites for vultures to feed and nest.

Protected by effective legal frameworks

- All species legally protected in all countries.
- Legislation effectively enforced.
- Improved regulation of chemicals linked to vulture mortality.
- Reduced national and international trade in vultures and their parts.

Live in a healthy environment

- Decreased disease occurrence linked to waste matter not being removed by vultures.

Live in harmony with people

- Reduced killing of vultures for food and belief-based trade/use.
- Increased public awareness and positive perception of the value of vultures.
- Substitution of vulture parts used in traditional practices for sustainable alternatives.

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Background and approach

1.1 Background

The West African Vulture Conservation Action Plan (WAVCAP) focuses on six species of vulture that occur across West Africa (Table 1), all of which are threatened with extinction, mainly due to trade for belief-based use.

Species	IUCN Red List Status
Rüppell's vulture (<i>Gyps rueppelli</i>)	Critically Endangered
Egyptian vulture (<i>Neophron percnopterus</i>)	Endangered
Hooded vulture (<i>Necrosyrtes monachus</i>)	Critically Endangered
Lappet-faced vulture (<i>Torgos tracheliotos</i>)	Endangered
White-backed vulture (<i>Gyps africanus</i>)	Critically Endangered
White-headed vulture (<i>Trigonoceps occipitalis</i>)	Critically Endangered

Table 1.
The six vulture species representing the conservation concern for this plan.

Geographically, the plan concerns 16 countries: Benin, Burkina Faso, Cameroon, Chad, Côte D'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo.

Incidents of mass vulture killings and cases of their body parts being traded for use in belief-based use have been documented in all these countries, with some - such as Nigeria and Benin - representing important regional 'hubs' for cross-border vulture trade (Buij, et al., 2016).

In January 2020, more than 2,000 hooded vultures were found dead in Guinea-Bissau, many of which had had their heads removed (Henriques, et. al., 2020). This event was not isolated, but one of multiple incidents of vulture mass mortalities linked to poisoning and subsequent removal of body parts for belief-based uses across the subregion. The CMS Vulture MsAP, identifies killing for trade in belief-based use as being a primary driver of vulture population declines across West Africa. The plan goes further to state that poisoning is, '...by far the most significant threat...' facing vulture species globally (Botha et al., 2017) .

The need for action to reduce the imminent threat posed to vultures within West Africa through trade for belief-based use was the primary motivation for the development of the current WAVCAP. It will support achieving Objective 4 of the CMS Vulture MsAP, 'To reduce and eventually to halt the trade in vulture parts for belief-based use'; thereby contributing to Objective 1 of the CMS Vulture MsAP, 'To achieve a significant reduction in mortality of vultures caused unintentionally by toxic substances used (often illegally) in the control and hunting of vertebrates'; and Objective 10, 'To substantially reduce levels of direct persecution and disturbance of vultures caused by human activities, including actions to better understand the motivations behind persecution, and to identify approaches that could mitigate this threat'. In addition, the WAVCAP is designed to contribute to achieving Objective 11, 'To support vulture conservation through cross-cutting actions that contribute to addressing knowledge gaps'. These objectives recognise that unintentional killing of vultures (again primarily using poisons) is an additional threat to vultures within West Africa, where efforts to remove predatory species such as big cats or feral dogs, indirectly contribute to vulture mortality.

The WAVCAP is a subregional plan, designed to guide actions within and between countries in West Africa in their efforts to curb the threats to these six vulture species. The WAVCAP is directed towards the realisation of a 2043 vision for West African vultures.

This vision recognises that removing threats to a level at which vulture populations can stabilise and recover will be a lengthy process, involving the implementation of actions contained within this plan and learning from their impacts so future actions can increasingly effective and efficient.



Under the 2043 vision sits a seven-year (2023–2029) suite of goals (with associated actions) designed to tie in with the completion of the existing CMS Vulture MsAP in 2029. It is assumed that further action-planning will be required after this point to realise the 2043 vision and such planning will benefit from learning and improvement gained through implementation of the 2017–2029 CMS Vulture MsAP.

1.2 Approach

In January 2020, the Chair of the IUCN Species Survival Commission (SSC) Vulture Specialist Group approached the IUCN SSC Conservation Planning Specialist Group (CPSG) to request support in developing a plan to counter the threat posed by trade for belief-based use to vultures within West Africa. At this point an Organising Team (Appendix II) consisting primarily of vulture conservation biologists from within West Africa, was formed to design the planning process. The first step in the process was to collate information on the state of knowledge about direct persecution of vultures, primarily for belief-based use, and indirect poisoning. This resulted in the development of the West African Vulture Persecution Threat Analysis Report. The global COVID-19 pandemic presented challenges in bringing a broader group of stakeholders together to develop a plan of action based on this report. However, in October 2022, 32 stakeholders from 12 countries across West Africa (Appendix I) convened for a three-day strategy development workshop organized by BirdLife International and the Nigerian Conservation Foundation in Abuja, Nigeria.

The workshop was facilitated by the IUCN SSC CPSG and was based on an internationally-recognised, core set of Species Conservation Planning Principles and Steps, focused on maximising collaboration and consensus-building between the stakeholders involved. The first day of the workshop was devoted to sharing information on the vulture species and the threats they face, and a critical review of the existing threat analysis report.

Stakeholders were broadly in agreement with the findings contained in the West African Vulture Persecution Threat Analysis Report as a summary of the state of knowledge about these threats and their drivers. Stakeholders added valuable additional comments (Appendix III) and produced a map of the hypothesised supply chain linking initial drivers of vulture killing to trade and sale for mystical beliefs and traditional medicine use (Appendix IV).

Towards the end of the first day of the strategy development planning workshop, stakeholders worked together to draft a shared 2043 vision for the strategy. The second day focused on developing seven-year goals to alleviate threats, the timeline being designed to tie in with the existing CMS Vulture MsAP, which will end in 2029. On the third day, stakeholders identified suites of actions to achieve priority goals and drafted a governance structure to oversee the implementation of the strategy.

Focal species and their status

2.1 Species distribution

Africa supports 11 of the 23 currently recognised species of vultures (Hertz, 1994; Campbell, 2015), making it the most 'vulture rich' continent in the world. West Africa is home to eight of the 11 African species (Borrow & Demey, 2004; Deikumah, 2020) including the six species in focus for the WAVCAP (Figure 1).

2.2 Ecosystem roles

Vultures are large scavenging birds of prey, that, due to their very acid (pH1–2) gastric fluids can digest decomposing carcasses that are already infected with toxic bacteria that would be harmful to other scavenger species (Ogada et al., 2012a, Ogada et al., 2012b; Hill et al., 2018; DeVault et al., 2016).

Whilst consuming such carcasses, vultures potentially remove dangerous bacteria from the environment, thereby providing a crucial ecosystem service to humans (Heever et al., 2021). In their absence, the exposure of rotting animal matter may increase the population of opportunistic species, such as feral dogs or rats.



These species can act as disease reservoirs that can increase the rates of transmission of infectious diseases, such as rabies and bubonic plague, to both humans and livestock (Ogada et al. 2012b; Baldé, 2016). A recent study in India has shown that human mortality in areas where vultures had become extinct increased by 4%, with evidence of increase of feral dog population and cases of rabies and declined water quality (Frank and Sudarshan, 2023).

2.3 Threats

West Africa has experienced the most significant vulture population crash across the continent (Ogada et al., 2016), although exact population size and distribution estimates at regional and national scales is at best imperfect. Threats to African vulture species in general are diverse and multiple, including susceptibility to habitat conversion for agro-pastoral systems; loss of wild ungulates leading to reduced availability of carrion; and hunting for human consumption (Ogada et al., 2016). Vultures are also poisoned (Odino et al., 2014) as a perceived pest directly and killed indirectly through the provision of poison carcasses to target species such as feral dogs and other predators (e.g. Mullie et al., 2017). Of particular concern is the growing threat posed by direct human persecution, which often involves poisoning, including for belief-based use.

Although not restricted to occurrences in West Africa (Ogada et al., 2016), intentional poisoning of vultures, primarily for belief-based use, has been documented in: Burkina Faso, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Niger, Nigeria, Sierra Leone, and Senegal. A variety of poisons are employed in killing vultures, including insecticides such as carbofuran lindane, nicotine powder and pesticides such as strychnine and warfarin.

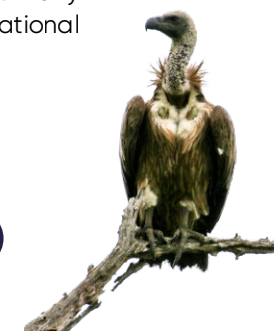
At the centre of the belief-based use are the traditional practitioners and healers. The main difference between a traditional healer and a traditional practitioner is that traditional

healers focus primarily on spiritual and cultural aspects of healing, while traditional practitioners focus primarily on the use of traditional or indigenous forms of medicine, such as herbalism and acupuncture. A mystic healer is a type of traditional healer who uses spiritual and cryptic/magical practices to promote healing. They may also be known as spiritual healers or energy healers. They believe that illness and injury are caused by imbalances in the body's energy field, and that healing can be achieved by restoring balance to this energy field. Both traditional practitioners and healers could use vulture parts in their professional practice. Farmers and hunters are a primary group believed to be involved in vulture killing though others (including traditional healers) also participate in the practice (Williams et al., 2021). The selling of vultures or vulture parts is believed to involve men aged between 25-45 years old (coinciding with the demographic group that is often most active as hunters and where the greatest financial need may be) (Williams et al., 2021; Atuo and O'Connell, 2015). Several cultural groups have been documented to be involved in trading vultures or vulture parts for belief-based use. Medicinal traders involved often seem to inherit the profession from their parents pointing to the importance of generational linkages.

A range of vulture parts are sold, including heads, legs, eggs, feathers, bones and even faeces, in the belief they can cure a variety of ailments be they physical, mental and spiritual in nature. The use of vulture parts for such purposes seems to be common knowledge, particularly in countries such as Nigeria. There is evidence of significant cross-border trade in vulture parts (Rondeau and Thiollay, 2004; Buij et al. 2016; UNEP/WCMC, 2021). For example, there appears to be movement of vultures and vulture parts from Ghana to Nigeria (Gbogbo 2016), and from Niger, Benin, Sudan, Cameroon and Chad into Nigeria (UNEP/WCMC 2021).

The analysis by the World Conservation Monitoring Center (WCMC, 2020) indicates that the CITES documented trade of wild caught vultures in the decade 2009-2018 from this region is very limited and involves only Cameroon, Ghana and Togo. The only commercial reported trade within the region involved 12 vultures traded between Togo and Ghana.

These numbers do not match the number of vultures reported for sale at many markets across the region (e.g., Buij et al., 2016) nor the evidence of international trade within the region.



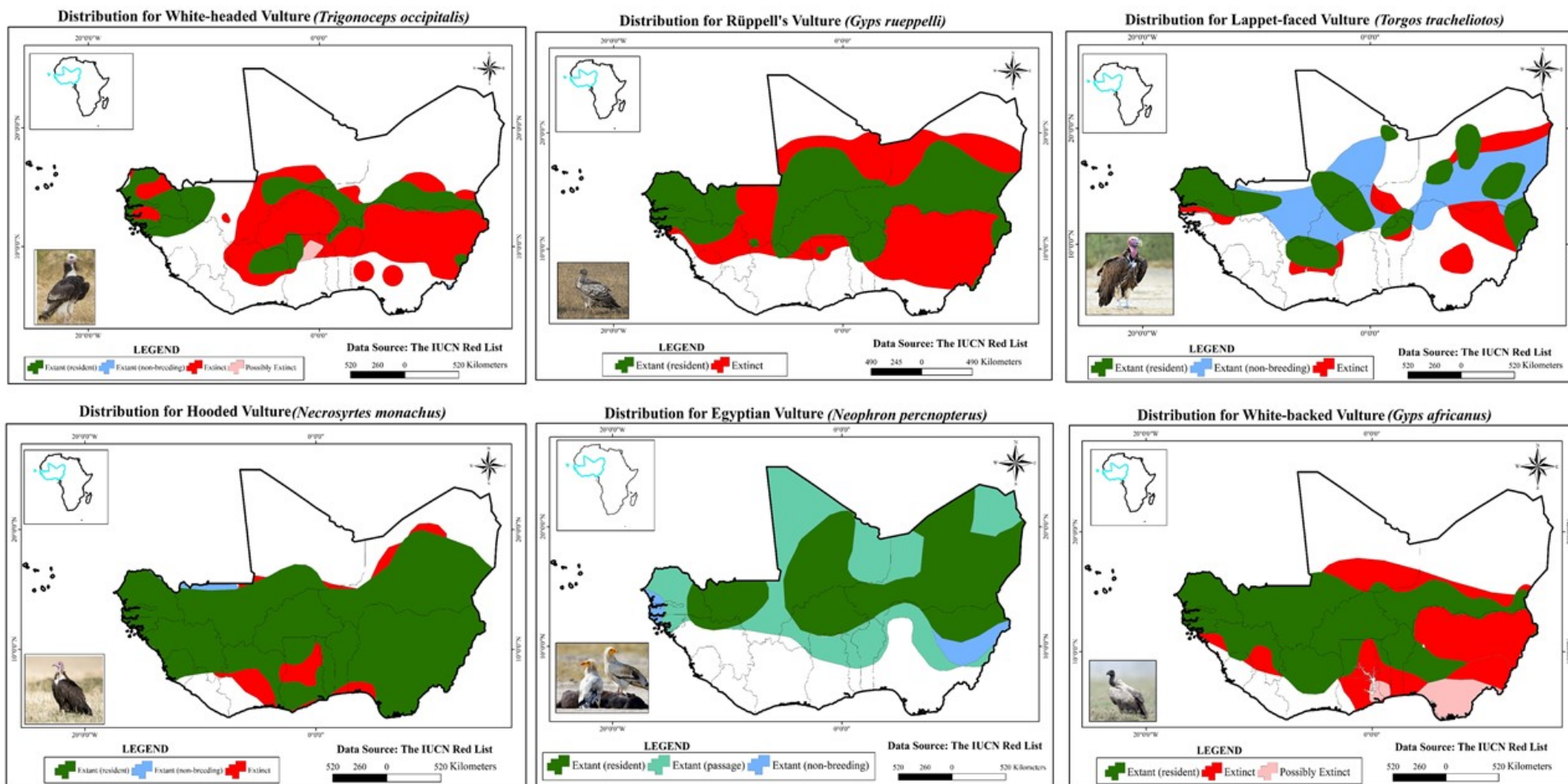
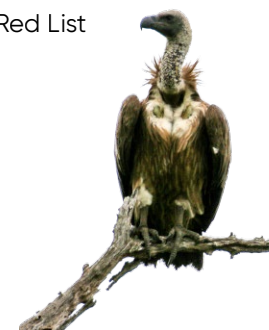


Figure 1. West African distribution of the six focal species of the WAVCAP [BirdLife International and Handbook of the Birds of the World 2021. The IUCN Red List of Threatened Species. Version 2022-2. Maps downloaded on 22 December 2022].



The killing and sale of vultures for belief-based use is fuelled by demand based on widespread belief and the high financial returns that can be achieved (e.g. Deikumah, 2020). The value of vultures in the trade has increased significantly in recent years (UNEP-WCMC, 2021). A lack of alternative livelihood options (Atuo and O'Connell, 2015), limited access to modern healthcare systems and a lack of relevant laws or law enforcement collectively provide the conditions in which the trade can flourish

2.4 International legal framework

Three Multilateral Environmental Agreements provide the legal framework to address the killing and the national and international trade in vulture parts (Table 2).

The **Convention on the Conservation of Migratory Species of Wild Animals** (CMS) provides a global platform for the conservation and sustainable use of migratory animals and their habitats. Migratory species threatened with extinction are listed in Appendix I of the Convention. CMS Parties strive towards strictly protecting these animals, conserving or restoring the places where they live and controlling other threats. Migratory species that would benefit from international cooperation are listed in Appendix II. All vultures covered by this action plan are listed in both Appendices of CMS.

CMS provides instruments and tools relevant to vulture conservation globally and in West Africa. This includes a Memorandum of Understanding (MOU), CMS Resolutions and Task Forces, as well as developed guidelines.

The **Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia** (Raptors MOU), is accompanied by an Action Plan outlining specific activities of relevance to this document, including:

1.2. Review relevant legislation and take steps where possible to make sure that it protects all birds of prey from all forms of a) deliberate killing, b) deliberate disturbance at nest sites and communal roost sites [...]. Unless this is authorised by the competent body and only where the action is sustainable and not detrimental to the conservation status of the species concerned

1.3 Review relevant legislation and take steps where possible to ban the use of exposed poison baits for predator control and those chemicals where they have been shown to cause significant avian mortalities

3.4 Taking into account the needs of birds of prey conservation in sectors and related policies such as agriculture, forestry, fisheries, industries, tourism, energy, chemicals and pesticides

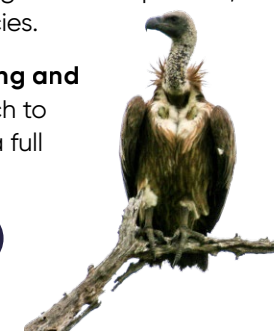
5.4 Assess and then address the impacts of the use of toxic chemicals on breeding, passage and wintering populations of birds of prey, and their survival, identify and then implement appropriate measures to assist in achieving and maintaining Favourable Conservation Status

6.1 Prepare National, Regional or Sub-Regional strategies, or equivalent documents, for birds of prey (taking into account the need for collaborative trans-boundary measures with adjacent Signatory States)

CMS Resolution 12.10 on Conservation of African-Eurasian vultures, adopted the Vulture Multispecies Action Plan to which the present document is a regional implementation instrument and urges the Parties and non-Parties to implement it and urgently address the problem of poisoning of vultures.

CMS Resolution 11.15 (Rev.COP13) on Preventing poisoning of migratory birds, encourages Parties and Signatories to the Raptors MOU to identify those areas where poisoning is causing significant mortality in migratory birds, and to address these as a matter of priority. It also calls on Parties and non-Parties, including inter-governmental organizations and other relevant institutions, to develop strategies to address poisoning, and relevant legislation to prevent, minimize, reduce or control the impact of poisoning on migratory bird species.

CMS Resolution 11.16 (RevCOP13) on The prevention of illegal killing, taking and trade of migratory birds urges Parties to adopt a zero-tolerance approach to any deliberate illegal killing, trapping or trade of wild birds, and to adopt a full



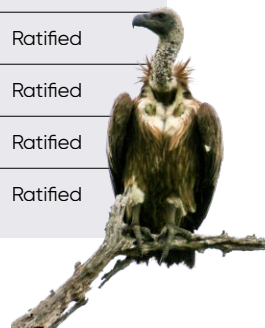
and proactive role in fighting against these illegal activities. It also urges Parties to prioritize cases of illegal killing, trapping or trade of birds, with special attention to profit-motivated crime and organized crime, taking into account the different levels of persons involved, from individuals to organized crime groups.

CMS Decision 13.50 on Conservation of African-Eurasian Vultures encourages Parties and non-Parties to develop partnerships with anti-poaching initiatives and conservation groups concerned with poisoning of other taxonomic groups, including developing training courses, translating and disseminating examples of best practice, sharing protocols and regulations, transferring technology, and promoting the use of online tools to address specific issues that are relevant to the Vulture MsAP. New decisions were discussed at CMS COP14.

CMS Guidelines to Prevent the Risk of Poisoning to Migratory Birds address the use of poison-baits driven by the need for predator control, and as a means for harvesting birds for human consumption and traditional medicine, by suggesting legislative and non-legislative actions.

Table 2. Overview of international engagement with conventions relevant to the conservation of vultures across West Africa.

Country	CMS	Raptors MOU	CITES	ACNNR	ECOWAS	African Union	Stockholm Convention	Rotterdam Convention
Benin	Party		Party	Signed	Member State	Member State	Ratified	Ratified
Burkina Faso	Party	Signatory	Party	Ratified	Member State	Member State	Ratified	Ratified
Cameroon	Party		Party	Ratified		Member State	Ratified	Ratified
Chad	Party	Signatory	Party	Signed		Member State	Ratified	Ratified
Côte D'Ivoire	Party	Signatory	Party	Ratified	Member State	Member State	Ratified	Ratified
Gambia	Party	Signatory	Party	Signed	Member State	Member State	Ratified	Ratified
Ghana	Party	Signatory	Party	Ratified	Member State	Member State	Ratified	Ratified
Guinea	Party	Signatory	Party	Ratified	Member State	Member State	Ratified	Ratified
Guinea-Bissau	Party		Party	Signed	Member State	Member State	Ratified	Ratified
Liberia	Party		Party	Ratified	Member State	Member State	Ratified	Ratified
Mali	Party	Signatory	Party	Ratified	Member State	Member State	Ratified	Ratified
Niger	Party	Signatory	Party	Ratified	Member State	Member State	Ratified	Ratified
Nigeria	Party		Party	Ratified	Member State	Member State	Ratified	Ratified
Senegal	Party	Signatory	Party	Ratified	Member State	Member State	Ratified	Ratified
Sierra Leone			Party	Signed	Member State	Member State	Ratified	Ratified
Togo	Party	Signatory	Party	Ratified	Member State	Member State	Ratified	Ratified



The **Convention on International Trade in Endangered Species of Wild Fauna and Flora** (CITES) regulates the international trade in wild animals and plants, both whole animals/plants, and their parts or derivatives, to ensure that it does not threaten their survival. The species covered by CITES are listed in Appendices, according to the degree of protection they require. Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances. Appendix II includes species not necessarily threatened with extinction, but for which trade must be controlled to avoid utilization incompatible with their survival. All vultures covered by this action plan are listed in Appendix II of CITES, hence their international trade requires the issuance of export permits by national CITES Management Authorities upon advice from national CITES Scientific Authorities.

CITES Decisions 18.90 (Rev. CoP19), 1984 - 1986 (Wildlife crime enforcement support to West and Central Africa) calls for Parties importing CITES specimens from West and Central Africa to ensure sustainable levels of trade are ensured. Furthermore, Parties in the two regions are strongly encouraged to enhance collaboration and communication regarding illegal wildlife trade, and to, through the Economic Community of West African States (ECOWAS) Commission, request support from International Consortium on Combating Wildlife Crime (ICWC) for the implementation of the ICWC Guidelines for Wildlife Enforcement Networks, to facilitate fully operationalizing the West Africa Network to Combat Wildlife Crime.

CITES Decisions 19.192 and 19.193 West African Vultures (Accipitridae spp.) calls upon Parties in West Africa to consider vultures in their implementation of the West Africa Strategy on Combating Wildlife Crime (WASCWC), ensuring that national laws to protect vultures and control trade in vulture parts and derivatives are effectively implemented, in compliance with CITES.

The **African Convention on the Conservation of Nature and Natural Resources** (ACNRR) demonstrates how the Contracting States (i.e. those that have signed and ratified the convention) recognize the importance and urgency to accord special protection to those animal and plant species that are threatened with extinction, or which may become so, and to the habitat necessary to their survival. Species classified as Class A (which includes all vultures) shall be protected throughout the entire territory of the Contracting States. Any taking shall be permitted only on the authorization of the highest competent authority and if required in the national interest or for scientific purposes.

Most of the states included in the geographic scope of the present Action Plan are members of the **Economic Community of West African States** (ECOWAS). ECOWAS was established through the Lagos Treaty to foster the ideal of collective self-sufficiency for its member states. The aim of the Community is to promote co-operation and integration, leading to the establishment of an economic union in West Africa to raise the living standards of its peoples, and to maintain and enhance economic stability, foster relations-among Member States and contribute to the progress and development of the African continent. Pursuant to Article 29 the Member States commit to undertake to protect, preserve, enhance the natural environment of the subregion, and co-operate in the event of natural disasters. In addition, they commit to adopt policies, strategies and programmes at national and subregional levels and establish appropriate institutions to protect, preserve and enhance the environment.

The **African Union** (AU) is a continental body consisting of the 55 member states that make up the countries of the African Continent. The AU is committed to protecting biodiversity and ecosystems from further destruction and degradation. The Commission supports and facilitates efforts by member states, through the African Group of Negotiators (AGN) to secure a post-2020 Global Biodiversity Framework that aims to halt and reverse biodiversity loss by the year 2030. The African Union is particularly concerned with the unsustainable use of African wild fauna and flora, and the increase in the illegal trade in wild flora and fauna in recent years, undermining sustainable development, peace, security, rule of law and good governance. In 2015 the AU launched the **African Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa**.

The **Stockholm Convention on Persistent Organic Pollutants** (POPs) is an international treaty to protect human health and the environment from the harmful effects of POPs.



The Convention requires that Parties take measures to eliminate or restrict the production and use of certain hazardous chemicals on the list of POPs in the Convention. The list includes lindane which is among the chemicals used in poison baits in the region.

The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade is an international treaty promoting shared responsibility between exporting and importing countries in protecting human health and the environment from certain banned or restricted hazardous chemicals and pesticides. It also provides a mechanism for the exchange of information about potentially hazardous chemicals. Carbofuran and lindane are both listed in Annex III as they have been banned or severely restricted for health or environmental reasons by two or more Parties (none of them have been restricted in West Africa).

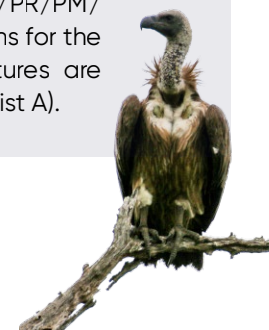
Table 3 –

Global conservation status and international legal status of the 6 species of vultures.

Species	Global IUCN Red List Category	CMS Appendix	Raptors MOU Category	CITES Appendix	ACNRR Class
Egyptian Vulture <i>Neophron percnopterus</i>	EN	I & II	1	II	A
Hooded Vulture <i>Necrosyrtes monachus</i>	CR	I & II	1	II	A
Lappet-faced Vulture <i>Torgos tracheliotos</i>	EN	I & II	1	II	A
Ruppell's Vulture <i>Gyps rueppelli</i>	CR	I & II	1	II	A
White-backed Vulture <i>Gyps africanus</i>	CR	I & II	1	II	A
White-headed Vulture <i>Trigonoceps occipitalis</i>	CR	I & II	1	II	A

2.5 National legal frameworks

Country	Protection afforded to Vultures
Benin	All vulture species are fully protected by Law No. 2002-16 dated 18 October 2004, on the wildlife regime in the Republic of Benin. Vultures are in Appendix I of the decree N°2011-394 of 28 May 2011. Appendix I covers species that are fully protected and therefore prohibited from hunting and trade. Benin voted in a Law No. 2021-04 July 08, 2021, on the protection and rules relating to international trade in wild species of fauna and flora threatened with extinction in the Republic of Benin.
Burkina Faso	Vultures have been wholly protected since 1960 through several legislative decrees the most recent being N° 1996-061-PRES/PM/MEE/MATS/MEFP/MCIA/MTT of 11 March 1996 concerning the regulation of the exploitation of Burkina Faso's wildlife.
Cameroon	All Vultures are protected under an equivalent of CITES Appendix 2
Chad	Law N°14/PR/2008 covers forestry, wildlife and fishery resources and organises fauna species into two categories: fully protected (list A) and partially protected species (List B). Decree N°380/PR/PM/MAE/2014 establishes the terms and conditions for the application of the wildlife regime - all vultures are listed as fully protected species (Appendix 1, List A).



2.5 National legal framework

Country	Protection afforded to Vultures
Côte D'Ivoire	All migratory raptors are covered by the Raptors MOU and are fully protected by Law n° 94-442 of 16 August 1994 (that amends Law n° 65-255 of 4 August 1965) on the protection of Fauna and hunting. Decree no 003/SEPN/CAB of 20 February 1974 relates to the closure of hunting.
Gambia	Taking of all CMS Appendix I birds is prohibited.
Ghana	Taking of all CMS/CITES birds is prohibited by the Wild Animals Preservation Act, 1961 (Act 43).
Guinea	Taking of all CMS Appendix I birds is prohibited. The wildlife and hunting regulations code includes articles for the full protection of species on the IUCN Red List in the Critically Endangered and Endangered categories. Vultures fall into this category and are therefore fully protected by law.
Guinea-Bissau	There is no specific law protecting vultures in Guinea Bissau. However, taking of all CMS Appendix I birds is prohibited.
Liberia	Taking of all CMS Appendix I birds is prohibited by the Environmental Protection and Management Law (2003).
Mali	Taking of all CMS Appendix I birds is prohibited.
Niger	Taking of all Appendix I birds is prohibited by Law 98-07 of 29 April 1998 establishing the regime for hunting and protection of wild fauna. All vulture species are listed as fully protected species (List 1), i.e. those whose hunting, capture, possession, transport or marketing are prohibited. Vultures are also protected under Law 98-56 of 29 December 1998 on the management of the environment; Law 98-042 of 7 December 1998 of the regime for fishing; and Law 2004-040 of 8 June 2004 on the regime for forestry.
Nigeria	As a signatory to CITES, all vultures listed under the second schedule are legally protected by the Endangered Species Act (ESA) of 2016 of Nigeria. The National Environment Standards and Regulations Enforcement Agency (NESREA) is the main agency tasked with implementing this convention alongside other agencies like the Nigerian customs, police and the judiciary. Taking of all Appendix I birds is prohibited.



Table 4 – Summary of national status for vultures in West Africa.

Country	Protection afforded to Vultures
Senegal	Taking of all CMS or CITES birds is prohibited.
Sierra Leone	All vulture species are protected nationally by the Wildlife Conservation Act of 1972.
Togo	Taking of all CMS or CITES birds is prohibited.

2.6 Conservation work in the subregion

Across the 14 countries included in this plan, vulture conservation actions have been implemented in Benin, Burkina Faso, Chad, Côte D'Ivoire, Ghana, Guinea Bissau, The Gambia, Niger, Nigeria, and Senegal. Within these countries, efforts have focused on population monitoring and addressing unintentional poisoning and belief-based use, with only Ghana concentrating on electrocutions and collisions.

Benin

Despite the protected status of vultures in Benin, they are openly sold in the believe-based use markets. The sellers do not seem to find it a concern to display and sell certain products which are fully protected by national legislation. Some vendors have been selling animal parts for generations and traditional medicine.

Apart from the study on vulture diversity (Lougbeignon and Libois, 2011) which reported six species of vultures as present in Benin, there is little known about vultures in the country. One study, initiated by the University of Abomey-Calavi on the vulture supply chain, worked with 16 Traditional Medicine Markets (TMM) and 46 villages surrounding protected areas cited as provision zones of vultures. The results revealed a trade network involving seven West African countries with some specimens originating from Cameroon (Central Africa). A total of 491 specimens belonging to Egyptian, Hooded, Lappet-faced, Rüppell's, White-backed, and White-headed vultures were recorded in the TMM.

The selling price varied significantly according to the body part, species, and market. Among the six species recorded in the TMM, the hooded vulture, lappet-faced and white-backed vulture occur in Benin and are restricted to the north according to local ecological knowledge. Other species (Rüppell's and white-headed vultures) may occur in the Pendjari National Park but at lower densities (Dognimon pers. comm). Conservation awareness campaign activities were carried out in primary schools adjacent to the National Park and Trois Rivières classified forest. These two protected areas were the main areas of occurrence for vultures in Benin.

SOS Savane and Nature Plus are local non-government organisations (NGOs) established in Benin and operating in the field of biodiversity conservation, and environmental education. They conduct activities to enhance vulture conservation. Recently SOS Savane surveyed hooded vultures in 16 districts in northern Benin and counted 143 hooded vultures over four months. Nature Plus has undertaken educational activities around protected areas located in the north of the country on vulture conservation.

Burkina Faso

Despite national legal protection being in place, vulture populations have declined. From the 1970s to 2004, the number of hooded vultures declined from 84 to 46 individuals every 100 km, a decrease of 45% (Thiollay, 2006). Large vultures have suffered precipitous declines (98%) outside of protected areas. Conservation actions designed to secure vultures began with the NGO NATURAMA and its partners who produced a video documentary in 2011 which addresses the cultural value, importance and the main threats facing vultures.

From 2013 to 2017 the Laboratory of Animal Biology and Ecology at the University Joseph Ki-Zerbo, completed a series of investigations into the factors leading to the collapse of vulture populations. They found that the main reasons for the vulture decline in Burkina Faso were:



(i) intentional poisoning for belief-based use; (ii) declining of food availability; (iii) indirect poisoning; and (iv) habitat loss. To address these threats, community awareness-raising was undertaken in 2018 through the distribution of a video documentary and radio broadcasts on vultures' role, threats and opportunities for their conservation. In September 2019, a two-day workshop involving 47 stakeholder representatives of Burkina Faso and Benin was organized to share knowledge about the status, population trends, distribution, and ecology of vultures and to map threats, strengths, and opportunities for vulture conservation. This was a part of the process to develop a National Action Plan for Vultures in Burkina Faso and Benin.

Chad

Recent studies have identified the Chad basin area as the largest aggregations of vulture habitats in West Africa supporting significant populations of six highly threatened vulture species (Egyptian, hooded, lappet-faced, Rüppell's, white-backed, and white-headed vultures). Besides a survey between 2010 and 2013, and some independent monitoring work in Ouadi Rimé-Ouadi Achim Game Reserve, in central Chad (both carried out by the NGO Sahara Conservation in collaboration with the Royal Zoological Society of Scotland) almost no scientific or technical work has been carried out in Chad for vultures. This lack of data, capacity and resources is an obstacle to the protection of these birds in the country, and it is urgent to act to fill these gaps. In 2023, Sahara Conservation developed and implemented an updated vulture monitoring protocol for Chad and Niger, as well activities related to illegal killing reduction, capacity building and awareness raising.

The Gambia

The Gambia Vulture Conservation Project (GVCP) was established in 2013, as a partnership of government agencies and NGOs.

Project activities are led by the West African Bird study Association (WABSA), along with organisations including Kartong Bird Observatory and the Department of Livestock Service. The Gambia Vulture Action Plan (GVCP) details vulture conservation activities in the country. The plan identifies the main threat to vultures in Gambia as belief-based use and limited food availability.

Additional threats to vultures include intentional and unintentional poisoning and habitat loss. The main recommendation of the GVCP is to conduct more public awareness-raising activities within Gambia targeting local communities, schools, abattoir managers and traditional healer associations through radio talk shows and public meetings. WABSA and other organisations have conducted a series of awareness-raising activities across Gambia, as well as publishing articles on vultures both within international journals and local papers. In addition, they have established vulture restaurants (providing food which is toxin-free) and have conducted monitoring of these important populations through nation-wide surveys and tagging programmes.

Ghana

Up to the late 1980s, the vulture population in Ghana was reported to be stable. There is no explicit mention of vultures being protected under law at the current time. More recent studies have shown that vulture population declines in Ghana may be more serious than previously anticipated. This has elicited responses to counter this decline, in three major areas: research, education and population monitoring.

Most research has centred on estimating population size and better understanding threats to their survival. Belief-based use of vultures or vulture parts as well as attitudes towards vultures and ethno-medicinal use of vultures by traditional medicinal practitioners have been investigated. The first international vultures' awareness day was celebrated in Cape Coast in 2015 as part of the Indigenous Vulture Monitoring Project (IVMP). The Ghana Wildlife Society together with other conservation organisations and individuals have replicated this celebration in other parts of the country by organising workshops and educating the public through radio programs and news articles.

There are also efforts from other organisations to educate the public on the importance of vultures to humans such as the Ghana Vultures Conservation Campaign by Transform Ghana NGO.



Population monitoring has mainly been achieved through establishing community-based vulture population monitoring groups across the country through the Indigenous Vulture Monitoring Project and the International Bird Conservation Partnership's Critically Endangered vulture survey.

Guinea Bissau

Guinea-Bissau is home to about 22% of the world's population of hooded vultures. In 2020, the largest known intentional mass poisoning of vultures occurred in the country, with over 2,000 vultures killed, about 500 of which were found without heads. This event occurred in the East of the country particularly in the cities of Bafatá and Gabu. In 2021, 150 more vultures were found dead in the region of Cacheu, Canchungo and Caio. In 2022, 50 headless vultures were found in the region of Bafatá, Cossé sector and 32 beheaded vultures were found in the region of Gabu in Bada Tabanca in January of the same year. The 2020 event led to the creation of a national technical commission that includes regional experts, coordinated by the Organização para a Defesa e Desenvolvimento das Zonas Úmidas in Guinea-Bissau (ODZH).

This commission, with the support of BirdLife International and through the IUCN SOS "Emergency conservation actions to prevent new vulture extinction crises linked to trade in beliefs in West Africa" project, has promoted rapid actions in the city of Gabu, Bafatá, in the Cossé sector. It has organised meetings and awareness-raising conferences with local administrators, village leaders, butchers, breeders, veterinary delegates, the Nature and Environment Protection Brigade, forests, judicial police, teachers and students, some of which are part of the alert network for reporting vulture mortality in the East and in Cachungo, Caió and Calequisse. The implementation of this work has led to the arrest of five suspected people and their trial conducted by the Cacheu regional court in Bissoram. The work has also resulted in the creation of an alert network in the North of the country, in addition to the network of

environmental teachers for the protection of vultures in the three regions (Cacheu, Bafatá and Gabú). ODZH has promoted environmental education activities by raising awareness among schoolchildren and members of communities living in high-risk areas such as Bafatá and Gabú. Despite the efforts made by ODZH, national and international partners, it is still difficult to promote continuous monitoring, and especially during critical periods of reproduction, during which the risk of poisoning is particularly intense.

Niger

In Niger few vulture monitoring and targeted conservation activities have been carried out in the country and the current knowledge related to these avian scavengers is partial and limiting the implementation of efficient conservation actions. Sahara Conservation started working on vultures in Niger in 2008. In 2018, Sahara Conservation intensified its work on vultures in central-south Niger with the implementation of a close monitoring protocol in Gadabeggi Biosphere Reserve- home to the six species of vulture covered by the WAVCAP- and in Koutous massif. Cohesive nest monitoring allowed unprecedented data to be collected on the reproduction of three species: Lappet-faced, rüppell's, and white-headed vultures. Alongside monitoring, education and awareness-raising work was initiated and is being pursued among key stakeholders. The aim is to reduce the illegal killing and trading of vultures for belief-based use engaging with traditional and administrative authorities, traditional leaders, and hunters, as well as the young generations.

Nigeria

In 2017, the Nigerian Conservation Foundation (NCF) commenced the implementation of a Vulture Advocacy Plan (with support from the Leventis Foundation through the BirdLife Africa Office). The Plan was made in response to the decline of vulture species in Africa and particularly in Nigeria, largely through belief-based use. Advocacy and sensitization visits were conducted in 3 Nigerian States (Oyo, Ondo, and Ogun) to improve public knowledge on the vulture crisis. A wide range of stakeholders were involved including enforcement and border control agencies, prosecution authorities, wildlife traders, traditional healers (vulture users), and research institutions.

This was also complemented with visits to wildlife markets in 2019 where an assessment of about 13 wildlife markets was conducted to understand the trade route, users and sellers, uses, prices, and quantity sold. NCF engaged celebrities as vulture ambassadors, organized stakeholder engagement processes with



various groups, including traditional healers and wildlife traders, towards dissuading them from using vultures in their traditional practices. In those engagements, plant-based alternatives to vultures were identified among the traditional healers and a Guide to Plant-based Alternatives for these healers was developed to document the knowledge for future use and acceptance. Through the support of EVNEWLIFE partners and other partners, NCF also developed the capacity of enforcement and border control agencies to strengthen enforcement, investigation, and prosecution of wildlife crime associated with vultures and other endangered species. A video documentary called Plight of Vulture: Nigeria's Wildlife Crisis was also produced and promoted reaching over five million people. NCF supported this advocacy with the commemoration of International Vulture Awareness Day, Awareness March and Cycling events for Egyptian vulture and other species across the country between 2020-2022. At a national policy level, NCF introduced vultures as key species of consideration into the newly developed Nigeria's National Strategy to Combat Wildlife and Forest Crime (2021-2025). Towards supporting the recovery of vulture population in Nigeria, two Vulture Safe Zones were established in Southeast Nigeria. Vulture Monitoring Networks were created, involving volunteers trained to monitor vulture populations and reduce threats of poisoning and other forms of killing.

Senegal

In 2021-2022, the Nature Communities Development (NCD) Association fully contributed to the implementation of BirdLife International's IUCN SOS Vultures project. The major goal was to significantly reduce the poisoning and mass, deliberate commercialization of vultures that are Critically Endangered in the West African subregion, particularly between Senegal, Gambia, and Guinea-Bissau.

The project intervened in seven regions including Dakar, Fatick, Kaolack, Ziguinchor, Sédhiou, Kolda and Tambacounda, three of

which are bordering Guinea Bissau and five with Gambia. According to surveys completed, the most in-demand parts by customers on the market are the head, feet, bones, and feathers. The price is estimated to be 20,000-25,000 FCFA for the head, 7,000-15,000 FCFA for the feet, and 500-1,000 FCFA for the bones and feathers. Thirty-five percent of users prefer the head in their practices using it to promote popularity, prosperity, glory, and for divination. Customers purchasing heads for these purposes are often people with high standing in society. Bones, feet, and feathers are used by all age groups for protection and in traditional medicine.

To conserve vultures in Senegal and address the various threats, NCD undertook awareness-raising activities for local authorities of the different municipalities, involving the distribution of posters and delivery of radio broadcasts. The broadcasts were interactive and included some public responses in which respondents said they have used the vulture to heal people in the Ziguinchor region. NCD has also organized monthly monitoring of the different target sites, which allowed for a census of 3637 hooded vultures, including only one white-backed vulture in Diaobe in the Kolda region. NCD established a network of volunteers to continue monitoring of vultures and alerting of potential poisonings and killing.

Subregional work

The International Consortium on Combating Wildlife Crime (ICWC) is the collaborative effort of CITES, INTERPOL, United Nations Office on Drugs and Crime (UNODC), the World Bank Group and World Customs Organization (WCO) working to bring coordinated support to the national wildlife law enforcement agencies and to the sub-regional and regional networks that act in defence of natural resources. It works by mobilizing a variety of tools (such as Guidelines, Toolkits and Indicator Frameworks) and services to build long-term capacity among national agencies responsible for wildlife law enforcement to effectively combat wildlife crime. In the region it has carried out activities and supported initiatives in Benin, Burkina Faso, Cameroon, Côte D'Ivoire, Ghana, Liberia, Mali, Nigeria and Togo.

Combating Wildlife Trafficking

The thematic area 'Combating Wildlife Trafficking' of the West Africa Biodiversity and Climate Change (WA BiCC) program was a USAID-funded program implemented from

May 2015 to February 2021. The goal of the program was 'to improve conservation and climate-resilient, low-emissions growth across West Africa'. WA BiCC focused on targeted geographical landscapes across the region and with policy makers and practitioners to improve governance, policy and practice over



critical natural and human systems. a detailed, field-based assessment on combating wildlife trafficking and threats to biodiversity in seven West African Countries: Burkina Faso, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, and Togo. This resulted in the adoption of a "Strategic Areas of Intervention" document that identified six priority areas and 47 priority recommendations aimed at guiding the ECOWAS Member States in their actions to counter wildlife crime in West Africa.

Vision

By 2043, vulture populations across West Africa have achieved sustainable levels, are protected by effective legal frameworks, and live in a healthy environment in harmony with people.

Success Indicators

Vulture populations achieve sustainable levels

- IUCN conservation status of the six species moves to non-Threatened categories.
- Improved availability of safe sites for vultures to feed and nest.

Protected by effective legal frameworks

- All species legally protected in all countries and legislation effectively enforced.
- Improved regulation of chemicals linked to vulture mortality.
- Reduced national and international trade in vultures and their parts.

Live in a healthy environment

- Decreased disease occurrence linked to waste matter not being removed by vultures.

Live in harmony with people

- Reduced killing of vultures for food and belief-based trade/use.
- Increased public awareness and positive perception of the value of vultures.
- Substitution of vulture parts used in traditional practices for sustainable alternatives.

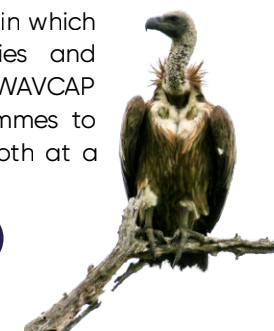
4.2 Thematic goals

To move towards the 2043 vision and monitor progress in line with the indicators of success, the primary areas of focus for the Action Plan concern reducing the killing of vultures, whether it be intentional for food or, most significantly, for trade for belief-based use or unintentional (the target species being those other than vultures).

This plan is therefore essentially a behavioural change plan requiring actions to address the motivations for killing of the vultures for sale or use of the birds for belief-based use or food, and for purchasing the vultures or their parts for belief-based use. This will involve a combination of incentives to change behaviour (for example, through provision of alternatives) and disincentives, including strengthening laws and their enforcement across the subregion.

The goals and actions that follow also recognise that current understanding of 'the system' requires improvement, including developing a better understanding of motivations and drivers and the extent to which they are built on perceptions or realities; both of which influence human behaviour. Therefore, over the first seven years of the WAVCAP careful monitoring and feedback on actions implemented and their impact will be critical in ensuring that learning takes place to inform future refinements and increasingly effective and efficient action.

It is also recognised that these goals and actions are not implemented within a vacuum, but within an environment in which existing national, subregional and international policies and programmes are being enacted. It is important that the WAVCAP capitalises upon this wider suite of policies and programmes to ensure its most effective and efficient implementation both at a national and subregional level.



Thematic Goals 2023-2029

Thematic Goal 1

Reduce intentional killing of vultures linked to illegal off take, use and trade (Contributing to Obj. 4 of the Vulture MsAP)

Thematic Goal 2

Reduce unintentional poisoning of vultures (Contributing to Obj. 1 and Obj. 11 of the Vulture MsAP)

Thematic Goal 3

Instate a vulture-positive public perception (Contributing to Obj. 10 of the Vulture MsAP)

4.2 From thematic goals to actions toward 2029

Presented below are the thematic goals and related actions to be undertaken to achieve the desired directional change in vulture populations in West Africa.

Thematic Goal 1: Reduce intentional killing of vultures linked to illegal take, use and trade

Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of success
1.01. Undertake an analysis of national legislations to identify and address gaps in the protection of vultures, including building on existing ICCWC work, and prepare model legislation for States to use.	2024 - 2029	BirdLife International partners* National organisations & institutions, ICCWC regional hubs (Senegal, Nigeria, Cameroon and Côte d'Ivoire), CMS	Availability of report outlining gaps and how to address them per country. Availability of draft model law



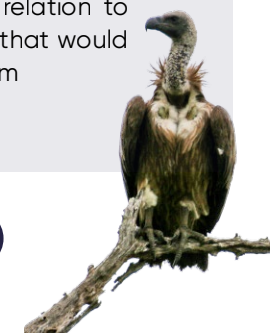
Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of Success
1.02. Transpose into national legal frameworks existing international requirements that prohibit the take of CMS Appendix I species and the illegal or unsustainable trade in vultures.	2024 - 2029	Direction Nationale des Eaux et Forêts (Senegal), CITES*, Judiciary, Customs, forestry officers	Number of West African countries considered fully compliant with CMS and CITES regulations
1.03. Adopt regulations at regional level (e.g., through ECOWAS, West African Economic and Monetary Union [UEMOA]) that prohibit the national trade in vultures and vulture parts in West African States.	By 2027	Department of Environment at ECOWAS*, Ministries of Environment, NGOs, ICCWC	Number of new regulations adopted by regional organisations or bodies
1.04. Enact regulations at national level to ensure that any unsustainable domestic take, use or trade in vultures is prohibited and complies with any applicable regional and international requirements.	2024 - 2029	National Governments*, CMS	Number of West African countries prohibiting unsustainable domestic take, use and trade
1.05. Identify areas important for Vultures	2024-2026	BirdLife International partners*, National NGOs, The Peregrine Fund, research institutes, Habitat INFO	List of important areas for vultures published
1.06. Provide legal protection for the areas important for vultures.	2026- 2029	National Governments*	All sites identified as areas important for vultures receive legal protection



Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of Success
1.07. Establish Community Vulture Action Groups for monitoring the species and enforcing safe zones.	Starting 2023	Ghana Butchers Association* + other institutions to be identified at national level	Number of groups established per country
1.08. Establish national vulture monitoring taskforces with the remit to track illegal practices and empowered to apply the law.	2025 - 2026	West Africa Bird Studies Association*, national wildlife authorities, police, border security, Interpol, customs, opinion leaders, repentant traders and defaulters	Availability of taskforce per country Increase in the number of cases dealt with
1.09. Build the capacity of relevant authorities (e.g., judiciary, customs, police, inspectors, and others) in curbing illegal vulture take, use and trade and build national capacity to identify specimens in use or trade.	2023- 2026	Federal Ministry of Environment (Abuja)*, Forestry Commission (Ghana)*, ICCWC*, Local, national NGOs and researchers, police, custom officers, wildlife and forestry officers, BirdLife International partners, Vulture Conservation Fund, conservation practitioners	Number of trainings conducted per country Availability and degree of distribution of a vulture specimens identification manual, per country Evolution in the number of seizures per country
1.10. Develop a regional database with information on the traditional practitioners and healers who use vulture specimens for belief-based practices.	By 2026	Association of Traditional Practitioners of (Ghana)*, Association of Traditional Practitioners in other nation states	Availability of database for each country



Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of Success
1.11. Raise awareness within traditional practitioners and healers concerning legislation that regulates take, use and trade in vultures.	Starting 2023	SOS-Forêts (Côte d'Ivoire)*, SOS Savane (Benin)*, Environmental NGOs, national ministries of environment, media	Number of awareness-raising meetings held with traditional practitioners and healers per country. Number of traditional healers engaged/ informed
1.12. Raise awareness of traditional practitioners and healers on the detrimental impact of belief-based use on the long-term presence of vultures in the subregion.	2023 - 2027	Association of Traditional Practitioners of (Ghana)*, Association of Traditional Practitioners in other nation states	Number of awareness campaigns per country
1.13. Conduct studies on the effectiveness of treatments based on vulture parts.	2023 - 2029	LEBA (University of Ouagadougou)*, NCF* University of Cape Coast*, Laboratory of Applied Ecology (LAE)*, University of Abomey-Calavi*, other national universities and research institutes	Research findings published and shared with traditional practitioners and healers
1.14. Identify in collaboration with communities (including traditional practitioners and healers) sustainable alternative livelihoods for those that take, trade in and use vultures.	2024-2029	NCF*, University of Cape Coast*, Association of Traditional Practitioners (Ghana)*, researchers, associations of traditional practitioners, development organisations	Availability of research studies/ reports on the situation in each country
1.15. Work with communities (including traditional practitioners and healers) that take, trade in and use vultures to implement the identified sustainable alternative livelihoods.	2024-2029	NCF*, University of Cape Coast*, Association of Traditional Practitioners (Ghana)*, Snail Farmers Association, farmers, BirdLife International partners, other national universities, Beekeepers Association, associations of traditional practitioners	Number of alternative livelihood projects per country in relation to number of communities that would need to benefit from them

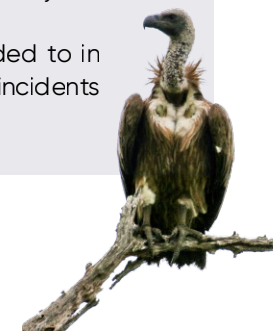


Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of Success
1.16. Establish baseline data on the status of vulture populations using comparable methodologies and undertake population viability studies.	2023-2026	Ghana Wildlife Society*, University of Cape Coast*, researchers, BirdLife International partners, NCF, wildlife authorities	Availability of population baseline data per country
1.17. Monitor the trends in vulture populations using comparable methodologies.	2023-2029	Ghana Wildlife Society*, University of Cape Coast*, other national universities/ GWD/ GWS/ NGOs/FC + similar organizations in all range states	Number of comparable monitoring assessments per species and per country
1.18. Map markets where vultures and their parts are sold and identify the extent, scope, trends, supply chain and routes of vulture trade across the subregion.	2023-2025	Ghana Wildlife Society*, University of Cape Coast*, University of Abomey-Calavi (Benin)*, Biodiversity Conservation Laboratory*, NANGUI ABROGOUA University*, LAE*, LEBA (University of Ouagadougou)*, NCT*, other national universities/ GWD/ GWS/ NGOs/FC + similar organizations in all range states, government institutions	Availability of reports on the status, extent, scope, trends, supply chain and routes of vulture each country
1.19. Establish a database on vulture poisoning incidents related to belief-based use in West Africa and ensure link made to AWPDB	By 2025	LEBA (University of Ouagadougou)*, NCT*, University of Cape Coast*, LEA*, University of Abomey-Calavi*, SOS Savane (Benin)*, other national universities and research institutes in member countries, NGOs, government institutions	Database established Evolution in the number of incident entries over time
1.20. Institute a Save the West African Vultures Small Grants Fund, financed by Range States to support student projects addressing vulture take, use and trade.	2023-2029	University of Cape Coast*, BirdLife International partners, NGOs, governments, grant awarding bodies	Grant Fund established Amount of funds raised Number of student projects supported

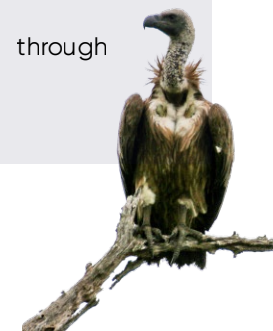


Thematic Goal 2: Reduce unintentional poisoning of vultures (Contributing to Obj. 1 and Obj. 11 of the Vulture MsAP)

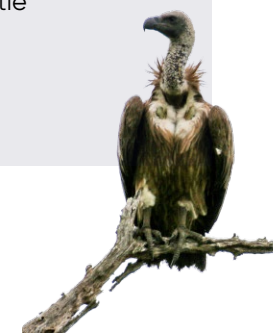
Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of Success
2.01. List and map the use of toxic substances in poison baits across the subregion.	Starting 2023	University Center of Tenkodogo, Burkina Faso/ Naturama*, UCC, APLORI, NCF, TSU, VERT LABS, hospitals, agriculture extension and veterinarian services, farmers, livestock-owners associations	Number of scientific studies and reports made available on the matter per country
2.02. Identify toxic substances that require use and trade regulation and assess gaps in such regulation at national level.	Starting 2023	NCF*, researchers	Availability of national-level reports describing methodologies and findings
2.03. Raise awareness of national agriculture, environment, livestock, health and sanitation authorities on national and international controls in pesticide and veterinary drug use and trade.	Starting 2023	NCF*, GWS, NCF, BirdLife International partners at workshop, UCC, APLORI, TSU, Wildlife Authorities, vets, law societies, law enforcement and judiciary, ECOWAS	Number of capacitation exercises delivered per country
2.04. Ensure that the use and trade of identified toxic substances is appropriately regulated at national level, including in compliance with any applicable international conventions and agreements	Starting 2023	NCF*, GWS, NCF, BirdLife International partners at workshop, UCC, APLORI, TSU, National wildlife authorities, vets, law societies, law enforcement and judiciary, ECOWAS	National legislation provides for safe use and trade of toxic substances National compliance with legal requirements of applicable international conventions and agreements
2.05. Establish reporting systems for wildlife/national park authorities to monitor and respond to poisoning incidents.	2023-2027	GWS*, NCF, BirdLife International partners at workshop, UCC, APLORI, TSU, wildlife authorities, vets, Endangered Wildlife Trust/ North Carolina Zoo - people who can train, rehabilitation centres	Availability of systems per country Number of incidents responded to in relation to number of incidents recorded



Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of Success
2.06. Work with ECOWAS to identify and implement stricter international controls in pesticide and veterinary drug use and trade.	Starting 2023	NCF*, GWS, NCF, BirdLife International partners at workshop, UCC, APLORI, TSU, wildlife authorities, vets, law societies, law enforcement and judiciary, ECOWAS	Number of regulations on use and trade adopted by ECOWAS
2.07. Raise awareness on the impacts of poisoned bait to vultures and other scavengers.	2024	BirdLife Partners*, Environmental NGOs, ministries of environment, public works, community associations	Number of awareness campaigns per country
2.08. Work with farmers and livestock owners to map motivations for retaliation and identify joint solutions.	2023-2029	Guinée-Ecologie*, GWS, NCF, BirdLife International partners at workshop, wildlife authorities, livestock owners, dairy/ poultry farms, cattle rearing, agricultural farmers, local community, key influencers/ trusted voices such as elders, chiefs, pastors	Number of meetings held with farmers and livestock owners per country Number of human-wildlife conflict resolution committees established per country Number of cases resolved by each committee
2.09. Build the capacity of wildlife rangers, veterinarians, local communities, hunter associations, and cattle rearing associations in responding to poisoning incidents.	2023-2027	NCF*, GWS, NCF, BirdLife International partners at action planning workshop, UCC, APLORI, TSU, Federal Ministry of Environment (Abuja), wildlife authorities, Endangered Wildlife Trust, The Peregrine Fund	Number of trainings delivered per country or per subregion Number of people reached through those trainings
2.10. Build the capacity of farmers on pesticide use best practice that can avoid unintentional poisoning.	2023-2027	NCF*, GWS, NCF, BirdLife International partners at action planning workshop, UCC, APLORI, TSU, Federal Ministry of Environment (Abuja), wildlife authorities, Endangered Wildlife Trust, The Peregrine Fund, FAO	Number of trainings delivered per country or per subregion Number of people reached through those trainings



Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of Success
2.11. Build the capacity of farmers and livestock keepers on poisoned carcass management and disposal.	2023-2027	NCF*, GWS, BirdLife International partners at action planning workshop, UCC, APLORI, TSU, Federal Ministry of Environment (Abuja), Wildlife Authorities, Endangered Wildlife Trust, The Peregrine Fund	Number of trainings delivered per country or per subregion Number of people reached through those trainings
2.12. Establish rehabilitation facilities for treating poisoned vultures.	Starting 2023	GWS* plus partners to be identified at the national level	Number of facilities established per country Number of birds rehabilitated in relation to number of bird arrivals
2.13. Develop guidance for the establishment of safe vulture feeding stations and their monitoring.	Starting 2023	University of Cape Coast* plus partners to be identified at the national level	Availability of a best-practice manual
2.14. Establish and manage safe vulture feeding stations.	2024-2029	University of Cape Coast*, GWS, NCF, BirdLife International partners at workshop, UCC, APLORI, TSU, wildlife authorities, livestock owners, dairy farms, cattle rearing, poultry farmers, butchers, abattoirs	Number of stations established per country Number of vultures using the stations per country
2.15. Work with wildlife management authorities, cattle owners and herders to curb illegal grazing by cattle, including by ensuring appropriate availability and use of livestock corrals and cattle ranching areas.	2023-2029	University Center of Tenkodogo, Burkina Faso/ Naturama*, African-led International Support Mission to Mali (AFISMA)*, SOS Savane (Benin)*, GWS, NCF, BirdLife partners at workshop, wildlife authorities, livestock owners, dairy/ poultry farms, cattle rearing, agricultural farmers, local community, key influencers/trusted voices such as elders, chiefs, pastors	Number of corrals and ranching areas used in relation to number of available ones per country. Change in the number of cattle depredations.

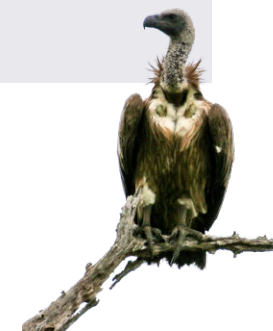


Thematic Goal 3: Instate a vulture-positive public perception (Contributing to Obj. 10 of the Vulture MsAP)

Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of Success
3.01. Define national communication strategies clarifying target audiences, messages and opinion leaders (including religious ones) and tools to deliver the messages.	2024	Ministry of Forestry & Wildlife (Cameroon)*, Research partners to be identified at national level.	Production of communication strategy documents. Availability of final report per country.
3.02. Raise awareness of opinion leaders (including religious ones) on vulture conservation.	2024	Ministry of Forestry & Wildlife (Cameroon)* plus partners to be identified at national level.	Number of meetings held with opinion leaders per country.
3.03. Engage opinion leaders with a view to disseminate public messages on vulture conservation.	2024	Ministry of Forestry & Wildlife (Cameroon)* plus partners to be identified at national level.	Number of opinion leaders engaged per country. Number of awareness exercises carried out per country.
3.04. Raise awareness of vulture hunters, traders and vulture users on the threats posed to vultures by illegal taking, killing, trade and use.	2023-2024	NCF*, Forestry Commission (Ghana)*, wildlife authorities, national universities, religion groups, media, security services, WABSA, NCF, SOS, FC.	Number of workshops organised with the relevant stakeholders per country.
3.05. Produce materials and organize events (e.g., International Vulture Awareness Day) to raise awareness of livestock owners, farmers, herders, local communities, hunter associations, and game rangers on: - Ecological value of vultures; - Impact on human life, health and wealth of the disappearance of vultures.	2023-2025	University of Cape Coast*, GWS, NCF, BirdLife International partners at workshop, UCC, APLORI, TSU, Federal Ministry of Environment (Abuja), local media companies.	Number of materials distributed per country. Number of events completed.



Action	Timeline	Collaborators (*nominated action lead within WAVCAP workshop)	Measure of Success
3.06. Organize community meetings with the help of "town criers" to convey information on the importance of protecting vultures.	2023	Department of Parks & Wildlife Management Wildlife Conservation (Gambia)*, Wetlands International, ECOWAS, BirdLife International partners, IUCN, British Council, GEF, EU, Hawk Mountain - USA.	Number of meetings organized with relevant stakeholders per country.
3.07. Organize annual roadshows or carnival celebrations on vulture conservation.	2023	IBAP-Guinea Bissau* plus partners to be identified at national level.	Number of events organized per country.
3.08. Design and distribute posters and information, education and communication materials.	2023	SOS FORETS (Côte d'Ivoire)*, BirdLife International partners, universities, NABU.	Number of materials distributed per country.
3.09. Implement campaign on vulture conservation on social media.	2023	SOS FORETS (Côte d'Ivoire)*, BirdLife International partners, universities, NABU.	Average numbers of social media engagement per country.
3.10. Work with theatre groups at national and sub-national levels to establish productions that raise awareness on vulture conservation.	2024	NCF*, Conservation clubs, Nollywood.	Number of films, documentaries and theatre pieces produced per country.
3.11. Establish Pro-Vulture School Clubs.	2023 - 2029	NCF*, links to existing organizations in allcountries that have nature or science club.	Number of clubs established per country.



5. Governance and policy linkages

5.1 Links to other commitments

As outlined in section 2.4 above, the WAVCAP contributes to the implementation of various international commitments of West African vulture Range States, such as those under ACNNR, CITES, CMS and its Raptors MOU, and ECOWAS. Under the framework of CMS and its Raptors MOU, the WAVCAP is particularly relevant to the implementation of the CMS Vulture MsAP.

Furthermore, the WAVCAP contributes to the implementation of:

- The United Nations Sustainable Development Goals, including Goals: 1) No Poverty, 2) Zero Hunger, 8) Decent Work and Economic Growth, 13) Climate Action, 15) Life on Land and 17) Partnerships for the Goals.
- The Kunming-Montreal Global Biodiversity Framework and in particular targets: 3) protected areas, 4) halt extinctions, 5) sustainable trade and spillover risks, 9) Sustainable use of wild species, 11) Ecosystem services, 15) sustainable consumption choices and others.
- Conserving West African vultures through the WAVCAP enables Range States to fulfill their own national legal commitments towards protecting their own wildlife, habitats and ecosystems, and ensuring sustainable livelihoods for their people. At the same time, successful implementation of the WAVCAP will require the strengthening of national legal frameworks to tackle unsustainable practices.

5.2 Collaboration and cooperation

Implementation of the WAVAP will require collaboration and cooperation across a range of actors, from governments to inter- and non-governmental organisations and other civil society representatives, research institutions, sectoral organisations, community members and international agencies.

Many of these institutions and individuals are already associated with actions within this Action Plan. Given the scale of the work proposed, new collaborations should be encouraged where possible.

5.3 Governance framework

Oversight of the WAVCAP implementation process requires a combination of individual, assigned responsibilities and collective involvement at both national and subregional levels (Figure 2). Central to this oversight is the WAVCAP Coordinator role, who will be responsible for maintaining communication channels between the relevant groups within the governance structure. To ensure synergy with the CMS Vulture MsAP, the WAVCAP Coordinator would also be responsible for coordinating the work undertaken with the CMS Vulture MsAP Coordination Team.

A Subregional Committee would be established, and it will include individuals nominated as Thematic Goal leads. National Committees would be responsible for compiling national-level information and reporting it to the Subregional Committee. They would collect this information from National Implementation Focal Points, who would have direct lines of communication with action leads and collaborators. Early actions for the Subregional Committee to take in collaboration with the WAVCAP Coordinator would include prioritizing actions laid out in the WAVCAP and identifying potential funding sources for full implementation of the Action Plan. The Subregional Committee will play an integral role throughout the implementation process in monitoring and evaluating progress and making decisions concerning any changes to the Action Plan in response to this information.

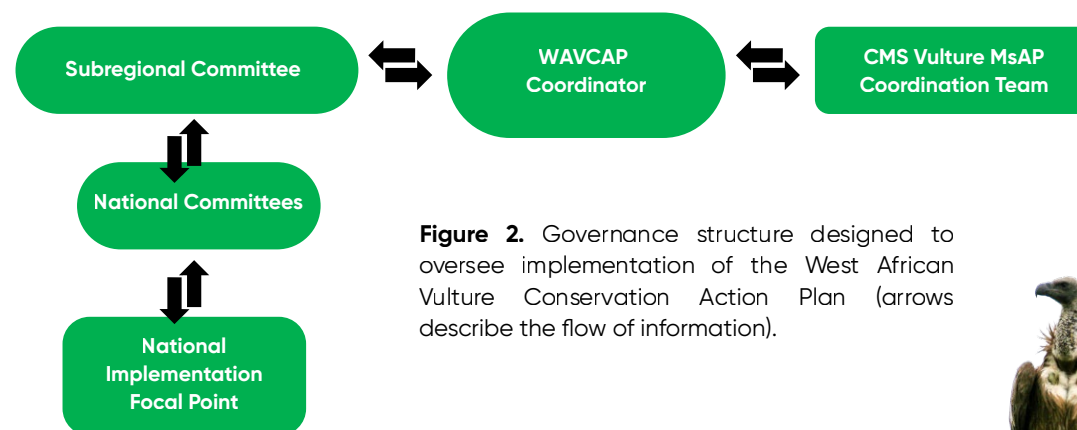


Figure 2. Governance structure designed to oversee implementation of the West African Vulture Conservation Action Plan (arrows describe the flow of information).



5.4 WAVCAP implementation review

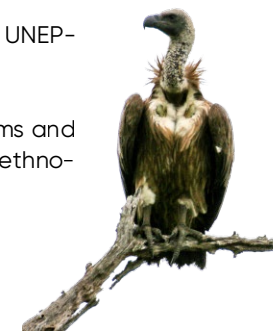
The WAVCAP Coordinator will be responsible for producing an annual progress report, detailing the extent of implemented actions, their results and lessons learned. This progress report should be reviewed by the Subregional Committee annually and used by this committee to make recommendations for identifying priority actions per country the following year. These recommendations must be shared with National Committees and used to develop the next year's workplan to be implemented by National Implementation Focal Points.

A more detailed implementation review of the WAVCAP shall be undertaken half-way through the implementation period (2025-2026) to inform any significant changes to the Action Plan in the remaining time. A full review shall be undertaken towards the end of the implementation period (2028-2029) to align with the review and completion of the wider Vulture MsAP, and to inform the creation of a new seven-year Action Plan for the subregion.



6. References

- Anderson, M.D. and Hohne, P., 2007. African White-backed Vultures nesting on electricity pylons in the Kimberley area, Northern Cape and Free State provinces, South Africa. *Vulture News*, 57, pp.45-50.
- Atuo, F.A. and O'Connell Timothy, J., 2015. An assessment of socio-economic drivers of avian body parts trade in West African rainforests. *Biological Conservation*, 191, pp.614-622.
- Baldé, M.F.H., 2016. Vultures in Guinea-Bissau: establishing baseline data on distribution and abundance, assessing conservation status and launching bases for populations monitoring (Doctoral dissertation).
- Buij, R., Nikolaus, G., Whytock, R., Ingram, D.J. and Ogada, D., 2016. Trade of threatened vultures and other raptors for fetish and bushmeat in West and Central Africa. *Oryx*, 50(4), pp.606-616.
- Borrow, N. & Demey, R. 2004. *Field Guide to the Birds of Western Africa*. London, UK: Christopher Helm
- Campbell, M.O.N., 2015. *Vultures: their evolution, ecology and conservation*. CRC Press.
- Deikumah, J.P., 2020. Vulture declines, threats and conservation: the attitude of the indigenous Ghanaian. *Bird Conservation International*, 30(1), pp.103-116.
- DeVault, T.L., Beasley, J., Olson, Z.H., Moleón, M., Carrete, M., Margalida, A. and Sánchez-Zapata, J.A., 2016. Ecosystem services provided by avian scavengers.
- Frank, E., and Sudarshan, A., 2023. The Social Costs of Keystone Species Collapse: Evidence from the Decline of Vultures in India. University of Chicago, Becker Friedman Institute for Economics Working Paper No. 2022-165.
- Gbogbo, F., Roberts, J.S. and Awotwe-Pratt, V., 2016. Some important observations on the populations of Hooded Vultures *Necrosyrtes monachus* in Urban Ghana. *International Journal of Zoology*, 2016.
- Hertel, F., 1994. Diversity in body size and feeding morphology within past and present vulture assemblages. *Ecology*, 75(4), pp.1074-1084.
- Hill, J.E., DeVault, T.L., Beasley, J.C., Rhodes Jr, O.E. and Belant, J.L., 2018. Effects of vulture exclusion on carrion consumption by facultative scavengers. *Ecology and Evolution*, 8(5), pp.2518-2526.
- Linda Van Den Heever, Lindy J. Thompson, William W. Bowerman, Hanneline Smit-Robinson, L. Jen Shaffer, Reginal M. Harrell, and Mary Ann Ottinger "Reviewing the Role of Vultures at the Human-Wildlife-Livestock Disease Interface: An African Perspective," *Journal of Raptor Research* 55(3), 311-327, (1 September 2021). <https://doi.org/10.3356/JRR-20-22>
- Lougbegnon, T. and Libois, R., 2011. 19. Oiseaux in Nature conservation in West Africa: red list for Benin (pp. 204-228) Ogada, D.L., Torchin, M.E., Kinnaird, M.F. and Ezenwa, V.O., 2012a. Effects of vulture declines on facultative scavengers and potential implications for mammalian disease transmission. *Conservation biology*, 26(3), pp.453-460.
- Mullié, W.C., Couzi, F.X., Diop, M.S., Piot, B., Peters, T., Reynaud, P.A. and Thiollay, J.M., 2017. The decline of an urban Hooded Vulture *Necrosyrtes monachus* population in Dakar, Senegal, over 50 years. *Ostrich*, 88(2), pp.131-138. Odino, M., Imboma, T. and Ogada, D.L., 2014. Assessment of the occurrence and threats to Hooded Vultures *Necrosyrtes monachus* in western Kenyan towns. *Vulture News*, 67(2), pp.3-20.
- Ogada, D.L., Keesing, F. and Virani, M.Z., 2012. Dropping dead: causes and consequences of vulture population declines worldwide. *Annals of the New York Academy of Sciences*, 1249(1), pp.57-71.
- Ogada, D., Shaw, P., Beyers, R.L., Buij, R., Murn, C., Thiollay, J.M., Beale, C.M., Holdo, R.M., Pomeroy, D., Baker, N. and Krüger, S.C., 2016. Another continental vulture crisis: Africa's vultures collapsing toward extinction. *Conservation Letters*, 9(2), pp.89-97.
- Rondeau, G. and Thiollay, J.M., 2004. West African vulture decline. *Vulture news*, 51, pp.13-33.
- Thiollay, J.M. 2006. The decline of raptors in West Africa: long-term assessment and the role of protected areas. *Ibis*, 148, 240- 254
- Van Den Heever, L., Thompson, L.J., Bowerman, W.W., Smit-Robinson, H., Shaffer, L.J., Harrell, R.M. and Ottinger, M.A., 2021. Reviewing the role of vultures at the human-wildlife-livestock disease interface: An African perspective. *Journal of Raptor Research*, 55(3), pp.311-327.
- UNEP-WCMC. 2021. *West African vultures: A review of trade and sentinel poisoning*. UNEP-WCMC, Cambridge
- Williams, M.M., Ottosson, U., Tende, T. and Deikumah, J.P., 2021. Traditional belief systems and trade in vulture parts are leading to the eradication of vultures in Nigeria: an ethno-ornithological study of north-central Nigeria. *Ostrich*, 92(3), pp.194-202.



Appendices

Appendix I. Stakeholders participating in the strategy development workshop.

Name	Organization	Country
Abdoulie Sawo	Department of Parks & Wildlife Management Wildlife Conservation Officer; National Focal Point (NFP) for the Convention on Migratory Species (CMS)	Gambia
Fagimba Camara	West African Bird Studies Association	Gambia
Roger Dore	Guinée-Ecologie	Guinea
Benard Asemuah Boatang	Forestry Commission	Ghana
Doudou Sow	Direction Nationale des Eaux et Forêts	Senegal
Awudu Osumanu	Ghana representative of Chief Butchers and Butchers Association	Ghana
Tom Mereck	Instituto da Biodiversidade e das Áreas Protegidas	Guinea Bissau

Name	Organization	Country
Neslon Gomes	Organização para Defesa e Desenvolvimento das Zonas Húmidas	Guinea Bissau
Chief Rosanwo Tosin	Traditional Healer Association	Nigeria
Dr Dabone Clement	University Center of Tenkodogo, Burkina Faso/ Naturama	Burkina Faso
Peter Kobina Eghan	Ghana Federation of Traditional Medicine	Ghana
N'da Kognan Degrace	National Focal Point (NFP) for the Convention on Migratory Species (CMS)	Ivory coast
Dr Ahon Dibie Bernard	SOS-Forêts Côte d'Ivoire	Ivory coast
Dognimon Samson	Laboratory of Applied Ecology, University of Abomey-Calavi	Benin
Asso Asso Armel	Laboratoire de Conservation de la Biodiversité	Ivory coast
Violeta Barrios	Sahara Conservation	France



Name	Organization	Country
Abdulmalik Ozigis	Federal Ministry of Environment, Abuja	Nigeria
Mamoudou Mariko	ANCFE	Mali
Talatu Tende	Aplori, Jos	Nigeria
Geoffroy Citegetse	BirdLife International	Senegal
Salisha Chandra	BirdLife International	Kenya
Fomo Genevieve	Ministry of Forests & Wildlife	Cameroon
Jamie Copsey	IUCN SSC Conservation Planning Specialist Group	United Kingdom
Christiana Adeyemi	Nigerian Conservation Foundation	Nigeria
T.D John	Federal Ministry of Environment	Nigeria
Solomon Adefolu	Nigerian Conservation Foundation	Nigeria
Adedayo Memudu	Nigerian Conservation Foundation	Nigeria

Name	Organization	Country
Justus Deikumah	University of Cape Coast	Ghana
Joseph Afrifa	Ghana Wildlife Society	Ghana
Umar Idris Makhtar	Federal Ministry of Environment	Nigeria
Folake Salawu	Nigerian Conservation Foundation	Nigeria
Joseph Onoja	Nigerian Conservation Foundation	Nigeria
Boyi Garba Mohammed	Nigerian Conservation Foundation	Nigeria



Appendix II. Organizing Team for WAVCAP process development.

Name	Institutional affiliation	Country
Stephen Awoyemi	Central European University	Nigeria
Andre Botha	IUCN SSC Vulture Specialist Group	South Africa
Salisha Chandra	BirdLife International	Kenya
Geoffroy Citegetse	BirdLife International	Senegal
Jamieson Copsey	IUCN SSC Conservation Planning Specialist Group	United Kingdom
Justus P. Deikumah	University of Cape Coast	Ghana
Umberto Gallo Orsi	Convention on Migratory Species Office	Abu Dhabi
Mohamed Henriques	University of Lisbon	Guinea Bissau
Lauren Lopes	Convention on Migratory Species Office	Abu Dhabi
Joseph Onoja	Nigerian Conservation Foundation	Nigeria

Appendix III. Summary of stakeholder comments on threat mapping report.

Poverty and supplementary income needs are perceived as important drivers of vultures poaching in the sub-region. This practice is also reinforced by cultural beliefs, and it is promoted by respected leaders within this African society. Pro-vulture cultural attitudes do exist within West Africa, although the extent to which these supersede economic incentives to deter the practice needs to be better understood. The degree of awareness concerning the significant role vultures play within the ecosystem and their precarious status within West Africa may undermine current efforts to change this behaviour. However, the extent to which higher levels of awareness would encourage change is recognised as a question to be answered. Further information is also required on the extent to which vultures do play a significant ecosystem services role.

An additional point raised during the workshop concerned the cultural influence of immigrant populations within the sub-region. The influx of foreign workers to support major developments such as infrastructural improvements has anecdotally at least, led to the 'importation' of new cultural practices that include the consumption of wild animals, including vultures. This may be introducing local populations to new behaviours. However, consumption of vulture meat is practiced by people across West Africa, whether it be for practical reasons (it is readily available) because it is considered a delicacy or out of curiosity. Research is needed to understand the potential human health implications of consuming vulture meat.

Trade in vultures and vulture parts is widespread within the sub-region. At least one example of international trade has been highlighted, with vultures from Guinea ending up in The Netherlands. The degree to which international trade in vultures is contributing to the vulture deaths requires further investigation.

Further information is also required on the status, distribution and the impact of trade for belief-based use in particular countries within West Africa (e.g. Mali) where currently few data exist.



Opportunities do exist to identify and engage with traditional medicine practitioners. For example, in Ghana there is the Traditional Medicine Practitioner Council or Traditional Medicine Board, which demands registration and demonstration of ability from their 40,000 registered healers. However, a distinction should be made between traditional healers and other groups (soothsayers/spiritualists/ 'Marabouts') engaged in more mystical practices; these latter groups may be harder to identify with many of their practices being undertaken in secret.

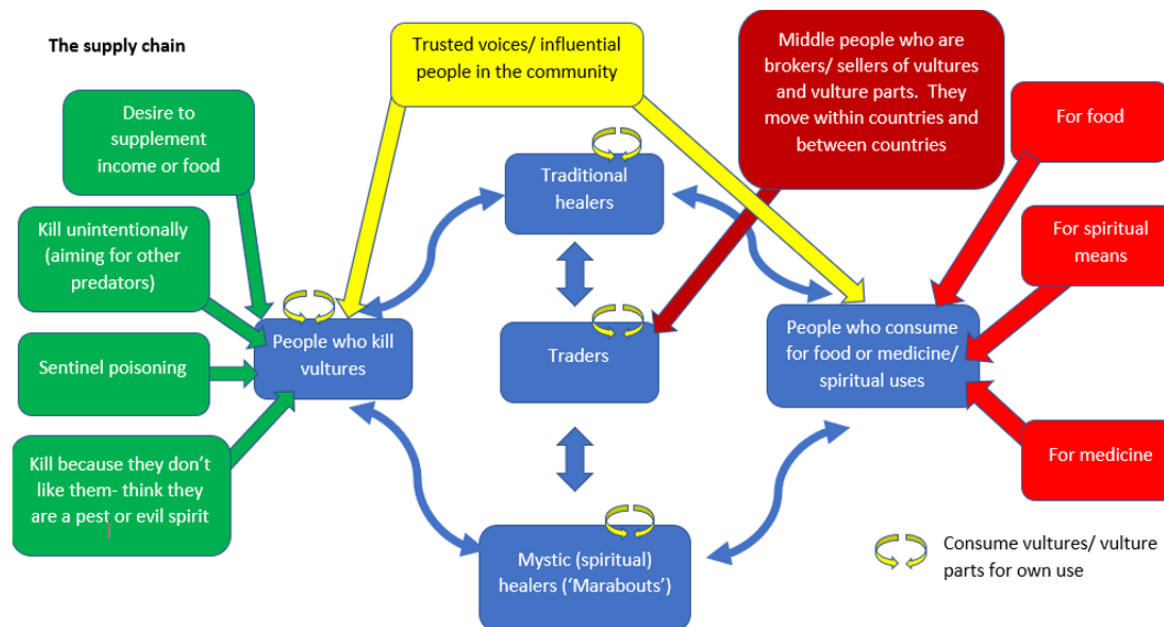
Vulture parts are 'prescribed' for a variety of uses, from political gain, to bringing good fortune, developing intelligence, and achieving good luck in gambling. Their curative effect on physical ailments is assumed to be misplaced although research is needed to confirm whether this is the case. Further investigation is also required into the 'customer profile' of individuals who purchase vulture parts for these purposes.

Indirect persecution of vultures is linked to poisoning of carcasses designed to attract other scavenging and predatory species, such as feral dogs, hyenas and big cats.

Vultures are particularly sensitive to the impacts of chemical consumption, and the sub-lethal effect on reproduction requires further clarification.

Research is required to understand the use of non-steroidal anti-inflammatory drugs such as diclofenac, and other agricultural chemicals across West Africa.

Appendix IV. Supply chain drafted by stakeholders at workshop.

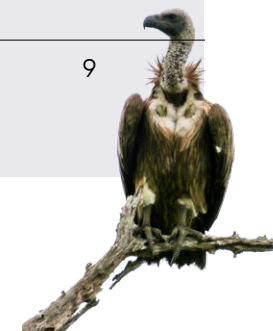


Appendix V. Potential intervention points identified by stakeholders.

The identification of potential points to intervene on within the supply chain was undertaken by stakeholders in three separate working groups. Each working group brainstormed a range of intervention points that could be acted upon. Then, each member within the working groups was provided with approximately five sticky dots of two distinct colours and asked to identify their priority intervention points based on two criteria (scale of impact on reducing vulture mortality and ease of acting on the intervention point). They were told they could place any number of dots (up to five) next to any single intervention point, depending on the degree to which they felt it was a priority point to be considered. Total sticky dots assigned to each intervention point against both criteria were then calculated. Listed below are those intervention points that scored at least one point from each of the groups. Yellow highlights identify the top-scoring intervention points within each working group.

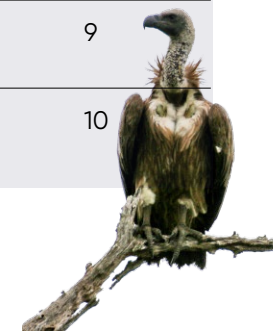
Potential intervention points	Potential impact (potential ease of implementation) *	Rank (Highest first for each group)
Group 1.		
Livestock breeders/ farmers poison carcasses in retaliation to depredation by other species, unintentionally killing vultures.	9 (8)	1
Demand/ value emphasised by mystical/magical healers.	9 (6)	1
Traders sell vulture parts because of opportunity to make money (may be driven by unemployment).	5 (4)	3
Wildlife hunters/poachers killing vultures for money (they go where the demand is).	2 (6)	4
Young boys killing vultures for sport.	(6)	5
Electrocution at poorly fitted lines.	1 (3)	6

Potential intervention points	Potential impact (potential ease of implementation) *	Rank (Highest first for each group)
Hidden/ secret usage of vulture parts by mystics/ Marabous).	3	7
Cultural beliefs around vulture parts strengthened or passed down through generations (patrilineal).	2	6
Electric companies destroying nests on poles.	1 (1)	9
Competition for food by humans and other scavengers reducing availability of food for vultures.	1 (1)	9
Intermediaries/ brokers/foreign/ new to country/ Marabous push youth to kill vultures for their use-target abattoirs.	1	9
Poachers kill vultures intentionally to avoid detection (sentinel poisoning).	1	9



Potential intervention points	Potential impact (potential ease of implementation) *	Rank (Highest first for each group)
Group 2.		
Low participation of the public in vulture conservation.	1 (11)	1
High value of traditional/ mystic/ medicine beliefs in West Africa.	7	2
Poor implementation of law at national level and lack of resources.	5	3
Lack of awareness.	(5)	3
Conflict between cattle farmers/ rearers and carnivores (indirect mortality of vultures).	2 (2)	5
Lack of poor involvement of media in communicating about vultures.	(3)	5
Poor border control on vulture species trade.	2	7
Lack of knowledge of the species and their ecological function by the public.	2	7
Inadequate alternative livelihoods in terms of food and income.	1	9

Potential intervention points	Potential impact (potential ease of implementation) *	Rank (Highest first for each group)
Group 3.		
Vulture parts harvested for traditional medicine.	7 (3)	1
Killing vultures for protein supplement in people's diet.	1 (8)	2
Killing vultures for their backbones for treating back pains in people.	2 (6)	3
Killed due to perception that their presence is a bad omen.	1 (7)	3
Killing vultures for their parts to fortify oneself against evil spirits and enemies (mystical use).	5	5
Trade in vulture parts through intermediaries (local) to international dealers (e.g. Cameroon).	3 (2)	5
Financial gains through using vulture as chicken at chop bars to maximise profits (it is easy to acquire them and cheaper than other meat).	4 (1)	5
Unintentional killing through wildlife poison by herders (e.g. Côte d'Ivoire, poison hides in Gambia).	2 (3)	5
Removal of preferred trees through illegal lumbering.	2 (1)	9
Kill and consume vulture meat for spiritual powers.	1 (1)	10



*First numbers within each box represent the number of sticky dots received for that intervention point from stakeholders within the working groups based on the extent to which intervening at this point would achieve the biggest impact on reducing vulture mortality.

The second number (in brackets) corresponds with the number of sticky dots received by stakeholders regarding the intervention point they felt would be easiest to act upon. Collectively, these marks represent the total score achieved for each potential intervention point, those with the most points ranking highest in the final column in the table.

