Updated draft of the Global Action Plan on Biodiversity and Health

I. Background and objectives

1. In decision 14/4, the Conference of the Parties (COP) of the Convention on Biological Diversity requested the Executive Secretary to develop a draft global action plan to mainstream biodiversity and health interlinkages into national policies, strategies, programmes and accounts, building upon decision XIII/6 and the guidance on integrating biodiversity considerations into One Health approaches[1], among other holistic approaches.[1] Subsequently, in decision 15/29, the COP requested the Executive Secretary to produce an updated version of the draft global action plan drawing on the deliberations of the resumed session of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice on a draft plan that had been prepared by the Secretariat (document CBD/SBSTTA/24/9).

2. In pursuance of these requests, the Secretariat has prepared an updated version of the draft global action plan on biodiversity and health.

3. In line with, and further to, decisions XII/21, XIII/6, and 14/4, the objective of the draft global action plan on biodiversity and health is to support Parties and other Governments, at all levels, relevant organizations and initiatives, indigenous peoples and local communities, and stakeholders, in mainstreaming biodiversity and health interlinkages into policies, strategies, programmes and accounts.

4. The updated version of the draft global action plan on biodiversity and health provides a set of voluntary actions intended to complement other national, regional, and global efforts to address biodiversity and health interlinkages. It also aims to enable relevant government authorities and stakeholders to closely collaborate and coordinate their work on biodiversity and health interlinkages. It acknowledges that implementation of the Kunming-Montréal Global Biodiversity Framework can contribute to human health as well as to healthy ecosystems and includes voluntary actions to facilitate such contributions.

II. Rationale

5. The draft global action plan on biodiversity and health builds on the following:

(a) The Kunming Montréal Global Biodiversity Framework, which is to be implemented with consideration of the One Health approach, among other holistic approaches;

(b) Decisions XII/21, XIII/6, 14/4 and 15/29, by which the COP called for enhanced integration of health into national biodiversity strategies and action plans (NBSAPs), and as well as the integration of biodiversity into health plans and strategies;

(c) The findings of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services which recognizes that i) nature underpins all dimensions of human health and contributes to inspiration and learning, physical and psychological experiences, and supporting identities which are central to quality of life and cultural integrity; ii) nature's contributions to people[2] are essential

[1] One Health approaches are defined by the UN Quadripartite One Health High Level Panel of Experts in the One Health Joint Plan of Action as an integrated, unifying approach that aims to sustainably balance and optimize the health of humans, animals, plants and ecosystems. It recognizes the health of humans, domestic and wild animals, plants and the wider environment (including ecosystems) are closely linked and interdependent. See, https://iris.who.int/bitstream/handle/10665/363518/9789240059139-eng.pdf?sequence=1.

[2] Nature's contributions to people (NCP) are all the contributions, both positive and negative, of living nature (i.e. diversity of organisms, ecosystems, and their associated ecological and evolutionary processes) to the quality of life for people. See Intergovernmental Science Policy Platform for Biodiversity and Ecosystem Services glossary, https://www.ipbes.net/glossary/natures-contributions-people.

to human health by regulating, material, and non-material ecosystem services[3]; iii) that worldwide there is unequal access to nature's contributions on different social groups; iv) that decline of nature's contributions to people threatens a good quality of life; and v) the deterioration of nature and consequent disruption of benefits to people has both direct and indirect implications for public health and can exacerbate existing inequalities in access to health care or healthy diets; [9]

(d) The findings of the Intergovernmental Panel on Climate Change recognizes that climate change is a threat to human well-being and planetary health[4], and that safeguarding biodiversity and ecosystems is fundamental to climate resilient development [10]

(e) Recent guidance of the United Nations Permanent Forum on Indigenous Issues which recognizes the centrality of nature to health: "The health of the land and Peoples are synonymous, nurtured through relationships with the physical and social environments, providing a strong basis for health and overall well-being" and further recognizes the interdependence of humans and the environment, noting an "equilibrium of spirituality, traditional medicine, biodiversity, and interconnectedness of all that exists";[28]

6. The draft global action plan on biodiversity and health recognizes that:

(a) Biodiversity is a key environmental determinant of human health[5], and the conservation and sustainable use of biodiversity can benefit human health by maintaining ecosystem services;[11]

(b) The need to strengthen the environmental dimension of One Health and other holistic approaches, is widely recognized;[1][2][3][4][5][6][7] [8]

(c) The relationship between biodiversity loss and the emergence and spread of communicable and noncommunicable disease and increasing health inequalities is well known,[9][12][13][14] as is the role of conservation and sustainable use of biodiversity in prevention [15], reduction [3], and proactive management [16] of communicable and noncommunicable disease risks;

(d) More effective and integrated policy coordination on ecosystem and public health, including enhanced communication, dialogue, and collaboration across government ministries and sectors, is needed;[3][6][15][16][17][18][19][20] [21][22];

(e) Halting the loss of biodiversity contributes to respecting, protecting, and fulfilling the human right to health [23] and the human right to a clean, healthy, sustainable environment; [24] [25]

(f) It is important to ensure healthy lives and promoting well-being, (Sustainable Development Goal 3) in the context that children and youth are more physically, mentally, and emotionally vulnerable to environmental degradation and environmental change, which are posing a "major threat" to children's health and achievement of children's full development potential;[6][10][22][26] [27]

7. Implementation of the global action plan on biodiversity and health can be supported by a range of tools and a body of knowledge available on biodiversity and health interlinkages, (e.g. UN Environment Programme Global Framework on Chemicals, Food and Agriculture Organization of the UN Food Systems Dashboard, World Health Organization's Compendium of WHO and Other UN Guidance on Health and Environment, Quadripartite for One Health's Joint Plan of Action, UNICEF Children's Climate Risk Index, UN Permanent Forum on Indigenous Issues Indigenous Determinants of Health in the 2030 Agenda,

[3] Ecosystem services are the benefits people obtain from ecosystems [IPBES https://www.ipbes.net/glossary/ecosystem-services], and include provisioning, regulating, cultural, and supporting services. See Convention on Biological Diversity Factsheet, https://www.cbd.int/undb/media/factsheets/undb-factsheet-ecoserv-en.pdf.

[4] Planetary health refers to the health of the human species and the state of the natural system upon which it depends. It is based on the understanding that human health and human civilization depend on flourishing natural systems and the wise stewardship of those systems. See World Health Organization Health Promotion Glossary of Terms, https://www.jstor.org/stable/resrep39121

[5] Environmental determinants of health are global, regional, national, and local environmental factors that influence human health, including physical, chemical, and biological factors external to a person. See, Pan American Health Organization website

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services Values Assessment). Additional information on this will be provided through an information document for SBSTTA 26.

III. Voluntary Actions to Mainstream Biodiversity and Health Interlinkages

A. General actions:

8. The following actions may be taken by governments, at the appropriate level, and where relevant by other actors, to mainstream biodiversity and health interlinkages and thereby generate benefits for human health and the environment:

a. Take stock of biodiversity and health interlinkages, including nature's contributions to people (ecosystem services) directly and indirectly related to health, the environmental determinants of health, and the environmental burden of disease[6] [30], taking into account biocultural diversity, diverse values systems [29], and a comprehensive understanding of health and well-being;

b. Raise awareness and build capacity on biodiversity and health interlinkages, through information campaigns, education, media and trainings, noting the positive role of nature in all aspects of health, including physical and mental health, emotional health, cognitive development, learning, and supporting identities[7],[9] and highlighting, for example, that addressing biodiversity loss contributes to protecting, respecting, and fulfilling the human right to health and the human right to a clean, healthy, sustainable environment

c. Encourage and facilitate national dialogues and knowledge sharing and strengthen capacities among all sectors and actors on biodiversity and health interlinkages in an effort to mainstream biodiversity in national health strategies and mainstream health in biodiversity strategies [12], and towards developing communities of practice on the consideration of biodiversity and health interlinkages;

d. Integrate biodiversity and health interlinkages into health strategies, national biodiversity strategies and action plans and other relevant policies and strategies for sustainable development, including health plans for mental health, nutrition, non-communicable and communicable disease control, and childhood development, among other health plans; [31]

e. Consider establishing a national focal point on biodiversity and public health, to enhance national coordination, implementation, and sharing of best practices, and develop and, as necessary, strengthen, national coordination mechanisms on biodiversity and health interlinkages, ensuring that the coordination mechanisms are both interdisciplinary and inter-ministerial;

f. Consider designating a national youth liaison on biodiversity and public health, who, among other tasks, can report on progress related to environmental stewardship, intergenerational equity, and sustainable use of biodiversity from children and youth at the national level to national, regional, international, and global forums;

g. Incorporate biodiversity and health interlinkages into relevant impact assessments related to sustainable development, and in particular:

[6] Environmental burden of disease is the magnitude of health impacts from modifiable environmental drivers.

[7] Supporting identities refers to as the basis for religious, spiritual, and social-cohesion experiences; sense of place, purpose, belonging, rootedness or connectedness, associated with different entities of the living world; narratives and myths, rituals and celebrations; satisfaction derived from knowing that a particular landscape, seascape, habitat or species exist. [9]

(i) Consider the co-benefits and risks of biodiversity loss to biodiversity and health interlinkages in environmental impact assessments, strategic impact assessments, health assessments and other relevant assessments.

(ii) Include diverse health stakeholders in the screening, scoping, review, decision making, and follow-up processes for Strategic Environmental Assessments, Environmental Impact Assessments, national ecosystem assessments, and national reporting; [32]

(iii) Include comprehensive biodiversity and health screening factors in assessments and ensure that they include cumulative impacts, scaled impacts (local, subnational, and regional contributions to global environmental change), and temporal impacts (immediate, slow-onset, and chronic impacts to health; [32]

(iv) Ensure that any environmental assessment, as well as national monitoring, reporting, and review frameworks, consider biodiversity decline in the context of intergenerational equity and the health of future generations, specifically, the ability of children to be born, grow, develop, and thrive; [31]

h. Develop integrated metrics, indicators and tools to facilitate the analysis, evaluation monitoring and integration of biodiversity into health strategies, plans and programmes and vice-versa;

B. Actions related to targets of the Kunming-Montréal Global Biodiversity Framework

9. The Kunming-Montréal Global Biodiversity Framework, adopted by the Conference of the Parties in its decision 15/4, acknowledged the interlinkages between biodiversity and health as one of the considerations for the implementation of its vision, mission, goals and targets.

10. To advance mainstreaming of biodiversity and health interlinkages while implementing the Framework, Parties can consider actions proposed in Table 1 below.

130 **Table 1. Actions to mainstream biodiversity and health interlinkages in the implementation of the Kunming-Montréal Global Biodiversity**
131 **Framework**

Action area and related targets	Relevance of the target implementation to health	Complementary actions to ensure biodiversity and health co-benefits
Land and Sea Use T1: Plan and manage all areas to reduce biodiversity loss T2: Restore 30% of degraded ecosystems T3: Conserve 30% of lands, waters and seas	Reduced degradation and fragmentation of wildlife habitats (including reduced deforestation), and reduced encroachment of people and livestock into biodiverse areas, supports continued provision of nature's contributions to people (ecosystem services), which support human health, and tends to reduce pandemic and other disease risk.	1. Integrate consideration of biodiversity-health interlinkages into land-use planning and incorporate health impact assessments into all major development and land use projects, including assessments of how conservation measures can promote health and reduce disease risks, while also identifying potential trade-offs where disease spillover risk may increase. [11] 2. Integrate health considerations into restoration plans to optimize co-benefits of restoration activities for positive health impacts. 3. Establish monitoring networks that include impacts on human health of protected and conserved areas and their periphery and buffer zones as well as their effectiveness for biodiversity conservation [33]
Species Management T4: Halt species extinction, protect genetic diversity, and manage human-wildlife conflicts T5: Ensure sustainable, safe and legal harvesting and trade of wild species T9: Manage wild species sustainably to benefit people.	Sustainably managing populations of wild species will enable people to continue to realize benefits from these species, such as food and nutrition, medicine and other uses. Protecting customary sustainable use by indigenous peoples and local communities and other populations particularly dependent on these species, is especially important. At the same time, improving the regulation and management of the use and trade of wildlife, and reducing human-wildlife conflict, can reduce exposure of people to animal species that carry high-risk for infectious disease emergence.	1. Consider in national policies and strategies the role of species and genetic diversity in the production of medicines and other health products, and the associated risks that may come from species extinction in this respect;[34] as well as the risk of biodiversity loss arising from high demand for naturally derived medicines;[35][9] 2. Promote community-based and interoperable surveillance, and participatory monitoring from indigenous peoples and local communities, as elements of disease prevention [34] 3. Avoid the unsustainable and illegal use of threatened or protected wild animals and plants for prescriptions for medicinal use, and wherever possible, use alternative, sustainable sources for medicinal use;[34] 4. Improve the regulation and management of the use of, and trade in, wildlife, such that it is safe from a human health perspective by: reducing or removing species in wildlife trade that are high-risk for disease emergence; improving biosecurity and sanitation in markets; conducting disease surveillance of wildlife, and of wildlife hunters, farmers, and traders; promoting responsible consumption and reducing

		unsustainable consumption of commodities from emerging disease hotspots, and of wildlife and wildlife-derived products; and enhancing law enforcement on all aspects of illegal wildlife trade. [40]
Invasive Alien Species T6: Reduce the introduction of Invasive Alien Species by 50% and minimize their impacts	Invasive species often reduce the quantity and quality of services provided by ecosystems and therefore management and control of invasive systems is necessary to maintain or restore such services. Many pests and disease-causing organisms are invasive alien species.	1. Develop approaches for the prevention, control and management of invasive alien species to address biological invasions of pathogenic agents, to reduce and prevent disease emergence from this cause as well as negative impacts on species that could be beneficial for human health;
Pollution T7: Reduce pollution to levels that are not harmful to biodiversity	Pollution is harmful to biodiversity, ecosystem functioning, and the health of people, animals, plants and other organisms. For example: excess nutrients reduce biodiversity in ecosystems, reduce water quality and cause eutrophication of water bodies. Pesticides can harm both pollinators and human health, among other effects. Early-life exposures to plastic-associated chemicals also increase the risk of multiple non-communicable diseases later in life. [37] Therefore, reduction of pollution to levels not harmful to biodiversity will have health co-benefits.	1. Re-enforce regulations to effectively reduce pollution; including raising awareness of the negative impact of excess nutrients, pesticides, hazardous chemicals, and plastic; [36] 2. Avoid inappropriate use and disposal of medical products [36] while also limiting unnecessary use of antimicrobial treatments and other pharmaceuticals [6]; 3. Encourage life cycle approaches by among others, promoting corporate sustainability and sustainable procurement policies and developing harmonized approaches across sectors for safe use of chemicals;[37] (*Please also see relevant actions under Agriculture/Target 10*).
Climate Change T8: Minimize the impacts of climate change on biodiversity and build resilience	Climate change is a driver of biodiversity loss and ill-health. Nature based solutions can help to mitigate and adapt to climate change.	1. Synergize actions on climate change, biodiversity, and health within national policies, plans, and strategies, including nationally determined contributions, national adaptation plans, health national adaptation plans, national disaster risk reduction strategies, and NBSAPs;
Agriculture, Aquaculture, Fisheries, and Forestry	Biodiversity at every level (genetic, species and ecosystem level) is a foundational pillar for food security,	1. Strengthen the resilience of food systems, compromised by ecological degradation, biodiversity loss and climate change; [38]

T10: Enhance biodiversity and sustainability in agriculture, aquaculture, fisheries, and forestry.	nutrition, and dietary quality. [38] The quality and quantity of food, and the way it is produced, has implications for human health as well as the health of livestock, wild animals and the environment: Dietary diversity, underpinned by diverse crops, livestock, fish and other foods help to provide a wide range of essential nutrients and non-nutrients, such as fiber. Many nutrient-rich crops are dependent on pollinators. Integrated pest management, agro-ecological and other approaches can reduce the need for pesticides including those harmful to humans and pollinators, and also reduce waste from the overuse of fertilizers.	2. Promote the diversity and sustainable use of foods, local crops and livestock, and fisheries, including through national dietary guidelines, policies, public procurement, investments and projects on public health nutrition and sustainable diets; 3. Reduce pollution from agriculture, aquaculture, fisheries and forestry by leveraging sustainable agricultural practices, such as agrobiodiversity and integrated landscape planning and the use of integrated pest management to reduce the need for chemical pesticides and herbicides,[34][6] as well as antimicrobials;
Nature's Contributions to People T11: Restore, maintain and enhance nature's contributions to people.	Biodiversity underpins nature's contributions to people (NCP) that benefit human health. Safeguarding NCP benefits human health. NCP include: - regulation of climate, ocean acidification, hydrological cycles - improving air and water quality and regulating water flows - soil quality, fertility, and degradation or storage of pollutants - disaster risk reduction - pollination and seed dispersal - food and feed production	1. Raise awareness of the value of ecosystem functions and services to health, wellbeing, and health equity, including across the life course and for different community groups. 2. Identify the co-benefits of biodiversity for the health of people, wildlife, and the environment, including its use value and intrinsic value;

	- regulation of pests, pathogens, predators, competitors, parasites, and potentially harmful organisms - learning (education, knowledge acquisition, and inspiration for art and technological design, e.g. biomimicry) - healing, relaxation, recreation, leisure, - intrinsic interconnection and supporting identities (e.g., basis for religious, spiritual, and social-cohesion experiences, and the sense of place, purpose, belonging, rootedness or connectedness)[9]; - provision of medicinal, biochemical and genetic resources	
Urban areas T12: Enhance green spaces and urban planning for human well-being and biodiversity	Green and blue spaces and urban planning that takes into account biodiversity can increase physical and mental health through various mechanism including by improving air quality, reducing heat islands, and providing beneficial microbiota as well as through cultural and psychological benefits and by encouraging physical exercise.	1. Ensure that all policies that impact green and blue spaces consider both health and well-being implications such as the benefits of these spaces for mental and physical health, as well as biodiversity impacts such as connectivity, the use of native species, among others;
Access and benefit sharing and biotechnology T13: Increase the sharing of benefits from genetic resources, digital sequence information and traditional knowledge.	Access and benefit sharing of genetic resources is essential to health, health practice, and effective health systems. Vaccine and therapeutic development rely on access to the diversity of organisms, molecules and genes found in nature. Many important therapeutics are derived from indigenous knowledge and traditional medicine.	1. Recognize the role of genetic resources, digital sequence information on genetic resources, and traditional knowledge associated with genetic resources in the research and development of health and health-related products and services, and the importance of the fair and equitable sharing of the benefits arising from their utilization in this regard, in line with the Convention and its Protocols;[39] 2. Ensure the equitable access to tools and technologies including diagnostics, medicines, vaccines and other health products and

T17: Strengthen biosafety and distribute the benefits of biotechnology.	The safe use of biotechnology can play an important role in providing tools and solutions for biodiversity and health challenges.	knowledge required to implement the One Health approach and other holistic approaches for the management of infectious diseases; 3. Ensure that environmental and health risk protocols for living modified organisms are in place and strengthen their application at all scales; 4 Support multisectoral and multidisciplinary coordination mechanisms where potential benefits and risks from biotechnology applications could be assessed, taking into account health and environmental perspectives;
Mainstreaming T14: Integrate biodiversity into decision-making at every level T15: Businesses assess, disclose and reduce biodiversity-related risks and negative impacts T18: Reduce harmful incentives by at least $500 billion per year, and scale up positive incentives for biodiversity	Consideration of biodiversity and health interlinkages in decision-making across all sectors can mobilize action to reduce indirect economic and institutional drivers of biodiversity loss.	1. Consider biodiversity and health interlinkages in assessing the values of biodiversity, in the dependencies and impacts on biodiversity of financial and business practices, and in the impacts of incentive measures. 2. Raise awareness of consumer options that enhance or support biodiversity conservation. 3. Promote sustainable public procurement to support companies and producers to contribute to conservation and sustainable use of biodiversity;[34] 4. Promote a financial mechanism, private and public investment, and incentives that safeguard a broad spectrum of biodiversity and health interlinkages, especially those affected by the commercial determinants of health [31]
Consumption T16: Enable sustainable consumption choices to reduce waste and overconsumption equitably	To a large extent, diets that are more diverse and more sustainable are also more healthy (though this depends on national and local context). In addition, more equitable and sustainable use of resources, including reduction of waste and overconsumption, allows for all to live well in harmony with nature.	1. Promote healthy and sustainable diets including through developing or updating food-based dietary guidelines, through information made available to consumers, advertising standards and public procurement;

Means of implementation T19: Mobilize $200 billion per year for biodiversity from all sources, including $30 billion through international finance. T20: Strengthen capacity-building, technology transfer, and scientific and technical cooperation for biodiversity	Consideration of the health co-benefits of investment in halting biodiversity loss can help to mobilize necessary financial resources.	1. Consider health co-benefits in strategies for resource mobilization and in capacity building, technology transfer, and scientific and technical cooperation activities;
Knowledge and engagement of people T21: Ensure that knowledge is available and accessible to guide biodiversity action. T22: Ensure participation in decision-making and access to justice and information related to biodiversity for all. T23: Ensure gender equality and a gender-responsive approach for biodiversity action.	Ensuring that knowledge is available to all, and that all groups of people are engaged in decision making related to biodiversity can help ensure that biodiversity and health interlinkages of particular importance to certain groups are taken into consideration thereby contributing to the protection of rights, gender responsiveness and intergenerational and health equity.	1. Incorporate biodiversity and health interlinkages into knowledge management, training and education activities, including technical and scientific cooperation and ensure that information is available to support informed decision making. 2. Promote and support meaningful and active participation by all actors of civil society, on projects, programmes and initiatives related to biodiversity and health interlinkages; 3. Consider within the mainstreaming of biodiversity and health interlinkages into policies, programmes and projects, that men and women often have different roles in the management of natural resources and family health, and that poor and vulnerable communities, women and children are often particularly directly dependent on biodiversity and ecosystems for food, medicines, clean water, and other health related services;[17]

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