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Agenda item 11

REPORT OF THE SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE ON ITS TWENTY-FIRST MEETING

The Subsidiary Body on Scientific, Technical and Technological Advice held its twenty-first meeting in Montreal, Canada, from 11 to 14 December 2017. It adopted seven recommendations concerning (a) scenarios for the 2050 Vision for Biodiversity; (b) sustainable wildlife management: guidance for a sustainable wild meat sector; (c) health and biodiversity; (d) mainstreaming of biodiversity in the sectors of energy and mining, infrastructure, manufacturing and processing, and health; (e) considerations for the preparation of the fifth edition of the *Global Biodiversity Outlook*; (f) tools to evaluate the effectiveness of policy instruments for the implementation of the Strategic Plan for Biodiversity 2011-2020; (g) new and emerging issues. These are provided in section I of the report.

The draft decisions contained within the recommendations will be submitted to the Conference of the Parties to the Convention on Biological Diversity for consideration at its fourteenth meeting.

The account of the proceedings of the meeting appears in section II of the report.

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I. RECOMMENDATIONS ADOPTED BY THE SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE

XXI/1. Scenarios for the 2050 Vision for Biodiversity

The Subsidiary Body on Scientific, Technical and Technological Advice,

Emphasizing the need to continue to focus current efforts on to the implementation of the Strategic Plan for Biodiversity 2011-2020¹ and the achievement of the Aichi Biodiversity Targets,

1. *Notes* that achieving the Aichi Biodiversity Targets would improve the starting position for the post-2020 global biodiversity framework and the prospects for realizing the 2050 Vision;

2. *Welcomes* the information provided in the notes by the Executive Secretary on scenarios for the 2050 Vision for Biodiversity and the 2030 Agenda on Sustainable Development,² and *requests* the Executive Secretary to undertake a peer review of the information documents associated with these notes,³ with the participation of Parties other Governments, indigenous peoples and local communities, and relevant stakeholders, as well experts, and to make the revised versions available for the information of the Subsidiary Body on Implementation at its second meeting and the Conference of the Parties at its fourteenth meeting;

3. *Welcomes* the ongoing work of the Expert Group on Models and Scenarios of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services to develop a new set of multi-scale biodiversity scenarios through a stakeholder-driven process,⁴ and, noting the relevance of this work to the process of developing a post-2020 global biodiversity framework, *recognizes* the importance of the participation of indigenous peoples and local communities in this work, and *encourages* Parties, other Governments, indigenous peoples and local communities and all stakeholders to engage in this process;

4. *Recommends* that the Subsidiary Body on Implementation at its second meeting take scenario analyses into account, including the information referred to in paragraphs 2 and 3 above, in its consideration of the agenda item on the preparation for the follow-up to the Strategic Plan for Biodiversity 2011-2020;⁵

5. *Emphasizes* the need for capacity-building, especially for developing countries and countries with economies in transition, in particular the least developed countries and small island developing States, to enable all countries to participate in the development and application of scenarios;

6. *Welcomes* the ongoing work by the scientific and other relevant communities working on scenarios and related assessments, including the increased collaboration between the communities working on biodiversity and on climate change, and, *recalling* the invitation to the Intergovernmental Panel on Climate Change in paragraph 5 of Subsidiary Body on Scientific, Technical and Technological Advice recommendation XX/10, *invites* these communities to continue these efforts to promote coherence in scenarios and related assessments;

7. *Invites* the scientific and other relevant communities working on scenarios and related assessments to take into account the following issues which are relevant to the development of the post-2020 global biodiversity framework:

(a) The broad range of underlying drivers and systemic and structural issues related to biodiversity loss;

¹ Decision X/2, annex.

² CBD/SBSTTA/21/2 and Add.1.

³ CBD/SBSTTA/21/INF/2, CBD/SBSTTA/21/INF/3, CBD/SBSTTA/21/INF/4 and CBD/SBSTTA/21/INF/18.

⁴ See <https://www.ipbes.net/deliverables/3c-scenarios-and-modelling> and CBD/SBSTTA/21/INF/18.

⁵ Item 16 of the provisional agenda for the second meeting of the Subsidiary Body on Implementation.

- (b) Combinations of policy approaches at multiple scales and under different scenarios;
- (c) The identification of potential synergies, trade-offs and limitations related to biodiversity that should be considered in order to identify effective policies and measures to enable the achievement of the Sustainable Development Goals;
- (d) The contributions of the collective action of indigenous peoples and local communities in the conservation of biological diversity and the sustainable use of its components;
- (e) The consequences of alternative scenarios for the customary sustainable use of biodiversity by indigenous peoples and local communities;
- (f) Scenario analyses on financing the post-2020 global biodiversity framework and the attainment of the 2050 Vision for Biodiversity;
- (g) The potential positive and negative impacts of productive sectors such as inter alia agriculture, forestry and fisheries;
- (h) Technology developments that may have positive or negative impacts on the achievement of the three objectives of the Conventions as well as on the lifestyles and traditional knowledge of indigenous peoples and local communities;

8. *Requests* the Executive Secretary, when preparing proposals for the process of developing a post-2020 global biodiversity framework, to make provisions for sound analytical work in order to ensure that this framework is based on the best available evidence, building on previous work and taking into account the conclusions contained in the annex to the present recommendation, work related to the fifth edition of the *Global Biodiversity Outlook*, and relevant work under other multilateral environmental agreements and under the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, including the following:

- (a) The links between biodiversity and the Sustainable Development Goals and the role of the 2030 Agenda for Sustainable Development⁶ in providing an enabling environment;
- (b) Lessons learned from the implementation of the Convention, its Protocols and the Strategic Plan for Biodiversity 2011-2020,⁷ including successes, challenges, opportunities and capacity-building needs;
- (c) Possible reasons for the varying levels of progress towards the achievement of the Aichi Biodiversity Targets;
- (d) Policy options and recommendations under the Convention that could leverage the transformational change required to achieve the 2050 Vision for Biodiversity and contribute to the implementation of the 2030 Agenda for Sustainable Development;
- (e) Ways in which other biodiversity-related conventions, the other Rio Conventions and, other relevant international conventions and agreements could contribute to the post-2020 global biodiversity framework and the 2050 Vision for Biodiversity;

10. *Recommends* that the Conference of the Parties at its fourteenth meeting adopt a decision along the following lines:

The Conference of the Parties

- 1. *Welcomes* the conclusions of the Subsidiary Body on Scientific, Technical and Technological Advice regarding scenarios for the 2050 Vision for Biodiversity contained in the annex to the present decision as well as the information contained in the notes by the Executive

⁶ [General Assembly resolution 70/1](#), annex.

⁷ [Decision X/2](#), annex.

Secretary and supporting information documents,⁸ noting their relevance to the discussions on the long-term strategic directions to the 2050 Vision for Biodiversity, approaches to living in harmony with nature and the process of developing a post-2020 global biodiversity framework;

2. *Invites* the scientific and other relevant communities working on scenarios and related assessments to take into account the following issues which are relevant to the development of the post-2020 global biodiversity framework:

- (a) The broad range of underlying drivers and systemic and structural issues related to biodiversity loss;
- (b) Combinations of policy approaches at multiple scales and under different scenarios;
- (c) The identification of potential synergies, trade-offs and limitations related to biodiversity that should be considered in order to identify effective policies and measures to enable the achievement of the Sustainable Development Goals;
- (d) The contributions of the collective action of indigenous peoples and local communities in the conservation of biological diversity and the sustainable use of its components;
- (e) The consequences of alternative scenarios for the customary sustainable use of biodiversity by indigenous peoples and local communities;
- (f) Scenario analyses on financing the post-2020 global biodiversity framework and the attainment of the 2050 Vision for Biodiversity;
- (g) The potential positive and negative impacts of productive sectors such as inter alia agriculture, forestry and fisheries;
- (h) Technology developments that may have positive or negative impacts on the achievement of the three objectives of the Conventions as well as on the lifestyles and traditional knowledge of indigenous peoples and local communities;

3. *Requests* the Executive Secretary, in collaboration with relevant partners, to facilitate capacity-building activities in accordance with [decision XIII/23](#), especially for developing countries and countries with economies in transition, in particular the least developed countries and small island developing States, to enable all countries to participate in the development and application of scenarios;

4. *Recalling* [decision XIII/22](#) on the framework for a communication strategy, *requests* the Executive Secretary to promote the use of scenarios as a communication tool for raising public awareness and to foster participation and involvement of all stakeholders, in particular academia and the scientific community, and to scale up global support for biodiversity concerns, including by engaging celebrities as biodiversity ambassadors from all regions who would act as biodiversity voices.

Annex

CONCLUSIONS OF THE SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE REGARDING SCENARIOS FOR THE 2050 VISION FOR BIODIVERSITY

1. *The 2050 Vision of the Strategic Plan remains relevant and should be considered in any follow-up to the Strategic Plan for Biodiversity 2011-2020.* The 2050 Vision (“Living in harmony with nature” where “by 2050, biodiversity is valued, conserved, restored and wisely used,

⁸ [CBD/SBSTTA/21/2](#) and [Add.1, CBD/SBSTTA/21/INF/2, INF/3, INF/4, INF/18](#). The information documents will be updated in the light of the peer review requested in Subsidiary Body recommendation XXI/1.

maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”) contains elements that could be translated into a long-term goal for biodiversity and provide context for discussions on possible biodiversity targets for 2030 as part of the post-2020 global biodiversity framework.

2. *Current trends, or “business-as-usual” scenarios, show continued loss of biodiversity, with major negative consequences for human well-being, including changes that may be irreversible. Urgent action on biodiversity therefore remains a pressing global societal issue.*

3. *Scenarios for future socioeconomic development demonstrate that there is a wide range of plausible futures with respect to population growth, education, urbanization, economic growth, technological development and approaches to international trade, among other factors, leading to varying levels of drivers of ecosystem and biodiversity change, such as climate change, overexploitation, pollution, invasive alien species and habitat loss, including land use change. This range of plausible futures provides space for developing policy measures to achieve the 2050 Vision and other global goals.*

4. *The biodiversity goals reflected in the 2050 Vision could be attained while also reaching broader socioeconomic objectives by deploying a combination of measures, including measures: (a) to increase the sustainability and productivity of agriculture, increasing and making better use of biodiversity within agricultural ecosystems to contribute to increases in sustainable production; (b) to reduce ecosystem degradation and fragmentation and maintain biodiversity and ecosystem functions and services including through proactive spatial planning, the restoration of degraded lands and ecosystems and the strategic expansion of protected areas; (c) to reduce overexploitation of fisheries and other biological resources; (d) to control invasive alien species; (e) to adapt to and mitigate climate change; and (f) to reduce waste and excessive consumption.*

5. *These measures could be developed in various “policy mixes” depending on the needs and priorities of countries and stakeholders. For example, the combination of policy measures referred to in paragraph 4 above could vary with respect to the emphasis on changes in production and consumption, the degree of reliance on new technologies and international trade and the degree of global and local coordination such as illustrated by the three pathways identified in the fourth edition of the *Global Biodiversity Outlook*.⁹ Further visioning exercises, at multiple scales and with strong stakeholder engagement are needed to further elucidate options and promote action.*

6. *The pathways towards a sustainable future, while plausible, require transformational change, including changes in behaviour at the levels of producers and consumers, Governments and businesses. Further efforts will be needed to understand motivations and facilitate change. Societal and disruptive technological developments can lead to transitions that may contribute to, or counter, sustainability and the achievement of the three objectives of the Convention. Governments and international institutions can play a critical role in establishing an enabling environment to foster positive change. Further work is required to identify ways and means by which the Convention and the post-2020 global biodiversity framework can leverage such change.*

7. *A coherent approach is needed on biodiversity and climate change to ensure that impacts on biodiversity of climate change are reduced, that biodiversity and ecosystems can contribute solutions related to climate adaptation and mitigation, and that climate change adaptation and mitigation measures do not negatively impact biodiversity through changes in land management.*

⁹ See also Leadley et al (2014), Progress towards the Aichi Biodiversity Targets: An Assessment of Biodiversity Trends, Policy Scenarios and Key Actions. Secretariat of the Convention on Biological Diversity, Technical Series 78 (<https://www.cbd.int/doc/publications/cbd-ts-78-en.pdf>), and Kok, & Alkemade (eds) (2014), How sectors can contribute to sustainable use and conservation of biodiversity, Secretariat of the Convention on Biological Diversity, and PBL Netherlands Environmental Assessment Agency, Technical Series 79 (<https://www.cbd.int/doc/publications/cbd-ts-79-en.pdf>)

8. *The 2050 Vision is consistent with the 2030 Agenda for Sustainable Development and other international goals.* Progress towards the 2030 Agenda for Sustainable Development would help to address many drivers of biodiversity loss and also support biodiversity objectives by creating a favourable enabling environment. The integrated and indivisible nature of the Agenda implies that the achievement of all goals is necessary, and scenarios and models may inform the choice of policies and measures and their limitations, highlighting the need for policy coherence.

9. *Scenarios and models may be useful in informing the development and implementation of the post-2020 global biodiversity framework.* The development of the current Strategic Plan for Biodiversity 2011-2020 was informed by biodiversity scenarios that include those developed for the third edition of the *Global Biodiversity Outlook*. There is also a potential for scenarios developed at appropriate scales to inform policymaking and implementation at the national level.

10. *Scenario analyses tailored to regional, national or local circumstances provide information to feed into strategic planning for conservation and sustainable use of biodiversity.* They can therefore directly support the development of national biodiversity strategies and action plans. Furthermore, the inclusion of participatory approaches in scenario analysis is a valuable tool for building the capacity for decision-making that focuses on the conservation and sustainable use of biodiversity. It can do this by allowing stakeholders to recognize the relationships between biodiversity and other sectors, and how enhanced benefits can increase human well-being.

XXI/2. Sustainable wildlife management: guidance for a sustainable wild meat sector¹⁰*The Subsidiary Body on Scientific, Technical and Technological Advice*

1. *Takes note* of the draft voluntary guidance for a sustainable wild meat sector,¹¹ applicable to some areas of terrestrial tropical and subtropical habitat, biomes and ecosystems, prepared in accordance with decision XIII/8, paragraph 5(a);

2. *Requests* the Executive Secretary to finalize the technical study entitled “Towards a sustainable, participatory and inclusive wild meat sector”,¹² following the peer review by Parties and other Governments and other relevant stakeholders;

3. *Also requests* the Executive Secretary, in collaboration with interested Parties, other members of the Collaborative Partnership on Sustainable Wildlife Management, and indigenous peoples and local communities, subject to the availability of resources, to convene and facilitate dialogues to review the draft voluntary guidance and address related issues, as appropriate, in the light of regional needs and circumstances;

4. *Further requests* the Executive Secretary to report on progress to the Subsidiary Body on Scientific, Technical and Technological Advice at its twenty-second meeting and to the Conference of the Parties at its fourteenth meeting;

5. *Requests* the Executive Secretary to communicate to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services the priority that the Subsidiary Body on Scientific, Technical and Technological Advice gives to the thematic assessment on sustainable use and conservation of biodiversity;

6. *Recommends* 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 of human population growth and urbanization for biodiversity conservation and land management,

Aware that Parties have identified integrated wildlife management needs in their national biodiversity strategies and action plans and in other national, regional and global strategies and plans, and that a number of sustainable wildlife management¹³ 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,

¹⁰ For some Parties, sustainable wild meat practices are not considered a sector of the economy.

¹¹ At its eleventh meeting, the Conference of the Parties to the Convention on Biological Diversity defined “bushmeat” (or “wild meat”) hunting more broadly as “the harvesting of wild animals in tropical and sub-tropical countries for food and for non-food purposes, including for medicinal use” (see [decision XI/25](#)). Given that wildlife hunting for food and livelihoods affects over 500 wild vertebrate species in Oceania, South America, South and South-East Asia as well as sub-Saharan Africa, the [Second World Conservation Congress](#), held in October 2000, in its Resolution 2.64, refers to the issue of “wild meat” rather than “bushmeat” hunting.

¹² [CBD/SBSTTA/21/INF/6](#).

¹³ 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).

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

Recognizing the right to customary use of biological resources, in accordance with the traditional practices, and the importance of full and effective participation of indigenous peoples and local communities in decision-making processes related to sustainable wildlife management in accordance with national legislation,

Also recognizing the significant role that indigenous peoples and local communities play in the sustainable use and management of wild meat,

Building on the Plan of Action on Customary Sustainable Use of Biological Diversity, endorsed by the Conference of the Parties at its twelfth meeting,¹⁴

Recalling the urgent need to reduce biodiversity loss, including preventing the extinction of threatened species, to improve and sustain their conservation status and to restore and safeguard ecosystems that provide essential functions and services, including services related to water, health, livelihoods and well-being,

Having considered the progress report prepared in line with recommendation XXI/2 on sustainable wildlife management: guidance for a sustainable wild meat sector,

1. *[Welcomes]/[Takes note of]* the voluntary guidance for a sustainable wild meat sector, contained in the annex to the present decision,¹⁵ with the aim of promoting the sustainability of supply at the source, managing the demand along the entire value chain, and creating the enabling conditions for legal, sustainable management of terrestrial wild meat in tropical and subtropical habitats, taking into account the traditional use by indigenous peoples and local communities without adversely affecting their livelihoods;

2. *Notes* that the voluntary guidance for a sustainable wild meat sector can contribute to improving integrated wildlife management aspects reflected in Sustainable Development Goals 2 and 15,¹⁶ for terrestrial wildlife, with a view to enhancing policy coherence across biodiversity-related conventions¹⁷ and other conservation agreements;

3. *Encourages* Parties, other Governments and relevant organizations, including other biodiversity-related conventions and conservation agreements, where applicable, and in accordance with national circumstances and national legislation, to make use of the voluntary guidance for a sustainable wild meat sector, as well as the Plan of Action on Customary Sustainable Use of Biological Diversity and the Sustainable Development Goals,¹⁴ when developing, revising and implementing governance approaches on wildlife and when developing and updating national development plans and national biodiversity strategies and action plans;

4. *Invites* Parties to provide, on a voluntary basis, best practices from their existing national programmes that promote sustainable wildlife management, while contributing to poverty reduction, food security and employment generation, in line with the Sustainable Development Goals and sustainable use of biological diversity;

5. *Also invites* Parties to provide information on their activities and results arising from the consideration of the voluntary guidance for a sustainable wild meat sector;

6. *Encourages* Parties to undertake cross-sectoral dialogues and joint trainings on sustainable wildlife management, among the forestry, agriculture, veterinary and public health,

¹⁴ [Decision XII/12](#) B, annex.

¹⁵ Note: the annex may be revised in the light of the work pursuant to recommendation XXI/2 on sustainable wildlife management: guidance for a sustainable wild meat sector.

¹⁶ See [General Assembly resolution 70/1](#) of 25 September 2015 entitled “Transforming our world: the 2030 Agenda for Sustainable Development”.

¹⁷ See <https://www.cbd.int/brc/>

natural resources, finance, rural development, education, legal and private sectors, as well as indigenous peoples and local communities, and other relevant stakeholders with a view to promoting the application of the voluntary guidance for a sustainable wild meat sector;

7. *Invites* Parties, and *encourages* other Governments and other relevant organizations that are in a position to do so, to support capacity-building initiatives for developing countries, aimed at enhancing the implementation of the voluntary guidance for a sustainable wild meat sector;

8. *Requests* the Executive Secretary to compile the submissions referred to in paragraph 5 above and make them available through the clearing-house mechanism;

9. *Requests* the Executive Secretary, in consultation with interested Parties, other Governments, indigenous peoples and local communities, and other members of the Collaborative Partnership on Sustainable Wildlife Management, subject to the availability of resources:

(a) To identify areas that may require complementary guidance to be developed and to explore ways to apply such guidance to other geographical areas, other species and other uses, in view of the fact that the voluntary guidance for a sustainable wild meat sector is applicable only to some areas of terrestrial tropical and subtropical habitat, biomes and ecosystems;

(b) To promote and facilitate the use of monitoring tools and databases, through an exchange of best practices and lessons learned, among Parties, other Governments and relevant organizations, with a view to improving information on sustainable wildlife use, including wild meat hunting, consumption, trade and sales, and legality issues;

(c) To further test multidisciplinary approaches to combining better knowledge of the use of and trade in wildlife, taking into account the knowledge, innovations and practices of indigenous peoples and local communities and livelihood alternatives for the customary sustainable use of wildlife, possibly including an understanding of the taxonomy and ecology of the species involved, a review and strengthening of legal frameworks, the identification and promotion of best practices for sustainably managing and using wildlife, and an examination of the provisions of food and livelihood alternatives relating to customary sustainable use of wildlife through, among other things, a review of existing activities relating to the Partnership;

(d) To communicate with the Executive Secretary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services with a view to facilitating the wide dissemination of the outcomes of the assessment on sustainable use and conservation of biodiversity in order to help strengthen capacities and tools;

(e) To report on the progress of activities listed in paragraph 9 (a) through (d) above to the Subsidiary Body on Scientific, Technical and Technological Advice at a meeting held prior to the fifteenth meeting of the Conference of the Parties.

Annex

VOLUNTARY GUIDANCE FOR A SUSTAINABLE WILD MEAT SECTOR¹⁸

CONTEXT: WILD MEAT, FOOD SECURITY, AND LIVELIHOODS

1. 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

¹⁸ For some Parties, sustainable wild meat practices are not considered a sector of the economy.

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.¹⁹

2. 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.²⁰

3. 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. Illegal and unregulated harvesting, 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.

4. 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 dispersal, seed predation, control of prey species) are eliminated through overhunting. This loss of ecological interactions creates an internal imbalance of the ecosystem that in turn gravely reduces ecosystem functions and services, including provision of pharmaceutical compounds, biocontrol agents, food resources and disease regulation.²¹ Moreover, between 23 and 36 per cent of birds, mammals, and amphibians used for food or medicine are now threatened with extinction.²²

5. 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 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.

6. Concurrently, habitat for wildlife is declining as lands are converted for agricultural commodities to meet the demands of a growing human population, 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. However, more attention should be given to the positive contributions that relate to livelihood benefits, local economic growth and connections to climate change adaptation, which can provide incentives for the improved management of wildlife resources.

7. 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.

¹⁹ The information document on sustainable wildlife management prepared for the twentieth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice ([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 national reports of Parties 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](#)).

²⁰ See [UNEP/CBD/SBSTTA/20/11](#), para. 26.

²¹ S.S. Myers et al. (2013). *Proceedings of the National Academy of Sciences* 110, 18753-18760.

²² S.H.M. Butchart et al. (2010). *Science* 328, 1164-1168.

8. 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 indigenous peoples and local communities' livelihoods, food security and health, there is an urgent need to strengthen public policy responses within a more integrated socioeconomic, cultural, ecological and public health framework.

9. 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, illegal trade 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.²³ Certain wild meat species are likely to provoke pathogen spillover to humans, and this risk could increase through the unregulated and uncontrolled 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.

10. Approaches for sustainable wildlife management should include: (a) analysis of national policies, (b) improving knowledge of the use and trade of wild meat species, and understanding of the ecology of species involved; (c) review and strengthening of legal frameworks, to design policy and management frameworks that incentivize and enable sustainable management; (d) the identification of opportunities and barriers for providing sustainably produced food and livelihood alternatives; (e) taking into account the use and traditions of indigenous peoples and local communities, and (f) 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.

II. SCOPE AND PURPOSE

A. Scope

11. 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.

12. The present guidance focuses on wild meat – defined for the purposes of this present guidance as the meat of terrestrial vertebrates in tropical and subtropical habitat, biomes and ecosystems which is used for food.²⁴ 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 guidance.

²³ Zoonotic pathogens such as the Ebola, Marburg virus, and monkey pox.

²⁴ 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 guidance 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.

B. Goal and objective

13. The present guidance 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.

14. The overall objective of the present guidance 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, 12 and 18.²⁵

15. The information contained in the present guidance thus contributes to the achievement of objectives and commitments under the Convention on Biological Diversity²⁶ 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.²⁷

16. While many of the types of actions suggested in the present guidance 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.

17. More specifically the guidance aims 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 and legally managed at the source;
- (b) Reduce demand for unsustainably managed and/or illegal wild meat in towns and cities;
- (c) Create an enabling environment for the sustainable management of wild meat.

18. 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 guidance proposes joint approaches that can be applied to achieve sustainable use of wild meat species. 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.

III. TECHNICAL GUIDANCE FOR ACHIEVING A SUSTAINABLE WILD MEAT SECTOR

19. The guidance 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

²⁵ 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. Target 18 to promote traditional knowledge and the full participation of indigenous peoples and local communities.

²⁶ 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.

²⁷ See [General Assembly resolution 70/1](#) of 25 September 2015 entitled “Transforming our world: the 2030 Agenda for Sustainable Development”.

chain (subsection B); and how to create the enabling conditions for legal and regulated, 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 wild meat supply at the source

20. 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.

21. Several models for management of wildlife resources at the community level have been suggested and tested. These models are meant as examples as possible approaches, but may not be applicable in all countries or settings. Generally, these represent forms of co-management between communities and the state and/or private sector entities involved, such as those in infrastructure and extractive industries such as road construction, logging and mining. Forms of co-management between communities and the State and/or private companies, according to national legislation, inter alia, may 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 and infrastructure developers may also provide workers with alternative animal protein sources, such as sustainably sourced and/or produced chicken or fish, in lieu of the use of wild meat where current or projected levels of demand exceed wild meat species' capacity to recover;

(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 according to national legislation. Conservancies are supported by law enforcement agencies which respond to conservancy information 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 in the framework of national legislation;

(d) Payment for Ecosystem Services schemes. Communities are paid on delivery of an ecosystem services. In this case, in accordance with national policies, 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, respecting the cultural relation of indigenous peoples and local communities with wildlife. 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 sustainably-sourced 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). Such certification schemes may also incorporate safeguards that would assure consumers that wild meat meets good sanitary standards. 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.

22. Elements for successful, sustainable community-based (or regional cooperative) wildlife management, to create the enabling conditions for local community management, may include, in accordance with national legislation:

(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 the sustainable use of 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) Definition on geographical limits of those areas where community-rights-holders are able to collect wild meat is determined by national legislation taking into consideration their 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, traceability systems strengthened and local leadership capacities developed;

(j) Community hunting zones, within and around protected areas, are clearly defined,²⁸ 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 revenue stem from the land-use zone, then clear frameworks for financial management should also be set out, including penalties for misconduct;

²⁸ 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.

(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.

23. 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 principal 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 (ICWC) could also provide further support to national capacity-building of law enforcement, judiciary, prosecution and legislation to prevent illegal hunting.

24. In many countries, hunting regulatory frameworks need to be updated in order to adjust to their current situation and national realities. Otherwise, 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 outdated regulations implies high costs, which indigenous peoples and local communities cannot afford in the absence of compensatory measures.

25. There is a need to strengthen many countries' staff capacities and capabilities 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.

26. 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 information 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.

27. Suggested steps for managing and improving the sustainability of wild meat supply at the source:

(a) Review existing policies and legal frameworks:²⁹ 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, in accordance with national circumstances and applicable national legislation, to include:

²⁹ The [IUCN Best Practice Guidelines No. 20](https://www.iccaconsortium.org/index.php/2015/08/08/governance-for-the-conservation-of-nature/) may be useful in this respect. Available at <https://www.iccaconsortium.org/index.php/2015/08/08/governance-for-the-conservation-of-nature/>

- (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 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;³⁰
 - (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;³¹
 - (iii) Enhance measures to protect the rights of indigenous peoples and local communities in enforcement activities, and to deter poaching;
 - (iv) 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, and enable prosecutors and judges to prosecute and sentence on cases of illegal wild meat harvest and trade;
 - (v) Strengthen the capacity of fiscal, legal and judicial personnel on environmental laws and policies to increase their awareness, and effectiveness to address, crimes against wildlife;
 - (vi) Promote awareness-raising campaigns for citizens, including indigenous peoples and local communities on national and local legislation and regulations;

³⁰ 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/>

³¹ 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”.

(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, the private sector and other relevant stakeholders:

- (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. In relevant circumstances, contracts between government and infrastructure and extractive industry companies should provide food alternatives to wild meat for staff working in such concessions where demand exceeds or is projected to exceed the sustainable yield;
- (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 schemes³² and criteria and indicator processes for sustainable forest management to mitigate the impacts of human activities on wildlife by including provisions for alternative, sustainable food sources and livelihoods, where needed, and for capacity-building and management systems that support legal and sustainable hunting, and effectively regulating the hunting of protected species;

(d) 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 indigenous peoples and local communities or support community-based income projects. Mitigative measures (farming, ranching, captive breeding, etc.) may play a role in conserving wildlife resources.

B. Reducing demand for unsustainably managed and/or illegal wild meat in cities and towns

28. 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 is foreseen to 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.

29. 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

³² Such as the Programme for the Endorsement of Forest Certification Schemes (PEFC) and the Forest Stewardship Council (FSC).

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 for unsustainably managed wild meat species.

30. The price³³ of wild meat can be increased by increasing enforcement of wildlife laws, 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. Increasing prices can increase demand in certain luxury markets where the high price point and the social status it confers are a driver for consumption, and may also result in illegal meat being laundered into legal markets.

31. 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. In addition, assessments must be conducted to ensure that any increases on livestock and fishery production does not have adverse impacts on biodiversity and the environment, and is conducted sustainably.

32. 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 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.

33. 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.³⁴

34. 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.

35. 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 for sustainable wild meat hunting and/or consumption by employees.

³³ 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).

³⁴ 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.

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

37. Suggested steps for reducing demand for unsustainably managed and/or illegal wild meat in cities and towns:

(a) When necessary, develop demand-reduction strategies for unsustainably managed wildlife, focusing on towns and cities, using a cross-sectoral approach, in accordance with national circumstances and applicable national legislation:

- (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, development, economy, finance, infrastructure, and education, as well as those responsible for the environment, and relevant experts in the fields of consumer behaviour change, including social marketing and behavioural economics, and in conjunction with the private sector and experts in fields that go beyond conservation;
- (ii) The development of effective demand reduction strategies must also include the active involvement of the relevant experts in the related fields of consumer behaviour change, including social marketing and behavioural economics;
- (iii) 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;
- (iv) Demand-reduction strategies should be informed by research focused on the identification of environmental, economic and cultural drivers, attitudes and motivations that influence consumption of wild meat, in order to develop strategies that also address these important drivers;

(b) Increase the availability of sustainably produced and sustainably-harvested substitutes, as appropriate:

- (i) An enabling environment should be developed and incentives provided to encourage the development of self-sufficient private enterprise and private-public partnerships to supply substitutes, such as sustainably produced / sustainably-harvested chicken, fish and other domestic livestock, in urban settlements which are sufficiently large (and have a large enough customer base). Assessments must be conducted to ensure that any increase of livestock and fishery production does not have adverse impacts on biodiversity and the environment, and that the production is sustainable;
- (ii) Extractive and infrastructure industries that house their employees in close proximity to sources of wildlife should be required to ensure that their employees comply with applicable regulation concerning hunting of wild meat species and, where appropriate, have access to affordable and sustainably produced /

sustainably-harvested sources of protein from livestock or sustainable system crops, sustainably and 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 wildlife conservation, human health issues, conservation impact, wildlife laws and available sustainably produced/ sustainably-harvested 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 encourage legal, sustainable and traceable trade, and provide a disincentive to illegal traders and increase urban wild meat prices. Prior assessments should be conducted in order to determine if increasing prices will increase demand in certain luxury markets and/or lead to increased illegal trade;

(d) Promote responsible consumption of certified sustainably-sourced wild meat, since certification has the potential to contribute to the conservation and sustainable use of wild species by influencing consumer choices for sustainably-sourced products. Certification schemes could be developed to certify wild meat products as sustainably harvested, as well as meeting good sanitary standards. Such certified products can highlight benefits such as sustainability, local community livelihoods, conservation impact and health.

C. Creating the enabling conditions for a legal, regulated and sustainable wild meat sector

38. At the international level, wild meat issues are considered via two main types of institutions: international conventions and platforms (CBD, CITES, CMS, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)) and other relevant organizations that help to support or implement the decisions of the conventions (CPW, Interpol, UNODC, ICCWC, TRAFFIC, UNCTAD, FAO, IUCN, UNDP) and regional cooperation or economic integration bodies (EU, AU, CEEAC) and other related multilateral institutions (EC, COMIFAC, among others).

39. Among wildlife issues, the question of the illegal wildlife trade is of prominent concern and, too often, sustainable wildlife management and wild meat issues are overlooked or are treated as a by-product of the work on the illegal wildlife trade. Some conventions³⁵ 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.

40. 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.

41. This will require a conducive and comprehensive enabling environment (particularly regarding national policy and legal frameworks concerning wildlife hunting, and wild meat 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.

³⁵ For example, CBD, CITES, CMS.

42. The complexity of such a framework may require the development of a Theory of Change that can be used to think through and plan actions and interventions which address a specific societal or biodiversity problem. A Theory of Change maps out the logical steps that are needed for an intervention to lead to a desired outcome and ultimately to broader societal and conservation impacts.

43. 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.

44. Suggested steps for creating the enabling conditions for a legal, regulated and sustainable wild meat sector:

- (a) Increase international collaboration:
 - (i) Further enhance collaboration among the relevant conventions, platforms, 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), IPBES, the World Health Organization (WHO), the World Organization for Animal Health (OIE), and the Food and Agriculture Organization of the United Nations (FAO), the International Consortium on Combating Wildlife Crime (ICWC)), promoting the recommendations of the Bushmeat Liaison Group under the Convention on Biological Diversity;³⁶
 - (ii) An integrated approach is needed that addresses poaching and illegal wildlife trade hand-in-hand with the equally important issues of food security, livelihoods and the sustainable use of wildlife. Efforts aimed at tackling poaching and illegal wildlife trade to be effective and sustainable in the long term, need to be complemented by efforts to ensure that the conservation and sound management of wildlife species takes into account the socio-economic needs of local communities, including the sustainable use of wild meat;
 - (iii) Support integrated local, national, and transboundary action to build partnerships among relevant organizations, institutions and other relevant stakeholders 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 recognizing the benefits of its legal and sustainable use, and giving it appropriate weight in public policy and planning;
 - (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 issues in relevant educational curricula (e.g. tertiary education, government training);

³⁶ [CITES COP 17 \(Conf. 13.11\)](#), and CBD Conference of the Parties [decision XI/25](#).

- (v) Recognize the important role of women in the processing and sale of wild meat, while taking into account the needs, priorities and capacities of women and men;
- (c) Create regional and national monitoring frameworks for wild meat to inform policy and legal interventions, including:
- (i) To undertake an evaluation of wild meat consumers, the drivers of consumption and, where demand exceeds the sustainable yield 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) To carry out an evaluation of wild meat suppliers, 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) To generate a description of the wild meat commodity chain, to identify key actors and places along the commodity chain to target interventions;
 - (iv) To 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) To 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) To 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) To make use of relevant, existing data platforms 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 effort.

XXI/3. Health and biodiversity

The Subsidiary Body on Scientific, Technical and Technological Advice

Aware that, at its twenty-second meeting, it may consider possible suggestions for the second work programme of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and that, in this context, it may wish to consider the topic of biodiversity and health,

Recommends that the Conference of the Parties adopt a decision along the following lines:

The Conference of the Parties,

Recalling decisions [XII/21](#) and [XIII/6](#) on health and biodiversity,

Welcoming United Nations Environment Assembly [resolution UNEP/EA.3/L.8/Rev.1](#) on environment and health,

*Noting the reports issued by the Regional Office for Europe of the World Health Organization entitled *Urban green spaces and health: a review of evidence* (2016)³⁷ and *Urban green space interventions and health: a review of impacts and effectiveness* (2017),³⁸*

Acknowledging that consideration of health-biodiversity linkages can contribute to improving several aspects of human health and well-being, including through the prevention and reduction of both infectious and non-communicable diseases, and by supporting nutrition and healthy diets,

Also acknowledging the importance of conservation and sustainable use of biodiversity and of traditional knowledge for the health of indigenous peoples and local communities,

Recognizing the importance of the human microbiome for human health, and the value of biodiverse green spaces in urban environments, protected areas and their physiological and psychological benefits, and further highlighting the importance of ecosystem-based approaches for the delivery of multiple benefits,

Acknowledging that accessible biodiverse green spaces can enhance human health benefits by providing contact with nature, including for children and the elderly,

Noting the opportunities to contribute to the achievement of the Aichi Biodiversity Targets, in particular Target 14, and the 2030 Agenda for Sustainable Development³⁹ and the Sustainable Development Goals, through the mainstreaming of health-biodiversity linkages into relevant sectors and initiatives, including those for health, environment, agriculture, finance, nutrition and food security, food safety, planning (including urban planning), climate change mitigation and adaptation, and disaster risk reduction,

Highlighting, in this respect, the importance of all dimensions and components of biodiversity, including plants, animals and micro-organisms, and the interactions among them, as well as their genetic resources and the ecosystems of which they are part,

1. *Welcomes the Guidance on integrating biodiversity considerations into One Health approaches,⁴⁰ recognizes the importance of ecosystem-based approaches for the delivery of multiple benefits to health and well-being and encourages Parties, and invites other Governments and relevant organizations to make use of the guidance, in accordance with national circumstances;*

³⁷ <http://www.euro.who.int/en/health-topics/environment-and-health/urban-health/publications/2016/urban-green-spaces-and-health-a-review-of-evidence-2016>

³⁸ <http://www.euro.who.int/en/health-topics/environment-and-health/urban-health/publications/2017/urban-green-space-interventions-and-health-a-review-of-impacts-and-effectiveness.-full-report-2017>

³⁹ [General Assembly resolution 70/1](#), annex.

⁴⁰ [CBD/SBSTTA/21/4](#), section III.

2. *Invites* Parties and other Governments to consider integrating One Health policies, plans or projects in their national biodiversity strategies and action plans, and, as appropriate, national health plans, and other instruments including those under the United Nations Framework Convention on Climate Change and the International Strategy for Disaster Risk Reduction, to jointly support the implementation of the Convention, the 2030 Agenda for Sustainable Development³⁹ and other relevant global commitments;

3. *Invites* Parties, other Governments and other relevant stakeholders to consider gender-differentiated impacts and responses in the integration of biodiversity and health linkages in their policies, plans and actions;

4. *Invites* Parties, other Governments and relevant organizations and cooperation agencies to support capacity-building for the efficient and effective use of the guidance;

5. *Encourages* Parties to promote dialogue among ministries and agencies responsible for the sectors of health (including domestic animal and wildlife health), environment, pollution (such as marine plastic debris), pesticides, antimicrobial resistance, agriculture, nutrition and food security, food safety, planning (including urban planning), climate change adaptation and disaster risk reduction, to foster integrated approaches, with a view to enhancing implementation of the Strategic Plan for Biodiversity 2011-2020⁴¹ and the 2030 Agenda for Sustainable Development, including by mainstreaming biodiversity and health linkages into existing and future policies, plans and strategies, as appropriate;

6. *Encourages* Parties, and invites other Governments and relevant organizations to share their experience on implementing the Guidance on integrating biodiversity considerations in One Health approaches,⁴⁰ including through the clearing-house mechanism;

7. *Invites* the World Health Organization, the World Organization for Animal Health, the Food and Agriculture Organization of the United Nations and other relevant organizations to consider ecosystem-based approaches in their efforts to strengthen the prevention of ill health;

8. *Requests* the Executive Secretary, subject to the availability of resources, and *invites* the World Health Organization and other members of the Inter-agency Liaison Group on Biodiversity and Health, and other partners, as appropriate, to collaborate:

(a) To promote and facilitate dialogues on biodiversity-health approaches with relevant national, regional and subregional stakeholders, as appropriate, in order to assist Parties in developing strategies to mainstream biodiversity-health linkages effectively, and in particular, to promote holistic One Health approaches;

(b) To co-convene further regional and subregional capacity-building workshops in all regions;

(c) To compile information on relevant research, experiences and best practices on the microbiome and human health, and on the design, management and implementation of production systems based on the conservation and sustainable use of biological diversity and traditional knowledge and the corresponding benefits to nutrition and healthy diets, particularly, but not restricted to, vulnerable and marginalized sectors;

(d) To explore a mechanism that would facilitate access to, regularly update, synthesize and disseminate scientific literature and other reports on health and biodiversity, with a view to supporting the development of good practice guidance;

(e) To report on progress to the Subsidiary Body on Scientific, Technical and Technological Advice at its twenty-third meeting and to the Subsidiary Body on Implementation at its third meeting.

⁴¹ [Decision X/2](#).

XXI/4. Mainstreaming of biodiversity in the sectors of energy and mining, infrastructure, manufacturing and processing, and health

The Subsidiary Body on Scientific, Technical and Technological Advice

1. *Takes note* of the information contained in the note by the Executive Secretary⁴² as well as information documents⁴³ on mainstreaming of biodiversity in the energy and mining, infrastructure, and manufacturing and processing sectors, information considered under its agenda item on health and biodiversity⁴⁴ as well as relevant resolution on health adopted at the third session of the United Nations Environment Assembly;⁴⁵

2. *Notes* that mainstreaming is a critical approach to assist Parties in the implementation of the Convention, and that transformational change is required in the conservation, use and management of biodiversity and ecosystems, including changes in behaviour and decision-making at all levels, for the achievement of the 2050 Vision for biodiversity and the Strategic Plan for Biodiversity 2011-2020⁴⁶ and its Aichi Biodiversity Targets;

3. *Also notes* its conclusions at its twenty-first meeting regarding scenarios for the 2050 Vision for Biodiversity⁴⁷ that pathways towards a sustainable future, while plausible, require transformational change to meet the 2030 Agenda for Sustainable Development⁴⁸ and its Sustainable Development Goals and the 2050 Vision for Biodiversity, including behavioural changes, at all levels, of producers and consumers, governments and businesses, that are relevant to the mainstreaming of biodiversity in the energy and mining, infrastructure, and manufacturing and processing sectors;

4. *Further notes* that, while numerous policies and tools exist to address the mainstreaming of biodiversity in these sectors, many gaps in their implementation also exist, including with respect to strategic planning and decision-making, economy and sector-wide policies, and the wider application of biodiversity-inclusive impact assessments, in particular strategic environmental assessment of policies, plans and programmes, and the use of spatial planning at the national, subnational, regional and interregional levels, as appropriate;

5. *Emphasizes* the important role of indigenous peoples and local communities, as well as women, youth, local and subnational governments, and other relevant stakeholders, and the roles and contributions of community-based monitoring and information systems in addressing mainstreaming in these sectors;

6. *Invites* the United Nations Environment Programme's International Resource Panel, when undertaking its assessment on mineral resource governance, to include, as far as possible, impacts on biodiversity and ecosystem functions and services and indigenous peoples and local communities, as well as mitigation measures for avoiding or minimizing negative effects, and to inform the Executive Secretary on progress, and of its conclusions when the assessment is finalized;

7. *Requests* the Executive Secretary:

⁴² [CBD/SBSTTA/21/5](#).

⁴³ Documents [CBD/SBSTTA/21/INF/5](#) (Environmental assessment legislation - a global overview); [INF/9](#) (Energy and mining); [INF/11](#) (Infrastructure and biodiversity); [INF/12](#) (Manufacturing and processing); [INF/13](#) (Strategic Environmental Assessment and Environmental Assessment); [INF/14](#) (Cities and Infrastructure and Biodiversity Implications); [INF/15](#) (Options on how to make best use of existing programmes of work to further enhance the implementation of the Convention in the light of mainstreaming needs and the Strategic Plan for Biodiversity 2011-2020).

⁴⁴ CBD/SBSTTA/21/4 (Biodiversity and human health) considered under agenda item 5 which resulted in recommendation XXI/3.

⁴⁵ [Resolution UNEP/EA.3/L.8/Rev.1 on environment and health](#).

⁴⁶ [Decision X/2](#), annex.

⁴⁷ Subsidiary Body recommendation XXI/1.

⁴⁸ [General Assembly resolution 70/1](#), annex.

(a) To prepare an additional note expanding on the above-mentioned note⁴⁹ and information documents⁴³ and taking into account the list of elements contained in the annex to the present recommendation, and to make it available to the Subsidiary Body on Implementation at its second meeting;

(b) To invite Parties and other relevant stakeholders to submit case studies and practical examples of the mainstreaming of biodiversity into the sectors of energy and mining, infrastructure, and manufacturing and processing, and health, and to consider these in its preparations for deliberations on this issue at the second meeting of the Subsidiary Body on Implementation;

(c) To prepare, for the consideration of the Subsidiary Body on Implementation at its second meeting, a proposal for a long-term strategic approach to mainstreaming with identification of key tasks and priorities, that includes best practices, guidelines, methodologies, experiences and tools, as well as challenges and gaps, avoiding duplication with other initiatives, based on the information contained in the additional note to be prepared by the Executive Secretary, and other relevant information sources, to ensure implementation of the Convention in a manner coherent with the 2030 Agenda for Sustainable Development as well as the 2050 Vision for Biodiversity, ensuring broad participation in the process, along with draft terms of reference for a possible ad hoc technical expert group on the mainstreaming of biodiversity;

(d) To convene a time-limited informal advisory group, regionally balanced, that will work electronically, with advice from the Bureau of the Subsidiary Body on Scientific, Technical and Technological Advice, to assist the Executive Secretary in preparing for the discussions on the sectors of energy and mining, infrastructure, manufacturing and processing, and health at the second meeting of the Subsidiary Body on Implementation and the fourteenth meeting of the Conference of the Parties;

8. *Invites* the Subsidiary Body on Implementation to take the information contained in the additional note to be prepared by the Executive Secretary, as well as information submitted by Parties and other relevant stakeholders, requested under paragraph 7(b) above, into consideration during its deliberations on this issue at its second meeting, as well as when preparing proposals for the process of developing a post-2020 global biodiversity framework;

9. *Recommends* that the Subsidiary Body on Implementation at its second meeting, in preparing its recommendation on the mainstreaming of biodiversity, consider the following elements of a draft decision for the Conference of the Parties to be adopted at its fourteenth meeting:

[The Conference of the Parties,

Recalling [decision XIII/3](#), in which it considered the mainstreaming of biodiversity in the sectors of agriculture, forestry, fisheries and tourism as well as cross-cutting issues, and in which it decided to address, at its fourteenth meeting, the mainstreaming of biodiversity into the sectors of energy and mining, infrastructure, manufacturing and processing, and health,

Taking note of the Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-Being adopted during the high-level segment in Cancun, Mexico, on 3 December 2016,⁵⁰

Recognizing that the energy and mining, infrastructure, manufacturing and processing and health sectors, on the one hand, depend, to varying degrees, on biodiversity and the ecosystem services that biodiversity underpins and that the consequent loss of biodiversity can impact these sectors negatively, and that, on the other hand, these sectors have potential impacts on biodiversity which may threaten the provision of ecosystem functions and services that are vital to humanity,

⁴⁹ [CBD/SBSTTA/21/5](#).

⁵⁰ [UNEP/CBD/COP/13/24](#).

Bearing in mind that mainstreaming biodiversity into the sectors of energy and mining, infrastructure, manufacturing and processing, and health, is essential for halting the loss of biodiversity and for the achievement of the Strategic Plan for Biodiversity 2011-2020⁵¹ and the goals and objectives of different multilateral agreements and international processes, including the 2030 Agenda for Sustainable Development,

Noting the important role of relevant stakeholders such as indigenous peoples and local communities, academia, the private sector, civil society, local and subnational governments and youth, in addressing the mainstreaming of biodiversity in these and other sectors,

Taking note of the *Cities and Biodiversity Outlook*⁵² and its key messages to mainstream biodiversity at the city level given the strong linkages to the energy, infrastructure, manufacturing and processing sectors,

1. *Notes* that, while numerous policies and tools exist to address the mainstreaming of biodiversity in these sectors, many implementation gaps remain, including with respect to strategic planning and decision-making, economy and sector-wide policies, and the wider application of biodiversity-inclusive impact assessments, in particular strategic environmental assessment of policies, plans and programmes, and the use of spatial planning at the national, regional and interregional levels;

2. *Also notes* that there are also valuable initiatives that promote the conservation and sustainable use of biodiversity and, to some extent, promote its mainstreaming in productive processes;

3. *Welcomes* the resolution on pollution mitigation by mainstreaming biodiversity into key sectors adopted by the United Nations Environment Assembly at its third session;⁵³

4. *Invites* Parties, other Governments and relevant stakeholders:

(a) To review the trends with respect to the sectors of energy and mining, infrastructure, manufacturing and processing, and health in their own countries, as well as existing laws, policies and practices, to address potential impacts on biodiversity and on the traditional livelihoods and knowledge of indigenous peoples and local communities from these sectors;

(b) To foster the mainstreaming of the conservation and sustainable use of biodiversity in these sectors by, inter alia, including the economic, social and environmental value of biodiversity and ecosystem services in decision-making on investments, including by the evaluation of alternatives to such investments, by exploring innovative ways to better integrate biodiversity in these sectors, and promoting the creation of standards and good practice guidelines related to biodiversity in these sectors, taking into account ecosystem-based approaches and the implications of cumulative environmental effects on biodiversity;

(c) To review and, as necessary, update legal frameworks, policies and practices, to foster the mainstreaming of biodiversity conservation and sustainable use, as well as ecosystem services, in business policies and planning by, among other things, designing and implementing incentives along supply chains and strengthening small and medium enterprises in sustainable production and consumption patterns;

(d) To establish, strengthen or foster institutional, legislative and regulatory frameworks, incorporating an inclusive economic, social and environmentally sustainable approach involving relevant stakeholders, such as indigenous peoples and local communities, academia, civil society, the private sector and national and subnational governments, as appropriate;

⁵¹ [Decision X/2](#), annex.

⁵² [Secretariat of the Convention on Biological Diversity \(2012\). *Cities and Biodiversity Outlook*. Montreal, Canada.](#)

⁵³ [UNEP/EA.3/L.6/Rev.2](#).

(e) To review the mainstreaming of biological diversity in the elaboration, updating and reform of policies, plans and strategies of the sectors of energy and mining, infrastructure, manufacturing and processing, with the full and effective participation of the relevant sectors, private, governmental, and academic institutions, indigenous and local communities, among others, and as appropriate;

(f) To promote and strengthen good practices on sustainable production and consumption implemented in the energy and mining, infrastructure, manufacturing and processing, and health sectors that favour conservation and sustainable use of biodiversity;

(g) To encourage investments in biodiversity as a means of enhancing the functioning of ecosystems and the services they provide;

(h) To work with the private sector and civil society to address the underlying causes of biodiversity loss and mainstream biodiversity across all relevant sectors and jointly develop recommendations that will help mitigate biodiversity-related risks;

(i) To promote partnerships and strengthen institutional capacities and cooperation arrangements on mainstreaming;

(j) To strengthen mainstreaming in national biodiversity strategies and action plans and in national reports;

(k) To establish knowledge platforms to bring together State agencies, the private sector and indigenous peoples and local communities to address these complex and technical issues, taking into account matters related to environmental stewardship and corporate social responsibility, and tailored to specific audiences;

(l) To generate and share through the clearing-house mechanism information on the mainstreaming of the conservation and sustainable use of biodiversity in the energy and mining, infrastructure, manufacturing and processing sectors, including case studies, lessons learned, and good practice policies and tools, as well as information on gaps identified and additional options for more effective mainstreaming in these sectors;

5. *Agrees* to establish a long-term approach to mainstreaming biodiversity in key sectors, and an intersessional process to help guide the Secretariat in its work;

6. *Requests* the Executive Secretary, subject to the availability of financial resources:

(a) To include information on mainstreaming conservation and sustainable use of biodiversity into relevant sectors in the fifth edition of the *Global Biodiversity Outlook*;

(b) To identify appropriate methodologies to evaluate and strengthen the participation of relevant actors, including the private sector, in the mainstreaming of biodiversity in production and consumption patterns in the energy and mining, infrastructure, and manufacturing and processing sectors;

(c) To promote, at the regional and global levels, the exchange of experiences and information on possible mechanisms for the mainstreaming of biodiversity in the sectors of energy and mining, infrastructure, manufacturing and processing;

(d) To liaise with the key regional and international agencies which are relevant to these economic sectors to facilitate enhanced dialogue on biodiversity and these economic sectors and to identify and promote win-win scenarios;

(e) To facilitate capacity-building and training activities at the regional and subregional levels, and the sharing of experiences, in the utilization of the approaches and tools outlined in the updated note and related information documents referred to in recommendation XXI/4 of the Subsidiary Body on Scientific, Technical and Technological Advice;

(f) To implement a long-term strategic approach to the mainstreaming of biodiversity, including through the development of guidelines to support efforts at the national level;

(g) To report on progress to the Subsidiary Body on Implementation at a meeting held prior to the fifteenth meeting of the Conference of the Parties.]

Annex

INFORMATION FOR USE BY THE EXECUTIVE SECRETARY IN PREPARING AN ADDITIONAL NOTE ON MAINSTREAMING BIODIVERSITY IN THE SECTORS OF ENERGY AND MINING, INFRASTRUCTURE, MANUFACTURING AND PROCESSING, AND HEALTH, TO BE MADE AVAILABLE TO THE SUBSIDIARY BODY ON IMPLEMENTATION AT ITS SECOND MEETING

1. A brief assessment of the challenges and gaps in knowledge that hinder the mainstreaming of biodiversity in the sectors being addressed.
2. Clear indication of the linkages to other ongoing work under the Convention and in other forums in order to avoid duplication of work (such as work on renewable energy and climate change adaptation and mitigation, marine infrastructure and marine spatial planning, urban infrastructure and health).
3. Relevant inputs from the United Nations Environment Programme, including the International Resource Panel.
4. Relevant inputs from other scientific, technical and technological conventions and intergovernmental organizations, including the United Nations Industrial Development Organization.
5. How to make the best use of existing programmes of work to further enhance the implementation of the Convention in the light of mainstreaming needs and the Strategic Plan for Biodiversity 2011-2020.
6. An analysis of the role of indigenous peoples and local communities.
7. Relevant documents submitted to the Subsidiary Body on Scientific, Technical and Technological Advice at its twenty-first meeting.⁵⁴
8. Additional comments provided by Parties at the twenty-first session of the Subsidiary Body on Scientific, Technical and Technological Advice.

⁵⁴ [CBD/SBSTTA/21/4](#) (Biodiversity and human health); [CBD/SBSTTA/21/5](#) (Mainstreaming of biodiversity in the energy and mining, infrastructure, manufacturing and processing, and health sectors); [CBD/SBSTTA/21/INF/5](#) (Environmental assessment legislation – a global overview); [INF/9](#) (Energy and mining); [INF/11](#) (Infrastructure and biodiversity); [INF/12](#) (Manufacturing and processing); [INF/13](#) (Strategic Environmental Assessment and Environmental Assessment); [INF/14](#) (Cities and Infrastructure and Biodiversity Implications); [INF/15](#) (Options on how to make the best use of existing programmes of work to further enhance the implementation of the Convention in the light of mainstreaming needs and the Strategic Plan for Biodiversity 2011-2020).

XXI/5. Fifth edition of the *Global Biodiversity Outlook*: considerations for its preparation

The Subsidiary Body on Scientific, Technical and Technological Advice

1. Takes note of the plan for the preparation of the fifth edition of the *Global Biodiversity Outlook*, contained in the note by the Executive Secretary⁵⁵ and the timetable contained in the annex to the present recommendation;

2. Noting the importance of the sixth national reports to the preparation of the fifth edition of the *Global Biodiversity Outlook* and, recalling [decision XIII/27](#), urges Parties to submit their sixth national reports by 31 December 2018 at the latest;

3. Requests the Executive Secretary, in collaboration with the United Nations Environment Programme and the United Nations Development Programme, to continue providing support to Parties in preparing their sixth national reports, and invites the Food and Agriculture Organization of the United Nations and other relevant partners to contribute as appropriate;

4. Urges Parties and invites other Governments and relevant organizations to make available, in an open manner, accurate and reliable data and data updates on the status of, trends in, and projections for biological diversity as well as threats thereto, and on progress in the implementation of the Convention and the Strategic Plan for Biodiversity 2011-2020,⁵⁶ including with respect to mainstreaming activities;

5. Recommends that the Conference of the Parties adopt a decision along the following lines:

The Conference of the Parties

1. Recalls [decision XIII/29](#), in which it decided that the fifth edition of the *Global Biodiversity Outlook* should serve as a basis for the follow-up to the Strategic Plan for Biodiversity 2011-2020,⁵⁷ to be considered by the Conference of the Parties at its fifteenth meeting;

2. Noting the importance of the sixth national reports to the preparation of the fifth edition of the *Global Biodiversity Outlook* and, recalling [decision XIII/27](#), urges Parties to submit their sixth national reports by 31 December 2018 at the latest;

3. Also recalls [decision XI/2](#) and highlights the fact that the global and regional assessment on biodiversity and ecosystem services and the thematic assessments carried out by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, as well as other relevant national and subregional assessments, form an important evidence base for the assessment of progress towards the achievement of the Aichi Biodiversity Targets in the fifth edition of the *Global Biodiversity Outlook*;

4. Takes note of the plan and cost estimates for the preparation of the fifth edition of the *Global Biodiversity Outlook*,⁵⁵ including the indicative time table contained in the annex to the present decision, and requests the Executive Secretary:

(a) To prepare the fifth edition of the *Global Biodiversity Outlook*, including a summary for policymakers, on the basis of this plan;

(b) To notify relevant partners and potential contributors about the time table for preparing the fifth edition of the *Global Biodiversity Outlook* and its related products;

⁵⁵ [CBD/SBSTTA/21/6](#).

⁵⁶ [Decision X/2](#), annex.

⁵⁷ [Decision X/2](#), annex.

(c) To continue collaborating with other biodiversity-related conventions and other relevant processes and organizations in the preparation and review of the fifth edition of the *Global Biodiversity Outlook*, as appropriate and in accordance with their respective mandates, including the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and the Food and Agriculture Organization of the United Nations, among others;

(d) To take into account the conclusions of the twenty-first meeting of the Subsidiary Body on Scientific, Technical and Technological Advice regarding scenarios for the 2050 Vision on Biodiversity contained in the annex to decision COP-XIV/--;⁵⁸

5. *Urges* Parties and *invites* other Governments and relevant organizations to make available, in an open manner, accurate and reliable data and data updates on the status of, trends in, and projections for biological diversity as well as threats thereto, and on progress in the implementation of the Convention and the Strategic Plan for Biodiversity 2011-2020, including with respect to mainstreaming activities;

6. *Invites* Parties, other Governments and relevant organizations, where possible, to provide timely financial contributions for the preparation and production of the fifth edition of the *Global Biodiversity Outlook* and its related products, including the second edition of *Local Biodiversity Outlooks*.

Annex

Indicative timeline for the preparation of the fifth edition of the *Global Biodiversity Outlook*

<i>Product/element</i>	<i>Date</i>
IPBES Regional Assessments	March 2018
National report deadline	31 December 2018
Draft outline of report	December 2018
Preparation of first text elements	January 2019
IPBES Global Assessment	May 2019
Preparation of zero draft of report	May-August 2019
Review by invited experts	August-September 2019
Revision of draft	August-September 2019
Peer review by Parties and public	October-December 2019
Development of graphic elements	November 2019
SBSTTA-23	November 2019
Revision of draft of report	January-March 2020
Translation into official languages of the United Nations	March 2020
Layout	March-April 2020
Printing and dispatch to launch events	May 2020
SBSTTA-24/SBI-3	May 2020
Launch of the main report	May 2020
COP-15, CP/MOP-10; NP/MOP-4	October 2020

⁵⁸ See the draft decision of the Conference of the Parties contained in Subsidiary Body recommendation XXI/1.

XXI/6. Tools to evaluate the effectiveness of policy instruments for the implementation of the Strategic Plan for Biodiversity 2011-2020

Section A

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recalling [decision XIII/1](#), paragraphs 29 and 30,

1. *Emphasizes* the importance of sound evaluations of the effectiveness of policy instruments or measures in supporting the implementation of the Convention and the Strategic Plan for Biodiversity 2011-2020⁵⁹ and the need for associated capacity-building;
2. *Takes note* of the range of approaches, including community-based monitoring and information systems by indigenous peoples and local communities, for evaluating the effectiveness of policy instruments or measures supporting the implementation of the Convention and the Strategic Plan for Biodiversity 2011-2020, and *encourages* the use, as appropriate, of the information in the note by the Executive Secretary on tools to evaluate the effectiveness of policy instruments for the implementation of the Strategic Plan for Biodiversity 2011-2020⁶⁰ when designing and undertaking evaluations of the effectiveness of measures taken to implement the Strategic Plan for Biodiversity 2011-2020, in particular in the context of preparing their sixth national reports;
3. *Invites* the Subsidiary Body on Implementation at its second meeting to take into account the importance of sound evaluations of the effectiveness of measures and the need for associated capacity-building in its consideration of its agenda item on mechanisms for review of implementation, including consideration of proposals for strengthening existing review mechanisms, such as the voluntary peer review mechanism of national reports and national biodiversity strategies and action plans and options for a forward-looking approach to promote future implementation under the Convention;⁶¹
4. *Also invites* the Subsidiary Body on Implementation at its second meeting to take into account the usefulness of evaluating the effectiveness of measures taken under the Convention and the need for associated capacity-building in its consideration of its agenda item on the preparation for the follow-up to the Strategic Plan for Biodiversity 2011-2020;⁶²
5. *Requests* the Executive Secretary, in preparing documentation for the second meeting of the Subsidiary Body on Implementation, to take into account the guidance in paragraphs 3 and 4 above;
6. *Also requests* the Executive Secretary to continue compiling information, including case studies, on experiences in the use of tools to evaluate the effectiveness of policy instruments for the implementation of the Strategic Plan for Biodiversity 2011-2020;

Section B

The Subsidiary Body on Scientific, Technical and Technological Advice recommends that the Conference of the Parties at its fourteenth meeting adopt a recommendation along the following lines:

The Conference of the Parties,

Recalling [decision XIII/1](#), paragraphs 29 and 30,

1. *Emphasizes* the importance of sound evaluations of the effectiveness of policy instruments or measures in supporting the implementation of the Convention and the Strategic Plan for Biodiversity 2011-2020 and the need for associated capacity-building, and therefore *requests* the Executive Secretary to take both into account when preparing for the post-2020

⁵⁹ [Decision X/2](#), annex.

⁶⁰ [CBD/SBSTTA/21/7](#).

⁶¹ Item 12 of the [provisional agenda of the second meeting of the Subsidiary Body on Implementation](#).

⁶² *Ibid.*, item 16.

global biodiversity framework and for the third meeting of the Subsidiary Body on Implementation;

2. *Also emphasizes*, in this context, the value of aligning indicators used across different reporting processes on biodiversity and sustainable development;

3. *Encourages* the use by Parties, other Governments, international organizations, indigenous peoples and local communities, the business sector and other stakeholders, as appropriate, of the information in the note by the Executive Secretary on tools to evaluate the effectiveness of policy instruments for the implementation of the Convention⁶³ when designing and undertaking evaluations of the effectiveness of measures taken to implement the Convention, including in the context of preparing their national reports;

4. *Requests* Parties and *invites* other Governments, international organizations, indigenous peoples and local communities, the business sector and other stakeholders to share, as appropriate through their national reports and the clearing-house mechanism and other appropriate means, information on the methodologies used in evaluations of the effectiveness of measures taken to implement the Convention, including case studies, as well as lessons learned from these evaluations;

5. *Requests* the Executive Secretary, for consideration by the Subsidiary Body on Implementation at its third meeting, to develop a tool kit to assist Parties, other Governments, international organizations, indigenous peoples and local communities, the business sector and other stakeholders in the implementation of evaluations of the effectiveness of measures, building on the guidance provided in the note by the Executive Secretary,⁶³ and on information submitted in accordance with paragraph 3 above.

⁶³ [CBD/SBSTTA/21/7](#).

XXI/7. New and emerging issues relating to the conservation and sustainable use of biological diversity

The Subsidiary Body on Scientific, Technical and Technological Advice

1. *Takes note* of the proposals for new and emerging issues and the related information and views submitted by Parties and observers, summarized in the note by the Executive Secretary on new and emerging issues;⁶⁴

2. *Recommends* that, pursuant to the procedure established through decision IX/29, the Conference of the Parties decide not to add to the agenda of the Subsidiary Body in the coming biennium any of the proposed new and emerging issues listed in the note by the Executive Secretary on new and emerging issues;⁶⁴

⁶⁴ [CBD/SBSTTA/21/8](#).

II. PROCEEDINGS OF THE MEETING

INTRODUCTION

A. Background

1. The twenty-first meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) was held in Montreal, Canada, at the Palais des Congrès, from 11 to 14 December 2017, concurrently with the tenth meeting of the Ad Hoc Open-ended Intersessional Working Group on Article 8(j) and Related Provisions.

B. Attendance

2. The meeting was attended by representatives of the following Parties and other Governments:

Angola	Estonia	Palau
Antigua and Barbuda	Ethiopia	Peru
Argentina	European Union	Philippines
Australia	Finland	Poland
Austria	France	Portugal
Bangladesh	Gambia	Republic of Korea
Barbados	Germany	Saint Kitts and Nevis
Belarus	Guatemala	Saint Lucia
Belgium	Guinea-Bissau	Samoa
Benin	Haiti	Sao Tome and Principe
Bhutan	Honduras	Saudi Arabia
Bolivia (Plurinational State of)	Iceland	Senegal
Bosnia and Herzegovina	India	Seychelles
Botswana	Indonesia	Singapore
Brazil	Ireland	Slovakia
Bulgaria	Israel	Solomon Islands
Burkina Faso	Jamaica	Somalia
Burundi	Japan	South Africa
Cabo Verde	Kiribati	South Sudan
Cambodia	Kuwait	Sri Lanka
Cameroon	Lao People's Democratic Republic	Sudan
Canada	Madagascar	Sweden
Central African Republic	Malawi	Switzerland
Chad	Malaysia	Syrian Arab Republic
Chile	Maldives	Thailand
China	Mali	Timor-Leste
Colombia	Malta	Togo
Comoros	Mauritania	Tonga
Costa Rica	Mexico	Tunisia
Croatia	Morocco	Turkey
Cuba	Namibia	Turkmenistan
Denmark	Nepal	Uganda
Djibouti	Netherlands	Ukraine
Dominica	New Zealand	United Kingdom of Great Britain and Northern Ireland
Dominican Republic	Niger	United Republic of Tanzania
Ecuador	Norway	United States of America
Egypt	Oman	

3. Observers from the following United Nations bodies, specialized agencies, convention secretariats and other bodies also attended: Food and Agriculture Organization of the United Nations; GEF Scientific and Technical Advisory Panel (STAP); Global Environment Facility; Intergovernmental Platform on Biodiversity and Ecosystem Services; International Treaty on Plant Genetic Resources for Food and Agriculture; United Nations Development Programme; United Nations Educational, Scientific and Cultural Organization; United Nations Environment Programme; United Nations Office for Project Services.

4. The following organizations were also represented by observers:

Aichi Prefecture	Fridtjof Nansen Institute
American Bird Conservancy	Friends of the Earth International
American Museum of Natural History	Fundación para la Promoción del Conocimiento Indígena
Andes Chinchasuyo	Future Earth
ASEAN Centre for Biodiversity	German Research Foundation (DFG)
Asia Indigenous Peoples Pact Foundation	Global Biodiversity Information Facility
Association des Scientifiques Environnementalistes pour un Développement Intégré	Global Forest Coalition
Avaaz	Global Youth Biodiversity Network
Bern Convention, Council of Europe	Greenpeace International
BirdLife International	Group on Earth Observations
CBD Alliance	Heinrich Böll Foundation
Center for Indigenous Peoples Research and Development	Helmholtz Centre for Environmental Research - UFZ
Center for International Forestry Research	ICCA Consortium
Center for Support of Indigenous Peoples of the North/Russian Indigenous Training Centre	ICLEI – Local Governments for Sustainability
Centro para la Investigación y Planificación del Desarrollo Maya	Imperial College London
Chibememe Earth Healing Association	Indigenous Information Network
CIC - International Council for Game and Wildlife Conservation	Indigenous Knowledge and Peoples Network
Community Development Centre	Institute for Biodiversity Network
Community Resource and Development Center	Inter-American Institute for Global Change Research
Concordia University	International Development Law Organization
Conservation International	International Fund for Animal Welfare
Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónica	International Institute for Environment and Development
CropLife International	International Institute for Sustainable Development
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (German International Cooperation Agency)	International Partnership for the Satoyama Initiative
EcoHealth Alliance	International University Network on Cultural and Biological Diversity
EcoNexus	International Petroleum Industry Environmental Conservation Association
ECOROPA	International Union for Conservation of Nature
Environment and Climate Change Canada	Jabalbina Yalanji Aboriginal Corporation
Environmental Development Action in the Third World	Japan Biodiversity Youth Network
ETC Group	Japan Civil Network for the United Nations Decade on Biodiversity
Federation of German Scientists	Japan Committee for IUCN
Forest Peoples Programme	Japan Wildlife Research Center
Freeport-McMoRan Inc.	Jeunes Volontaires pour l'Environnement
Freetown Community Group	Kaunas University of Technology (Lithuania)
	KITA Institute of Tropical Agriculture

Mohawk Nation	Saami Council
Naga Women's Union	Stockholm Resilience Centre
Natural Justice (Lawyers for Communities and the Environment)	SWAN International
NatureServe	Te Kopu - Pacific Indigenous and Local Knowledge Centre of Distinction
Neighbour Organization Nepal	Tebtebba Foundation
Netherlands Commission for Environmental Impact Assessment	The Nature Conservancy
Network of Regional Governments for Sustainable Development	The Pew Charitable Trusts
OGIEK Peoples Development Program (OPDP) Panorama	Torres Strait
PBL Netherlands Environmental Assessment Agency	TRAFFIC International
Ramsar Convention on Wetlands	United Organization of Batwa Development in Uganda
Rare	Université de Montréal
Red de Mujeres Indígenas sobre Biodiversidad de América Latina y el Caribe	Université de Sherbrooke
Red Indígena de Turismo de México (RITA)	University of British Columbia
Reforestamos México, A.C.	University of Ontario Institute of Technology
	University of Turku
	USC - Canada
	World Habitat Council
	WWF International

ITEM 1. OPENING OF THE MEETING

5. The meeting was opened at 10.15 a.m. on Monday, 11 December 2017, by Ms. Theresa Mundita Lim (Philippines), Chair of the Subsidiary Body. She said that the current challenge for Parties was to provide timely, practical, yet profound scientific advice to policy and decision makers to enable implementation of the Convention. The meeting was designed to follow an integrated approach, connecting in particular with the tenth meeting of the Ad Hoc Open-ended Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity. The two meetings would take place concurrently for two days, providing an opportunity to enhance perspectives on the scientific and technical needs and traditional knowledge, innovations and practices relevant to the implementation of the Strategic Plan for Biodiversity 2011-2020 and areas of work that required policy coherence and further development cooperation.

6. Turning to the broader question of biodiversity, Ms. Lim enumerated the many challenges facing the world, including biodiversity loss, climate change, desertification and land degradation, disaster risk reduction, and achieving the Sustainable Development Goals. People had different reasons to value biodiversity but must work together to conserve it, and to achieve the transformational change needed for biodiversity to be recognized as fundamental to life on Earth and the foundation of human development, health and well-being. She urged the representatives to remember what was at stake as they worked through the various items on the meeting agenda over the next days. Furthermore, over the next three years, a coordinated and unified strategy would be required to address the Strategic Plan for Biodiversity 2011-2020 by identifying the types of interventions that could help to create an enabling environment for ecosystem-based solutions to development, and prioritizing the types of interventions that could accelerate change. It was important to present the challenges and adopt the mindset needed to influence the post-2020 process. Finally, she noted that it was International Mountain Day and that the implementation of the Mountain Biological Diversity Programme of work for the conservation and sustainable use of mountain biodiversity, adopted by the Parties in 2004, supported the achievement of Target 15.4 of the Sustainable Development Goals.

7. Opening statements were made by Ms. Cristiana Paşca Palmer, Executive Secretary of the Convention on Biological Diversity, and Mr. Andreas Obrecht on behalf of Mr. Erik Solheim, Executive Director of the United Nations Environment Programme.

8. The Executive Secretary welcomed the representatives to the meeting and expressed her gratitude to the Governments of Australia, Canada, Finland, Germany, Japan, New Zealand, Norway and Sweden, as well as the European Commission for their financial contributions, which had enabled representatives from least developed countries, small island developing States, indigenous peoples and local communities to participate in the meeting, adding that the United Nations Environment Programme had waived the support costs for those contributions. She also informed the meeting that, on 5 December 2017, Japan had become the fortieth country to deposit its instrument of ratification of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress, which would consequently enter into force on 5 March 2018. She urged the remaining Parties to the Cartagena Biosafety Protocol to ratify the Supplementary Protocol as soon as possible and to implement it nationally.

9. The twenty-fifth anniversary of the entry into force of the Convention on Biological Diversity would take place in 2018 and would mark 25 years of effort towards the conservation and sustainable use of biodiversity and the equitable sharing of the benefits. However, it was still not resonating with decision makers that biodiversity was essential both for achieving the Sustainable Development Goals and as a nature-based solution to climate-change. The Executive Secretary had raised that issue at various high-level platforms and global forums of the United Nations, and with various Governments, and was working with the Governments of Mexico, Egypt and China to further high-level global attention on biodiversity, including exploring the organization of a Global Biodiversity Summit prior to the fifteenth meeting of the Conference of the Parties to the Convention.

10. At its current meeting, the Subsidiary Body would consider a number of scenarios linked to the 2050 Vision for Biodiversity. Looking at a range of plausible futures would allow policy measures to be developed to further that Vision. The scenarios set out in the fourth edition of the Global Biodiversity Outlook demonstrated that it was possible to halt biodiversity loss while meeting food security and other development goals. A sustainable future required transformational change. That could be disruptive, but disruptions could contribute to the development of a sustainable future. The Convention on Biological Diversity needed to identify how to use them advantageously to achieve its vision of a world in harmony with nature. The recently convened dialogue of experts in transitions, communication and finance, held in Bogis-Bossey, Switzerland, had considered how to respond to those challenges, and she thanked the Government of Switzerland for hosting and financing that meeting; a follow-up meeting would also be held in Switzerland early in 2018.

11. The Subsidiary Body would continue discussing the mainstreaming of biodiversity across sectors, building on the Cancun Declaration. That topic was also relevant to the discussion taking place in other forums and was central to such global frameworks as the Sustainable Development Goals. Trillions of dollars would be invested each year in infrastructure in order to achieve the Goals, much of which would be for the unprecedented expansion of urban areas. That needed to be done in ways that did not destroy the natural foundations upon which societies depended. The values and contributions of biodiversity had to be nourished and enhanced, and, in that regard, the connections between biodiversity and health showcased the values of biodiversity in all its dimensions. The Subsidiary Body would also look at the preparation of the fifth edition of the *Global Biodiversity Outlook*, tools to assess the effectiveness of policymakers and the identification of any new and emerging issues.

12. It was important to reflect critically on what needed to be done differently in order to stop the destruction of biodiversity. Conservation and the sustainable use of biodiversity was a key to delivering other environmental and socio-economic objectives, including addressing the impacts of climate change. The global biodiversity agenda had to be present when important decisions were being taken that could affect the planet, such as the meetings of the G7 and the G20. A paradigm shift and transformational change based on holistic and systems approaches was required to create momentum and a positive narrative about biodiversity and ecosystem services as a basis for resolving many of the world's problems. The Subsidiary Body had to engage in that transformational effort to ensure that the work being done was beneficial for future generations of not just humans but all living creatures on this planet. She wished the delegates successful deliberations and assured them of her support.

13. Mr. Obrecht opened his remarks by recalling that the previous week, the United Nations Environment Assembly had discussed the issue of pollution and its effects on planet, people and societies. The Assembly had adopted many resolutions whose implementation would contribute to the achievement of the Aichi Biodiversity Targets. One, on pollution mitigation by mainstreaming biodiversity into key sectors, suggested biodiversity as an issue for the fourth session of the Environment Assembly, scheduled to take place in Nairobi from 11 to 15 March 2019. It was also notable that the sixth Global Environment Outlook would be issued three months prior to the Environment Assembly's fourth session. He then went on to describe the ways in which the United Nations Environment Programme supported Parties in meeting their obligations to the Convention, including through project implementation and help with the preparation of the sixth national reports.

14. Following the statements SBSTTA paused in memory of Mr. Nialuga Evaimalo Tavita, the Bureau member from Samoa, and Mr. Damaso Luna (Mexico) both of whom had passed away recently.

ITEM 2. ORGANIZATIONAL MATTERS

Election of officers

15. In accordance with the elections held at the nineteenth and twentieth meetings of SBSTTA, the Bureau at its twenty-first meeting comprised the following members:

- | | |
|--------------|--|
| Chair: | Ms. Theresa Mundita S. Lim (Philippines) |
| Vice-Chairs: | Ms. Eugenia Arguedas Montezuma (Costa Rica) |
| | Ms. Lourdes Coya de la Fuente (Cuba) |
| | Mr. Hendrik Segers (Belgium) |
| | Mr. Norbert Bärlocher (Switzerland) |
| | Ms. Prudence Tangham Galega (Cameroon) |
| | Mr. Samuel Dieme (Senegal) |
| | Mr. Yousef S. Al-Hafedh (Saudi Arabia) |
| | Ms. Czarina Iese Stowers (Samoa) replacing Mr. Nialuga Evaimalo Tavita |
| | Mr. Aleksander Mijović (Montenegro) |
| | Mr. Sergiy I. Gubar (Ukraine) |

16. The Chair informed the meeting that Mr. Norbert Bärlocher, Bureau member from Switzerland, would assist her by chairing the sessions of the Subsidiary Body related to agenda item 7, "Fifth edition of the *Global Biodiversity Outlook*".

17. It was agreed that Ms. Eugenia Arguedas Montezuma (Costa Rica) would act as rapporteur for the meeting.

18. At the 7th session of the meeting, on 14 December 2017, the Subsidiary Body formally elected the following officers, for a term commencing at the end of the twenty-first meeting and expiring at the end of the twenty-third meeting, to replace the members from Cameroon, Cuba, Montenegro, Samoa and Switzerland: Mr. Marthin Kaukaha Kasaona (Namibia), Ms. Ilham Atho Mohamed (Maldives), Ms. Senka Barudanovic (Bosnia and Herzegovina), Mr. Adams Toussaint (Santa Lucia) and Mr. Sigurdur Thrainsson (Iceland).

Adoption of the agenda and organization of work

19. At the 1st session of the meeting, on 11 December 2017, the Subsidiary Body took up consideration of the agenda of the meeting.

20. The Subsidiary Body adopted the following agenda on the basis of the provisional agenda prepared by the Executive Secretary in consultation with the Bureau (CBD/SBSTTA/21/1):

1. Opening of the meeting.

2. Organizational matters: election of officers, adoption of the agenda and organization of work.
3. Scenarios for the 2050 Vision for Biodiversity, and links between the Aichi Biodiversity Targets and the Sustainable Development Goals.
4. Sustainable wildlife management: Guidance for achieving a more sustainable bush meat sector.
5. Biodiversity and human health.
6. Mainstreaming of biodiversity into the sectors of energy and mining, infrastructure, manufacturing and processing industry, and health: scientific and technical considerations and use of the programmes of work of the Convention.
7. Fifth edition of the *Global Biodiversity Outlook*.
8. Tools for evaluating the effectiveness of policy instruments for the implementation of the Strategic Plan for Biodiversity 2011-2020.
9. New and emerging issues.
10. Other matters.
11. Adoption of the report.
12. Closure of the meeting.

21. At the 1st session of the meeting, on 11 December 2017, the Chair proposed that all sessions should be held in plenary.

22. At the invitation of the Chair, the Rapporteur made a statement of thanks on behalf of all the participants in the meeting. She congratulated the Chair of the Subsidiary Body and the members of the Bureau for their hard work in preparing for the meeting and thanked the Executive Secretary and her team for the high-quality preparations. She also thanked the Government of Canada for hosting the meeting and those Parties that had provided generous funding to facilitate the participation of developing countries. She had no doubt that the deliberations would be productive and she thanked the Chair for the opportunity to speak on behalf of the participants.

23. At the 3rd session of the meeting, on 12 December 2017, Ms. Cristiana Paşca Palmer, Executive Secretary of the Convention on Biological Diversity, and Ms. Anne H  l  ne Prieur-Richard, Director of Future Earth, signed a memorandum of understanding to promote and catalyse new scientific work, and the synthesis and dissemination of knowledge relevant to biodiversity in the broader context of sustainable development.

ITEM 3. SCENARIOS FOR THE 2050 VISION FOR BIODIVERSITY AND LINKS BETWEEN THE AICHI BIODIVERSITY TARGETS AND THE SUSTAINABLE DEVELOPMENT GOALS

24. At the 1st session of the meeting, on 11 December 2017, the Subsidiary Body took up agenda item 3. In considering the item, the Subsidiary Body had before it a note by the Executive Secretary on scenarios for the 2050 Vision for biodiversity (CBD/SBSTTA/21/2) and an assessment of the links between the Aichi Biodiversity Targets and the Sustainable Development Goals (CBD/SBSTTA/21/2/Add.1). It also had before it, as information documents, a review of future projections of biodiversity and ecosystem services (CBD/SBSTTA/21/INF/2), a note on the use of biodiversity scenarios at local, national and regional scales (CBD/SBSTTA/21/INF/3), a summary of the shared socioeconomic pathways (CBD/SBSTTA/21/INF/4) and a note on multiscale, cross-sectoral scenarios for nature futures: the positive visions for biodiversity, ecosystem services, and human well-being (CBD/SBSTTA/21/INF/18).

25. At the invitation of the Chair, Mr. Paul Leadley, a member of the Multidisciplinary Expert Panel of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), explained the modelling and scenarios developed by IPBES and used to develop scenarios for the 2050 Vision for Biodiversity (CBD/SBSTTA/21/2). He illustrated the utility of the approach by showing how sustainable consumption facilitated sustainable production and sustainable use in agriculture and marine fisheries, and contributed to climate mitigation and adaptation, a good quality of life and the protection and restoration of biodiversity and ecosystem services. There were various pathways to achieving the 2050 Vision and the Sustainable Development Goals, but changes in consumption would have a greater impact than approaches that reinforced “business-as-usual” practices. Transformational change was required for a sustainable future, but different policy mixes could be used to achieve sustainability which reflected the different needs and preferences of countries and stakeholders.

26. Statements were made by representatives of Australia, Austria, Belgium, Bolivia (Plurinational State of), Bosnia and Herzegovina, Brazil, Cambodia, Canada, China, Colombia, Cuba, Denmark, the European Union, Finland, France, Gabon, Germany, India, Indonesia, Japan, Mexico, Morocco, the Netherlands, Norway, Peru, the Philippines (on behalf of the ASEAN member states), Poland, the Republic of Korea, Switzerland, Uganda (on behalf of the African Group) and the United Kingdom of Great Britain and Northern Ireland.

27. Statements were also made by representatives of the Food and Agriculture Organization of the United Nations (FAO) and IPBES.

28. Additional statements were made by representatives of ETC Group, Global Forest Coalition (GFC), Global Youth Biodiversity Network (GYBN), International Indigenous Forum on Biodiversity (IIFB), International Union for Conservation of Nature (IUCN) and World Wide Fund for Nature (WWF).

29. Following the exchange of views, the Chair said that she would prepare a revised text for the consideration of the Subsidiary Body, taking into account the views expressed orally and the comments received in writing.

30. At the 4th session of the meeting on 12 December 2017, the Subsidiary Body considered a revised draft recommendation submitted by the Chair on scenarios for the 2050 Vision for Biodiversity.

31. The Subsidiary Body continued its consideration of the revised draft recommendation at its 5th and 6th sessions of the meeting, on 13 December 2017.

32. At the 7th session of the meeting the Subsidiary Body continued its discussion of the draft recommendation and approved it, as orally amended, for formal adoption as draft recommendation CBD/SBSTTA/21/L.7. The Subsidiary Body adopted UNEP/CBD/SBSTTA/21/L.7 as recommendation XXI/1. The text of the recommendation, as adopted, is contained in section I of the present report.

ITEM 4. SUSTAINABLE WILDLIFE MANAGEMENT: GUIDANCE FOR ACHIEVING A MORE SUSTAINABLE BUSH MEAT SECTOR

33. At the 2nd session of the meeting, on 11 December 2017, the Subsidiary Body took up agenda item 4. In considering the item, the Subsidiary Body had before it a note by the Executive Secretary on sustainable wildlife management: guidance for achieving a more sustainable wild meat sector (CBD/SBSTTA/21/3) and the following information documents: towards a sustainable, participatory and inclusive wild meat sector (CBD/SBSTTA/21/INF/6), wild life, wild livelihoods: involving communities in sustainable wildlife management and combating illegal wildlife trade (CBD/SBSTTA/21/INF/7), wildlife trade in Amazon countries: an analysis of trade in CITES-listed species (CBD/SBSTTA/21/INF/8) and an activity report of the Convention of European Wildlife and Natural Habitats for the period 2016-2017 (CBD/SBSTTA/21/INF/20).

34. At the invitation of the Chair, Mr. John Fa, from the Centre for International Forestry Research, presented document on sustainable wildlife management (CBD/SBSTTA/21/3), which was aimed at providing an overview of possible ways to address the issue of unsustainable wildlife hunting. While wildlife hunting took place around the world, the document focused on the use of wild meat as a source of

food in tropical and subtropical countries. Wildlife hunting was both a food security issue and an important cultural practice, and people's customary right to use the resources available to them deserved respect. It was also, however, a conservation issue in some areas. The document set out three main pillars of solutions, each with a number of suggested steps, as well as a draft decision on the matter.

35. Statements were made by representatives of Argentina, Australia, Belgium, Bolivia (Plurinational State of), Botswana, Brazil, Cameroon, Colombia, Ecuador, Finland, France, Germany, India, Indonesia, Mexico, Peru, the Philippines (on behalf of ASEAN member States), Poland, South Africa (on behalf of the African Group) and the United Kingdom.

36. A statement was also made by the representative of FAO.

37. Additional statements were made by representatives of GFC, GYBN, IIFB and IUCN (also on behalf of the Collaborative Partnership on Sustainable Wildlife Management).

38. Following the exchange of views the Chair asked Ms. Prudence Tangham Galega (Cameroon) to convene a group of friends of the Chair that included, in particular, the representatives of Belgium, Brazil, Colombia, Finland, Mexico, the Philippines and South Africa to help prepare a revised text for the consideration of the meeting.

39. At the 6th session of the meeting, on 13 December 2017, the Subsidiary Body considered a revised draft recommendation submitted by the Chair. Following an exchange of views, the revised draft recommendation, as orally amended, was approved for formal adoption by the Subsidiary Body as draft recommendation CBD/SBSTTA/21/L.5.

40. At the 7th session of the meeting the Subsidiary Body adopted CBD/SBSTTA/21/L.5 as recommendation XXI/2. The text of the recommendation, as adopted, is contained in section I of the present report.

41. The representative of Finland noted that, in paragraph 31 of the annex to the recommendation, the sentence containing the estimated yearly extraction rates of wild meat had been deleted because the figures had been challenged. However, the document from which they had been derived (CBD/SBSTTA/21/INF/6) was currently under peer review. She said that the sentence should not have been deleted but placed in brackets so that those brackets could be removed once that peer review had taken place.

42. The representative of the Secretariat said that the annex could later be revised pursuant to the footnote in paragraph 1 of the draft recommendation.

ITEM 5. BIODIVERSITY AND HUMAN HEALTH

43. At the 2nd session of the meeting, on 11 December 2017, the Subsidiary Body took up agenda item 5. In considering the item, the Subsidiary Body had before it a note by the Executive Secretary on biodiversity and human health (CBD/SBSTTA/21/4). The Subsidiary Body also had before it, as information documents, the report of the first meeting of the Interagency Liaison Group on Biodiversity and Health (CBD/HB/LG/2017/1/1) and the report of the regional workshop on the interlinkages between human health and biodiversity for the European region (CBD/HB/WS/2017/1/2).

44. Statements were made by representatives of Australia, Belgium, Bolivia (Plurinational State of), Brazil, Ecuador, Ethiopia (on behalf of the African Group), the European Union, Finland, France, India, Indonesia (on behalf of ASEAN member States), Japan, Kuwait, Mexico, Netherlands, New Zealand, Norway, Peru, Sweden and the United Kingdom.

45. A statement was also made by the representative of FAO.

46. Additional statements were made by representatives of EcoHealth Alliance, Global Forest Coalition, Group on Earth Observations Biodiversity Observation Network (GEO BON), Global Biodiversity Information Facility (GBIF), and IUCN.

47. Following the exchange of views, the Chair said that she would prepare a revised text for the consideration of the Subsidiary Body, taking into account the views expressed orally and the comments received in writing.

48. At the 6th session of the meeting, on 13 December 2017, the Subsidiary Body considered a revised draft recommendation submitted by the Chair. Following an exchange of views, the revised draft recommendation, as orally amended, was approved for formal adoption by the Subsidiary Body as draft recommendation CBD/SBSTTA/21/L.6.

49. At the 7th session of the meeting the Subsidiary Body adopted CBD/SBSTTA/21/L.6 as recommendation XXI/3. The text of the recommendation, as adopted, is contained in section I of the present report.

ITEM 6. MAINSTREAMING OF BIODIVERSITY INTO THE SECTORS OF ENERGY AND MINING, INFRASTRUCTURE, MANUFACTURING AND PROCESSING INDUSTRY, AND HEALTH: SCIENTIFIC AND TECHNICAL CONSIDERATIONS AND USE OF THE PROGRAMMES OF WORK OF THE CONVENTION

50. At the 3rd session of the meeting, on 12 December 2017, the Subsidiary Body took up agenda item 6. In considering the item, the Subsidiary Body had before it a note by the Executive Secretary on mainstreaming of biodiversity in the energy and mining, infrastructure, and manufacturing and health sectors (CBD/SBSTTA/21/5), and as information documents, a global overview on environmental assessment legislation (CBD/SBSTTA/21/INF/5), a note on mainstreaming of biodiversity into the energy and mining sectors (CBD/SBSTTA/21/INF/9), biodiversity and infrastructure: a better nexus? Policy paper on mainstreaming biodiversity conservation into the infrastructure sector (CBD/SBSTTA/21/INF/11), mainstreaming biodiversity into the manufacturing and processing industry: an initial compilation of reference documents, data and key actors (CBD/SBSTTA/21/INF/12), global state of the application of biodiversity-inclusive impact assessment (CBD/SBSTTA/21/INF/13), urban growth and biodiversity (CBD/SBSTTA/21/INF/14), and options on how to make the best use of existing programmes of work to further enhance the implementation of the Convention in the light of mainstreaming needs and the Strategic Plan for Biodiversity 2011-2020 (CBD/SBSTTA/21/INF/15).

51. At the invitation of the Chair, Mr. Francis Ogwal, Chair of the Subsidiary Body on Implementation (SBI), provided an overview on mainstreaming and said that it was the process of embedding biodiversity considerations into policies and practices so that biodiversity was conserved and sustainably used. He said that the difficulty associated with mainstreaming biodiversity in the energy, infrastructure, manufacturing, processing, and health sectors was that those sectors were highly complex and multi-faceted, and were vital for national development and job creation. He said that decision makers did not take sufficient account of biodiversity, in part because knowledge about biodiversity was not available to them, which meant that information on biodiversity had limited influence on policy. The challenge was to identify the most critical sectors that depended on and had an effect on biodiversity and understand the national institutions that were in a position to mainstream biodiversity into those sectors.

52. Statements were made by representatives of Argentina, Belgium, Burkina Faso, Brazil, Cambodia, Canada, China, Colombia, Ecuador, Ethiopia, the European Union, Finland, France, Gambia, Germany, Guatemala, India, Indonesia, Jamaica, Japan, the Lao People's Democratic Republic, Malaysia, Maldives, Mexico, Morocco, Netherlands, New Zealand, Niger, Norway, Peru, the Philippines (on behalf of the ASEAN member States), Senegal, Singapore, South Africa, Sweden, Timor-Leste, Togo and the United Kingdom.

53. Statements were also made by representatives of CBD Alliance, Global Biodiversity Information Facility (GBIF), GYBN and IIFB.

54. Following the exchange of views, the Chair said that she would prepare a revised text for the consideration of the Subsidiary Body, taking into account the views expressed orally and the comments received in writing.

55. At the 7th session of the meeting, the Subsidiary Body continued its discussion of draft recommendation and approved it, as orally amended, for formal adoption as draft recommendation CBD/SBSTTA/21/L.8. The Subsidiary Body adopted UNEP/SBSTTA/21/L.8 as recommendation XXI/4. The text of the recommendation, as adopted, is contained in section I of the present report.

ITEM 7. FIFTH EDITION OF THE *GLOBAL BIODIVERSITY OUTLOOK*

56. At the 3rd session of the meeting, on 12 December 2017, chaired by Mr. Norbert Bärlocher (Switzerland), the Subsidiary Body took up agenda item 7. In considering the item, the Subsidiary Body had before it a note by the Executive Secretary on the fifth edition of the *Global Biodiversity Outlook* (CBD/SBSTTA/21/6), and as information documents, an update on relevant GEO BON activities for the twenty-first meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (CBD/SBSTTA/21/INF/1), the communication strategy for the fifth edition of the *Global Biodiversity Outlook* and its related reports (CBD/SBSTTA/21/INF/10), a report on progress in implementing the work programme of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (CBD/SBSTTA/21/INF/16), and remote sensing enabled essential biodiversity variables (CBD/SBSTTA/21/INF/17).

57. At the invitation of the chair of the session, the Subsidiary Body heard presentations by Ms. Prudence Tangham Galega (Cameroon) on the workshop, held in Montreal on 9 December 2017, on the preparation of the sixth national reports and by Mr. Adams Toussaint (Saint Lucia) on the workshop, held in Montreal on 10 December 2017, on the spatial tools for the preparation of the sixth national reports.

58. Statements were made by representatives of Australia, Belgium, Canada, China, Denmark, Finland, France, India, Japan, Mexico, Morocco, Nepal, Singapore (on behalf of the ASEAN member states), South Africa (on behalf of the African Group) and United Kingdom of Great Britain and Northern Ireland.

59. At the 4th session of the meeting, on 12 December 2017, chaired by Mr. Norbert Bärlocher (Switzerland), SBSTTA continued its discussion of the item.

60. Statements were made by representatives of Bosnia and Herzegovina, Colombia, Jamaica, the Netherlands, New Zealand and Peru.

61. Statements were also made by representatives of IPBES and UNEP-WCMC.

62. Additional statements were made by representatives of IIFB, Global Forest Coalition (also on behalf of ICCA Consortium, GBYN, Friends of the Earth International, USC Canada, ProNatura, and EcoNexus), GYBN and GEO BON.

63. Following the exchange of views, the Chair said that he would prepare a revised text for the consideration of the Subsidiary Body, taking into account the views expressed orally and the comments received in writing.

64. At the 6th session of the meeting, on 13 December 2017, the Subsidiary Body considered a revised draft recommendation submitted by the Chair. Following an exchange of views, the revised draft recommendation, as orally amended, was approved for formal adoption by the Subsidiary Body as draft recommendation CBD/SBSTTA/21/L.4.

65. At the 7th session of the meeting, the Subsidiary Body adopted CBD/SBSTTA/21/L.4 as recommendation XXI/5. The text of the recommendation, as adopted, is contained in section I of the present report.

ITEM 8. TOOLS FOR EVALUATING THE EFFECTIVENESS OF POLICY INSTRUMENTS FOR THE IMPLEMENTATION OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020

66. At the 1st session of the meeting, on 11 December 2017, the Subsidiary Body took up agenda item 8. In considering the item, the Subsidiary Body had before it a note by the Executive Secretary on

tools to evaluate the effectiveness of policy instruments for the implementation of the Strategic Plan for Biodiversity 2011-2020 (CBD/SBSTTA/21/7).

67. At the 2nd session of the meeting, on 11 December 2017, statements were made by representatives of Belgium, Bolivia (Plurinational State of), China, Colombia, Cuba, the European Union, Finland, India, Maldives, the Netherlands, New Zealand, Peru, the Republic of Korea, Singapore, Sudan (on behalf of the African Group), Switzerland, Thailand (on behalf of the ASEAN member States) and the United Kingdom.

68. Statements were also made by representatives of IIFB and WWF.

69. Following the exchange of views, the Chair said that she would prepare a revised text for the consideration of the Subsidiary Body, taking into account the views expressed orally and the comments received in writing.

70. At the 4th session of the meeting, on 12 December 2017, the Subsidiary Body considered a revised draft recommendation submitted by the Chair on tools to evaluate the effectiveness of policy instruments for the implementation of the Strategic Plan for Biodiversity 2011-2020.

71. Following an exchange of views, the revised draft recommendation, as orally amended, was approved for formal adoption by the Subsidiary Body as draft recommendation CBD/SBSTTA/21/L.2.

72. At the 7th session of the meeting, the Subsidiary Body adopted CBD/SBSTTA/21/L.2 as recommendation XXI/6. The text of the recommendation, as adopted, is contained in section I of the present report.

ITEM 9. NEW AND EMERGING ISSUES

73. At the 4th session of the meeting, on 12 December 2017, the Subsidiary Body took up agenda item 9. In considering the item, the Subsidiary Body had before it a note by the Executive Secretary on new and emerging issues (CBD/SBSTTA/21/8).

74. Statements were made by representatives of Australia, Austria, Bangladesh, Belgium, Bolivia (Plurinational State of), Brazil, Canada, the European Union, India, Jamaica, Japan, Kuwait, Mexico, New Zealand, Norway and the United Kingdom.

75. A statement was also made by a representative of CBD Alliance.

76. Following the exchange of views, the Chair asked Mr. Hendrik Segers (Belgium) to convene a group of friends of the Chair open to all, but which particularly included the representatives of Australia, Austria, Bangladesh, Belgium, Bolivia (Plurinational State of), Brazil, Canada, the European Union, India, Jamaica, Japan, Kuwait, Mexico, New Zealand, Norway and the United Kingdom, to help prepare a revised text for the consideration of the Subsidiary Body.

77. At the 6th session of the meeting, on 13 December 2017, the Subsidiary Body approved a revised draft recommendation submitted by the Chair, as orally amended, for formal adoption by the Subsidiary Body as draft recommendation CBD/SBSTTA/21/L.3.

78. At the 7th session of the meeting, the Subsidiary Body adopted CBD/SBSTTA/21/L.3 as recommendation XXI/7. The text of the recommendation, as adopted, is contained in section I of the present report.

ITEM 10. OTHER MATTERS

79. At the request of the representative of Mexico, the representative of Peru gave a presentation on the Coalition of Centres of Origin, which was a follow-up to the initiative announced at the thirteenth meeting of the Conference of the Parties entitled "Towards the implementation of Aichi Target 13 in centers of origin: Coalition for food and agriculture countries". The Governments of Mexico and Peru were developing an action plan for the coalition and would invite other countries to join once it was completed.

80. At the request of the representative of South Africa, the representative of Egypt gave a presentation of the preparations under way for the fourteenth meeting of the Conference of the Parties, to be held in Sharm El-Sheikh, Egypt, from 10 to 22 November 2018.

81. The representative of Brazil reported on the Alliance for Zero Extinction and how Alliance for Zero Extinction (AZE) sites could help achieve Aichi Biodiversity Targets 11 and 12. Brazil was leading an effort to draft a recommendation for submission to the Conference of the Parties and would work on the issue with other interested Parties during 2018.

ITEM 11. ADOPTION OF THE REPORT

82. The present report was adopted at the 7th session of the meeting, on 14 December 2017, on the basis of the draft report prepared by the Rapporteur.

ITEM 12. CLOSURE OF THE MEETING

83. The Executive Secretary congratulated the representatives on a successful conclusion to their deliberations, which would help in the final push to achieve the Aichi Biodiversity Targets and contribute positively to the post-2020 global biodiversity framework. The outcomes of the meeting would take the Convention one step closer to the transformation needed to reach the 2050 Vision for Biodiversity. The next meeting of the Subsidiary Body would have a particularly heavy workload and, in order to make the best use of the time available for the meeting, she urged the representatives to work actively during the intersessional period by reviewing the items sent out for peer review and responding to the notifications on the issues to be considered by the Subsidiary Body.

84. After the customary exchange of courtesies, the twenty-first meeting of the Subsidiary Body on Scientific, Technical and Technological Advice was closed at 6.30 p.m. on Thursday, 14 December 2017.
