



## Convention on Biological Diversity

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**Subsidiary Body on Scientific,  
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Item 9 of the provisional agenda\*  
**Biodiversity and health**

### **Biodiversity and health**

#### **Note by the Secretariat**

## **I. Introduction**

1. In its decision 15/29, on biodiversity and health, the Conference of the Parties to the Convention on Biological Diversity requested the Executive Secretary, subject to the availability of resources, in consultation with the Bureau of the Subsidiary Body on Scientific, Technical and Technological Advice, and in collaboration with the World Health Organization and the Quadripartite alliance on One Health to: (a) complete the work pursuant to paragraphs 13 (b) and (c) of decision 14/4 on the development of targeted messages and a draft global action plan to mainstream biodiversity and health linkages into national policies, strategies, programmes and accounts, drawing on the deliberations of the Subsidiary Body at the resumed session of its twenty-fourth meeting; (b) invite Parties, other Governments, indigenous peoples and local communities, women, youth and other relevant stakeholders to review the updated version of the draft plan; and (c) make the outcomes of that work available for consideration by the Subsidiary Body, with a view to making recommendations to the Conference of the Parties at its sixteenth meeting.

2. The present document contains information on the revised draft global action plan on biodiversity and health (sect. II), targeted messaging approaches (sect. III) and a draft decision for the Conference of the Parties for consideration by the Subsidiary Body (sect. IV). Annex I to the draft decision contains the revised draft plan, and annex II targeted messages for mainstreaming biodiversity into the health sector.

## **II. Revised draft global action plan on biodiversity and health**

3. In response to the request made by the Conference of the Parties in its decision [15/29](#), the Secretariat of the Convention has prepared a revised draft global action plan.<sup>1</sup>

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\* CBD/SBSTTA/26/1.

<sup>1</sup> The work was supported in part by a contribution from the Government of Finland.

4. The revision draws on the deliberations of the Subsidiary Body at the resumed session of its twenty-fourth meeting, as well as the request to update the plan in paragraph 5 (a) of decision [15/29](#). The revision was also carried out to streamline the plan length, avoid repetitions and update the list of bibliographic references used to support the plan, as well as to bring the plan in line with the Kunming-Montreal Global Biodiversity Framework.

5. An online meeting with the members of the Quadripartite alliance on One Health (Food and Agriculture Organization of the United Nations, World Health Organization, World Organization for Animal Health and United Nations Environment Programme) was held in December 2023 with the support of the Quadripartite secretariat. The aim of the meeting was to share the Convention Secretariat's plans to revise the draft global action plan, including its proposed new structure aligned with the Framework, and to invite the Quadripartite members to provide input during the peer review of the draft plan.

6. Subsequently, the Executive Secretary invited Parties, other Governments, indigenous peoples and local communities, and relevant stakeholders to participate in the peer review of the revised version,<sup>2</sup> which was conducted from 12 January to 12 February 2024. In all, 62 submissions were received, of which 19 were from Parties and 43 from organizations, including from other United Nations bodies, the health sector, the environment sector and academia. The Bureau of the Subsidiary Body was kept informed of progress in the preparation of the revised draft global action plan at its regular meetings.

7. The revised draft global action plan, amended to take the comments from the peer review into account, is contained in annex I to the present note. An information document containing supplementary information for the plan will also be made available.<sup>3</sup>

### **III. Targeted messages**

8. In decision [14/4](#), the Conference of the Parties requested the Executive Secretary to develop targeted messaging approaches on mainstreaming biodiversity for the health sector, including as part of the delivery on the global communication strategy and messaging approaches, as set out in decision [XII/2](#). In decision 15/29, it requested the Executive Secretary to complete the work, drawing on the deliberations of the Subsidiary Body at the resumed session of its twenty-fourth meeting.

9. Following those requests, the Secretariat has prepared a revised version of the targeted messages, aligned with the draft global action plan. The revised version is provided in annex II to the draft decision.

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<sup>2</sup> See notification No. [2024/002](#).

<sup>3</sup> See CBD/SBSTTA/26/INF/3.

## IV. Recommendations

10. The Subsidiary Body may wish to recommend that, at its sixteenth meeting, the Conference of the Parties adopt a decision along the following lines:

The Conference of the Parties,

*Recalling* its decisions [XII/21](#) of 17 October 2014, [XIII/6](#) of 17 December 2016, [14/4](#) of 22 November 2018 and [15/29](#) of 19 December 2022,

*Recalling also* that the Kunming-Montreal Global Biodiversity Framework<sup>1</sup> acknowledges the interlinkages between biodiversity and health and the three objectives of the Convention on Biological Diversity,<sup>2</sup>

*Recognizing* that the implementation of the Framework will contribute to the reduction in the global burden of disease, inter alia, by addressing drivers of biodiversity loss, which are often also drivers of ill health,

*Recognizing also* the multiple dimensions of health and well-being, which go beyond human health and include the health of ecosystems upon which human health depends,

*Noting* the important role of education and awareness-raising for mainstreaming biodiversity and health interlinkages through a whole-of-government and whole-of-society approach,

*Noting also* the ongoing work of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on the thematic assessment of the interlinkages among biodiversity, water, food and health,

*Noting further* the importance given to biodiversity and health interlinkages by other organizations and initiatives, including the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, which urged Parties and invited non-Party stakeholders to advance targets addressing biodiversity and health in its decisions 1/CMA.5 and 2/CMA.5, and the Permanent Forum on Indigenous Issues, which recognized the centrality of nature to health,<sup>3</sup>

*Considering* the importance of cooperation with other organizations and initiatives in the area of biodiversity and health,

1. *Adopts* the Global Action Plan on Biodiversity and Health as contained in annex I to the present decision, and considers it an instrument for supporting the implementation of the Kunming-Montreal Global Biodiversity Framework, complementary to the guidance contained in decisions [XIII/6](#) and [14/4](#);

2. *Endorses* the targeted messages for mainstreaming biodiversity in the health sector contained in annex II to the present decision;

3. *Encourages* Parties, in accordance with national circumstances and priorities, and on a voluntary basis:

(a) To implement the Global Action Plan and provide information on their implementing activities and the results thereof, including through their national reports, as appropriate;

(b) To designate a national focal point on biodiversity and health to enhance national coordination, knowledge exchange, implementation and the sharing of best practices and lessons learned among biodiversity and health actors, including those working in human, animal and plant health, and environmental sectors, and to work comprehensively with health and health-related agencies and professionals at the national level;

<sup>1</sup> Decision 15/4, annex.

<sup>2</sup> United Nations, *Treaty Series*, vol. 1760, No. 30619.

<sup>3</sup> [E/C.19/2023/5](#), para. 24.

(c) To integrate biodiversity and health interlinkages into their national biodiversity strategies and action plans, in line with section C of the Framework, taking the elements of the Global Action Plan into account;

4. *Invites* other Governments and relevant organizations, including the members of the Quadripartite alliance on One Health, to make use, as appropriate, of the Global Action Plan in order to mainstream biodiversity and health interlinkages into their respective constituencies and across sectors;

5. *Invites* the World Health Organization to take account of synergies in its work on biodiversity and health undertaken pursuant to its fourteenth General Global Programme of Work (2025–2028) and resolutions of the World Health Assembly related to environmental determinants of health, and that undertaken under the Convention on Biological Diversity;

6. *Invites* Parties, other Governments, relevant organizations, donors and relevant financial institutions to support capacity-building for the effective implementation of the Global Action Plan;

7. *Invites* Parties, other Governments and relevant organizations to share information on:

(a) How the indicators in the monitoring framework for the Kunming-Montreal Global Biodiversity Framework could be used to assess progress towards mainstreaming biodiversity and health interlinkages, including by identifying gaps in the coverage of such interlinkages in the monitoring framework;

(b) Specific indicators on biodiversity and health interlinkages that currently exist at the national, regional or global level;

(c) Examples of the implementation of the Global Action Plan and the mainstreaming of biodiversity and health interlinkages at the national or international level;

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

(a) To complete the work conducted pursuant to paragraph 13 (a) of decision 14/4 on the development of integrated science-based indicators, metrics and progress measurements tools on biodiversity and health, taking account of the information referred to in subparagraph 7 (a) and of work done under the monitoring framework, among others;

(b) To facilitate, in collaboration with partners, capacity-building activities to support Parties in the uptake and implementation of the Global Action Plan, including by convening regional workshops and facilitating dialogues in collaboration with, inter alia, organizations members of the Quadripartite alliance on One Health and other multilateral environmental agreements;

(c) To continue to raise awareness at all levels, including through relevant processes of other multilateral environmental agreements and intergovernmental bodies, of the important interlinkages between biodiversity and health, including their relevance to the implementation of the Framework;

(d) To enhance cooperation with international organizations and other multilateral environmental agreements with regard to biodiversity and health interlinkages, including by promoting the consideration of those interlinkages with the other elements of the triple planetary crisis, namely, biodiversity loss, climate change and pollution;

(e) To report on the outcomes of that work to the Subsidiary Body on Scientific, Technical and Technological Advice at a meeting held before the seventeenth meeting of the Conference of the Parties.

## Annex I

### Global Action Plan on Biodiversity and Health

#### I. Purpose

1. In line with, and further to, decisions [XII/21](#) of 17 October 2014, [XIII/6](#) of 17 December 2016, 14/4 of 22 November 2018 and [15/29](#) of 19 December 2022, the objective of the 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, the private sector and other stakeholders to mainstream biodiversity and health interlinkages into national policies, strategies, programmes and accounts. The Plan is aimed in particular at enabling relevant government authorities, including those responsible for finance, health (e.g. in relation to nutrition, food security and food safety), environment, agriculture, water, waste, planning (e.g. urban planning), climate change mitigation and adaptation and disaster risk reduction, to collaborate closely and coordinate their work on biodiversity and health interlinkages.

2. The Global Action Plan includes a set of voluntary actions that can be implemented at various levels and on different scales, from international to national and from multisectoral to sector-specific, with cross-sectoral collaboration at the governmental level, and that allow for the participation of other stakeholders, such as civil society, indigenous peoples and local communities, and the private sector. In view of the cross-cutting nature of biodiversity and health interlinkages, other multilateral instruments and processes should also be considered when implementing the Plan.

3. The Global Action Plan builds on previous work undertaken under the Convention on Biological Diversity,<sup>4</sup> including that conducted in collaboration with the World Health Organization on biodiversity and health interlinkages through a joint work programme between 2012 and 2021. It is intended to complement and support the implementation of earlier decisions of the Conference of the Parties on biodiversity and health (decisions [XII/21](#), [XIII/6](#), 14/4 and [15/29](#)) and the information and guidance referred to therein, including the key messages in the joint publication of the World Health Organization and the Secretariat of the Convention entitled *Connecting Global Priorities: Biodiversity and Human Health – A State of Knowledge Review*, the guidance on integrating biodiversity considerations into One Health approaches<sup>5</sup> and the report of the Director General of the World Health Organization on health, environment and climate change: human health and biodiversity for the seventy-first World Health Assembly,<sup>6</sup> in which he called for enhanced integration of health, health policies, plans and projects into national biodiversity strategies and action plans and the integration of biodiversity into health plans and strategies. The Plan is also intended to facilitate the realization of biodiversity and health co-benefits from the implementation of the Kunming-Montreal Global Biodiversity Framework.<sup>7</sup>

4. The Global Action Plan also draws on the following:

(a) The findings of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, namely, that: (i) nature underpins all dimensions of human health and contributes to non-material aspects of the quality of life (inspiration and learning, physical and psychological experiences and supporting identities), which are central to the quality of life and cultural integrity; (ii) nature's contributions to people<sup>8</sup> play an essential role in human health by

<sup>4</sup> See information document CBD/SBSTTA/26/INF/3.

<sup>5</sup> CBD/SBSTTA/21/9.

<sup>6</sup> A71/11.

<sup>7</sup> Decision 15/4, annex.

<sup>8</sup> Nature's contributions to people are defined by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services as all the contributions, both positive and negative, of living nature (i.e. diversity of organisms and ecosystems and their associated ecological and evolutionary processes) to people's quality of life.

regulating material and non-material ecosystem services;<sup>9</sup> (iii) worldwide, social groups have unequal access to nature's contributions; (iv) the decline in nature's contributions to people threatens the quality of life; and (v) the deterioration of nature and consequent disruption of benefits to people have both direct and indirect implications for public health and can exacerbate existing inequalities in access to health care or healthy diets;

(b) The findings of the Intergovernmental Panel on Climate Change, namely, that climate change is a threat to human well-being and planetary health;<sup>10</sup>

(c) The study on indigenous determinants of health in the 2030 Agenda for Sustainable Development,<sup>11</sup> welcomed by the Permanent Forum on Indigenous Issues, in which the centrality of nature to health and the interdependence of human beings and the environment are recognized, noting an equilibrium of spirituality, traditional medicine and biodiversity and the interconnectedness of all that exists, and it is also stated that 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;

(d) The lessons learned from the coronavirus disease (COVID-19) pandemic, which has further highlighted the importance of the relationship between health and well-being and biodiversity, and the urgent need to conserve and sustainably use biodiversity for a sustainable and inclusive recovery, thereby contributing to minimizing the risk of future diseases of zoonotic origin.

5. The following is recognized:

(a) Biodiversity loss, ecosystem degradation and negative health outcomes share many common drivers, including direct drivers of environmental change (changes in land and sea use, direct exploitation of habitats and organisms, climate change, pollution and invasive alien species), which result from an array of underlying causes and are underpinned by social values and behaviours;

(b) Environmental degradation contributes 24 per cent to the overall global burden of disease and 28 per cent to the global burden of disease for children under 5 years of age;

(c) Biodiversity is a key environmental determinant of human health,<sup>12</sup> and the conservation and sustainable use of biodiversity can benefit human health by maintaining ecosystem services, fulfilling the psychological needs for nature relatedness and realizing the vision of living in harmony with nature by 2050;

(d) The relationship among biodiversity loss, the emergence and spread of communicable and non-communicable diseases and increasing health inequalities is well known, as is the role of conservation and sustainable use of biodiversity in prevention, reduction and proactive management of communicable and non-communicable disease risks;

(e) Halting biodiversity loss contributes to respecting, protecting and fulfilling the human rights to health and to a clean, healthy and sustainable environment;

(f) Within the context of ensuring healthy lives and promoting well-being for all at all ages (Sustainable Development Goal 3), children and youth are more physically, mentally and emotionally vulnerable to environmental degradation and environmental change, which are posing a major threat to the health of children and the achievement of their full development potential;

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<sup>9</sup> Ecosystem services are defined by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services as the benefits that people obtain from ecosystems. They include provisioning, regulating, cultural and supporting services.

<sup>10</sup> 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.

<sup>11</sup> E/C.19/2023/5.

<sup>12</sup> Environmental determinants of health are global, regional, national and local environmental factors that influence human health. They include physical, chemical and biological factors external to a person. Further information on environmental determinants of health is available on the Pan American Health Organization website at [www.paho.org/en](http://www.paho.org/en).

(g) Environmental degradation and biodiversity loss contribute to health inequities, especially for vulnerable groups, including women, children and the elderly, and have severe adverse impacts on the health of indigenous peoples and their unique interdependent relationship with local ecosystems, including on their physical, mental, emotional and spiritual health, foodways and healing practices and systems;

(h) More effective and integrated policy coordination on ecosystems and health, including by enhanced communication, dialogue and collaboration across government ministries and all governments and sectors, is needed. This includes the need to strengthen the environmental dimension of One Health, which is widely recognized, and that of other holistic approaches.

## II. Considerations and tools for supporting the implementation of the Global Action Plan on Biodiversity and Health

6. Taking account of the cross-cutting nature of biodiversity and health interlinkages, the implementation of the Global Action Plan should be carried out in accordance with national circumstances and taking other international obligations and agreements into consideration.

7. The Global Action Plan embodies the view that the health of the environment and the health of all species are interconnected and interdependent, and that a whole-of-government and whole-of-society approach is required to mainstream that view into national policies, strategies, programmes and accounts. The concept of biodiversity and health interlinkages should be interpreted broadly, encompassing biodiversity from gene to planetary level, across and between species and ecosystems, and the multiple dimensions of health and well-being, including physical, mental, spiritual and emotional health. Elements of the Plan should be actioned towards enabling improved stewardship of the environment, animals, plants and other taxa and the realization of the vision of living in harmony with nature by 2050.

8. The implementation of the Global Action Plan can be supported by a range of tools and a body of knowledge on biodiversity and health interlinkages, including:

(a) *Connecting Global Priorities: Biodiversity and Human Health – A State of Knowledge Review*, a joint publication of the World Health Organization and the Secretariat of the Convention on Biological Diversity;

(b) Guidance on integrating biodiversity considerations into One Health approaches; issued by the Secretariat of the Convention on Biological Diversity;<sup>13</sup>

(c) *Migratory species and health: a review of migration and wildlife disease dynamics, and the health of migratory species, within the context of One Health and ecosystem approaches to health*, a document issued by the Secretariat of the Convention on the Conservation of Migratory Species of Wild Animals;<sup>14</sup>

(d) The Global Framework on Chemicals – For a Planet Free of Harm from Chemicals and Waste, adopted at the fifth session of the International Conference on Chemicals Management;<sup>15</sup>

(e) *Sustainable Healthy Diets: Guiding Principles*, published by the Food and Agriculture Organization of the United Nations and the World Health Organization;

(f) The Compendium of WHO and other UN Guidance on Health and Environment: 2022 Update, published by the World Health Organization;

(g) The *One Health Joint Plan of Action (2022–2026)* and *A Guide to Implementing the One Health Joint Plan of Action at national level*, published by the Quadripartite organizations (Food

<sup>13</sup> [CBD/SBSTTA/21/9](#).

<sup>14</sup> UNEP/CMS/ScC-SC6/Inf.12.4.3.

<sup>15</sup> International Conference on Chemicals Management resolution V/1, annex II.

and Agriculture Organization of the United Nations, United Nations Environment Programme, World Health Organization and World Organisation for Animal Health);

(h) *The Climate Crisis is a Child Rights Crisis: Introducing the Children’s Climate Risk Index*, published by the United Nations Children’s Fund;

(i) A study on indigenous determinants of health in the 2030 Agenda for Sustainable Development issued for the twenty-second session of the Permanent Forum on Indigenous Issues;<sup>16</sup>

(j) *The Methodological Assessment Report on the Diverse Values and Valuation of Nature*, published by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services;

(k) OIE Wildlife Health Framework – “Protecting wildlife health to achieve One Health”, a paper issued by the World Organisation for Animal Health.

9. The Global Action Plan may be further supported by a compilation of additional resources, including a list of tools and resources that can assist its implementation, that are listed in document CBD/SBSTTA/26/INF/3.

### **III. Actions to mainstream biodiversity and health interlinkages into national policies, strategies, programmes and accounts**

10. The following voluntary actions may be taken by Governments, at the appropriate level, in accordance with national circumstances and, where relevant, by other actors, to mainstream biodiversity and health interlinkages, thereby generating benefits for health and the environment. The proposed general actions (sect. A) can be complemented with actions to integrate biodiversity and health interlinkages into the implementation of the Framework (sect. B).

#### **A. General actions**

11. Proposed general actions include the following:

(a) Assessing biodiversity and health interlinkages, including ecosystem services and nature’s contributions to people related to health, the environmental determinants of health and the environmental burden of disease<sup>17</sup> at the national level, taking account of biocultural diversity,<sup>18</sup> diverse value systems and a comprehensive understanding of health and well-being, including physical, mental, spiritual and emotional health, cognitive development, learning, supporting identities<sup>19</sup> and social determinants of health;

(b) Encouraging and facilitating national dialogues and knowledge-sharing platforms and events to strengthen capacities among all sectors and actors with regard to biodiversity and health interlinkages, with a view to developing communities of practice, noting the positive role of nature in all aspects of health and well-being;

(c) Promoting policy coordination and mainstreaming biodiversity and health interlinkages into national biodiversity strategies and action plans; plans for mental health, nutrition, non-communicable and communicable disease control and childhood development; economic and sustainable development policies; policies related to animal and plant health; and One Health antimicrobial resistance national action plans;

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<sup>16</sup> [E/C.19/2023/5](#).

<sup>17</sup> The environmental burden of disease is the magnitude of health impacts from modifiable environmental drivers.

<sup>18</sup> See also decision 15/22 of the Conference of the Parties to the Convention.

<sup>19</sup> Supporting identities refer to 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 exists (see Manuela Carneiro da Cunha and others, eds., *The Global Assessment Report on Biodiversity and Ecosystem Services*, Bonn, Germany, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services Secretariat, 2019).



(d) Developing and, as necessary, strengthening national coordination mechanisms on biodiversity and health interlinkages that are interdisciplinary and interministerial, ensuring the participation of all actors, including indigenous peoples and local communities; and designating a national focal point for biodiversity and health to facilitate the process;

(e) Considering the designation of a national youth liaison focal point on biodiversity and public health, who, among other tasks, can report on the contributions and needs of children and youth in relation to environmental stewardship and intergenerational equity;

(f) Incorporating biodiversity and health interlinkages into assessments related to sustainable development, including environmental impact assessments, strategic environmental assessments, health assessments, socioeconomic assessments and other relevant assessments, in particular by:

(i) Considering the risks of biodiversity loss on biodiversity and health interlinkages in the aforementioned assessments as valuable tools to guide decision-making;

(ii) Including diverse health stakeholders<sup>20</sup> in the screening, scoping, review, decision-making and follow-up processes for the assessments and national reporting;

(iii) Including comprehensive screening factors that reflect broad biodiversity and health interlinkages in assessments, ensuring, where possible, that they include cumulative and indirect impacts, scaled impacts (local, subnational and regional contributions to global environmental change)<sup>21</sup> and temporal impacts (immediate, slow-onset and chronic impacts on health);

(iv) Ensuring that the assessments, as well as national monitoring, reporting and review frameworks, consider biodiversity decline in the context of intergenerational and gender equity and the health of future generations, specifically the ability of children to be born, grow, develop and thrive physically and mentally;

(g) Supporting research on biodiversity and health interlinkages to address knowledge gaps, access to scientific evidence, indigenous science and good practices, through transformative and transdisciplinary education;

(h) Strengthening the understanding of biodiversity and health interlinkages by introducing them into the curricula of professionals in the fields of health care and medicine, biodiversity and environment, food system and animal welfare as part of lifelong learning and skills development;

(i) Promoting, in collaboration with health-related organizations, the integration of biodiversity-related metrics, indicators and tools into health strategies, plans and programmes and, conversely, the integration of health-related metrics, indicators and tools into biodiversity strategies, plans and programmes;

(j) Enhancing international cooperation to support developing countries in addressing the specific environmental and health-related challenges that they face, including in implementing the One Health and other holistic approaches;

(k) Encouraging cooperation among national focal points from multilateral environmental agreements on actions related to biodiversity and health interlinkages, including through participation in cross-sectoral events.

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<sup>20</sup> Health stakeholders include those related to human, animal and plant health and those with diverse knowledge of health.

<sup>21</sup> Global environmental change refers to changes to the Earth's natural systems, such as the nine planetary boundaries identified by the Stockholm Resilience Centre, namely, novel entities, biosphere integrity, biogeochemical flows, climate change, land-system change, freshwater change, ocean acidification, stratospheric ozone depletion and atmospheric aerosol loading.

**B. Actions to integrate biodiversity and health interlinkages into the implementation of the Kunming-Montreal Global Biodiversity Framework**

12. The interlinkages between biodiversity and health are acknowledged in the Kunming-Montreal Global Biodiversity Framework as one of the considerations for its implementation, as follows:

The Framework acknowledges the interlinkages between biodiversity and health and the three objectives of the Convention. The Framework is to be implemented with consideration of the One Health approach, among other holistic approaches that are based on science, mobilize multiple sectors, disciplines and communities to work together, and aim to sustainably balance and optimize the health of people, animals, plants and ecosystems, recognizing the need for equitable access to tools and technologies, including medicines, vaccines and other health products related to biodiversity, while highlighting the urgent need to reduce pressures on biodiversity and decrease environmental degradation to reduce risks to health, and, as appropriate, develop practical access and benefit-sharing arrangements.

13. The human right to a clean, healthy and sustainable environment are also acknowledged in the Framework.

14. Since the health of the environment and the health of all species are interconnected, all actions towards the implementation of the Framework will have co-benefits for all species and for human health. Actions for mainstreaming biodiversity and health interlinkages into the implementation of the Framework are shown in the table below.

### Actions for mainstreaming biodiversity and health interlinkages into the implementation of the Kunming-Montreal Global Biodiversity Framework

<i>Action areas and related Framework targets<sup>a</sup></i>	<i>Relevance to health<sup>b</sup></i>	<i>Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration</i>
<b>Land and sea use</b>		
Targets 1, 2 and 3	Reducing the degradation and fragmentation of wildlife habitats and the encroachment of biodiverse areas by people and livestock contributes to the continued provision of nature's contributions to people, which in turn support health and reduce disease emergence and transmission among wildlife, livestock and people.	<ol style="list-style-type: none"> <li>1. Integrate the consideration of biodiversity and health interlinkages into land- and sea-use planning and policies, plans and action for conservation and restoration to identify potential co-benefits and trade-offs for biodiversity and health, including by incorporating health impact assessments into such activities so as to promote the multiple dimensions of health and reduce and mitigate disease risks to people, livestock and wildlife, taking risks of disease spillover and spillback into account.</li> <li>2. Establish, as appropriate, monitoring systems to include the evaluation of the impacts of those activities on human beings, animals and ecosystems, including by establishing surveillance sites in high-risk areas where environmental conditions are quickly changing and becoming conducive to disease emergence, such as areas that are being rapidly deforested, degraded or encroached on and other natural habitats experiencing land-use conversion.</li> <li>3. Incorporate the consideration of biodiversity and health interlinkages into policies and programmes for water, sanitation and hygiene and measures to protect ecosystems that supply water; and promote sustainable water use.</li> </ol>
<b>Species management</b>		
Targets 4, 5 and 9	The sustainable management of populations of wild species is important for the health of ecosystems and the provision of ecosystem services, such as food security, nutrition, biomedical discovery and medicine, and will enable people to continue to draw benefits from those populations. Protecting customary sustainable use by indigenous peoples and local communities and other	<ol style="list-style-type: none"> <li>1. Protect the customary sustainable use of biodiversity by indigenous peoples and local communities in protected and conserved areas, and related health benefits.</li> <li>2. Consider the role of species and genetic diversity in the production of nutritious food, medicine and other goods, and the risk of biodiversity loss and species extinction arising from high demand for those goods, as well as the health risks associated with such loss; and promote collaboration among sectors to ensure that the medicinal use of wild species, including in traditional medicine, is sustainable, safe and legal; and, for threatened or</li> </ol>

<i>Action areas and related Framework targets<sup>a</sup></i>	<i>Relevance to health<sup>b</sup></i>	<i>Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration</i>
	<p>populations particularly dependent on those species is especially important. At the same time, improving the regulation and management of the use of and trade in wild species and reducing human-wildlife conflict can reduce the transmission of infectious diseases.</p>	<p>protected species, encourage alternative, sustainable sources for medicinal use where possible.</p> <p>3. Improve, in accordance with other international agreements, the regulation, management and use of and trade in wild species, such that it is safe for human and wildlife health, by:</p> <ul style="list-style-type: none"> <li>(a) Acknowledging and addressing the potential for health risks from use practices, such as the transport, marketing and commercialization of specimens of wild species;</li> <li>(b) Improving biosecurity and sanitation in markets and along the entire trade chain;</li> <li>(c) Encouraging the participatory monitoring of wildlife including by wildlife hunters, farmers and traders, in emerging disease hotspots, as elements of strategies for disease prevention;</li> <li>(d) Including policies and actions designed to limit pathogen spillover and spillback in wildlife use and management programmes and activities, such as wildlife farming and commercialization.</li> </ul> <p>4. Strengthen the capacity to understand human-mediated factors with high potential to drive the transmission of zoonotic diseases, such as increasing human demand for animal protein, unsustainable agricultural intensification, the unsustainable use of natural resources, changes in food supply and climate change.</p>
<b>Invasive alien species<sup>c</sup></b>		
<p>Target 6</p>	<p>Invasive alien species are a major driver of biodiversity loss and a major threat to nature, nature’s contributions to people and a good quality of life. Many are pathogens or pests. Others affect human, animal, plant and environmental health in various ways, including by causing diseases, such as allergic diseases, because of their toxicity or as vectors of pathogen transmission. In addition,</p>	<p>1. Consider the adverse impacts of invasive alien species on human, animal, plant and ecosystem health in strategies, action plans and projects, and undertake assessments on that matter to support informed decision-making and actions aimed at minimizing such impacts, including through the use of multisectoral and transdisciplinary approaches.</p> <p>2. Identify gaps in knowledge, monitoring and management of emerging infectious diseases affecting biodiversity and human health that relate to or are facilitated by invasive alien species.</p>

<i>Action areas and related Framework targets<sup>a</sup></i>	<i>Relevance to health<sup>b</sup></i>	<i>Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration</i>
	invasive alien species often reduce the quantity and quality of services provided by ecosystems and can affect livelihoods and food security.	3. Promote awareness of, and education on, the impacts of invasive alien species on human, animal, plant and ecosystem health, across sectors and among consumers.
<b>Pollution</b>		
Target 7	Pollution, in all its forms, is harmful to biodiversity, ecosystem functioning and the health of people, animals, plants and other organisms. It has an impact on the ability of biodiversity to contribute, for example, to the provision of clean air and water, soil fertility, pollination and pest control. Direct and indirect exposure to pollutants, in particular early-life exposure, can increase the risk of multiple non-communicable diseases over the life course.	<ol style="list-style-type: none"> <li>1. Raise awareness of the negative impact of excess nutrients, antimicrobials, pesticides, hazardous chemicals, heavy metals, plastic (including microplastics) and air, light and noise pollution on biodiversity and human health.</li> <li>2. Promote the implementation of joint guidelines for the environmentally sound management of public health, medical and veterinary operations and their waste, including to avoid the inappropriate use and disposal of medical products, heavy metals and waste, and monitor and limit the unnecessary use of antimicrobial treatments and other pharmaceuticals.</li> <li>3. Minimize pollution from waste and wastewater municipal systems that are drivers of antimicrobial resistance; integrate biodiversity and health considerations into local and municipal waste and wastewater management plans; and incorporate national- and subnational-level strategies for the management of municipal wastewater effluents into national biodiversity strategies and action plans.</li> <li>4. Promote strategies to reduce light and noise pollution that is harmful to human health and the health of other organisms.</li> <li>5. Make use of national systems on human biomonitoring<sup>d</sup> to, among other objectives, mobilize resources to produce or enhance data to develop new strategies for strengthening pollution control measures.</li> </ol>
<b>Climate change</b>		
Target 8	Climate change is a driver of biodiversity loss and ill health. It increases the risks of extreme weather events (e.g. heatwaves, forest fires, droughts and floods) and ocean acidification and has an adverse impact	1. Integrate the consideration of climate change impacts on biodiversity and health interlinkages into, for example, national and subnational vulnerability assessments, national health adaptation plans, national disaster risk reduction strategies, national biodiversity strategies and action plans, national

<i>Action areas and related Framework targets<sup>a</sup></i>	<i>Relevance to health<sup>b</sup></i>	<i>Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration</i>
	<p>on water quality and quantity, food production from agriculture, livestock, fisheries and aquaculture, and infrastructure supporting cities and settlements, increasing risks of vector-borne, waterborne and food-borne diseases, malnutrition, heat illness, mental health and displacement. Risks from climate change affect human beings, animals, plants and ecosystems. Nature-based solutions<sup>e</sup> and/or ecosystem-based approaches can help to mitigate and adapt to climate change.</p>	<p>adaptation plans and nationally determined contributions, as well as in assessments of loss and damage.</p> <ol style="list-style-type: none"> <li>2. Strengthen capacity to address the interlinkages among biodiversity, climate change and health, including through research and by developing knowledge and communication tools.</li> <li>3. Co-develop and implement early warning systems to predict disease outbreaks in terrestrial, inland water and marine ecosystems by incorporating interoperable<sup>f</sup> climate and environmental information and epidemiological information on appropriate spatial and temporal scales to support local decision-making.</li> <li>4. Promote research on potential climate change impacts on biodiversity and health interlinkages, for example, on vector-borne and waterborne diseases and community mental health.</li> <li>5. Integrate health considerations into the design, implementation and monitoring of nature-based solutions and/or ecosystem-based approaches.</li> </ol>
<b>Agriculture, aquaculture, fisheries and forestry</b>		
<p>Target 10</p>	<p>Biodiversity at every level (genetic, species and ecosystem levels) is a pillar of food security, nutrition and dietary quality. The quality and quantity of food and the way in which it is produced have implications for human health, as well as the health of livestock, wild animals and the environment. Dietary diversity, underpinned by diverse crops, livestock, healthy forests and marine and freshwater food, among others, provide a wide range of essential nutrients and non-nutrients, such as fibre. The cultivation of nutrient-rich crops depends, among other things, on pollinators and the diversity of beneficial microorganisms in the soil.</p>	<ol style="list-style-type: none"> <li>1. Raise awareness of the interlinkages between biodiversity and health for nutrition, food security, livelihoods and food system resilience.</li> <li>2. Reduce the negative impacts on biodiversity and health of agriculture, aquaculture, fisheries and forestry, among others, by leveraging sustainable practices, such as sustainable intensification, agrobiodiversity, agroecology, integrated landscape planning and the use of integrated pest management to reduce the need for pesticides and other chemical inputs.</li> <li>3. Promote improved standards of animal welfare for their health and well-being, including to reduce the risk of communicable disease in farm animals and aquaculture, by, inter alia, limiting the unnecessary use of antimicrobials, including antibiotics to prevent antimicrobial resistance.</li> <li>4. Recognize the value of traditional food practices, the foodways of indigenous peoples and the role of local foods in strategies for health, well-being and disease prevention.</li> </ol>

<i>Action areas and related Framework targets<sup>a</sup></i>	<i>Relevance to health<sup>b</sup></i>	<i>Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration</i>
	Sustainable intensification, integrated pest management and agroecological approaches can reduce the need for pesticides, including those harmful to people and pollinators.	5. Support initiatives to conserve genetic diversity for healthy ecosystems and food security, from seeds, livestock, forestry, fisheries and pollinators.
<b>Nature's contributions to people</b>		
Target 11	Biodiversity underpins nature's contributions to people. <sup>g</sup> Safeguarding those contributions benefits human health, including physical and mental health, and reduces mortality and morbidity. The contributions include: (a) The regulation of climate, ocean acidification and hydrological cycles; (b) The regulation and improvement of air and fresh and coastal water quality and the regulation of water flows; (c) Soil biodiversity, quality and fertility and the degradation or storage of pollutants; (d) The regulation of natural hazards and extreme events; (e) Pollination and seed dispersal; (f) Food and feed production from wild, managed or domesticated land or sea organisms; (g) The regulation of pests, pathogens, predators, competitors, parasites and potentially harmful organisms; (h) Learning (education, knowledge acquisition and inspiration for art and	1. Consider nature's role in national policies, strategies and programmes as a life support system for human beings and species and for health equity, including across the life course and for different community groups, recognizing nature's positive contributions to all dimensions of human health and well-being. 2. Take steps to address the adverse impacts of biodiversity loss on health, including mental and emotional health, such as eco-anxiety, for example, by: (a) supporting initiatives that assist individuals and communities suffering from those impacts; (b) fostering positive narratives on the environment for the future, especially among children and youth; (c) recognizing relevant public health tools, such as nature prescriptions and nature-based therapy, to engage the health sector in building capacity to minimize, prevent and treat adverse impacts. 3. Use nature-based solutions and/or ecosystem-based approaches and innovative approaches to achieve benefits for biodiversity, ecosystem integrity and natural systems while delivering sustainable health benefits to people, such as supporting access to safe water, sanitation, hygiene and waste management.

<i>Action areas and related Framework targets<sup>a</sup></i>	<i>Relevance to health<sup>b</sup></i>	<i>Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration</i>
	technological design, such as biomimicry); (i) Healing, relaxation, recreation and leisure; (j) Intrinsic interconnection and supporting identities (i.e. the basis for, for example, religious, spiritual and social-cohesion experiences, and the sense of place, purpose, belonging, rootedness or connectedness); (k) The provision of medicinal, biochemical and genetic resources	
<b>Urban areas</b>		
Target 12	Green and blue spaces and urban planning that takes biodiversity into account can optimize ecosystem integrity and connectivity and increase physical, mental, spiritual and emotional health through various mechanisms, including by improving air quality, reducing the heat island effect, enhancing flood resilience, providing beneficial microbiota, bringing cultural and psychological benefits and facilitating physical exercise, and for healing, relaxation, recreation and supporting identities, as well as community and social cohesion activities.	<ol style="list-style-type: none"> <li>1. Consider benefits for human health, in all its dimensions, in biodiversity-inclusive urban planning policies and the provision of blue and green spaces.</li> <li>2. Improve access to green and blue spaces for all, including children, youth and people with disabilities.</li> <li>3. Develop communication tools in collaboration with the health sector on how enhancing biodiversity and ecological integrity and connectivity in urban areas is essential for the health and well-being of all species; and take steps to disseminate those tools across sectors, within all health sectors and to schools and community organizations.</li> </ol>
<b>Access and benefit-sharing, biosafety and biotechnology</b>		
Targets 13 and 17	Access to genetic resources and the fair and equitable sharing of benefits arising	1. Recognize the role of genetic resources, digital sequence information on genetic resources, and traditional knowledge associated with genetic



<i>Action areas and related Framework targets<sup>a</sup></i>	<i>Relevance to health<sup>b</sup></i>	<i>Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration</i>
	<p>from their utilization are 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 practice.</p> <p>The safe use of biotechnology, including through biosafety measures to regulate, manage and control potential adverse effects on biodiversity and human health, can play an important role in providing tools and solutions for biodiversity and health challenges.</p>	<p>resources, in the research and development of health products and services, and the importance of the fair and equitable sharing of benefits arising from their utilization in this regard, in line with the Convention on Biological Diversity and its Protocols.</p> <p>2. Ensure that means are in place to evaluate, regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology that could affect the conservation and sustainable use of biological diversity, also taking risks to human health into account.</p> <p>3. Support coordination mechanisms where potential benefits and risks from biotechnology applications could be assessed in a multidisciplinary manner, taking health and environmental perspectives into account.</p>
<b>Mainstreaming</b>		
Targets 14, 15 and 18	The 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.	<ol style="list-style-type: none"> <li>1. Take biodiversity and health interlinkages into account in corporate environmental social governance standards<sup>h</sup> through active dialogues with the business community, and in assessments of the values and beneficiaries of biodiversity.</li> <li>2. Include biodiversity and health interlinkages in nature-related financial disclosures.</li> <li>3. Promote 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.<sup>i</sup></li> <li>4. Communicate to decision makers at all levels the importance and economic value of a healthy environment for healthy and resilient societies and economies.</li> <li>5. Promote the consideration of the multiple values of nature for health on the basis of diverse knowledge and knowledge systems, in educational curricula and training programmes at all levels and across disciplines, ensuring the</li> </ol>

<i>Action areas and related Framework targets<sup>a</sup></i>	<i>Relevance to health<sup>b</sup></i>	<i>Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration</i>
		engagement of knowledge holders and communicators from indigenous peoples and local communities and the health sector, among others. 6. Take into account biodiversity and health interlinkages in processes for reforming incentives.
<b>Consumption</b>		
Target 16	Overconsumption is an underlying driver of biodiversity loss and ill health. More equitable and sustainable use of resources, including a reduction of waste and overconsumption, allows all to live well and in harmony with nature. Diets that are more diverse tend to be healthier. In addition, depending on the national or local context, there are opportunities for achieving co-benefits between human health and a reduced environmental footprint through sustainable healthy diets. <sup>k</sup>	1. Promote sustainable consumption choices to reduce the global footprint of consumption in order to generate environmental and health co-benefits by: <ul style="list-style-type: none"> <li>(a) Identifying opportunities to promote healthy lifestyles, sustainable consumption patterns, waste reduction and associated behavioural change that would benefit biodiversity and health, and to limit the negative effects of telecoupling;<sup>j</sup></li> <li>(b) Providing incentives for products and services with lower negative biodiversity and health impacts;</li> <li>(c) Developing knowledge tools and educational activities to raise the consumers' awareness and understanding of the negative impacts of overconsumption and waste on biodiversity and health.</li> </ul> 2. Promote diverse sustainable healthy diets through national dietary guidelines, national and subnational policies, public procurement, investments, supply chains, school environments and projects, among others.
<b>Means of implementation</b>		
Targets 19 and 20	Understanding the health co-benefits of investing in strategies and activities to halt biodiversity loss can help to mobilize necessary financial resources.	1. Engage investors, donors, philanthropic institutions and the financial sector to consider the inclusion of budget lines for biodiversity and health interlinkages in their operations, policies, strategies, programmes and accounts. 2. Incorporate biodiversity and health interlinkage in capacity-building, technology transfer and scientific and technical cooperation activities by supporting capacity-building programmes and training initiatives for diverse health professionals and health-care providers to enhance their understanding of the interlinkages between biodiversity and health, including in traditional medicine practices (e.g. traditional healing techniques and herbal medicine) and indigenous knowledge.

<i>Action areas and related Framework targets<sup>a</sup></i>	<i>Relevance to health<sup>b</sup></i>	<i>Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration</i>
		3. Support research efforts to document and validate the efficacy, safety and quality of traditional medicine practices, in particular those used by indigenous peoples, and take the findings into consideration.
<b>Knowledge and engagement of people</b>		
Targets 21, 22 and 23	Ensuring that knowledge is available to all and that all groups of people are engaged in decision-making related to biodiversity can help to 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.	<ol style="list-style-type: none"> <li>1. Facilitate the establishment or strengthening of knowledge-sharing platforms and learning networks on biodiversity and health interlinkages to facilitate the exchange of best practices, lessons learned and innovative solutions.</li> <li>2. Recognize indigenous knowledge as an important knowledge system that contributes to scientific, technical, social and economic advancements for human and planetary well-being.</li> <li>3. Promote and support the meaningful and active participation of all actors of civil society, including traditional knowledge holders, indigenous peoples and local communities, women, youth and the elderly, also recognizing their unique contributions to and active roles in the mainstreaming of biodiversity and health interlinkages.</li> <li>4. Invest in communication tools and strategies that raise awareness of the value of ecosystem functions and services in ensuring health, well-being and health equity for different stakeholders in languages and formats accessible to the diverse groups of actors.</li> <li>5. Use the Gender Plan of Action adopted by the Conference of the Parties to support a gender-responsive consideration of biodiversity and health interlinkages.</li> </ol>

<sup>a</sup> For the text of the targets, see decision [15/4](#), annex, sect. H.

<sup>b</sup> See CBD/SBSTTA/26/INF/3 for additional information on biodiversity and health interlinkages.

<sup>c</sup> An invasive alien species is a species the introduction or spread of which threatens biological diversity. See decision [VI/23](#) for further information.

<sup>d</sup> Human biomonitoring directly measures the concentration of chemicals pollutants or their metabolites in human fluids (e.g. blood, urine, breast milk and saliva) and tissues (e.g. hair, nails and teeth) (see World Health Organization, “Human biomonitoring: assessment of exposure to chemicals and their health risks – Summary for decision makers”, technical document WHO/EURO:2023-7574-47341-69480 (Geneva, 2023)).

<sup>e</sup> Nature-based solutions are actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems that address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits (see United Nations Environment Assembly resolution 5/5).

<sup>f</sup> Interoperable information generally refers to information that can be used across sectors and disciplines, in particular for use by Governments with limited human, financial and technical resources, to address concurrent issues separately.

<sup>g</sup> See Eduardo S. Brondízio and others, eds., *The Global Assessment Report on Biodiversity and Ecosystem Services* (Bonn, Germany, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019), table 231, p. 318.

<sup>h</sup> Environmental, social governance considerations and standards for corporate sustainable investing.

<sup>i</sup> Commercial determinants of health are the private sector activities that affect people's health, directly or indirectly, positively or negatively, through business actions and societal engagements; for example, supply chains, labour conditions, product design and packaging, research funding, lobbying, preference shaping and others (see World Health Organization, "Commercial determinants of health", fact sheet, 21 March 2023).

<sup>j</sup> Telecoupling refers to socioeconomic and environmental interactions over distances (see the glossary on the website of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services at [www.ipbes.net/glossary](http://www.ipbes.net/glossary)).

<sup>k</sup> Sustainable healthy diets are dietary patterns that promote all dimensions of individuals' health and well-being; have low environmental pressure and impact; are accessible, affordable, safe and equitable; and are culturally acceptable. The aims of sustainable healthy diets are to achieve optimal growth and development of all individuals and support functioning and physical, mental, and social well-being at all life stages for present and future generations; contribute to preventing all forms of malnutrition (i.e. undernutrition, micronutrient deficiency, overweight and obesity); reduce the risk of diet-related non-communicable diseases; and support the preservation of biodiversity and planetary health. Sustainable healthy diets must combine all dimensions of sustainability to avoid unintended consequences (see Food and Agriculture Organization of the United Nations and World Health Organization, *Sustainable Healthy Diets: Guiding principles* (Rome, 2019)).

## Enclosure I

### Monitoring elements for the Global Action Plan on Biodiversity and Health

The monitoring of the implementation of the Global Action Plan on Biodiversity and Health can be supported by indicators from the monitoring framework for the Kunming-Montreal Global Biodiversity Framework<sup>1</sup> and by the following additional indicators or monitoring elements:

- (a) The environmental burden of disease per year (percentage) is used as a metric in government reporting at the national level;
- (b) Biodiversity and health interlinkages are considered in sector-specific policies and strategies and as an element of environmental determinants of health;
- (c) Intergenerational equity, the differentiated roles of women and men and the unique interdependent relationship of indigenous peoples and local communities with nature are considered in national policies, strategies and programmes that address biodiversity and health interlinkages;
- (d) Multisectoral, multidisciplinary coordination mechanisms exist at the national level to address biodiversity and health interlinkages;
- (e) National focal points on biodiversity and health interlinkages are appointed;
- (f) National coordination mechanisms that address biodiversity and health interlinkages incorporate diverse knowledge and perspectives;
- (g) Biodiversity and health interlinkages are included in national health strategies;
- (h) Biodiversity and health interlinkages are included in national biodiversity strategies and action plans;
- (i) One Health projects take biodiversity and health interlinkages into consideration;
- (j) Number of measures for the conservation and sustainable use of biodiversity that support the prevention and reduction of communicable and non-communicable disease risks;
- (k) Disease alerts are detected and reported through cross-sectoral interoperable surveillance systems;
- (l) Environmental impact assessments incorporate biodiversity and health interlinkages;
- (m) Communication materials and tools adapted to the national context are available to promote the understanding of biodiversity and health interlinkages and facilitate the engagement of a wide range of stakeholders across sectors;
- (n) Education curricula and training programmes on biodiversity and health interlinkages are included in national strategies, programmes and accounts;
- (o) Funding is allocated to transdisciplinary research on biodiversity and health interlinkages;
- (p) Funding is allocated to knowledge-sharing platforms and spaces on biodiversity and health interlinkages;
- (q) National dialogues are convened and knowledge-sharing platforms are established to discuss biodiversity and health interlinkages;
- (r) Biodiversity and health interlinkages are incorporated into medical and health curricula and the curricula of environmental management professionals;

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<sup>1</sup> Decision 15/5, annex I.

(s) The human right to a clean, healthy and sustainable environment is recognized and included in capacity-building and training programmes across sectors.

## **Enclosure II**

### **Biodiversity and health interlinkages identified for health promotion and disease prevention\***

- Air quality
- Freshwater and coastal water quality, quantity and access
- Soil quality, fertility and microbiome and degradation or storage of pollutants
- Pollination and seed dispersal
- Food and feed production from wild, managed or domesticated organisms on land and in the ocean, and nutrition and dietary diversity
- Habitat (ecological conditions necessary for or favourable to human life)
- Health care (traditional medicine and traditional medical knowledge, medicines and health products, biomedical discovery, biochemical and genetic resources)
- Nature-based learning (education, knowledge acquisition and inspiration for art and technological design, such as biomimicry)
- Regulation of earth systems, such as climate change, ocean acidification and hydrological cycles
- Resilience to natural hazards, extreme events and disasters
- Beneficial microbial biodiversity and human microbiome, including immune regulation
- Regulation of pests, pathogens, predators, competitors, parasites and potentially harmful organisms
- Healing, relaxation, recreation, leisure and aesthetic enjoyment based on positive exposure, experience or engagement with nature
- Intrinsic interconnection, culture and supporting identities (i.e. the basis for religious, spiritual and social-cohesion experiences; sense of place, purpose, belonging, rootedness or connectedness, associated with various entities of the living world; narratives and myths, rituals and celebrations; satisfaction derived from knowing that a particular landscape, seascape, habitat or species exists)

## **Annex II**

### **Targeted messages for mainstreaming biodiversity into the health sector**

The targeted messages below are aimed at supporting the mainstreaming of biodiversity in the health sector and the implementation of the Global Action Plan on Biodiversity and Health. They could also be used by Parties, institutions working in the fields of human, animal and plant health and the environment, organizations working on the interlinkages between biodiversity and health, such as other multilateral environmental agreements and intergovernmental bodies, indigenous peoples and local communities and relevant stakeholders.

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\* Health promotion and disease prevention are an ambition of public health. Health promotion is the process of enabling people to increase control over and improve their health. Disease prevention describes measures taken to reduce the occurrence of risk factors by preventing the occurrence of disease or arresting its progress and reducing its consequences once established. These biodiversity and health interlinkages function as environmental and ecological determinants of health and health equity, as defined in the *Health Promotion Glossary of Terms 2021* published by the World Health Organization.

**1. Biodiversity<sup>2</sup> is essential to human health and well-being and to all of life on Earth**

(a) Health and well-being of all species are interconnected and interdependent. A holistic consideration of the health of all people, as well as of animals, plants and other organisms, is needed to ensure living in harmony with nature;

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

(c) Halting the loss of biodiversity contributes to respecting, protecting and fulfilling the human rights to health and to a clean, healthy and sustainable environment.

**2. Biodiversity loss affects everyone and is a threat to human and planetary health<sup>3</sup>**

(a) Nature's contributions to people affect almost every aspect of life, and changes in nature can have a profound impact on people's quality of life, health and health equity;

(b) The adverse impacts of biodiversity loss on health are unequal across populations and disproportionately affect poor and vulnerable populations;

(c) Environmental degradation has severe adverse impacts on indigenous peoples and their interdependent relationship with local ecosystems, including with regard to their physical, mental, emotional and spiritual health, foodways and healing practices and systems;

(d) Environmental degradation is a planetary and global health crisis that shapes the epidemiology of communicable and non-communicable diseases, tests community resilience and puts future generations at risk.

**3. Health practitioners and health systems, including traditional medicine practice, depend on biodiversity to prevent, diagnose, improve and treat physical and mental illnesses**

Science, including indigenous science, and diverse knowledge and health practices should be considered together to exchange knowledge and revise the scientific validation of different approaches to improving and promoting health and well-being. Overcoming dualism, separation and imbalances in relationships between human beings and nature is central to addressing the biodiversity and health crises.

**4. Both health and biodiversity-related interventions are needed to manage short- and long-term health risks resulting from biodiversity loss and unsustainable practices**

(a) Ecosystems, including agricultural and urban ecosystems, as well as the use of wildlife, should be managed to promote healthy ecosystems, animal and plant populations and people;

(b) Safeguarding environmental determinants of health is a shared challenge. Integrated environmental and health policies and practices are mutually reinforcing, while siloed approaches to addressing environmental and health challenges and risks are ineffective and may have unintended adverse impacts on health and the environment.

**5. The impact of climate change on nature drives and exacerbates health risks for people and is detrimental to the healthy functioning of ecosystems**

Safeguarding biodiversity and ecosystems is fundamental to climate resilient development and to minimizing the adverse impacts of climate change on health, as well as to preventing unintended negative impacts of narrowly focused climate mitigation and adaptation actions on health.

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<sup>2</sup> Biological diversity means the variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (Convention on Biological Diversity, Article 2).

<sup>3</sup> 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 the *Health Promotion Glossary of Terms 2021* published by the World Health Organization).

**6. Pollution in all its forms is harmful to biodiversity and introduces health challenges to human beings and all other species**

Effectively reducing pollution from all sources can improve health and well-being and prevent diseases.

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