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**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**

*Note by the Executive Secretary*

***Executive summary***

Over-exploitation of mammals, birds, reptiles, and amphibians in many tropical and sub-tropical countries is increasingly threatening food security and livelihoods, and is causing significant biodiversity loss. Consequently, the Convention on Biological Diversity (CBD) has identified the unsustainable hunting and trade of wild fauna for bushmeat<sup>1</sup> and their effects on non-target species as priority issues (decision IX/5). Pursuant to 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 the Convention on International Trade in Endangered Species of Wild Fauna and Flora (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.

\* UNEP/CBD/SBSTTA/15/1.

<sup>1</sup> 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/LG-Bushmeat/2/4).

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## SUGGESTED RECOMMENDATIONS

The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties adopt a decision along the following lines:

*The Conference of the Parties*

1. *Adopts* the recommendations of the Liaison Group on Bushmeat (annex I of the present document) as a specific complement to the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity related to sustainable wildlife management in tropical and sub-tropical countries;
2. *Urges* Parties and *invites* other Governments and relevant organizations to:
  - (a) Implement the recommendations of the Liaison Group on Bushmeat as annexed to this decision, where appropriate, taking into account Article 10(c) of the Convention;
  - (b) Develop and promote appropriate alternatives to the unsustainable harvesting of tropical and sub-tropical fauna, depending on the local and national context, with a particular view to improve sustainable wildlife management and customary sustainable use, based on the recommendations of the Liaison Group on Bushmeat.
3. *Requests* the Executive Secretary to:
  - (a) Explore options for the development of a collaborative partnership on wildlife management, to support the implementation of this decision and other relevant decisions of the Conference of the Parties, and to enhance cooperation and coordination on wildlife management issues.
  - (b) Facilitate the exchange of information and experience between Parties.
  - (c) Based on submission from Parties and relevant organizations, and with the full and effective participation of indigenous peoples and local communities, report on progress of the implementation of the recommendations of the Liaison Group on Bushmeat, and on related capacity-building requirements, to the twelfth meeting of the Conference of the Parties.

## I. INTRODUCTION

1. In 2008, the Conference of the Parties, at its ninth meeting, identified the unsustainable hunting and trade of bushmeat, and their impacts on non-target species, as priority issues to be addressed by Parties (decision IX/5). 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*<sup>2</sup>, based on information contained in CBD Technical Series No. 33, “Conservation and Use of Wildlife-Based Resources: The Bushmeat Crisis”<sup>3</sup>. The meeting was convened in collaboration with the Food and Agriculture Organization of the United Nations (FAO) as well as the Center for International Forestry Research (CIFOR) and the International Council for Game and Wildlife Conservation (CIC).

2. In paragraph 4 (a) of decision X/32, the Conference of the Parties to the Convention on Biological Diversity, at its tenth meeting in October 2010, requested the following from the Executive Secretary:

In order to support current and future livelihood needs and to reduce unsustainable use of bushmeat, develop, through the Liaison Group on Bushmeat and in cooperation with the Food

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<sup>2</sup> UNEP/CBD/LG-Bushmeat/1/2, annex I. The full report of the Bushmeat Liaison Group meeting is available at [www.cbd.int/doc/?meeting=LGB-01](http://www.cbd.int/doc/?meeting=LGB-01).

<sup>3</sup> CBD Technical Series No. 33 “Conservation and Sustainable Use of Wildlife-based Resources: The Bushmeat Crisis” (2008) is available in Spanish, French, and English at [www.cbd.int/ts](http://www.cbd.int/ts).

and Agriculture Organization of the United Nations, the United Nations Development Programme, the Center for International Forestry Research and other relevant organizations and based on available case-studies, options for small-scale food and income alternatives in tropical and sub-tropical countries based on the sustainable use of biodiversity, and submit a report for the consideration by the Subsidiary Body on Scientific, Technical and Technological Advice at a meeting prior to the eleventh meeting of the Conference of the Parties, and to submit to that meeting a revised version of the recommendations of the Liaison Group on Bushmeat. (para. 4 (a), decision X/32)

3. Pursuant to this request, the Secretariat organized a joint meeting of the Convention on Biological Diversity's (CBD) Liaison Group on Bushmeat and the Convention on International Trade in Endangered Species of Wild Fauna and Flora's (CITES) Central Africa Bushmeat Working Group, held in Nairobi, Kenya, from 7 to 10 June 2011. The workshop was organized with generous financial support from the European Commission, with the purpose to facilitate the implementation of the above decision, as well as to encourage and enable Parties and relevant intergovernmental and non-governmental organizations to take effective action to ensure the conservation and sustainable use of wildlife resources in tropical and sub-tropical countries. The meeting report is available as document UNEP/CBD/LG-Bushmeat/2/4.

4. The joint meeting of the Convention on Biological Diversity Liaison Group on Bushmeat and the CITES Central Africa Bushmeat Working Group was attended by representatives from forty Parties and relevant organizations, and was held in collaboration with the following partners: the Food and Agriculture Organization of the United Nations (FAO); the Great Apes Survival Partnership (UNEP-GRASP), which is led by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Environment Programme (UNEP); the Central African Forests Commission (COMIFAC); the Convention on Migratory Species (CMS); the Center for International Forestry Research (CIFOR); the International Union for Conservation of Nature (IUCN); the International Council for Game and Wildlife Conservation (CIC), and the Wildlife Trade Monitoring Network (TRAFFIC).

5. Bushmeat hunting and sustainable wildlife management are complex topics that require close collaboration between Parties, relevant organizations, indigenous peoples and local communities, and the private sector. The collaboration at the joint CBD/CITES meeting between relevant organizations was welcomed by all participants. Building on this collaboration, it is recommended to form a collaborative partnership on wildlife management, inviting the organizations listed in the paragraph above as well as further global and regional, intergovernmental and non-governmental organizations, with a view to support the implementation of the recommendations of the Convention on Biological Diversity Liaison Group on Bushmeat, as well as to enhance coordination and exchange of information on sustainable wildlife management.

6. The Executive Secretary prepared the following information based on the results of the Nairobi workshop, as well as on the basis of documents tabled for the workshop, including a consultancy study commissioned by the Secretariat and funded by the European Commission on small-scale livelihood alternatives to the unsustainable use of wild fauna for bushmeat (UNEP/CBD/LG-Bushmeat/2/2; UNEP/CBD/SBSTTA/15/INF/7), which was reviewed by the partner organizations listed above, as well as by the United Nations Environment Programme (UNEP).

7. This note incorporates comments received from the SBSTTA Bureau at a face-to-face meeting held on 5 and 6 June 2011 in Montreal. A draft of this note was posted for review from 28 June 2011 to 19 July 2011 in accordance with notification 2011-123 (ref. No. SCBD/STTM/JM/VA/76477), and the comments received have been incorporated as appropriate.

## II. BACKGROUND

8. The over-exploitation of mammals, birds, reptiles, and amphibians in many tropical and sub-tropical countries is increasingly emptying forests and other ecosystems of wildlife “empty forest syndrome”. This is not only causing a widespread loss of biodiversity, it is also increasingly threatening local and national food security and livelihoods.

9. The threat to food security is particularly worrying. It is estimated that in some tropical developing countries bushmeat contributes 30 to 80 per cent of the protein intake in rural diets. If current extraction levels continue, there will be a significant decline in wild protein in the future, and there will be insufficient non-bushmeat protein available to replace the amounts supplied by wild meats. In the Congo Basin, for example, increasing population and trade from rural to urban areas compounded with the lack of any sizeable domestic meat sector are the main causes of unsustainable levels of hunting. Recent estimates suggest that if bushmeat consumption was to be replaced by local beef, as much as 80 per cent of the Democratic Republic of Congo would have to be pastures.

10. The unsustainable hunting of bushmeat for commercial trade not only affects targeted species but impacts ecosystems more broadly, as for example many biological processes are dependent on the presence of fauna as essential pollinators, seed dispersers and seed predators. When bushmeat hunting results in the local extinction of such keystone species it not only causes the loss of species and genetic diversity, but also results in weakened ecosystem functionality and resilience. An indirect impact of bushmeat hunting on biodiversity includes that decreased availability of bushmeat can lead to over-fishing.<sup>4</sup>

11. *Status of species used for bushmeat:* Species used for bushmeat are generally in decline. The IUCN Red List of Threatened Species lists 1,805 species intentionally used through hunting and trapping. Of these, 1,299 are under various degrees of threat. Overharvesting is one of the reasons contributing to this trend, albeit other pressures such as habitat loss also play an important role.

12. Overall, the loss of wild fauna due to overhunting has reached critical levels in many countries across the tropics and sub-tropics. Unsustainable bushmeat hunting for commercial trade is one of the most important causes of this trend. In Central Africa alone, an estimated 579 million forest mammals are consumed annually.

13. Estimated sustainable off-take levels<sup>5</sup> vary widely for different species. It is essential that bushmeat hunting focuses on species that are relatively resilient to hunting pressure, while species that are not resilient should be conserved.

14. *Status and trend of bushmeat hunting:* The rates of bushmeat hunting are already unsustainably high across large areas of the tropics and sub-tropics, and the problem is growing. Hunting rates in tropical Africa are estimated to be more than six times greater than sustainable levels, and in Asia large animals are already gone from most tropical forests and other ecosystems.

15. At the same time, many countries across the tropics and subtropics are experiencing an enormous growth of bushmeat markets. These rapidly growing urban markets, both domestic and international, are the most significant drivers of the unsustainable bushmeat exploitation. Their supply chains are often hundreds of kilometres long. Often, the bushmeat trade is facilitated by extractive industries such as logging and mining. These industries facilitate access to remote forests by opening roads in previously inaccessible areas, thus providing access to markets and transforming hunting from a largely subsistence

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<sup>4</sup> Sinclair, A. R. E. et al. 2004. “Bushmeat Hunting, Wildlife Declines, and Fish Supply in West Africa”. *Science*, vol. 306, No.5699: pp. 1180-3.

<sup>5</sup> This refers to the percentage of a population that can be harvested sustainably. Estimates for sustainable off-take levels are highest for insectivores and rodents, ranging from around 20 per cent to over 70 per cent of the standing population per year, depending on the species (CBD Technical Series No. 33), while long-live, large species with low reproduction rates are much less resilient to hunting pressure.

activity into a commercial one. Moreover, logging and mining companies often regard bushmeat as a free food supply which relieves them of the responsibility to provide for their workers.

16. The commercial bushmeat trade is also increasingly transnational. Even in remote and protected areas, commercial bushmeat hunting is often driven by markets beyond national borders. These markets exist in developed as well developing countries. Major entry points for bushmeat exist at main airport hubs in Britain, France, Belgium and the United States. Illegally imported bushmeat involves lucrative prices and a wide range of species, many of which are CITES-listed. This smuggling provides opportunities for introducing food-borne and tropical pathogens into novel environments as seen in the 2003 emergence of monkeypox in the United States from imported Gambian rats. Increasing human-wildlife contact related to the bushmeat hunting and trade also spreads infectious diseases such as Ebola and Nipah.

17. *Threat to local livelihoods and food security:* The increasing commercialization of the bushmeat trade is also posing a severe threat to the customary sustainable use practiced since time immemorial by indigenous peoples and local communities. It threatens local livelihoods and food security as well as indigenous peoples' and local communities' cultural and spiritual identities.

18. Given the impact of commercial bushmeat hunting and trade on local livelihoods, it is important to ensure the full and effective participation of indigenous peoples and local communities in the development of policies and measures to better manage tropical and sub-tropical wildlife. The involvement should be based on the United Nations Declaration on the Rights of Indigenous Peoples, as well as on Article 10(c) and 8(j) of the Convention on Biological Diversity.

### **III. RESULTS OF JOINT MEETING OF THE CONVENTION ON BIOLOGICAL DIVERSITY LIAISON GROUP ON BUSHMEAT AND CITES CENTRAL AFRICA BUSHMEAT WORKING GROUP**

19. The joint meeting of the Convention on Biological Diversity Liaison Group on Bushmeat and the CITES Central Africa Bushmeat Working Group Nairobi 7-10 June 2011, was co-chaired by Mr. Linjouom Ibrahim from Cameroon and Mr. Kurt Duchez from Guatemala. The results of the meeting were:

(a) Revised recommendations of the Convention on Biological Diversity Liaison Group on Bushmeat, for consideration of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) at its fifteenth meeting (7-11 November 2011), including recommendations on small-scale food and income alternatives in tropical and sub-tropical countries based on the sustainable use of biodiversity;

(b) Agreed work plan of CITES Central Africa Bushmeat Working Group for implementing decisions 14.73 and 14.74 (Rev. CoP15) which were directed to it;<sup>6</sup>

(c) Outline for an electronic media tool kit on bushmeat, including factsheets and audio-visual resources;

(d) Outline and basic material for a publication on best practice examples and lessons learned from conservation and sustainable use of wildlife resources in tropical and sub-tropical countries.

20. The meeting also generated inputs for the second meeting of the Parties to the Convention on Migratory Species Gorilla Agreement, to be held in Bergen, Norway, 26-27 November 2011.

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<sup>6</sup> The Working Group will report to the 61st (Geneva, 15-19 August 2011) and 62nd (Geneva, 2012) meetings of the CITES Standing Committee and to CoP16 on matters relating to the implementation of Resolution Conf. 13.11 and the two decisions related to bushmeat indicated above, and on progress made in implementing national action plans on trade in bushmeat and other relevant initiatives.

21. The meeting report is available as document UNEP/CBD/LG-Bushmeat/2/4. A summary of main results (co-chairs summary) is provided in annex II of the present document. It is suggested that SBSTTA considers key elements of the co-chairs summary for possible inclusion into the draft decision on this agenda item.

#### **IV. SMALL-SCALE LIVELIHOOD ALTERNATIVES TO THE UNSUSTAINABLE HARVESTING OF BUSHMEAT**

22. The following recommendations are based on the results of the second meeting of the Convention on Biological Diversity Liaison Group on Bushmeat (UNEP/CBD/LG-Bushmeat/2/4), and on a consultancy study developed for that meeting (UNEP/CBD/LG-Bushmeat/2/2). Generally, it can be feasible to replace the unsustainable harvesting of bushmeat with more sustainable alternatives. However, many approaches and projects have failed in the past. The problem at local and national level is usually complex and requires sufficient political will and a comprehensive approach. An analysis of lessons learned from a range of projects, and a list of successful case studies from Africa, Latin America and Asia-Pacific are included in document UNEP/CBD/LG-Bushmeat/2/2. Successful substitution activities may include:

- (a) Sustainable wildlife management, community wildlife management, game ranching, and hunting tourism;
- (b) Domestication and raising of wild animals in small farms (mini-livestock);
- (c) Sustainable harvesting of non-timber forest products; and
- (d) Certification and eco-labelling of wildlife products.

23. However, it is important to note that a number of conditions need to be met in order for livelihood alternatives to succeed. The following sections outline these conditions.

24. The use of bushmeat for food is by far the largest use, and includes any non-domesticated terrestrial mammals, birds, reptiles and amphibians harvested for food or other purposes. While invertebrates can be locally important dietary items, it is the larger vertebrates which constitute the majority of the terrestrial wild animal biomass consumed by humans. Insects, crustaceans, grubs, molluscs and fish are excluded from the focus of the recommendations on small-scale livelihood alternatives.

25. Alternatives to the unsustainable use of bushmeat in this document are analyzed both in rural and urban settings and include alternatives for both consumption and trade. Alternatives to unsustainable bushmeat use include bushmeat from sustainable sources (sustainable hunting or domestication of wild animals) or the provision of other sources of protein that are considered substitutes by bushmeat consumers. Alternatives to bushmeat trade are those that provide other sources of income that effectively reduce wildlife trade and reduce pressure on natural resources to sustainable levels.

26. “Sustainable use” in the context of bushmeat is based on Article 2 of the Convention: “the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations”. In practical terms, a sustainable use is one which is perpetuated over the long term. Often local interest in the resource is an important factor in maintaining its quality.

27. All forms of use of biodiversity, consumptive or non-consumptive, will impact ecosystems in some way. These impacts will translate into more or less dramatic effects on the local environment depending on what is harvested and how. Ultimately, for bushmeat use and other alternatives to be sustainable, they must be so from social, ecological and economic viewpoints.

*Conclusions of report on small-scale livelihood alternatives to the unsustainable harvesting of bushmeat*

28. The report on small-scale livelihood alternatives to the unsustainable harvesting of bushmeat analyzed several case studies from Asian, Latin American and African countries, covering both (i) bushmeat as a source of protein and (ii) bushmeat as a source of income. It explored in-depth the role of bushmeat for subsistence and commercial hunting; the importance of bushmeat in the household economy; and the income generated along the bushmeat market chain. As examples of small-scale livelihood alternatives for the unsustainable harvesting of bushmeat, the report explored a range of options, including: income generating activities (e.g., eco-tourism, bee-keeping, etc.); production of domesticated sources of protein; mini-livestock breeding with indigenous species; community-based wildlife management; game ranching; payments for environmental services and certification.

29. The report showed that alternatives to the unsustainable use of wildlife do exist and described the diversity of approaches that can be implemented. It further showed the range of difficulties and risks associated with each of the approaches. Many of the examples described were successful – at different levels and in different ways – in reducing pressure on wildlife locally.

30. Replicating and scaling-up successful local approaches to national or regional level remains a challenge. However, the following key considerations would improve the replication and upscaling of successful approaches:

31. *Local context:* Each site is characterized by a different local social, natural, economic and cultural context that explains the differences among sites in terms of drivers of bushmeat demand, users of bushmeat for both consumption and income, level of dependence on bushmeat and determinants of consumption behaviour. This implies that the same alternatives will not necessarily be equally successful in every place, and the outcome of replicating approaches that were locally successful will not necessarily be a global success. Nevertheless, if certain requirements and recommendations for scaling-up successful approaches are applied, successful examples can be transferred to other areas, with different ecological and socio-economic contexts.

32. *Participatory process and adaptive management:* A participatory process and an adaptive management approach should be employed in the development and implementation of small-scale alternatives to increase the likelihood of substitution and ensure that the alternative effectively leads to the reduction of pressure on wildlife resources. The objective of the alternative needs to be clearly defined with the full participation of beneficiaries.

33. *For each target a different alternative:* Different user groups have different criteria for behavioural change:

(a) For urban consumers who consume bushmeat on a daily basis as the most cheaply available protein source, economic and nutritional alternatives are likely to change consumption behaviour. However, urban consumers for whom bushmeat is rather a luxury good are neither economically nor nutritionally dependent upon bushmeat for their livelihood. Thus neither economic nor nutritional alternatives will necessarily curb their consumption or behaviour. Increased awareness of the ecological and livelihood impacts of the unsustainable use of bushmeat can generate demand for certified wildlife-friendly products among wealthier consumers.

(b) Bushmeat traders provide an important link between the hunter and urban markets. The trading of bushmeat is not necessarily seen as a highly desirable occupation as it implies high risks (fines, taxes, waste with perished products, etc.) and thus might be abandoned if other opportunities were made available.

(c) Hunters might be sensitive to different types of alternatives depending on whether they are primarily hunting for subsistence or commercial purposes. Commercial hunters primarily derive economic benefits from bushmeat exploitation. Consequently, alternatives developed to change a commercial hunter's behaviour must consider their economic needs and provide sufficient incentives to

switch occupations. This switch may be facilitated by technical and financial support as well as by institutional and infrastructural changes. Subsistence hunters are likely to change behaviour if socially-accepted alternative proteins are available at similar prices. Subsistence hunters also depend on income generated from bushmeat to cover basic household needs (medicine, school fees, clothing, etc.) and economic alternatives for the provision of such basic expenses are also needed.

34. *Likelihood for substitution for alternatives to bushmeat as a source of protein:* Depending on the level of taste and cultural preference, bushmeat can be difficult to substitute by domestic meat. Where people have a high preference (whether stated or actual) for bushmeat, meat from sustainable hunting areas, ranching or domesticated wildlife farms is likely to be more socially accepted than domesticated sources of meat. In some other cases, alternative wild products are easily considered as appropriate substitutes. Overall, people who depend on wild protein will substitute wild fish and wild meat for one another, depending on the price and availability of each. The other possible wild substitute, invertebrates (e.g., caterpillars, snails, worms), represents an important traditional habit, but is generally seasonal and cannot fully be substituted for meat and fish. In many other cases, domestic sources of protein will be regarded as a possible substitute, but the ways in which they are provided can determine the likelihood for adoption. The place (market, door to door, etc.), the state (fresh, smoked, frozen), the way they are sold (in small piles, per kilogram, whole animal, etc.) are all factors that can influence the likelihood for substitution.

35. *Likelihood for substitution for alternatives to bushmeat as a source of income:* In order to increase the likelihood for substitution, alternatives to bushmeat as a source of income need to: (i) Ensure that the alternatives target those effectively involved in bushmeat trade; (ii) consider the traditional gender distribution of income-generating activities; (iii) have a commercialization plan for the newly introduced products or services; (iv) provide equal or higher profits with similar socio-economic characteristics (high returns to discontinuous labour inputs, low risk, minimal investment, excellent storage properties, high social inclusivity, easily reconciled with the agricultural cycle and with diversified income-earning strategies).

36. *Monitoring the social, economic and environmental impacts.* Improved indicators and better monitoring processes are needed in order to capitalize lessons learned from field experiences. A major deficiency of many projects is the absence or paucity of quantitative and/or qualitative data on their social, economic and environmental impacts. There is a real need for good monitoring approaches to be in place and for measurements against baselines established at the outset of the project or programme. Most projects are good at reporting on activities and to an extent the project deliverables. Lacking are more meaningful outcomes, such as technical feasibility, economic sustainability, social appropriation, and conservation outcomes. Part of the solution lies with the engagement of several stakeholders (communities, governmental institutions, national research centres) in monitoring project successes (and failures). Imparting skills and knowledge in establishing baselines and subsequent monitoring is empowering for all stakeholders and instructive for project implementers. Properly designed and structured projects will provide for quantitative and qualitative self-assessments of project impacts long after the project has ended. Many methods for monitoring, and toolkits, already exist. They are just not currently being implemented to measure project success for the majority of existing small scale alternatives.

37. *Supportive legal frameworks and policies:* The existing examples show that legal frameworks are not always supportive for the development of small-scale alternatives to the unsustainable use of bushmeat. In many countries (e.g., Central Africa, South East Asia), wildlife trade is illegal and there is no provision for wildlife trade from sustainably managed areas, game ranches or mini-livestock farms. Bushmeat trade regulation should be developed to include a legitimate channel for the sustainable trade. A way of creating a legitimate channel for bushmeat would be to allow restricted hunting and/or trade through quotas. Where legislations allow the trade from sustainably managed areas, game ranching or mini-livestock farms, the numerous ecological problems associated with those alternatives are not

carefully taken into account. Many of the ecological problems of game-ranching could be overcome through allowing the formation of conservancies, where adjacent ranches remove internal fencing to form larger collaborative wildlife areas.

38. *Clearly defined land tenure regulations and rights to access natural resources:* Whereas an open access resource offers opportunities for people with limited resources, the same lack of exclusivity often prevents producers from adopting sustainable practices and making a good living. Particularly in areas with limited alternative opportunities, new entrants quickly dissipate profits if, for example, prices for a product rise. Technical difficulties and investment costs for the development of alternatives should be supported by governmental policies through research, extension services, and micro credits schemes.

39. *Landscape approaches:* The success of the development of alternatives is intimately linked to the capacity of the alternative to substitute for bushmeat without implying higher pressure on other natural resources or on other locations. For example: (i) a reduction in bushmeat use might drive up unsustainable exploitation of fish; (ii) a successful reduction of hunting inside a national park might increase hunting pressure in the buffer area. Ensuring that the adoption of the proposed alternative effectively leads to a reduction of pressure on wildlife in the project area without leakages (e.g., increasing pressure on wildlife elsewhere or on other natural resources) is key to the implementation of any alternative. As a result, landscape approaches are often necessary to ensure that successes in some landscape units do not lead to ecological catastrophes in others. The need for complementarity between the different land uses is exacerbated by the fact that efforts to conserve wildlife in one landscape unit can be undermined if the surrounding areas are not adequately managed.

40. *Multi-stakeholder approaches:* Landscape approaches also imply that different stakeholders work in coordination. Multi stakeholder partnerships between conservation organizations, development agencies, governmental bodies, extension services and the private sector, provide a robust framework for intervention. Several examples of effective partnerships between conservation organizations and some sections of the logging industry now exist in Central Africa. Among the most promising of these examples is a partnership of the Congolese Ministry of Forestry Economy, the Congolaise Industrielle des Bois (CIB) and the Wildlife Conservation Society around the Nouabale-Ndoki National Park in Congo. The project created a wildlife management system in the concessions based on four key principles: regulating access to wildlife resources through land-use planning; promoting selective hunting through law enforcement; involving communities in wildlife management; and developing economic and protein alternatives to hunting and bushmeat.

*Annex I*

**REVISED RECOMMENDATIONS OF THE CONVENTION ON BIOLOGICAL DIVERSITY  
LIAISON GROUP ON BUSHMEAT**

*The Liaison Group on Bushmeat<sup>7</sup> of the Convention on Biological Diversity (CBD) and the Central Africa Bushmeat Working Group of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) met in Nairobi from 7-10 June 2011, and adopted the following recommendations, building on the work of the first meeting of the Liaison Group on Bushmeat held in Buenos Aires from 15 to 17 October, 2009:*

**I. NATIONAL LEVEL**

1. *Increasing capacity to fully evaluate the bushmeat issue and establish appropriate policies and management regimes.* National Governments should, with the full and effective participation of indigenous peoples and local communities, evaluate the role of bushmeat and other wild animal products in national and local economies and cultures as well as the ecological services provided by harvested species and other biodiversity as an essential step towards conserving and sustainably using this resource. This can be done by:

(a) Formalizing the existing bushmeat market as a precursor to putting its management on a sounder footing;

(b) Increasing capacity to monitor levels of bushmeat harvest and consumption in national statistics to inform improved policy and planning;

(c) Incorporating a realistic and open assessment of wildlife consumption and its role in livelihoods and cultures into major policy and planning documents;

(d) Establishing mechanisms for full and effective participation of indigenous peoples and local communities in the process, to ensure inclusion of their views on the role of bushmeat in their diets and their cultures, and the impacts of unsustainable bushmeat use on their livelihoods, and to include traditional knowledge and customary laws in policy-making and planning.

2. *Engaging the private sector and extractive industries.* Wildlife management, including bushmeat species management, should be an essential part of management or business plans for natural resource industries (oil, gas, minerals, timber, etc.) operating in tropical, sub-tropical forest, wetland and savannah ecosystems. Where possible identify and apply existing biodiversity safeguards and standards within extractive industry guidelines and policies (such as safeguards for sustainable forest management - SFM). The private sector should provide food alternatives for staff working in logging concessions (for example: stipulated in the contracts between government and extractive industries).

3. *Land and resource rights and traditional knowledge:* The land and resource rights of indigenous peoples and local communities should be recognized and respected in accordance with the United Nations Declaration on the Rights of Indigenous Peoples<sup>8</sup> and other related human rights mechanisms. Their customary sustainable use and management of wildlife resources, including associated accountability in accordance with customary rules and laws, should be promoted and respected, in line with Article 10(c)

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<sup>7</sup> The meeting was convened in collaboration with the Food and Agriculture Organization of the United Nations (FAO); the Great Apes Survival Partnership (UNEP-GRASP), which is led by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Environment Programme (UNEP); the Central African Forests Commission (COMIFAC); the Convention on Migratory Species (CMS); the Center for International Forestry Research (CIFOR); the International Union for Conservation of Nature (IUCN); the International Council for Game and Wildlife Conservation (CIC), and the Wildlife Trade Monitoring Network (TRAFFIC).

<sup>8</sup> <http://www.un.org/esa/socdev/unpfii/en/drip.html>.

of the Convention on Biological Diversity. Capacity of these empowered indigenous peoples and local communities should be built and strengthened to ensure that they have the capacity to exercise these rights. Conservation and sustainable use of wildlife resources would be enhanced through the incorporation of traditional institutions, traditional knowledge and customary laws and practices into management and monitoring systems, as well as by favouring the use of the most ecologically friendly (e.g., species-specific), cost-efficient, and humane hunting methods.

4. *Review of national policies and legal frameworks:* States where bushmeat species occur are strongly encouraged to review existing policies and legal frameworks related to the conservation and sustainable use of wildlife. In addition to restricting harvesting in protected areas and of threatened species in accordance with existing legislation, it is recommended that States establish strategies, policies, capacity, and management systems that support the legal and sustainable hunting of targeted species. The review should ensure:

- (a) That rights and tenure issues are clearly defined in national legal frameworks;
- (b) The coherence of policy and legal frameworks through mainstreaming conservation and sustainable use of wildlife in the various sectoral and national planning exercises;<sup>9</sup>
- (c) That management schemes are practical and feasible for harvestable species as well as those in need of strict protection (e.g., endangered species);
- (d) Realistic approaches to enforcement in which control measures are consistent with capacity;
- (e) That legal and regulatory texts reflect current practices without compromising key conservation objectives;
- (f) Promotion of the sustainable harvest of low-risk species and of measures to enhance protection of high-risk species;
- (g) The full and effective participation of indigenous peoples and local communities, and include their views and proposals based on traditional knowledge, customary practices and laws.
- (h) That sanctions and penalties have a deterrent effect.

5. *Landscape-level management:* An effectively managed and coherent network of protected areas is essential to conserve wildlife, including threatened species. In order to conserve wildlife populations outside protected areas, management should consider the landscape level.

6. *Science, traditional and indigenous knowledge and monitoring.* Management decisions should be made based on the best available and applicable science, the precautionary approach and the practices and traditional knowledge of indigenous peoples and local communities. Further research is crucial and better information management is needed. Appropriate monitoring systems of bushmeat harvest and trade and wildlife habitats should be developed based on an integration of traditional, indigenous and scientific knowledge and implemented at national level, and allow for comparability of bushmeat harvest and trade at the regional level. International support and guidance should be provided for harmonization of monitoring and reporting. Standardized methods to assess and monitor the status of wildlife populations should be developed and implemented. New, updated and additional reliable data on populations of harvested species and on levels of use and trade should be made available for consideration within the Convention on Biological Diversity – Subsidiary Body on Scientific, Technical and Technological Advice (CBD-SBSTTA), the Convention on International Trade in Endangered Species of Wild Fauna

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<sup>9</sup> Including Poverty Reduction Strategy Papers (PRSP), forest management plans, national biodiversity strategies and action plans (NBSAP), national forest programmes (NFP), Nationally Appropriate Mitigation Actions (NAMAs), national adaptation programmes of action (NAPA), plans related to reducing emissions from deforestation and forest degradation (REDD), national bushmeat action plans, national wildlife management plans and regulations, species-specific national management and conservation plans.

and Flora (CITES) Animals Committee, the Convention on Migratory Species of Wild Animals (CMS) Scientific Council, other relevant international conventions, the Great Apes Survival Partnership led by the United Nations Environment Programme (UNEP-GRASP) and the International Union for Conservation of Nature (IUCN) Red Listing Process

7. *Substitution and other mitigative measures:* The development of culturally acceptable and economically feasible alternative food and income sources is essential where wildlife alone cannot be sustainably used to support current or future livelihood needs. Alternative food and income sources, however, need to take into account local realities, cultures and preferences and should be developed and implemented with local communities or support community-based income projects. Mitigative measures (farming, ranching, captive breeding, etc.) may play a role in conserving wildlife resources.

8. *Capacity-building, training, education and awareness-raising:* To achieve conservation and sustainable use of wildlife resources, sufficient capacity-building and public awareness-raising activities targeting relevant audiences need to be implemented and where possible institutionalized at international, national and local levels across a range of themes, including:

- (a) governance and law enforcement including customary laws;
- (b) wildlife monitoring and management, including non-detriment findings;
- (c) monitoring and management of bushmeat harvest and trade;
- (d) the role of indigenous peoples and local communities;
- (e) the impacts of unsustainable bushmeat harvesting and trade on indigenous peoples and local communities and their livelihoods;
- (f) livelihood alternatives; and
- (g) collaboration across government, private and public sectors, educational training institutions and indigenous peoples and local communities.

9. *Health and epidemiology:* (a) Where wildlife hunting and bushmeat trade is regulated, a national strategy for disease surveillance including those transmitted by wildlife should be implemented. Appropriate public health information and capacity-building should emphasize prevention of disease and protection of both human and animal health. Furthermore, wildlife, domestic livestock and human health need to be monitored and legislation, regulations, and enforcement need to be developed and implemented to reduce the threat of epizootics from newly emerging infections in an environmentally friendly manner; (b) in regions with bushmeat trade, sanitary control and biosecurity measures are necessary to prevent the sale of tainted meat or contaminated animal products that may lead to the spread of harmful pathogens.

10. *Climate change:* REDD-plus<sup>10</sup> programme development at a national level including biodiversity safeguards should take into account the importance of wildlife for maintaining healthy ecosystems and ecological services, and for the permanence of forest carbon stocks and forest adaptation capacity.

11. *Special management areas:* Where they do not already exist, specific areas for wildlife management should be designated at national and local levels, with the full and effective participation of indigenous peoples and in full respect of their rights (in line with Decision VII/28<sup>11</sup> of the Conference of

<sup>10</sup> With reference to decision 1/CP.16 of the United Nations Framework Convention on Climate Change (UNFCCC), REDD-plus comprises reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

<sup>11</sup> Decision VII/28, paragraph 22: "Recalls the obligations of Parties towards indigenous and local communities in accordance with Article 8(j) and related provisions and notes that the establishment, management and monitoring of protected areas should take place with the full and effective participation of, and full respect for the rights of, indigenous and local communities consistent with national law and applicable international obligations".

the Parties to the Convention on Biological Diversity and the programme of work on protected areas, in particular programme element 2 on governance, participation, equity and benefit-sharing), similar to permanent forest estates designated to manage timber resources. These may span existing protected area systems and multi-use landscapes (e.g., game-management areas or districts).

12. *Law enforcement:*

(a) Strengthen investigative capacity, enhance control, inspection and arresting procedures and methods, including domestically and at border-crossing points;

(b) Improve knowledge and capacity of prosecutors and judges to prosecute and sentence illegal bushmeat harvest and trade cases, ensure that sentences are served in full and publicize arrests, prosecutions and sentences;

(c) Enhance cooperation and coordination among wildlife trade enforcement officers and officials, prosecutors and judges and other relevant personnel in the implementation of the respective law;

(d) Assure that citizens, including indigenous peoples and local communities, are aware of national, regional and local laws.

13. *National strategies and action plans to address bushmeat:* (a) support and strengthen national political will to plan and take action on key bushmeat and existing conservation commitments; (b) governments should develop or strengthen participatory and cross-sectoral processes in formulating and implementing the sustainable management and harvesting of wildlife.

## II. INTERNATIONAL LEVEL

14. *National, regional and international strategies to address bushmeat:* Such strategies could include:

(a) Supporting and strengthening national political will to take action on key bushmeat and existing conservation commitments at a transboundary and regional level;

(b) Supporting, strengthening and monitoring the implementation of existing international commitments and agreements and encouraging new ones concerning the conservation and sustainable use of transboundary and shared wildlife resources.

(c) International partners should seek to effectively integrate wildlife-conservation strategies into relevant development assistance such as poverty-reduction strategies;

(d) Parties are encouraged to create regional or subregional bushmeat working groups in cooperation with relevant regional bodies to be technically supported by the Secretariat.

15. *Participatory processes:* The international community should support national Governments to develop or strengthen participatory and cross-sectoral processes in formulating and implementing the sustainable management and harvesting of bushmeat species, in particular participation of indigenous peoples and local communities, and the private sector.

16. *Impacts of international trade in natural resources.* International policy processes and institutions concerning trade and development should take steps to better assess, communicate, and mitigate impacts of extraction and trade in natural resources (e.g., timber, minerals, oil) on wildlife, wildlife-dependent communities, and resulting bushmeat demands to ensure that all international trade is based on sustainable principles.

17. *International trade in bushmeat.* Concerned with the potential threat that a growing international trade in bushmeat may have on wild populations and wildlife-dependent communities, the international community should take action to discourage trade in illegally harvested bushmeat, including through the

close monitoring of such trade. The international community should provide the means to implement such actions and communicate law-enforcement successes. Close cooperation between Parties, including with regard to law enforcement, and between the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on this topic is required.

18. *International policy environment:* In order to optimize the sustainability of hunting, the international community should support integrated local, national, and transboundary action to build partnerships among relevant organizations and institutions to:

- (a) Build enforcement and monitoring capacity;
- (b) Develop and implement protein and income alternatives;
- (c) Increase awareness and education regarding bushmeat hunting and trade;
- (d) Increase collaboration between the relevant conventions: the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of wild Fauna and Flora (CITES), Convention on Migratory Species (CMS), the World Health Organisation (WHO), the World Organization for Animal Health (OIE), and other relevant organizations.

These actions taken together have the potential to support communities to sustainably manage their wildlife resource and reduce the demand for bushmeat.

19. *Science:* Research should assure to include and integrate ecology, health, development, economics and social science to inform future policy.

20. *Incentives:* The international community should ensure that financial mechanisms and payments for ecosystem services such as REDD-plus take into account the importance of ecosystem functioning and the role of forest fauna in forest health and resilience, including the well-being of forest-dependent indigenous peoples and local communities.

21. *Forest certification:* Forest certification schemes and standards should take into account the role of conservation and sustainable use of wildlife in maintaining healthy forest ecosystems, as well as the well-being of forest-dependent indigenous peoples and local communities.

*Annex II*

**CO-CHAIRS SUMMARY OF THE JOINT MEETING OF THE CONVENTION ON  
BIOLOGICAL DIVERSITY LIAISON GROUP ON BUSHMEAT AND THE  
CITES CENTRAL AFRICA BUSHMEAT WORKING GROUP**

1. The over-exploitation of mammals, birds, reptiles, and amphibians in many tropical and sub-tropical countries is increasingly threatening food security and livelihoods in many countries, and is a major cause of biodiversity loss. Participants at the joint meeting of the Convention on Biological Diversity Liaison Group on Bushmeat and the CITES Central Africa Bushmeat Working Group<sup>12</sup>, Nairobi, 7 – 10 June 2011, recognized with alarm the growing scale and commercialisation of bushmeat hunting and trade across range states, and an increasing trend of organized illegal international trade in bushmeat.
2. The ‘empty forest syndrome’ due to loss of forest fauna has reached critical levels in many countries across the tropics and sub-tropics. Population growth, poverty in rural areas and the absence of livelihood alternatives, increased urban consumption, forestry activities, and extractive industries in remote forests are contributing to unsustainable levels of commercial and subsistence hunting.
3. The increasing scale and commercialisation of bushmeat use is also posing a severe threat to the food security, customary practices, livelihoods, and cultural and spiritual identity of indigenous peoples and local communities. The joint meeting emphasized the importance of full and effective participation of indigenous peoples and local communities in the development of policies and measures to better manage tropical and sub-tropical wildlife. The involvement should be based on the United Nations Declaration on the Rights of Indigenous Peoples, as well as on Article 10(c) and 8(j) of the Convention on Biological Diversity.
4. The loss of biodiversity also poses a threat to the long-term stability of forest ecosystem services and their economic utilization, including the production of timber and non-timber forest products, and carbon storage. For example, up to 75 per cent of tropical tree species depend on seed dispersal by animals. Many tree species will no longer be able to reproduce without their seed dispersers.
5. National economies and governments lose significant revenue if the wildlife as a key resource is managed poorly, and depleted irreversibly. The degradation of forest ecosystems and decline in wildlife species severely weakens national and local economies and makes them more vulnerable to climate change.
6. Ensuring the conservation and sustainable management of species used for bushmeat poses complex challenges, but feasible solutions exist in many locations and regions. Some countries have developed and implemented successful policies and measures. The joint meeting called for increased collaboration, in particular at regional level, to exchange information, data, and best practices and policies between governments and key stakeholders.
7. Stronger leadership by governments, the private sector, and indigenous peoples and local communities, is needed to address the trade in bushmeat. The joint meeting recognizes the efforts of some countries and private sector companies to address this issue, and urges all relevant actors to improve the sustainable use and conservation of biodiversity in tropical and sub-tropical countries, *inter alia* by implementing relevant provisions of the Convention on Biological Diversity and CITES, particularly its resolution Conf. 13.11 on bushmeat, and by applying relevant guidelines and tools, including forest certification.

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<sup>12</sup> 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. By changing this definition from the previous one, which focused only on forests, the Liaison Group recognizes the need to improve wildlife management across all terrestrial and inland water ecosystems in tropical and sub-tropical countries.

8. To further promote successful approaches, the joint meeting endorses the recommendations of the first meeting of the Liaison Group on Bushmeat, with the revisions and additions as listed in annex I to this report. The joint meeting recommends to the fifteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity to forward the recommendations contained in annex I to its report to the Conference of the Parties to the Convention on Biological Diversity for adoption at its eleventh meeting.

9. The group recommends a number of approaches for alternatives to unsustainable harvesting of bushmeat<sup>13</sup>, including:

- (a) Sustainable wildlife management, community wildlife management, game ranching, and hunting tourism;
- (b) Domestication and raising of wild animals in small farms (mini-livestock);
- (c) Sustainable harvesting of non-timber forest products; and
- (d) Certification and eco-labelling of wildlife products.

10. Participants commend the close collaboration between CITES and the Convention on Biological Diversity, and the other partners<sup>14</sup> in the organization of the joint meeting, and encourage the continuation of joint activities and the involvement of further partners, including the private sector, and indigenous peoples and local communities.

11. The joint meeting recommends to the CITES Standing Committee to consider the recommendations contained in annex I. The findings of the Standing Committee should be reported to the Conference of the Parties to CITES at its sixteenth meeting.

12. The co-chairs and participants thank the organizers and gratefully acknowledge the financial contribution of the European Commission for this joint meeting.

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<sup>13</sup> The Convention on Biological Diversity Liaison Group on Bushmeat defines alternatives to unsustainable bushmeat consumption and trade as activities that effectively reduce pressure on wildlife resources to sustainable levels, by (i) providing other sources of protein or income, or (ii) through sustainable and legal hunting.

<sup>14</sup> Partners that contributed to the organization of this joint CBD/CITES meeting are COMIFAC, CIFOR, CMS, FAO, UNEP-GRASP, IUCN, and TRAFFIC.