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SUSTAINABLE WILDLIFE MANAGEMENT: GUIDANCE FOR A SUSTAINABLE WILD MEAT SECTOR

Note by the Executive Secretary

I. INTRODUCTION

1. The Conference of the Parties, in its decision XIII/8 (para. 5(a)) requested the Executive Secretary, in collaboration with other members of the Collaborative Partnership on Sustainable Wildlife Management 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.

2. The present note responds to this request. It has been prepared by the Secretariat and the Center for International Forestry Research (CIFOR), with input from other members of the Collaborative Partnership on Sustainable Wildlife Management, as well as peer-review comments from Parties and others.¹ The note is based on a technical study prepared by CIFOR which will be made available as an information document. The guidance contained in the present note also builds on existing recommendations from the Liaison Group on Bushmeat adopted in decision XI/25, as well as past decisions of the Convention, and ongoing work of the Collaborative Partnership on Sustainable Wildlife Management.²

* CBD/SBSTTA/21/1.

¹ Submissions were received from six countries (Brazil, Canada, the United Kingdom, Mexico, Argentina and Iraq); three CPW member organizations (IUCN, FAO, UNEP-WCMC), and seven major groups: Global Protected Area Friendly System; Japan Wildlife Research Center; Eco Alliance; Planetary Health Alliance; REDCAM; Timber Watch — South Africa; and the Indigenous Knowledge and Peoples Network Society for Wetland Biodiversity Conservation Nepal (IPLCs/IIFB).

² Further information and guidance is drawn from CBD Technical Series No. 33, *Conservation and Use of Wildlife-based Resources: The Bushmeat Crises*, prepared in response to decision VI/22, paragraph 42, and its annex, the expanded programme of work on forest biological diversity, based on goal 4, objective 2, activity (a) of programme element 1, as well as from CBD Technical Series No. 60 *Livelihood Alternatives for the Unsustainable Use of Bushmeat*, prepared pursuant to decision X/32.

3. With the aim of supporting the implementation by Parties of the Strategic Plan for Biodiversity 2011-2020, the present note highlights measures to promote the sustainable use of terrestrial wild meat resources across all types of terrestrial tropical and subtropical habitat, biomes and ecosystems (including forests, grasslands, croplands, wetlands, savannas and other terrestrial ecosystems), and, as appropriate, in rural, urban and international settings. The note also describes activities that can be applied at the national, regional, subnational and site levels within a landscape management perspective.

4. The present note is organized as follows: section II provides background information on the multifaceted role that wildlife plays in the tropics and subtropics, focusing primarily on its use for food, and considers the challenges facing the sector. Section III sets out the purpose and scope of the guidance. Section IV provides guidance to improve the sustainable use of wild meat resources focusing, in turn, on how to work with actors at the source to improve the sustainability of supply (subsection A), how to manage and reduce the demand along the whole value chain (subsection B), and how to create the enabling conditions for a controlled, sustainable management of wild meat (subsection C). Section V provides suggested recommendations for the consideration of the Subsidiary Body.

II. CONTEXT: WILD MEAT, FOOD SECURITY, AND LIVELIHOODS

5. Wild animal hunting can be undertaken for subsistence, commercial, and recreational purposes. In subsistence hunting, the benefits obtained from wildlife (particularly food) are directly consumed or used by the hunter and his or her family. Further, the food security and livelihoods of many rural people in the tropics and subtropics depends on the use and trade of wild animals.³

6. Wild meat has long served as a source of nutrition for millions of people in many regions of the world, in both developed and developing countries. For example, in some rural communities in tropical developing countries, wild meat has been found to provide almost all of the protein in the diet. In Central Africa, it is estimated that over 4 million tons of wild meat are consumed each year, most of it supplying urban areas.⁴

7. Increased exploitation of the resource has been driven by growing human populations, advances in hunting technologies and the emergence of a booming commercial wild meat trade. Unprecedented extraction rates cause the decline of numerous wildlife populations and endanger foundation species critical to the functioning of ecosystems. Increased hunting pressure, alongside rising rates of habitat destruction and conversion in tropical forest regions, make it highly likely that wild meat supplies in some tropical and subtropical countries will diminish.

8. The loss of wildlife will impact the availability of animal protein and fat sources for countless numbers of people and also initiate cascading alterations of ecosystems as species that play important ecosystem functions (e.g., seed dispersers, seed predator, control of prey species) are eliminated through overhunting. This loss of ecological interactions in turn gravely reduce ecosystem goods and services, including pharmaceutical compounds, biocontrol agents, food resources and disease regulation.⁵ Moreover, between 23 and 36 per cent of birds, mammals, and amphibians used for food or medicine are now threatened with extinction.⁶

9. Increasing human population and trade from rural to urban areas, compounded with the lack of any sizeable domestic meat sector which might provide a substitute for wild meat, are the main drivers of

³ The information document on sustainable wildlife management prepared for the twentieth meeting of the Subsidiary Body (UNEP/CBD/SBSTTA/20/INF/46) includes an overview of the role of subsistence hunting in human societies, the impacts of subsistence and commercial hunting (including the combined impacts of hunting and land-use change as a result of agricultural and industrial activity), and an analysis based on the theories regarding the management of common pool resources. Additional information relating to Parties' national reports and national biodiversity strategies and action plans and sustainable use of wildlife was also made available in another information document (UNEP/CBD/SBSTTA/20/INF/47).

⁴ <https://www.cbd.int/doc/meetings/sbstta/sbstta-20/official/sbstta-20-11-en.pdf>

⁵ S.S. Myers et al. (2013). Proceedings of the National Academy of Sciences 110, 18753-18760.

⁶ S.H.M. Butchart et al. (2010). Science 328, 1164-1168.

unsustainable levels of hunting. Even where provincial town consumers have access to domesticated sources of meat, they are typically imported and/or expensive, and wild meat remains an important part of the diet. In large metropolitan areas located far from sources of wildlife, wild meat is no longer a dietary necessity for families but in some traditional and cultural contexts, remains an important luxury or an occasional consumed good.

10. Concurrently, habitat for wildlife is declining as lands are converted for agricultural commodities to meet the demands of a growing human population (i.e. beef, soy, palm oil), natural resource extraction (e.g. timber, mining), and expanding human settlements. Land-use conversion can also reduce the size of the customary hunting grounds of indigenous peoples and local communities, exerting greater pressure on remaining wildlife resources within increasingly smaller territories, and often also impacting the legitimacy and effectiveness of customary hunting laws.

11. In tropical forests, wildlife species are typically undervalued, based on productivity and size, as compared to domesticated animals. However, in some contexts, wildlife may be quite competitive with livestock, particularly once higher value uses, such as eco-tourism, hunting, meat and other benefits produced, are taken into account.

12. Given that unsustainable hunting for wild meat is deemed a major threat to the ecology of tropical and subtropical ecosystems, directly affecting many endangered species, as well as people's livelihoods, food security and their health, there is an urgent need to strengthen public policy responses within a more integrated socioeconomic, cultural, ecological and public health framework.

13. Mitigating the effects of overhunting is a complex issue. The reasons for wild meat overexploitation are manifold and these can vary considerably between regions. Often, a complex web of factors exists, contributing to increased wild meat demand and consequent resource overexploitation. These factors may include employment availability, property rights issues, the role of institutions, lack of incentives for managing the resource sustainably, migration, failures of crop harvests and availability of food from livestock, weather patterns and climate change, logging and resource extraction, overgrazing, urban sprawl, natural disasters, displacement, poaching, war and strife. Land-use change for agricultural and industrial needs also has a major impact on wildlife habitat and wildlife behaviour. Moreover, though relatively little is known about host ecology, dynamics and the disease risk to people in contact with hunted wildlife, there is enough evidence to suggest that wildlife is an important reservoir of zoonotic pathogens that can present a clear public health risk of epidemics. Certain wild meat species are likely to provoke pathogen spillover to humans, and this risk could increase through the butchering and skinning of wild animals used for meat. Multisectoral approaches combining appropriate policy mechanisms from the agricultural, biodiversity, food security, health, infrastructure, mining and logging sectors, are therefore required for successful sustainable wildlife management.

14. Approaches for sustainable wildlife management should include: (a) improving knowledge of the use and trade of wild meat species, and understanding of the ecology of species involved; (b) review and strengthening of legal frameworks, to design policy and management frameworks that incentivize and enable sustainable management; (c) the identification of opportunities and barriers for providing food and livelihood alternatives; and (d) appropriate enforcement capacity. With these combined and incorporated into solid national and regional wild meat strategies, there is a potential to achieve more sustainable use of wildlife for food.

III. SCOPE AND PURPOSE

A. Scope

15. Sustainable wildlife management refers to the sound management of wildlife species to sustain their populations and habitat over time, considering the socioeconomic needs of human populations. Wildlife, if sustainably managed, can provide both long-term nutrition and sustained income to indigenous peoples and local communities, therefore contributing considerably to local livelihoods as well as safeguarding human and environmental health.

16. The present note focuses on wild meat – defined for the purposes of the present note as the meat of terrestrial vertebrates in tropical and subtropical habitat, biomes and ecosystems which is used for food.⁷ This may be considered synonymous with the term “bushmeat”. Freshwater and marine fish, and in some situations invertebrates, are also important nutritional resources, but are not covered by the present note.

B. Goal and objective

17. The present note provides a technical guide aimed at enhancing governance for a sustainable, participatory and inclusive wild meat sector in the tropics and subtropics. Interventions specific to rural, urban and international contexts are presented to help reduce the loss of biodiversity, particularly that of wild species used for food, as well as to improve the sustainable use of wild meat for human well-being.

18. The overall objective of the present note is to facilitate the development of integrated policy measures, to prioritize and incorporate actions to improve the sustainability of wild meat use and further implement the Strategic Plan for Biodiversity 2011-2020, in particular Aichi Biodiversity Targets 4, 7, and 12.⁸

19. The information contained in the present note thus contributes to the achievement of objectives and commitments under the Convention on Biological Diversity⁹ and other conventions, including the Convention on the Conservation of Migratory Species of Wild Animals (CMS), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), as well as the 2030 Agenda for Sustainable Development.

20. While many of the types of actions suggested in the present note can be undertaken in the short term, sustainable wildlife management involves sustained activities over the medium and long term. Therefore, the actions identified in the present note should be undertaken in the context of the 2050 Vision of the Strategic Plan for Biodiversity and the 2030 Agenda for Sustainable Development.

21. More specifically the note comprises guidance to support the work of Parties as well as relevant organizations and initiatives to promote, implement and accelerate integrated action to:

- (a) Ensure that the supply of wild meat is sustainably managed at the source;
- (b) Control the excessive demand of wild meat in towns and cities;
- (c) Create an enabling environment for the sustainable management of wild meat.

22. The technical guidance within the present note can be used by various ministries, decision makers, as well as planning and implementing agencies at the national level. Due to the complexity of the issue and its many cross-sectoral dimensions, the present note proposes joint approaches that can be

⁷ Based on the scope of work on wild meat (or “wild meat”) carried out in accordance with past decisions regarding the Convention’s programme of work on forest biodiversity, the focus of this report is on wild animals in tropical and subtropical forests used for food. This present note excludes a focus on non-food purposes, including medicinal uses. Information document UNEP/CBD/SBSTTA/20/INF/46 provides a broader analysis on non-domesticated terrestrial mammals, birds, reptiles and amphibians harvested for food or other purposes.

⁸ Aichi Biodiversity Target 4 aims to achieve or have implemented plans for sustainable production and consumption and keep the impacts of use of natural resources well within safe ecological limits by 2020. Target 7 calls for the sustainable management of areas under agriculture, aquaculture and forestry, ensuring conservation of biodiversity by 2020. Target 12 ultimately aims to prevent the extinction of known threatened species and to improve and sustain their conservation status, particularly for those most in decline, by 2020.

⁹ In particular, Article 10 ([Sustainable Use of Components of Biological Diversity](#)), which requires Parties, as far as possible and as appropriate, to: (a) integrate consideration of the conservation and sustainable use of biological resources into national decision-making; (b) adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity; (c) protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements; (d) support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced; and (e) encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources.

applied to achieve sustainable use of wild meat. The information therein supports continued dialogue, learning and methodological exchanges on sustainable wildlife management among forest, agriculture, natural resources, veterinary and public health, finance, rural development and legal sectors.

IV. TECHNICAL GUIDANCE FOR ACHIEVING A SUSTAINABLE WILD MEAT SECTOR

23. The guidance contained in the present note comprises a comprehensive set of recommendations to achieve a sustainable wild meat sector with a focus on how to work with actors to improve the sustainability of the supply (subsection A); how to reduce the demand for unsustainably managed wild meat along the whole value chain (subsection B); and how to create the enabling conditions for controlled, sustainable management of wild meat (subsection C). The guidance also suggests steps and approaches that can be applied, by Parties and other Governments, in collaboration with relevant organizations, building on decision XI/25, and in accordance with national legislation, circumstances and priorities.

A. Managing and improving the sustainability of wildmeat supply at the source

24. In commonly used lands, hunting is often governed by local and often informal rules establishing who can hunt and where hunting can take place. Challenges arise in the enforcement of such rules where local leaders are not empowered to control access to their land by external hunters or where hunters have lost their rights to legally hunt or participate in wildlife management, or else where the social structure of local communities has been eroded by several external historical factors (such as colonialism, immigration). In these contexts, individual hunters (both within and external to local communities) tend to compete with other hunters for this finite resource. This competition can prompt the harvesting of a wild species as quickly as possible, driving the species to local extinction. Therefore, the rules governing wildlife use for food needs to recognize rights for subsistence hunting, provide for the management of wildlife and determine which activities are considered legal or illegal. Responsive enforcement is an integral component of such rules. Procedurally, a participatory process with two way consultations involving indigenous peoples and local communities is required.

25. Several models for management of wildlife resources at the community level have been suggested and tested. Generally, these represent forms of co-management between communities and the state and/or private sector entities involved in extractive industries such as logging and mining. Forms of co-management between communities and the state and/or private companies include:

(a) Community hunting zones, which can be used to regulate hunting in settlements bordering protected areas or industrial concessions. Hunting by community members is allowed within delimited hunting zones, often using quota systems and rotation of zones and protected areas to allow repopulation of wildlife. Extractive concession owners may also provide workers with alternative animal protein sources, such as chicken or fish, in lieu of the use of wild meat;

(b) Community conservancies. Hunting quotas are set by the state, based on annual game counts. The conservancies are managed by communities, who have rights to establish tourism enterprises and auction big game licenses. Conservancies are supported by law enforcement agencies which respond to conservancy intelligence to apprehend and arrest poachers;

(c) Wildlife (or game) ranching comprises the maintenance of wild animals in defined areas delineated by fences. It is a form of husbandry similar to cattle ranching, the animals are managed on natural vegetation although the habitat may be manipulated to improve production efficiency. The animals on the ranch are the property of the ranch owner (individual or community) for as long as they remain on the ranch;

(d) Payment for Ecosystem Services schemes. Communities are paid on delivery of an ecosystem service; in this case, they may be paid to maintain “food stocks” at sustainable levels or even to maintain “carbon stocks” through sustainable hunting or strict conservation of key tree seed dispersers. Population monitoring of the target species are conducted to measure the delivery of the service;

(e) Certification Schemes. Certification has the potential to contribute to the conservation and sustainable use of wild species by influencing consumer choices for wildlife-friendly products. While most certification schemes certify products that are cultivated, harvested or produced without harming wildlife habitats or wildlife populations (such as wildlife-friendly wood; wildlife-friendly cocoa), there are also a few examples of certification schemes that certify “wildlife-based” products for being sustainably harvested (for example, peccary pelts, certified meat). Certification schemes work well in societies that are ready to pay a premium price for products that respond to their ethics as consumers. The premium price received by the producer (a hunter, or a community) must cover the costs of certification, which are often high.

26. Elements for successful, sustainable community-based (or regional cooperative) wildlife management, to create the enabling conditions for local community management include:

(a) Communities have the social cohesion (i.e., they trust one another and feel kinship with their community neighbours) sufficient to take collective actions to address shared problems;

(b) Communities develop, or receive support to develop, benefit-sharing mechanisms for wildlife over which they have traditional and legitimate claims. The right to benefit is devolved to the lowest community level, with support from the State to ensure that communities gain a just share of benefits from wildlife use;

(c) Rights over land and rights to manage and benefit from wildlife are clearly defined and recognized and defended by the State. The corresponding rights holders are identified and formally recognized to prevent non-rights holders (illegitimate users) from abusing the use of wildlife resources;

(d) The legitimate territory of community rights-holders is defined, demarcated and autodemarcated under customary law;

(e) Local communities and hunters are explicitly interested in benefiting from their rights to use wildlife, including customary rights, but also take the responsibility to be accountable for its sustainability and habitat conservation. Communities have clear, acknowledged procedures for resolving policy and practice differences within the community or group;

(f) Clear regulatory frameworks exist or are created to allow for the sustainable use of wildlife by local community members, or groups of members, including procedures for determining and enforcing penalties on group members or whole communities if necessary;

(g) The structure, capacities and budgets of governmental institutions in charge of wildlife are adapted to play a key role in framing and facilitating sustainable use activities;

(h) There is clear national hunting legislation, and the effective enforcement of that legislation, which prevents actors from outside a community from undermining the legitimate authority and effectiveness of each governance authority;

(i) Administrative procedures are simplified, available in local languages, and local leadership capacities are developed;

(j) Hunting zones are clearly defined,¹⁰ comply with a specific land use, and respect the management plans and conservation parameters of protected areas;

(k) A local governance authority is made responsible for each land-use zone. If the State is not devolving full control to the local authority (i.e. when the State retains responsibility for protected areas, species or local food security), then there should be clearly laid out criteria for assessment of good local governance and the consequences of poor governance. In cases where taxation or other forms of

¹⁰ Land-use zones should delineate: (a) areas where hunting is strictly prohibited to allow for population recovery and protect undisturbed habitats for species very sensitive to human perturbation; (b) areas where some hunting is allowed through permits, licenses, etc.; (c) areas where hunting is less restricted, except for protected species.

revenue stem from the land-use zone, then clear frameworks for financial management should also be set out, including penalties for misconduct;

(l) Government officials and local authorities have the skills and knowledge to develop sustainable wildlife management plans. Such knowledge should include traditional and customary sustainable use;

(m) Species that can or cannot tolerate harvesting are identified. Among those that can be harvested sustainably, species needing maximum harvesting quotas (and those such as pests needing minimum harvesting quotas) should be distinguished from species for which no quota is necessary. For species requiring maximum harvesting quotas, sustainable offtake rates should be calculated and adjusted on a regular basis;

(n) Systems to establish sustainable quotas, and monitor (by and with the communities) trends in target wildlife species, are established and rules for adaptation of offtakes are clearly set out, together with responsibility for enforcement and penalties for misconduct;

(o) Procedural rights of indigenous peoples and local communities, such as access to information, participation in decision-making and access to justice, should be guaranteed.

27. Legalization and taxation of the sales of some wildlife species can help enable communities to benefit from wildlife. This may not be feasible for countries that lack the required infrastructure and capacity, and an effective justice system that adheres to the principle of equal rights under the law and equal application of the law. In this regard, relevant organizations of the International Consortium on Combating Wildlife Crimes (ICCWC) could also provide further support to national capacity-building of law enforcement, judiciary, prosecution and legislation to prevent illegal hunting.

28. In many countries, the current hunting regulatory framework contains irrelevant sections (often derived from colonial systems), mal-adapted to local realities and poorly designed and regulated. Under such conditions, wildlife laws are difficult to apply and enforce, and are unlikely to be successful in reducing hunting pressure on key species and ecosystems. Moreover, compliance with such regulations implies high costs, which indigenous peoples and local communities cannot afford in the absence of compensatory measures.

29. Many countries lack adequate staff, resources and motivation to effectively and fairly enforce wildlife laws. A lack of enforcement of national laws results in the illegitimate appropriation of indigenous peoples and local communities' traditional rights over wildlife by external hunters who lack legitimate rights to hunt on traditional lands. When indigenous peoples and local communities benefit from hunting, consuming and trading wildlife from their lands, they see poaching as stealing from them and are highly motivated to halt the illegal or illegitimate use of their wildlife.

30. There is ample evidence that hunting regulation, law enforcement and crime prevention are more effective when communities and authorities work together over the long term. Tried and proven, effective strategies are those that require long-term engagement on both sides, regulating hunting while also respecting and protecting the legitimate traditional rights of indigenous peoples and rural communities living with wildlife, defending community assets, and enabling local communities to sustainably manage and benefit from wildlife use and conservation. Communities can be the "eyes and ears" of law enforcement by providing actionable intelligence to an arresting authority, such as the police and the national park service, which ensures the anonymity of informants, reducing the risk of retribution. Further action could also be taken to train indigenous peoples and local communities to perform roles of security enforcement and national park officers.

Suggested steps:

- (a) Review existing policies and legal frameworks.¹¹ States where wild meat use is common are strongly encouraged to review existing policies and legal frameworks related to the conservation and sustainable use of wildlife, including wild meat species management, to include:
- (i) A rationalization of wildlife laws to focus on sustainability, ensure that they are fit-for purpose and can be properly applied and enforced, and with due consideration to both food security and conservation concerns;
 - (ii) Devolution of wildlife rights to local populations, where appropriate, and in line with the Plan of Action on Customary Sustainable Use under the Convention, enhancing appropriate forms of land tenure, including ownership (within and outside of protected areas) to increase their incentive to sustainably manage the resource and exert enforcement against external actors. In this, communities should be supported by a competent and trusted national agency with the authority to arrest and prosecute law breakers in a timely manner;¹²
 - (iii) Development of guidelines distinguishing species that are resilient to hunting and those that are not, in order to inform the use and trade of species that can be hunted sustainably. Laws regulating hunting and trade should distinguish those wildlife species that reproduce rapidly (e.g., rodents and pigs) from those that do not (e.g., primates and most large bodied mammals). Legislation should be responsive enough to allow adaptive management, with quotas or other regulatory mechanisms recognizing a species' resilience to harvest;
 - (iv) Where a system of taxation is being considered, a full investigation of the current and required capacities, and the sustainability of the taxation system (i.e. that the revenues will cover the costs) is conducted;
- (b) Strengthen law enforcement capacity:
- (i) Enforcement of national wildlife laws in partnership between the State and local communities, incentivizing biodiversity benefits for communities to cooperate and support conservation and sustainable use objectives;
 - (ii) Strengthen investigative capacity, enhancing control, inspection and arresting procedures and methods, together with training and employment of indigenous peoples and local communities, including domestically and at border-crossing points;¹³
 - (iii) Enhance measures to protect the rights of indigenous peoples and local communities in enforcement activities, and to minimize the risks of poaching;
 - (iv) Enhance cooperation and coordination among wildlife trade enforcement officers and officials, prosecutors and judges and other relevant personnel in the

¹¹ The [IUCN Best Practice Guidelines No. 20](#) may be useful in this respect.

<https://www.iccaconsortium.org/index.php/2015/08/08/governance-for-the-conservation-of-nature/>

¹² There are CBD decisions on “indigenous and community conserved territories and areas” (also known as territories and areas conserved by indigenous peoples and local communities). See <https://www.iccaconsortium.org/index.php/international-en/conservation-en/>

¹³ 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.”

- implementation of the respective law, and enable prosecutors and judges to prosecute and sentence on cases of illegal wild meat harvest and trade;
- (v) Promote awareness-raising campaigns for citizens, including indigenous peoples and local communities on national and local legislation and regulations.
- (c) Develop and strengthen participatory processes in formulating and implementing the sustainable management and harvesting of wildlife, including wild meat species, with the participation of indigenous peoples and local communities, non-governmental organizations and the private sector:
- (i) Where appropriate, communities should be involved in the sustainable management of local wildlife resources. This can be achieved by recognizing and supporting territories and areas conserved by indigenous peoples and local communities (ICCAs), and by using a range of governance models, including community hunting zones, community conservancies, payment for ecosystem services and certification schemes, as well as biodiversity-friendly management models;
 - (ii) Wildlife management, including wild meat species management, should be an essential part of the management or business plans for extractive industries (oil, gas, minerals, timber, etc.) operating in tropical and sub-tropical ecosystems. Contracts between government and extractive industry companies should provide food alternatives to wild meat for staff working in such concessions;
 - (iii) Existing biodiversity safeguards and standards within extractive industry guidelines and policies should be identified, expanded where needed, applied and monitored. Fines and compensation measures should be applied in cases where companies default on such safeguards and standards;
 - (iv) Sustainable wild meat management considerations could be further integrated into forest certification schemes¹⁴ and criteria and indicator processes for sustainable forest management to mitigate the impacts of human activities on wildlife by including provisions for alternative food sources and livelihoods, and for capacity-building and management systems that support legal and sustainable hunting, and prohibit the hunting of protected species.

B. Reducing demand for unsustainably managed wild meat

31. The global demand for animal protein is increasing due to a rapidly growing human population, urbanization, and increasingly successful global efforts to alleviate poverty. This is driving a dramatic increase in the demand for wildlife (both terrestrial and aquatic), and this demand will accelerate over the coming decades. Demand for wild meat, as for other consumer goods, is influenced by price, consumer wealth, culture, the availability of substitutes and non-price factors, such as consumer preference, and who pays for the good.

32. At most income levels, when the price of wild meat increases relative to substitutes, consumers tend to reduce their wild meat consumption. However, where consumption of wild meat confers prestige on the consumer, wealthy households may be motivated to consume more as the price increases. There is limited information on how much the price of wild meat needs to rise, and the price of available substitutes needs to fall, before demand for wild meat will significantly decrease. This information is crucial when designing demand-reduction strategies.

¹⁴ Such as the Programme for the Endorsement of Forest Certification Schemes (PEFC) and the Forest Stewardship Council (FSC).

33. The price¹⁵ of wild meat can be increased by increasing enforcement of wildlife laws (effectively a tax on illegal hunting and trading of wildlife), or by taxing wildlife sales and consumption. However, as mentioned above, this might not work so well where wild meat is consumed for reasons of prestige.

34. To ensure that wildlife populations are conserved while ensuring that consumers have continued access to sources of food, in many cases, substitutes for wild meat will need to be developed and produced in sufficient quantities. Livestock meat and fish can serve as substitutes for wild meat. However, in those cases where wild meat is an important part of the diet of rural communities, and can be regulated to ensure its sustainability, it may, in fact, be a better alternative than livestock production with its concomitant impacts on land-use change.

35. The relative success of sustainable management of wild meat, as compared to substitutes will be dependent on the context, as will the choice among substitutes. In the tropical forest blocks of the Amazon and Congo Basins, with estimated yearly extraction rates of millions of tons of wild meat, current consumption rates of wildlife are unsustainable; they cannot persist and alternatives will be needed. In Central Africa, backyard poultry production may provide a suitable substitute, whereas in South America, where freshwater fish is an important component of the diet, sustainable fish production may be more suitable. The situation is different in savannah or grassland ecosystems (such as eastern and southern Africa), where wildlife and domesticated livestock have shared the same pastures for thousands of years.

36. Previous attempts to produce food and income substitutes for wild meat have generally been as part of small-scale “alternative livelihood” projects for rural communities. However, these projects have not provided substitutes at a scale needed to meet the growing demand, particularly in urban areas. Identification of the factors influencing the success or failure of such projects would allow the potential of alternative livelihood projects to be properly assessed, and the development of best-practice guidelines.¹⁶

37. Behavioural change interventions aim to influence the consumer choices and decisions in order to elicit a swifter response to the availability of meat substitutes. In the longer term, interventions might aim to reduce overall meat consumption in favour of plant-based alternatives. Media campaigns, often disseminated as radio plays or tele-novellas, attempt to reach large audiences from villages to cities, provide consumers with information designed to encourage them to shift their meat consumption to alternatives, and promote certified wild meat products where relevant. Where young urbanites are already switching their preferences from wild meat, media campaigns can help to catalyse this change.

38. Rapidly growing provincial towns or remote urban settlements created by extractive industries (logging, mining, oil) are a critical entry point for managing the wild meat trade. Many residents still eat wild meat regularly due to the proximity to this resource and the highly limited availability of other animal source proteins, but are not fully reliant on it for their livelihoods. For rural villages with legitimate claims to manage and benefit from the sustainable use of wildlife within their traditional territories, a key solution to current open-access hunting is to assist rights holders to secure the authority and attain the capacity to control and manage the level of hunting on their lands, as discussed in subsection A. Natural resource extraction activities may be accompanied by an influx of workers that could potentially increase hunting pressure or alter the food supply in the region: companies should ensure a reliable protein source and set and enforce regulations against wild meat hunting and/or consumption by employees.

39. With rapidly increasing human populations and urbanization, large urban centres represent a significant and growing proportion of the overall consumption of wild meat in some countries. Increasing the availability of cheaper, sustainable substitutes through local production and importation is both

¹⁵ This may be the actual price or the shadow price (i.e. the estimated price of a good or service for which no market price exists).

¹⁶ This would require substantial improvements in project monitoring and reporting. The development and application of suitable monitoring and evaluation frameworks should be a requisite for donor or government funding of projects.

possible and a priority. This should be combined, however, with a proper enforcement of wildlife use at wholesale, retailer and consumer levels.

Suggested steps:

- (a) Develop demand-reduction strategies, focusing on towns and cities, using a cross-sectoral approach:
 - (i) Demand for wild meat is not an isolated environmental issue, and hence demand-reduction strategies should be developed cross-sectorally, with the involvement of government ministries responsible for health, food, agriculture, business, infrastructure, and education, as well as those responsible for the environment;
 - (ii) Demand-reduction strategies should focus principally on consumers in provincial towns and metropolitan cities, where a reduction in wild meat consumption can be achieved without impacting livelihoods or land rights. For provincial towns, close to sources of wildlife, a mix of formalization of short value chains based on the hunting of resilient species should be combined with strict enforcement especially for protected/vulnerable species, and the development of locally produced substitutes. For metropolitan cities, far from sources of wildlife, consumption is a consumer choice issue that may be best resolved through targeted social marketing to encourage behavioural change;
- (b) Increase the availability of substitutes:
 - (i) An enabling environment should be developed to encourage the development of self-sufficient private enterprise and private-public partnerships to supply substitutes, such as chicken, fish and other domestic livestock, in urban settlements which are sufficiently large (and have a large enough customer base);
 - (ii) Extractive industries that house their employees in close proximity to sources of wildlife should be required to ensure that their employees do not hunt illegally and that they have access to affordable sources of protein from livestock, preferably domestically produced;
- (c) Decrease the availability and demand for unsustainably produced wild meat:
 - (i) Targeted media campaigning (based on an understanding of the drivers of consumption and relevant substitutes), including the use of social media, in urban towns and cities should be used to inform citizens on issues pertaining to wild meat consumption, including health issues, wildlife laws and available substitutes, with the aim of changing consumer behaviour. Campaigns should be designed based on a clear understanding of the consumers, drivers, and substitutes in the areas to be targeted;
 - (ii) Wildlife laws governing the trade and sales of wild meat (which are relevant, understandable, and enforceable) should be developed and applied in provincial towns, cities and villages, to provide a disincentive to illegal traders and increase urban wild meat prices.

C. Creating the enabling conditions for a controlled, sustainable wild meat sector

40. At the international level, wild meat issues are considered via two main types of institutions: international conventions (CBD, CITES, CMS) and other relevant organizations that help to support or implement the decisions of the conventions (CPW, Interpol, TRAFFIC, UNCTAD, FAO, IUCN, UNDP) and regional cooperation or economic integration bodies (EU, AU, CEEAC) and other related multilateral institutions (EC, COMIFAC, among others).

41. Among wildlife issues, the question of the illegal wildlife trade is of prominent concern and, too often, wild meat issues are overlooked or are treated as a by-product of the work on the illegal wildlife

trade. Some conventions¹⁷ explicitly consider and act upon the unsustainable use of wild meat by trying to produce a more favourable environment for the conservation and sustainable use of wildlife.

42. Management of the wild meat sector must move beyond ad hoc disconnected palliative measures intended to mitigate the effects of wildlife hunting (e.g. hunting bans, captive breeding of wild species, and small-scale alternative protein or livelihood options). A holistic approach along the wild meat value chains, focused on conserving and sustainably using the resource at the source (rural areas) and reducing the demand in urban centres, should be developed.

43. This will require a conducive and comprehensive enabling environment (particularly regarding national policy and legal frameworks concerning wildlife hunting, and wildmeat trade and sales), which is currently absent in most developing countries. Creating such an enabling environment becomes the necessary condition to achieve or progress towards a more controlled, more sustainable wild meat sector. A coherent and focused governance framework is required at both the international and national levels in support of interventions targeting better management of the resource and/or a significant reduction of the demand. The figure on page 16 presents an adapted example of a Theory of Change Diagram for wild meat.

44. Much of the current wild meat trade is not legal, and this can hinder policy processes and prevent a sound assessment of management requirements. There is an urgent need to include the wild meat sector formally within systematic national wealth accounting systems and GDP estimates.

Suggested steps:

- (a) Increase international collaboration:
 - (i) Further enhance collaboration among the relevant conventions and organizations (in particular: the Convention on Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on Migratory Species (CMS), the World Health Organization (WHO), the World Organization for Animal Health (OIE), and the Food and Agriculture Organization of the United Nations (FAO)), promoting the recommendations of the Bushmeat Liaison Group under the Convention on Biological Diversity;¹⁸
 - (ii) Support integrated local, national, and transboundary action to build partnerships among relevant organizations and institutions to: build enforcement and monitoring capacities; develop and implement alternatives for nutrition and livelihoods; and increase awareness, research exchanges and education regarding hunting of and trade in wild meat. In addition, there should be targeted action to advance the Action Plan on Customary Sustainable Use, as well as to support national processes to revise policy and legal frameworks to support and enable conservation and sustainable use of wildlife species.
- (b) Acknowledge the role of wild meat, where legitimate, and adapt national policy and legal frameworks accordingly:
 - (i) Recognize the reality of the existing wild meat trade, as a necessary precursor to getting wildlife management onto a sounder footing;
 - (ii) Record levels of existing wild meat consumption into national statistics, as a means of valuing the resource and giving it appropriate weight in public policy and planning;

¹⁷ For example, CBD, CITES, CMS.

¹⁸ CITES COP 17 (Conf. 13.11), and CBD decision XI/25.

- (iii) Assess the role of wildlife consumption in livelihoods and consider it in national resource assessments and major policy planning documents, such as national development and poverty reduction strategies;
- (iv) Include wild meat/wildlife concerns in relevant educational curricula (e.g. tertiary education, government training).
- (c) Create regional and national monitoring frameworks for wild meat, including to:
 - (i) Undertake an evaluation of wild meat consumers, the drivers of consumption and potential substitutes, and the calculation of elasticities of demand. This knowledge is required for the design and targeting of demand-reduction strategies, including the development of behavioural change strategies to address sustainable wild meat consumption practices, including consumption of sustainable substitutes;
 - (ii) Carry out an evaluation of wild meat producers, including the use of wild meat for protein and income, the characteristics of hunters and hunting households, the use of alternative sources of protein and income, and the impacts of hunting on local livelihoods;
 - (iii) Generate a description of the wild meat commodity chain, to identify key actors and places along the commodity chain to target interventions;
 - (iv) Design an ecological monitoring platform at key sites nationally to determine and track the impacts of wild meat hunting and the impacts of policy implementation;
 - (v) Assess relative health benefits and risks from wild meat and alternatives in development planning (e.g., extractive industry operations), including both nutritional content and infectious disease risks, to inform supply options;
 - (vi) Collate past and current interventions aimed at increasing the sustainability of wild meat use, and any evidence of their impact, to build an evidence-base of success and failures with which to better design future interventions;
 - (vii) Make use of relevant, existing data platforms¹⁹ to develop a deeper understanding of the type of interventions needed, including their potential design, and opportunities for different stakeholders to contribute to data collection efforts.

V. SUGGESTED RECOMMENDATION

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,

Recalling decision XIII/8,

Recognizing that the sustainable use of biodiversity, including management of wild species, contributes to the achievement of several Aichi Biodiversity Targets and Sustainable Development Goals,

Also recognizing the implications from human population growth for biodiversity conservation and land management, and how the guidance contained in the note by the Executive Secretary on

¹⁹ For example, the OFFTAKE project (www.OFFTAKE.org), a global project to collate information on wild meat hunting, consumption and sales is accessible to Parties, other relevant Governments and organizations to participate and contribute to.

sustainable wildlife management²⁰ can contribute to improving wildlife management aspects reflected in Sustainable Development Goal 15,²¹ for terrestrial wildlife and to policy coherence across biodiversity-related conventions²² and other conservation agreements,

Aware that Parties have identified wildlife management needs in their national biodiversity strategies and action plans and in other national, regional and global strategies and/or plans, and that a number of sustainable wildlife management²³ activities are under way with support from various Governments and organizations, and *noting* that many wildlife species are still in need of urgent conservation measures including protection, sustainable utilization and restoration of populations,

Welcoming the progress made in the Collaborative Partnership on Sustainable Wildlife Management,

Building on the Plan of Action on Customary Sustainable Use of Biological Diversity endorsed by the Conference of the Parties at its twelfth meeting²⁴ and *recognizing* the significant role that indigenous peoples and local communities play in the sustainable use and management of wild meat,

Recalling the urgency to prevent the extinction of threatened species, to improve and sustain their conservation status and to restore and safeguard ecosystems that provide essential services, including services related to water, health, livelihoods and well-being,

1. *Endorses* the guidance contained in the note by the Executive Secretary²⁰ for improving the sustainable use of wildlife resources with the aim of ameliorating the sustainability of supply at the source, managing the demand along the entire value chain, and creating the enabling conditions for controlled, sustainable management of wild meat;

2. *Urges* Parties and *encourages* other Governments in accordance with national circumstances to take into account the Plan of Action on Customary Sustainable Use of Biological Diversity and the Sustainable Development Goals, when developing, revising and implementing governance approaches on wildlife and when updating national biodiversity strategies and action plans;

3. *Also encourages* relevant organizations, including other biodiversity-related conventions and conservation agreements, to make use of the guidance contained in the note by the Executive Secretary;

4. *Invites* Parties to provide, on a voluntary basis, information on their activities and results arising from the implementation of the guidance contained in the note by the Executive Secretary, and *requests* the Executive Secretary to compile the submissions and make them available through the clearing-house mechanism;

5. *Encourages* Parties to undertake cross-sectoral dialogues and joint trainings on sustainable wildlife management among the forest, agriculture, veterinary and public health, natural resources, finance, rural development and legal sectors with a view to promoting the application of the guidance contained in the note by the Executive Secretary;

6. *Requests* the Executive Secretary, in collaboration with members of the Collaborative Partnership on Sustainable Wildlife Management, subject to the availability of resources, to facilitate the application of the guidance contained in the note by the Executive Secretary by:

²⁰ CBD/SBSTTA/21/3.

²¹ See General Assembly resolution 70/1 of 25 September 2015 entitled “Transforming our world: the 2030 Agenda for Sustainable Development”.

²² See <https://www.cbd.int/brc/>.

²³ Sustainable wildlife management (SWM) is “the sound management of wildlife species to sustain their populations and habitat over time, considering the socio-economic needs of human populations”. Wildlife, if sustainably managed, can provide both long-term nutrition and sustained income to local communities, therefore contributing considerably to local livelihoods as well as safeguarding human and environmental health (Collaborative Partnership on Sustainable Wildlife Management, 2015).

²⁴ Decision XII/12 B.

(a) Promoting and facilitating the use of monitoring tools and databases, among Parties, other relevant Governments and organizations, to improve information on wild meat hunting, consumption, trade and sales;

(b) Further testing multidisciplinary approaches to combine better knowledge of the use of and trade in wild meat species, including knowledge, innovations and practices of indigenous peoples and local communities and livelihood alternatives for the customary sustainable use of wildlife. This would include an understanding of the ecology of the species involved, a review and strengthening of legal frameworks, and an examination of the provisions of food and livelihood alternatives relating to customary sustainable use of wildlife, including through a review of existing activities relating to the Partnership.

Figure. Example of a Theory of Change Diagram for a wild meat and food security project

