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## ADDRESSING UNSUSTAINABLE USE OF TERRESTRIAL AND AVIAN WILD MEAT

*(Prepared by the Secretariat)*

Summary:

Increased consumption and unregulated markets of wild meat due to growing human populations have become of increasing concern to decision makers, conservationists and human development agencies. Together with the Collaborative Partnership on Sustainable Wildlife Management (CPW), CMS aims to understand the direct and indirect impacts of wild meat consumption and trade on CMS-listed species. The Secretariat proposes draft Decisions to evaluate these impacts in order to propose measures to address this pressing matter.

The implementation of the attached draft Decisions will contribute towards the implementation of targets 1, 2, 3 and 6 of the Strategic Plan for Migratory Species 2015 – 2023.

When considering this document, reference should also be made to document [UNEP/CMS/COP12/Doc.24.2.3](http://www.cms.int/sites/default/files/document/cms_cop12_doc.24.2.3_aquatic-wild-meat_e.pdf) on *Aquatic Wild Meat.*

Rev. 1 corrects text and references relating to footnotes 16, 17 and 18.

**ADDRESSING UNSUSTAINABLE USE OF TerrestriAl AND AVIAN WILD MEAT**

Introduction

1. For millennia, wild animals have provided food and a source of income for humans in many parts of the world.[[1]](#footnote-1) Wildlife constitutes an essential source of meat (protein, fat and vitamins) and provides easy access, low risk opportunities for trade. However, recent population growth, increased access to untouched forests by hunters due to road expansion and forest fragmentation, commercialization of wild meat in large urban centers, and the use of modern hunting technology and methods alongside the loss of traditional hunting controls, have resulted in hunting reaching unsustainable levels.[[2]](#footnote-2)
2. This document only covers wild meat consumption of terrestrial species, including avian species. A separate document on Aquatic Wild Meat ([UNEP/CMS/COP12/Doc.24.2.3](http://www.cms.int/sites/default/files/document/cms_cop12_doc.24.2.3_aquatic-wild-meat_e.pdf)) has been prepared by the CMS Aquatic Mammals Working Group upon the request of the first meeting of the Sessional Committee of the Scientific Council. Given the different stages of knowledge and recognition of this issue in the terrestrial versus the aquatic environment, and the different genesis of the documents, it was decided to present these separately. In the future, Parties may wish to consider whether to combine the work streams on terrestrial and aquatic wild meat.

Wild meat and bushmeat

The [Oxford English Dictionary](https://en.oxforddictionaries.com/definition/bushmeat) (accessed on 22 May 2017) describes ‘bushmeat’ as “The meat of African wild animals as food”. The Convention on Biological Diversity Liaison Group on Bushmeat defines bushmeat (or wild meat) hunting as the harvesting of wild animals in tropical and sub-tropical countries for food and for non-food purposes, including for medicinal use ([UNEP/CBD/COP/DEC/XI/25](https://www.cbd.int/doc/decisions/cop-11/cop-11-dec-25-en.pdf)) based on the Report prepared for the CBD Bushmeat Liaison Group on Sustainable Use: Options for small-scale food and income alternatives in tropical and sub-tropical countries and revised recommendations of the Liaison Group on Bushmeat ([UNEP/CBD/SBSTTA/15/6](https://www.cbd.int/doc/recommendations/sbstta-15/sbstta-15-rec-06-en.pdf)).Given that wildlife hunting for food affects over 500 wild vertebrate species in Oceania, South America, South and Southeast Asia and Sub-Saharan Africa, the IUCN–World Conservation Union General Assembly in October 2000 in its Resolution 2.64 refers to the issue of ‘wild meat’ rather than ‘bushmeat’ hunting. CMS-listed species occur globally and hunting for wild meat occurs in all hemispheres. It is therefore proposed that CMS uses the term ‘wild meat’, as it better reflects the global nature of this issue.

Impact of wild meat consumption on species and terrestrial ecosystems

1. In most regions where hunting has been studied, vertebrates contribute almost all of the wild meat consumed and traded. By class, mammals are the most common, followed by birds, reptiles and amphibians.[[3]](#footnote-3) In the late 1990s, it was estimated that over 5 million tons of wild mammal meat were annually consumed in Neotropical (0.15 million tons) and Afrotropical (4.9 million tons) moist forests.[[4]](#footnote-4) More recent estimations suggest that nearly six million tons of meat from wild mammals may be eaten in the Afro- and Neotropics each year.[[5]](#footnote-5) As a consequence, as many as 301 terrestrial mammal species are currently threatened with extinction from hunting for food and medicinal products.[[6]](#footnote-6) Moreover, contemporary consumption levels are deemed unsustainable and are expected to result in the eventual collapse of game populations[[7]](#footnote-7) and the reduction of food and livelihoods for people who rely on them.[[8]](#footnote-8)
2. A large variety of animal species are hunted for food. In Gabon, 114 species were recorded from hunter bags, household consumption records and markets.[[9]](#footnote-9) In Eastern and South-eastern Asia as many as 400 species are known to be hunted. In Latin America, over 200 mammals, ca. 750 birds, and more than 60 reptiles and 5 amphibians are harvested for food.[[10]](#footnote-10) In African moist forests, ungulates and rodents comprise 73% and 12% of the total biomass harvested respectively, and account for around 42% and 39% of the recorded carcasses.[[11]](#footnote-11) However, rare and vulnerable species, such as great apes or elephants usually comprise less than 5% of wild meat prey.[[12]](#footnote-12)
3. Hunting can have direct impacts on prey populations, as well as indirect effects on the functioning, structure and composition of the ecosystems they are part of.[[13]](#footnote-13) Evidence of depletion effects are available for the Congo Basin in which 60% of 57 forest mammals were assessed as being unsustainably harvested (93% of ungulates and 63% of primates and carnivores).[[14]](#footnote-14) In the Amazon basin, comparisons of unhunted and heavily hunted sites indicate a reduction of more than 90% in the biomass of harvest-sensitive species.[[15]](#footnote-15) Similarly, studies from India conclude that 20 of the 33 mammals hunted in Arunachal Pradesh are endangered, vulnerable or near threatened . according to the IUCN Red List.[[16]](#footnote-16) The IUCN Red List states hunting as one of the main threats to these species.[[17]](#footnote-17) Throughout India as many as 25 large mammals showed substantial probabilities of local extinction over the past century because of widespread hunting and land-use changes (deforestation, agricultural expansion), together with rapid economic and demographic growth in the last 100 years.[[18]](#footnote-18)
4. Across different geographic regions, large long-lived species, such as elephants, big cats and great apes, which have characteristically lower intrinsic rates of population increase and long generation times, are significantly more vulnerable to hunting than smaller animals.[[19]](#footnote-19) An example of a species directly affected by commercial hunting for meat has been the Western lowland gorilla populations in Gabon, which decreased by more than half between 1983 and 2000.[[20]](#footnote-20) Wild meat hunting also affects large carnivore populations, as shown for leopard populations in the Congo Basin where intensive hunting of wild game may have precipitated their widespread disappearance, even from within protected areas.[[21]](#footnote-21)
5. Unsustainable wild meat hunting can have severe impacts on the broader functioning of ecosystems, since hunters generally target herbivores and seed dispersers, as these are the more abundant and accessible prey[[22]](#footnote-22). One example are large herbivores, who through their grazing habits and seed dispersal maintain habitats for other species and ensure vegetation regeneration.[[23]](#footnote-23) Because these species function as landscape engineers their loss will have a disproportionate effect on ecosystems compared to the demise of other species. Another example are predators, such as big cats, raptors and crocodiles who provide other species with resources, such as carrion or safe breeding sites that they would otherwise not have.[[24]](#footnote-24) Their loss can result in large-scale prey population changes, trophic cascades and even ecosystem collapse.[[25]](#footnote-25)
6. While the severe impacts of unsustainable wild meat hunting on species and ecosystems in tropical moist forests is well established, there is growing recognition by scientists that wild meat hunting is equally having detrimental effects on savannah species and their habitats.[[26]](#footnote-26)

Meaning of wild meat consumption for food security and livelihoods

1. In remote areas of Central Africa and the Amazon basin, where animal husbandry is often not a viable option, wild meat is the main source of animal protein and plays an essential role in the diet of many people. For some human populations, especially indigenous groups, eating wild meat is often a matter of survival.[[27]](#footnote-27) Wild meat consumption by rural people has been estimated around 63 kg per capita per annum in the Amazon, and 51 kg per capita per annum in the Congo basin.[[28]](#footnote-28)
2. While wild meat is an important item for many, it is increasingly clear that the drivers and patterns of wild meat trade are not static.[[29]](#footnote-29) They vary temporarily as well as between economically disparate countries and between rural and urban areas, in accordance with availability, price, disposable income and cultural preferences.[[30]](#footnote-30)
3. Studies in Africa indicate that wild meat consumption is widespread in urban areas.[[31]](#footnote-31) With increasing urbanisation across Central, Western, Eastern and Southern Africa consumption of wild meat has risen accordingly.[[32]](#footnote-32) In Latin America 1.4–2.2% of the total population has been estimated to rely on wild meat as the main source of protein, many of them among the poorest. Although wild meat consumption in urban areas was considered insignificant in past studies[[33]](#footnote-33), there is growing evidence that this is increasing in some countries.[[34]](#footnote-34) This trend has also been observed in South East Asia where wild meat is increasingly a luxury item for the more affluent urban populations.[[35]](#footnote-35)
4. While wild meat often constitutes the only choice for populations in remote areas, urban populations choose to consume wild meat for a variety of reasons. In Kisangani (Democratic Republic of the Congo) and Bangui (Central African Republic) wild meat is cheaper than many alternative sources of protein.[[36]](#footnote-36) On the other hand, in large cities of Equatorial Guinea, Gabon and Cameroon, wild meat is more of a luxury product.[[37]](#footnote-37) Wild meat consumption also occurs for cultural reasons. In Gabon, wild meat is associated with the village, and with rituals and ceremonies, such as men’s circumcisions.[[38]](#footnote-38) In Equatorial Guinea, certain species are considered to have medicinal or magical properties that increase value, while others are taboo.[[39]](#footnote-39)
5. Apart from satisfying dietary needs, wild meat hunting is also seen by families as a possibility to meet short-term cash needs[[40]](#footnote-40) and by hunters to supplement incomes.[[41]](#footnote-41)  The trade in wild meat represents a full-time source of income for some, while for others this may serve as a buffer during times of hardship (e.g. crop failure, unemployment, illness of relatives) or as a means to generate extra cash for special needs (school fees, funerals).[[42]](#footnote-42) In the Congo basin, commercial trade is probably the main driver for wild meat off take[[43]](#footnote-43), as the aggregate urban consumption is higher than the aggregate rural consumption due to the size of the urban population.[[44]](#footnote-44) While in the Congo basin 50-60% of commercial trade occurs in established local markets, this is not the case in the Amazon basin, where wild meat trade is hidden.[[45]](#footnote-45) In addition to local trade, international trade of wild meat is known to occur between countries in the Congo basin,[[46]](#footnote-46) and a study of 2010 estimated that 270 tons of wild meat is channeled annually unchecked through Charles-de-Gaulle airport.[[47]](#footnote-47)

How to address unsustainable wild meat consumption?

1. With an estimated yearly extraction rate in the Congo basin of 4.5 million tons, if wild meat consumption in the Congo basin was to be replaced by locally produced beef, some 25 million hectares would have to be converted to pastures. Achieving sustainable harvest of wild meat is therefore a necessity and by far, the best short- to medium-term option compatible with conservation, livelihoods, food security and nutrition.[[48]](#footnote-48) Cross-sectoral collaboration[[49]](#footnote-49) and multidisciplinary approaches are needed to combine a better knowledge of the use and trade of wild meat, the strengthening of legal frameworks, the provision of food and livelihood alternatives and the sustainable use of wildlife.[[50]](#footnote-50)

CMS provisions relevant to wild meat consumption

1. CMS lists species that are endangered on Appendix I (Article III), while Appendix II lists species that have an unfavourable conservation status and require an international agreement for their conservation and management or whose conservation status would significantly benefit from international cooperation (Article IV). With respect to Appendix I-listed species Parties are required to prohibit their taking (i.e. *taking, hunting, fishing capturing, harassing, deliberate killing, or attempting to engage in any such conduct*), except if one of four exceptions applies, including if the taking is to *accommodate the needs of traditional subsistence users of such species* (Article III, 5. c)). Furthermore, if a Party makes use of this exception, it shall, as soon as possible, inform the Secretariat accordingly (Article III. 7.).
2. Appendix II-listed species should be protected through international agreements, which should, amongst others, *provide for* *measures based on sound ecological principles to control and manage the taking of the migratory species* (Article V, 5. j)). Since it is within the prerogative of the Parties to agreements or Signatories to Memoranda of Understanding (MOU) concluded for Appendix II-listed species to provide for measures to control and manage the taking of species, each agreement and MOU might differ on that point.
3. In addition, Goal 1 of the Strategic Plan for Migratory Species (2015-2023) ([Resolution 11.2](http://www.cms.int/sites/default/files/document/Res_11_02_Strategic_Plan_for_MS_2015_2023_E_0.pdf)), requests Parties to *Address the underlying causes of decline of migratory species by mainstreaming relevant conservation and sustainable use priorities across government and society*, while Target 6 provides that *Fisheries and hunting have no significant direct or indirect adverse impacts on migratory species, their habitats or their migration routes, and impacts of fisheries and hunting are within safe ecological limits*.

Wild meat discussions in other international organisations

1. The issue of wild meat is already under discussion in other multilateral environmental agreements. The Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) recognizes “*that the harvest of and trade in bushmeat may be detrimental to the immediate survival of certain species and may be one of a number of pressures impacting an even greater number of species*” (Resolution [Conf.13.11 (Rev. CoP17)](https://cites.org/sites/default/files/document/E-Res-13-11-R17.pdf).
2. The Conference of the Parties to CITES at its 17th meeting (COP17, Johannesburg, September 2016), considerably revised its Resolution on bushmeat. Additionally, the Secretariat of CITES, subject to the availability of external resources, is directed in collaboration with the Collaborative Partnership on Sustainable Wildlife Management (see below) and the International Consortium on Combating Wildlife Crime (ICCWC) and other organisations to develop guidance materials, activities and tools to enhance the capacity of Parties to regulate bushmeat trade according (CITES Decision 17.113). COP17 also directed the Central Africa Bushmeat Working Group (a group composed of six Central African countries) to collaborate with CBD and the Food and Agricultural Organization of the United Nations (FAO) concerning the implementation of Resolution Conf. 13.11 (Rev. COP17) and CITES Decisions 14.73-74 (Rev. CoP17), and 17.112.
3. The Conference of the Parties to the Convention on Biological Diversity (CBD), in 2008, urged Parties to “*address as a matter of priority major human-induced threats to forest biodiversity, including unregulated and unsustainable use of forest products and resources (including unsustainable hunting and trade of bushmeat, and their impacts on non-target species)* [..]” ([Decision IX/5](https://www.cbd.int/decisions/cop/?m=cop-09)) and established a Liaison Group on Bushmeat in 2009..)
4. In October 2009, the Convention on Biological Diversity Liaison Group on Bushmeat held its first meeting and developed National and International Recommendations towards the Sustainable Use of Bushmeat,[[51]](#footnote-51) based on information contained in CBD Technical Series No. 33, “Conservation and Use of Wildlife-Based Resources: The Bushmeat Crisis”.[[52]](#footnote-52)
5. Pursuant to CBD Decision X/32, paragraph 4 (b), the Executive Secretary organized a joint meeting of the Convention on Biological Diversity Liaison Group on Bushmeat with the Central Africa Bushmeat Working Group of CITES, resulting in revised recommendations for the conservation and sustainable use of wildlife, as well as options for small-scale food and income alternatives based on the sustainable use of biodiversity. The background documentation for the joint CBD/CITES meeting (7-10 June 2011), as well as the results of the meeting indicate inter alia that (i) increased attention of the global community to bushmeat hunting, and closer collaboration between Parties, relevant organizations and other stakeholders, including the private sector, is required; (ii) improving the sustainability of wildlife management and hunting is essential to avoid further biodiversity loss and food insecurity in concerned States; (iii) appropriate livelihood alternatives should be developed and promoted; and (iv) the full and effective participation of indigenous peoples and local communities must be ensured.
6. The revised recommendations of the CBD’s Liaison Group on Bushmeat were adopted in CBD Decision XI/25, inviting Parties, other Governments and relevant organizations to make use of these recommendations consistent with national needs and priorities. Decision XI/25 also led to the establishment of the [Collaborative Partnership on Sustainable Wildlife Management](http://www.fao.org/forestry/wildlife-partnership/en/) (CPW). The CPW currently brings together 14 organisations, including CMS (see [UNEP/CMS/Resolution 11.31](http://www.cms.int/sites/default/files/document/Res_11_31_Fighting_Wildlife_Crime_E_0.pdf)), concerned with aspects of biodiversity conservation and sustainable use.[[53]](#footnote-53) To date the CPW has only been concerned with sustainable wildlife management of terrestrial vertebrates.
7. CBD Decision XII/18 called for several actions, including an analysis of the impacts of subsistence use of wildlife on the survival and regeneration of wild species, in the context of growing human populations and pressures on wildlife resources. Discussions on wild meat have continued under CBD at its 13th meeting in 2016. Decision XIII/8 requests the Executive Secretary, in collaboration with other members of the CPW:

“*to further elaborate technical guidance for better governance towards a more sustainable bushmeat sector, with a view to supporting Parties’ implementation of the Strategic Plan for Biodiversity 2011-2020, building on the road map on the role of bushmeat in food security and nutrition* *and the results of the Symposium on “Beyond enforcement: Communities, governance, incentives, and sustainable use in combating illegal wildlife trade”, held in South Africa in February 2015, as well as the workshop on “Sustainable use and bushmeat trade in Colombia: operationalizing the legal framework in Colombia”, held in Leticia, Colombia, in October 2015, taking into account the perspective and knowledge of indigenous peoples and local communities in customary sustainable use of biodiversity*” ([CBD/COP/DEC/XIII/8](https://www.cbd.int/doc/decisions/cop-13/cop-13-dec-08-en.pdf)).

Discussion and analysis

1. In light of the severe impacts of unsustainable wild meat hunting across the globe, with its multiple implications for species, the ecosystems they live in, as well as food security and livelihoods of local human populations the issue certainly requires urgent attention. While CMS sets clear obligations (see above) for Parties with regard to wild meat hunting, it is, however, unclear which and how CMS-listed species are directly or indirectly impacted by these practices.
2. The Conference of the Parties is therefore recommended to ascertain the impact of wild meat hunting on CMS-listed species and make appropriate recommendations to Parties to address the issue.

Recommended actions

1. The Conference of the Parties is recommended to adopt the Decisions contained in Annex 1 of this document.

**Annex 1**

DRAFT DECISIONS

**ADDRESSING UNSUSTAINABLE USE OF WILD MEAT**

***Directed to the Secretariat***

12.AA The Secretariat shall, subject to the availability of external resources:

1. Prepare an analysis on the direct and indirect impacts of wild meat consumption on terrestrial and avian species listed on CMS;
2. On the basis of the findings made under paragraph a), cooperate with the partners of the Collaborative Partnership on Sustainable Wildlife Management (CPW) and, in particular, with:
   1. The Secretariats of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Convention on Biological Diversity (CBD), as well as the Presidencies of their respective Conferences of the Parties through the Secretariats of CBD and CITES, in raising the importance of unsustainable wild meat trade and consumption within the global policy agenda;
   2. The Food and Agricultural Organisation (FAO), the Centre for International Forestry Research (CIFOR), Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD) and the Wildlife Conservation Society (WCS) on Sustainable Wildlife Management issues, as they relate to CMS-listed species and to present the lessons learned to the 13th meeting of the Conference of the Parties;
   3. The Executive Secretary of the CBD and other members of the CPW to further elaborate technical guidance for better governance towards a sustainable wild meat sector, as set out in CBD Decision CBD/COP/DEC/XIII/8;
3. Report to the Standing Committee its 48th and 49th meetings and the Conference of the Parties at its 13th meeting on the progress in implementing this decision.

***Directed to Parties***

12.BB Parties are requested to cooperate with the Secretariat in the implementation of Decisions 12.AA, by:

1. Providing information and data to the analysis mentioned in paragraph a);
2. Supporting the discussions on wild meat in global policy fora mentioned in paragraph b) i.; and
3. Supporting the development and implementation of governance towards a sustainable wild meat sector mentioned in paragraph b) iii..

***Directed to the Scientific Council***

12.CC The Scientific Council shall:

1. Consider the analysis on the direct and indirect effects of wild meat consumption on CMS-listed species submitted by the Secretariat and make appropriate recommendations to the Conference of the Parties at its 13th meeting;

***Directed to the Standing Committee***

12.DD The Standing Committee shall

1. Consider the report submitted by the Secretariat at its 48th and 49th meetings;

***Directed to Parties, intergovernmental and non-governmental organizations***

12.EE Parties, intergovernmental and non-governmental organizations are urged to provide financial and technical support for the implementation of the above Decisions.

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