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## Forest Management in Africa: Is Wildlife taken into account?



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# Conservation and sustainable use of wildlife -based resources through the framework of the Convention on Biological Diversity (CBD) : The Bushmeat Crisis

Tim Christophersen<sup>1</sup> and Robert Nasi<sup>2</sup>

## Summary

*This article presents a number of policy recommendations to improve the sustainability of wildlife-based resources use in tropical forests, including by strengthening national ownership of this issue in a way that provides long-term local and national benefits. It also argues in favour of stronger involvement of civil society and the private sector in addressing governance issues and other aspects of current overexploitation of wildlife; enhancing local ownership rights; and establishing links between the bushmeat debate and tenurial and land-rights reform. At the international level, the authors suggest that trade relations between developed and developing countries, which (directly and indirectly) affect bushmeat consumption levels, must be seriously reconsidered, and that efforts should place a stronger emphasis on positive incentives for better managing wildlife resources.*

## Bushmeat in the framework of the CBD

The Convention on Biological Diversity (CBD) recognizes the importance of the conservation and sustainable use of bushmeat in several decisions of the Conference of the Parties (COP). The CBD programme of work on forest biodiversity, adopted on 2002 and reviewed in 2008, contains the goal to prevent biodiversity losses caused by unsustainable harvesting of timber and non-timber forest resources, including bushmeat. In 2002, the CBD also established a liaison group with a focus on bringing harvesting of non-timber forest products (NTFPs), particularly bushmeat, to sustainable levels. This group was involved in developing the CBD Technical Series publication Conservation and Use of Wildlife Based Resources: The Bushmeat Crisis, which is the basis for this article.

The ninth meeting of the COP, 19-30 May 2008 in Bonn, Germany, furthermore urged Parties to the CBD to address, as a matter of priority, major human-induced threats to forest biodiversity, including unsustainable hunting and trade of bushmeat, and their impacts on non-target species.

## Wildlife and livelihoods

Rural people, moving from a subsistence lifestyle to a cash economy, and without access to capital, land or livestock, have relatively few options for generating income. They can sell agricultural or pastoral produce, work for a cash wage in agriculture or industry, or sell retail goods in local or regional marketplaces. However, the harvesting of wildlife resources often offers the best return for labour input in the short-term.

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<sup>1</sup> Environmental Affairs Officer for forest biodiversity, Secretariat of the Convention on Biological Diversity. United Nations Environment Programme, 413 St-Jacques O., Suite 800. Montreal, QC., H2Y 1N9, Canada. Tel.: +1-514-288-2220. Fax: +1-514-288-6588. Tim.Christophersen@cbd.int

<sup>2</sup> Center for International Forestry Research (CIFOR), P.O. Box 0113 BOCBD Bogor 16000, Indonesia. Email: [r.nasi@cgiar.org](mailto:r.nasi@cgiar.org)

<sup>3</sup> This article is a summary of the CBD Technical Series publication "Conservation and Use of Wildlife Based Resources: The Bushmeat Crisis" (Nasi et al., 2008), published by the Centre for International Forestry Research (CIFOR), the Wildlife Conservation Society (WCS), the Overseas Development Institute (ODI), and the Secretariat of the Convention on Biological Diversity (CBD) in 2008. The full document is available at electronically at [www.cbd.int](http://www.cbd.int), and can be ordered free of charge in hard copy at: [secretariat@cbd.int](mailto:secretariat@cbd.int), or CBD Secretariat, 413 rue St. Jacques W, Suite 800, Montreal, QC, H2Y 1N9, Quebec, Canada

<sup>4</sup> Bushmeat is defined in this article as any non-domesticated terrestrial mammals, birds, reptiles and amphibians harvested for food. While insects and other invertebrates can be locally and seasonally important dietary items, it is the larger vertebrates which constitute the majority of the terrestrial wild animal biomass consumed by humans. The article therefore focuses on terrestrial vertebrates, but makes reference to the indirect links between harvesting of fish to the consumption levels of bushmeat.

<sup>5</sup> Decision VI/22, Annex, revised by decision IX/5 – see [www.cbd.int](http://www.cbd.int)

Indeed, recent data suggests that the use of wildlife is important to local livelihoods and serves multiple roles. Estimates of the national value of the bushmeat trade range from US\$ 42 to 205 million across countries in West and Central Africa (Davies, 2002). Wildlife products are often major items of consumption or display and have high medicinal and spiritual values in many cultures (Scoones et al., 1992). Bushmeat, in particular, offers a number of benefits to forest-dwelling populations. It is an easily traded resource as it is transportable, has a high value/weight ratio and is easily and cheaply preserved. It often represents both the primary source of animal protein and the main cash-earning commodity for the inhabitants of the humid forest regions of the tropics. Throughout tropical forest countries, many people benefit from wild meat: from those who eat it as part of a forest-dependent subsistence lifestyle, to those who trade and transport it at all points along different supply chains, to those who consume it in restaurants and homes, often far from the forest.

### The bushmeat crisis

The increase in population density in many forested areas, as well as persistent problems with the affordable supply of substitute sources of protein, have increased off-take levels, often beyond sustainable levels (Bennett and Robinson, 2000). A review of the literature addressing the sustainability of hunting in tropical forests was compiled by comparing estimated productivity and off-take rates. From Table 1 it can be seen that, in general, hunting appears to be unsustainable. This means that many bushmeat species are being harvested at levels beyond their reproductive rates, which might lead to the collapse of populations and the possible extinction of species. The bushmeat crisis could have considerable socio-economic effects, in addition to the potential damage to ecosystems, and the cultural, moral, spiritual, and emotional loss that extirpations (local extinctions) or global extinctions of species represent for humankind.

**Table 1: Sustainability of hunting**

Country	Reason for hunting	Estimated sustainability <sup>a</sup>	Reference
Bolivia	Subsistence	50 (10)	Townsend, 2000
Cameroon	Subsistence / trade	100 (2)	Fimbel et al., 2000
Cameroon	Subsistence / trade	No	Infield, 1998
Cameroon	Subsistence / trade	50-100 (6)	Delvingt et al., 2001
C. A. R.	Subsistence / trade	100 (4)	Noss, 2000
Côte d'Ivoire	Trade / subsistence	100 (2)	Hofmann et al., 1999
DRC	Subsistence	Yes	Hart, 2000
DRC	Subsistence / trade	Yes	De Merode et al., 2003
Ecuador	Subsistence	30 (10)	Mena et al, 2000
Eq. Guinea Bioko	Subsistence / trade	30.7 (16)	Fa, 2000
Eq. Guinea (Rio Muni)	Trade	36 (14)	Fa and Garcia Yuste , 2001
Eq. Guinea (Rio Muni)	Trade	12 (17)	Fa et al., 1995
Ghana	Trade / subsistence	0 (2)	Hofmann et al., 1999
Ghana	Trade	47(15)	Cowlishaw et al., 2004
Indonesia (Sulawesi)	Subsistence / trade	66.7 (6)	O'Brien and Kinnaird, 2000
Indonesia (Sulawesi)	Subsistence / trade	75 (4)	Lee, 2000
Kenya	Subsistence / some trade	42.9 (7)	FitzGibbon et al., 2000
Paraguay	Subsistence	0 (7)	Hill and Padwe, 2000
Peru	Subsistence / trade	Yes	Bodmer et al., 1994
Peru	Subsistence / trade	No	Bodmer et al., 1994
Peru	Subsistence	0 (2)	Hurtado-Gonzales and Bodmer, 2004

<sup>a</sup> Estimated sustainability: % of species unsustainably hunted (number of species studied)  
Yes /No when the above information was not available in the reference  
Modified from Bennett and Robinson (2000)

<sup>6</sup> Sustainable use is defined in Article 2 of the Convention on Biological Diversity as: “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.”



The sustainability of bushmeat harvesting is, in many cases, influenced by external factors, such as inappropriate policies and governance; demography; increased commercialization of the wildlife harvest; fragmentation and land-use changes; logging and other resource extraction activities; and developments in the agricultural sector (Nasi et al., 2008). There appears to be no easy solution to this complex problem. However, some policy recommendations for the consideration of decision-makers at the appropriate levels are outlined below.

### **Recommendations for improving the sustainability of bushmeat hunting**

The bushmeat crisis is first and foremost a problem resulting from an unmanaged common resource being unsustainably harvested because of inadequate governance and policy frameworks. Many of the underlying causes of the unsustainable use of wildlife are the same as those underlying poverty and sustainable livelihoods. As such, the problem should be addressed in the broader framework of sustainable natural resource management, and build on lessons learnt in the framework of sustainable forest management (SFM), and other relevant policies and management regimes. Approaches to address the bushmeat crisis should be nation-, site- and context-specific, based on a detailed knowledge of hunting patterns and the ecology of the hunted species, and tailored to local cultural, socio-economic and political conditions.

#### ***Specific recommendations for the national level in bushmeat-range States***

1. National policy linkages: The bushmeat economy is largely invisible in most countries. Acknowledging the contribution of bushmeat and other animal products to the local economy will be a first essential step towards sustainable management of this resource. Inclusion of information on bushmeat and animal products in official national statistics may be a next step in order to better understand its role in the country's economy, and as a contributor to local livelihoods and food security.

Forest exploitation has a major impact on bushmeat hunting in several ways: it provides increased access to hunters, attracts more temporary or permanent settlements and, last but not least, it affects wildlife habitat. Therefore wildlife management should be an integral part of National Forest Programmes and (mandatory) forest management plans, as well as National Biodiversity Strategies and Action Plans.

Another key policy linkage should be established with development planning. Policies aimed at poverty reduction can be as important as developing a legislative framework for hunting. Such policies should include the establishment of clear land tenure and land-use rights, promoting the production of alternative sources of proteins, and the involvement of indigenous and local communities in land use planning and natural resource management.

2. Enhancing ownership and links to tenurial and rights reform: In significant measure the bushmeat problem is often a problem of rights. Rural dwellers lack rights to the use of wildlife and other resources they need to secure their livelihoods, hence they are unwilling to invest in wildlife management. Measures to reform the tenurial systems pertaining to all of these resources are urgently needed, including the transfer of ownership or stewardship of wildlife and other natural resources to local communities, so as to stimulate an interest in sustainable use.

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<sup>7</sup> The latter two factors have both direct and indirect effects on wildlife resources: logging often degrades wildlife habitat, and in addition increases harvesting levels, as logging crews rely on bushmeat for nutrition and additional income. Also, logging roads facilitate the quick access to bushmeat markets. Changes in the agricultural sector, in particular intensification and increasing of production units, can change the habitat for species which thrive in swidden agriculture and agro-forestry.

<sup>8</sup> Readers are encouraged to refer to the publication "Conservation and Use of Wildlife Based Resources: The Bushmeat Crisis" (Nasi et al., 2008), which is available from the CBD Secretariat ([www.cbd.int](http://www.cbd.int)), for the full set of recommendations.

Opportunities exist, for example within the Poverty Reduction Strategy Papers and Forest Law Enforcement and Governance (FLEG) processes, to advance the rights and tenurial changes needed to ensure sound management of rural resources, bushmeat included.

3. Legitimizing the bushmeat debate: Policy is unlikely to be advanced as long as bushmeat is not present in the public discourse. The aura of illegality that surrounds all aspects of the trade is unhelpful to the policy process and is preventing a sound assessment of management requirements. Moves to legalize a portion of the trade would increase the reliability of information on the bushmeat commodity chain, and information about possibilities for adding value to the commodity chain in a way that is sound in terms both of biodiversity (conservation effects) and development (poverty reduction).
4. Legislative review: National legislation on wildlife and hunting often suffers from incoherence and impracticality. Well-established and widely accepted practices may be *de jure* (according to law) illegal, thus increasing the opportunities for corruption, and the steps required to achieve legality may be so impractical as to encourage illegality on the part of otherwise law-abiding citizens. Range States are therefore encouraged to review their existing legislation for policy coherence and cross-linkages (see above); practicality and feasibility; the potential for incentive measures; and law enforcement capacities; and rationalization of the law to reflect actual practice, without surrendering key conservation concerns.
5. Protected areas: Protected areas are an essential component of any strategy for sustainable use of wildlife at the landscape level, and large protected areas will be essential for conserving the larger animals. In addition, landscape level planning for habitat connectivity and resilience is rapidly gaining importance in view of the need to adapt to climate change. At the same time, a balanced approach to protection policy is required, giving greater attention to the designation and management of protected areas, with due regard to all aspects of sustainability, including poverty reduction needs. The fact that biodiversity hotspots are often associated with human settlement and impact renders this a challenging issue.
6. The role of science in wildlife policy: heavy investments have been made in many bushmeat range states in relation to in the scientific study of wildlife populations and the impacts of their use. However, the value of this research has been limited by its frequent close association with advocacy groups, often representing the interests of external constituencies. Support is needed to increase the information base of national policy-makers (government and non-government) and to reduce their dependence on advocacy-based organizations with external constituencies and mandates.
7. Engaging the private sector: Approaches to conservation in production forests have tended to focus on restricting the impact of timber concessionaires and their personnel. While these efforts are in many ways to be commended, the implications for the livelihoods and welfare of local populations have not been adequately considered. Policy development needs to go beyond the interests of the reputable loggers and the external organizations, and to embrace public participation of local stakeholders, in particular indigenous and local communities.
8. Learning processes: Greater attempts are needed to investigate and build on the experience in the context of sustainable forest management, and of other sectors for ideas and models that might help to improve the management of the bushmeat trade. Examples of relevance might include sea fisheries (e.g. lessons learnt from the collapse of the North Atlantic cod fisheries, etc.), the pharmaceutical industry, and herbal medicines.
9. Substitution and other palliative measures: A shift in thinking is needed, away from palliative measures intended to mitigate the effects of wildlife harvest with minimum implications for the

status quo (e.g., captive breeding of game species; livestock breeding schemes intended to replace existing sources of animal protein; integrated conservation and development projects – ICDPs), towards more radical measures to improve integrated management and governance of wildlife resources. At present, the low purchasing power of local populations severely restricts the development of alternatives for the use of wildlife.

### **Specific recommendations for the international level**

1. The need for national ownership: The international community is called on to give much greater support to range States to bring the bushmeat problem under effective national ownership in ways that provide broad local and national benefits. One area where this process is underway is with the CITES Great Ape Enforcement Task Force Country Profiles, which may help develop the sense of ownership by assisting countries in determining or identifying some of the key issues associated with the bushmeat trade.
2. Democratic process: Host governments need to be supported to open up the national debate on wildlife management as part of the democratic process.
3. Policy processes: International partners should seek to ensure that wildlife issues are, wherever relevant, adequately covered within internationally supported policy processes, such as poverty reduction strategies.
4. Trade relations: More consideration needs to be given to the issue of unfavourable terms of trade between wealthy and developing nations. A case in point may be international fisheries policy and fisheries licensing agreements, where there is some evidence of a possible linkage between increase of industrial scale fisheries, and increase of bushmeat consumption levels as a protein substitute for fish stocks that are lost due to industrial-scale overfishing. To the extent that this evidence is confirmed, the manipulation of international trade patterns (e.g. EU marine fisheries subsidies) could indirectly influence the bushmeat trade in positive directions.
5. International trade in wildlife: An area of particular international interest is the potential for the high-value export of wild meat to act as a force for the rationalization of the trade, and as a means of adding greater value to the lower levels of the bushmeat commodity chain. As matters stand, legitimate channels for export of wild meat simply do not exist in most of the major range States, and this may serve as an incentive to illegality.
6. International policy environment: In general terms, international policy might be well advised to give less emphasis to restrictive and repressive measures in the bushmeat-range States, and to give greater attention to the positive incentives that may be required to better manage the wildlife resource as an integral part of poverty reduction and national economies.

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