Agenda item 9
**Biodiversity and health**

# Biodiversity and health

**Draft recommendation submitted by the Chair**

*The Subsidiary Body on Scientific, Technical and Technological Advice*

*[to be completed]*

*Recommends* 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[1] acknowledges the interlinkages between biodiversity and health and the three objectives of the Convention on Biological Diversity,[2]

*Recalling* the Framework for cross-cutting initiative on biodiversity for food and nutrition, adopted by COP in its decision VIII/23

*Recognizing* that the implementation of the Framework will contribute to the improvement of health and well-being, including physical, mental, spiritual and emotional health by addressing drivers of biodiversity loss, which are often also drivers of ill health, including those outlined in CBD/SBSTTA/26/INF/3,

*Noting* the definition of human health provided by the Constitution of the World Health Organization, which states that health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity,

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

*Welcoming* the participation of the Quadripartite Alliance for One Health in the preparation of the Global Action Plan on Biodiversity and Health,

*Noting* 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,

*Acknowledging* the potential interlinkages of the draft Global Action Plan on Biodiversity and Health with several issues covered in the horizon scanning report (Annex I of CBD/SBSTTA/26/4) containing results of the process for broad and regular horizon scanning, monitoring and assessment of the multidisciplinary Ad Hoc Technical Expert Group on Synthetic Biology,

*Taking note of* the options to integrate biodiversity into COVID-19 stimulus and recovery measures as contained in CBD/SBSTTA/26/INF/3, and in the WHO Manifesto for a healthy recovery from COVID-19,[3]

*Noting further* the importance given to biodiversity and health interlinkages by other organizations and initiatives, including the UNEA resolution 5.6 on biodiversity and Health, which

[1] Decision 15/4, annex.
[2] United Nations, *Treaty Series*, vol. 1760, No. 30619.
[3] WHO Manifesto for a healthy recovery from COVID-19. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0IGO. www.who.int/publications/m/item/who-manifesto-for-a-healthy-recovery-from-covid-19

noted the interdependence between the crises of climate change, biodiversity loss, pollution and health, 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, the Permanent Forum on Indigenous Issues, which recognized the centrality of nature to health,[4] and the Global Framework on Chemicals, which aims to prevent or minimize harm from chemicals and waste, protecting human health and biodiversity,

*Considering* the importance of cooperation with other multilateral environment agreements and relevant organizations and initiatives to achieve a global approach for biodiversity and health, and the need to avoid duplication of efforts,

1. *[Adopts* the Global Action Plan on Biodiversity and Health as contained in annex I to the present decision, as a voluntary 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. *[Welcomes* 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,

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

(b)bis To designate a national youth liaison focal point on biodiversity and public health, who will, *inter alia*, report on the contributions and needs of children and youth in relation to environmental stewardship, health and intergenerational equity;

(c) To integrate biodiversity and health interlinkages into biodiversity-related policies, programmes and accounts, in line with decision 14/4 and if appropriate, in their national biodiversity strategies and action plans, taking the elements of the Global Action Plan into account, in line with section C of the Framework;

(c bis) To recognize the need to urgently address the drivers of biodiversity loss to reduce risks to health, while contributing to the implementation of the Kunming-Montreal Global Biodiversity Framework, in particular section C, paragraph 7 (r) and Target 14;

4. *Invites* other Governments, relevant multilateral environment and health agreements and international 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, and to further support the development and implementation of measures, guidance and tools for promoting and supporting the mainstreaming of biodiversity and health linkages;

(4 bis) Invites indigenous peoples and local communities, relevant stakeholders, including the private sector and academia, women, children and youth, to contribute to the implementation of the Global Action Plan;

[4] E/C.19/2023/5, para. 24.

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

6. *Urges* Parties, in accordance with Article 20 of the Convention, other Governments, relevant multilateral environmental and health agreements, relevant organizations, donors and relevant financial institutions to provide financial and technical support, as appropriate, for capacity-building and development and avail adequate resources in a timely manner for the effective implementation of the Global Action Plan;

6 bis. *Requests* the Global Environment Facility, to provide financial assistance to developing countries, including capacity-building and development activities, for national, subnational and regional projects that address the Global Action Plan;

7. *Invites* Parties, other Governments, relevant multilateral environmental agreements and other organizations to share measures, guidance and tools, examples, best practices and lessons learned in the implementation of the Global Action Plan and the mainstreaming of biodiversity and health interlinkages at all levels;

8. *Requests* the Executive Secretary, subject to the availability of 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 measurement tools on biodiversity and health, taking account of section III and paragraph 14 of annex I and the information referred to in annex III to the present decision, among others, and to prepare a note on how these indicators, metrics and progress measurement tools could be used to monitor the implementation of the Global Action Plan;

(b) To facilitate, in collaboration with partners, capacity-building, technical and scientific cooperation and technology transfer activities to support Parties, indigenous peoples and local communities and stakeholders, such as relevant organizations, academia, women, children, youth and the elderly in the uptake and implementation of the Global Action Plan, including by convening regional workshops and facilitating dialogues, ensuring indigenous peoples, local communities, women and youth participation, in collaboration with, inter alia, 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 and strengthen cooperation with international organizations and other multilateral environmental, health and human rights agreements with regard to biodiversity and health interlinkages;

(d bis) To explore, in consultation with the World Health Organization, the development of an online information platform to collate knowledge and experiences on interlinked biodiversity and health policies and actions, including, inter alia, case studies, indicators, assessments and methodologies, in order to facilitate knowledge-sharing and capacity-building and thereby further support implementation of the Global Action Plan;

(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, and to the World Health Assembly at its seventy-ninth meeting.

# 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, women, children, youth, the private sector and other stakeholders to mainstream biodiversity and health interlinkages into national policies, strategies, programmes and accounts, in line with national circumstances, priorities and legislation, and in a manner consistent with relevant international obligations. The Plan is aimed in particular at enabling relevant government authorities 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 local and from multisectoral to sector-specific, with cross-sectoral collaboration at the governmental level, and that allow for the participation of civil society, indigenous peoples and local communities, women, children, youth, the elderly, and people with disabilities as well as academia, the private and financial sectors, among others. 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, in order to ensure consistency with relevant international obligations.

3. The Global Action Plan builds on previous work undertaken under the Convention on Biological Diversity,[5] 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). The Plan is also intended to facilitate the realization of biodiversity and health co-benefits from the implementation of the Convention and the Kunming-Montreal Global Biodiversity Framework.[6]

3bis. The Global Action Plan should be implemented recognizing the importance of the three objectives of the Convention – the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, in a balanced manner, to further work on the interlinkages between biodiversity and health. It further acknowledges that the provision of adequate means of implementation to developing countries, including adequate and predictable financial resources, capacity building, scientific and technical cooperation, and technology transfer, is critical to enable the implementation of the Plan and ensure equity. The Plan further stresses the urgent need to address the inequities in global health and the need to strengthen health systems in developing countries and countries with economies in transition, including through North-South, South-South and triangular cooperation.

3ter. Nothing in this Global Action Plan should be interpreted as modifying the rights and obligations of a Party under the Convention or any other international agreement.

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

[5] See information document CBD/SBSTTA/26/INF/3.
[6] Decision 15/4, annex.

psychological experiences and supporting identities), which are central to the quality of life and cultural integrity; (ii) nature's contributions to people[7] play an essential role in human health by regulating material and non-material ecosystem services;[8] (iii) worldwide, social groups have unequal access to nature's contributions to people; (iv) the decline in nature's contributions to people threatens the quality of life; (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; and (vi) the global environment can be safeguarded through enhanced international cooperation and linked, locally relevant measures;

(b) The findings of the Intergovernmental Panel on Climate Change, namely, that climate change is a threat to human well-being;

(c) The study on indigenous determinants of health in the 2030 Agenda for Sustainable Development,[9] welcomed by the Permanent Forum on Indigenous Issues;

(d) The lessons learned from the coronavirus disease (COVID-19) pandemic and other emerging zoonoses , which has further highlighted the importance of the relationship between health and well-being and biodiversity, the urgent need to conserve, restore and sustainably use biodiversity, the need to address inequities in global health, including with respect to equitable access to medicines, vaccines, diagnostics and medical equipment, as well as the need to enhance global collaboration and co-operation 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, overexploitation 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[10] of human and animal health, and the conservation, restoration and sustainable use of biodiversity benefits health and the right to a clean, healthy and sustainable environment by maintaining ecosystem services, which contributes to fulfilling the psychological needs for nature relatedness and realizing the vision of living in harmony with nature by 2050;

(d) The relationship between 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, restoration and sustainable use of biodiversity in prevention, reduction and proactive management of communicable and non-communicable disease risks;

(d bis) Several human-mediated factors are most likely driving the emergence of zoonotic diseases, including increasing human demand for animal protein, unsustainable agricultural intensification, increased use and exploitation of wildlife, unsustainable utilization of natural

[7] 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.

[8] 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.

[9] E/C.19/2023/5.

[10] 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.

resources accelerated by urbanization, land use change and extractive industries, increased travel and transportation, changes in food supply, and climate change;[11]

[(e) Halting biodiversity loss is fundamental to respecting, protecting and fulfilling the human rights to health and to a clean, healthy and sustainable environment;[12]]

(e bis) Ensuring the fair and equitable sharing of benefits arising from the utilization of genetic diversity and traditional associated knowledge, including for Parties that provide genetic resources for health-related research and development, is critical to achieve more equitable health systems;

(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;

(f bis) Biodiversity loss and its direct drivers are a threat to animal, human and plant health, while biodiversity is a key factor of climate change mitigation and adaptation;

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

(h) More effective and integrated policy coordination on biodiversity 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, and that of other holistic approaches, while acknowledging the need to enhance international cooperation with a view to addressing the specific challenges faced by developing countries in implementing the One Health approach, including by strengthening capacity for health surveillance and promoting responses, in line with national circumstances and priorities.

# 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 in a manner consistent with international obligations and agreements.

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 take into consideration both individual and collective systemic levels, across and between species and ecosystems, and the multiple dimensions of health and well-being. 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 a sustainable way of life by 2050.

9. The implementation of the Global Action Plan may be further supported by a compilation of 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

[11] United Nations Environment Programme and International Livestock Research Institute (2020). Preventing the Next Pandemic: Zoonotic diseases and how to break the chain of transmission. Nairobi, Kenya.
[12] UNGA resolution 76/300.

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

## A. General actions

11. Proposed general actions include the following:

(a) Assessing biodiversity and health interlinkages, including nature's contributions to people related to health (including wildlife health), the environmental determinants of health and the environmental burden of disease[13] at the national level, taking account of biocultural diversity,[14] diverse value systems and a comprehensive understanding of health and well-being, including physical, sexual reproductive, mental, spiritual and emotional health, cognitive development, learning, supporting identities[15] 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 biodiversity in all aspects of health and well-being;

(c) Promoting, in consideration of the One Health approach and other holistic approaches, policy coordination and mainstreaming of biodiversity and health interlinkages into strategies related to sectors with the highest impact on biodiversity, into national biodiversity strategies and action plans, into plans for mental health, nutrition, farming, on-communicable and communicable disease control and childhood development, economic and sustainable development policies, policies related to animal and plant health, disaster risk reduction, relief and recovery, pandemic prevention, preparedness and response action plans, and policies on sustainability in the health sector;

(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, women, children, youth and the elderly, and designating a national focal point for biodiversity and health to facilitate the process;

(dbis) Considering the designation of a national gender liaison focal point on biodiversity and public health, who, among other tasks, can report on the contributions and needs of women and girls in relation to environmental stewardship and gender equality;

(e) Taking steps to ensure the effective participation in decision making and action on biodiversity and health, including by 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, health and intergenerational equity;

(f) Incorporating biodiversity and health interlinkages into assessments related to sustainable development, including environmental impact assessments, strategic environmental

[13] The environmental burden of disease is the magnitude of health impacts from modifiable environmental drivers. as contained in CBD/SBSTTA/26/INF/3

[14] See also decision 15/22 of the Conference of the Parties to the Convention.

[15] 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).

assessments, health assessments, health impact assessments, socioeconomic assessments and other relevant assessments, in particular by:

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

(ii) Including diverse health stakeholders[16] 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;

(iv) Ensuring that the assessments, as well as national monitoring, reporting and review frameworks, consider biodiversity loss and degradation in the context of intergenerational equity and gender equality 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, improving access to scientific evidence and good practices, through enabling transformative and transdisciplinary education and research, respecting the traditional knowledge of indigenous peoples and local communities, and with their free prior and informed consent;

(h) Strengthening the understanding of the One Health approach and other holistic approaches, and stress the focus on biodiversity and health interlinkages by introducing them into the curricula of professionals in the fields of health care and medicine, public and global health, biodiversity and environment, urban spatial planning, including for green and blue spaces, and other relevant fields, as part of lifelong learning and skills development;

(i) Encouraging, where appropriate, in collaboration with health-related organizations, the integration of biodiversity-related metrics, indicators and tools, as well as welfare metrics and indicators, into health strategies, plans and programmes, and conversely, the integration of health-related metrics, indicators and tools into biodiversity strategies, plans and programmes, in line with existing mandates;

(i bis) Encouraging the development of sector-specific information material such as fact sheets to mainstream biodiversity and health interlinkages into key sectors[17]

(j) Enhancing international cooperation to support developing countries in addressing the specific environmental and health-related challenges and regulating resource use and extraction owing to international demand, including in implementing the One Health approach and other holistic approaches;

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

## 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

[16] Health stakeholders include those related to human, animal and plant health and those with diverse knowledge of health.

[17] These include but are not limited to agriculture, forestry, fisheries, aquaculture, aquaculture, tourism, health, infrastructure, energy and mining, manufacturing and processing, and finance in line with previous CBD COP decisions on mainstreaming.

> 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.[18]

13. The human right to a clean, healthy and sustainable environment is also acknowledged in the Framework.[19]

14. Since the health of the environment and the health and well-being 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.

[18] Kunming-Montreal Global Biodiversity Framework, Section C, para. 7 (r).
[19] UNGA resolution 76/300 in line with CBD/COP/DEC/15/29).

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

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
|---|---|---|
| **Land and sea use** | | |
| Targets 1, 2 and 3 | Reducing the loss, 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. | 1. Encourage efforts to consider 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, *inter alia*, indigenous peoples and local communities, women, children, youth and the elderly; livestock and wildlife, taking risks of disease spillover and spillback into account.[1]<br>2. Encourage efforts to improve in line with national capabilities, 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.<br>3. Incorporate the consideration of biodiversity and health interlinkages into policies and programmes for water, sanitation and hygiene and measures to protect and sustainably manage ecosystems that supply water.[2]<br>3bis. Consider the contributions of indigenous peoples, and local communities and traditional practices to mitigate negative health impacts in land-and-sea use planning and actions for conservation and restoration.<br>3ter. Develop technologies and disease monitoring systems for improved regulation of wildlife trade.<br>[1] *CBD/SBSTTA-SBI-SS/2/2*<br>[2] *CBD/SBSTTA/24/9* |
| **Species management** | | |
| Targets 4, 5 and 9 | The sustainable management of populations of wild species is important for the health of ecosystems and the | 1. Protect the customary sustainable use of biodiversity and ecosystems stewardship by indigenous peoples and local communities in protected areas, |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
|---|---|---|
| | 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 those particularly dependent on wild 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. Maintaining, in partnership with indigenous peoples and local communities, the genetic diversity of wild species, domestic species and their wild relatives increases resilience against future pathogens, food security and nutritional values for the benefit of environmental and human health. | and areas under other effective area-based conservation measures (OECM) and indigenous and traditional territories, and related health benefits.<br>2. Consider the role of species and genetic diversity in the production of nutritious food, food security, nutrition, medicine and other goods, to ensure that the medicinal use of wild species, including in traditional medicine, is sustainable, safe and legal; and, for threatened or protected species, encourage precautionary approaches and conservation actions, as well as alternative, sustainable sources for medicinal use where possible.[3]<br>3. Improve, in accordance with other international agreements and within national capabilities the regulation, management and use of and trade in wild species, such that it is sustainable and safe for human and wildlife health, by:<br>(a) Acknowledging and addressing the potential for health risks from use practices, such as the transport, marketing and commercialization of specimens of wild species;<br>(b) Improving biosecurity measures and sanitation in markets and along the entire value chain;<br>(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;[4]<br>(d) Including policies and actions aimed at limiting pathogen spillover and spillback in wildlife use and management programmes and activities, such as wildlife farming and commercialization.<br>4. Strengthen, when possible and in accordance with national capabilities, the capacity to understand and manage human-mediated factors with high potential to drive the transmission of zoonotic diseases, such as unregulated and unsustainable consumption of wild animal meat,<br>4.bis Maintain the genetic diversity of wild and domestic species and their wild relatives to safeguard their resilience and adaptive potential hence protecting the health benefits associated with their existence.<br>4.ter Promote collaborations in line with the One Health approach, by reinforcing planning and surveillance of biodiversity, including on wildlife habitats and zoonotic pathogen spillover risk to better assess and address |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
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| | | health threats and disease risks in order to manage wild species sustainability. Infectious disease emergence can be reduced, mostly by preserving wild species that work as reservoirs for viruses, and by reducing contact between humans, their livestock, and wildlife.<br>[1] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, *Global Assessment Report on Biodiversity and Ecosystem Services, Summary for Policymakers*, available at https://www.ipbes.net/document-library-catalogue/summary-policymakers-global-assessment-laid-out<br>[4] *CBD/COP/DEC/15/29* |
| **Invasive alien species**[c] | | |
| Target 6 | Invasive alien species are a major driver of biodiversity loss[1] and a major threat to nature, nature's contributions to people and a good quality of life[2]. Invasive alien species can be pathogens or pests and 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, invasive alien species often reduce the quantity and quality of services provided by ecosystems and can affect livelihoods and food security.<br>[1] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, *Global Assessment Report on Biodiversity and Ecosystem Services, Summary for Policymakers*, available at https://www.ipbes.net/document-library-catalogue/summary-policymakers-global-assessment-laid-out | 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 preventing and minimizing such impacts, including through the use of multisectoral and transdisciplinary approaches.<br>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.[1]<br>3. Promote awareness of, and education on, the impacts of invasive alien species on human, animal, plant and ecosystem health,<br>3bis. Promote and strengthen collaboration with other sectors impacted by invasive alien species for enhancing prevention, control and management of invasive alien species, especially to address invasions of pathogenic agents, to reduce and prevent disease emergence.<br>[1] *CBD/COP/DEC/15/27* |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
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| | [2] Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services, *Thematic Assessment Report on Invasive Alien Species and Their Control*, (Bonn, Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services, 2023). | |
| **Pollution** | | |
| 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[1,2], and exposure to air pollution in later life increases the risk of developing dementia.<br>[1] Romanelli, Cristina, and others, *Connecting Global Priorities: Biodiversity and Human Health – A State of Knowledge Review* (Geneva, World Health Organization and Secretariat of the Convention on Biological Diversity, 2015).<br>[2] Landrigan, Philip and others, *Mindaroo-Monaco Commission on Plastics and Human Health, Annals of Global Health*,89(1): 23, (2023) | 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.[1,2]<br>2. Promote the implementation of voluntary joint guidelines for the environmentally sound management of public health, medical and veterinary operations and their waste[3], including to avoid the inappropriate use and disposal of antibiotics, pharmaceuticals, medical products[4], heavy metals and waste[5,6],<br>3. Minimize pollution from waste and wastewater municipal systems 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.<br>4. Promote strategies to reduce light and noise pollution, [6],[7] especially in urban environments that is harmful to human health and the health of other organisms.<br>5. Make use of national systems on human biomonitoring[d] to, among other objectives, mobilize resources to produce or enhance data to develop new strategies for strengthening pollution control measures.[1]<br>5.bis Develop monitoring and/or surveillance data, enhance information sharing and promote understanding of the linkages between chemicals, and waste and human health impacts to maximize the co-benefits for biodiversity and human health, including through One Health approaches.<br>[1] World Health Assembly resolution 76.17 |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
|---|---|---|
| | | [2] Landrigan, Philip and others, *Mindaroo-Monaco Commission on Plastics and Human Health, Annals of Global Health*,89(1): 23, (2023)<br>[3] World Health Organization, Food and Agriculture Organization of the United Nations, World Organisation for Animal Health & United Nations Environment Programme, *One health joint plan of action (2022–2026): working together for the health of humans, animals, plants and the environment,* (Rome, 2022).<br>[4] World Health Assembly resolution 76.17<br>[5] United Nations Environment Programme, *Bracing for superbugs: Strengthening environmental action in the One Health response to antimicrobial resistance,* (Geneva, United Nations Environment Programme, 2023).<br>[6] World Health Organization, *Compendium of UN and other UN guidance on health and the environment,* (Geneva, World Health Organization, 2021).<br>[7] World Health Organization, *Seventh ministerial conference on environment and health, Budapest Declaration: Accelerating action for healthier people, a thriving planet, a sustainable future* |
| **Climate change** | | |
| | Climate change exacerbated by biodiversity loss, is a driver of biodiversity loss and ill health [1]. It increases the risks of extreme weather events (e.g. heatwaves, forest fires, droughts and floods) and ocean acidification and has an adverse impact 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 | 1. Integrate the consideration of climate change biodiversity and health interlinkages into, relevant national policy and planning instruments, in line with national circumstances and priorities<br>2. Strengthen capacity building and development to address the interlinkages among biodiversity, climate change and health, including through research, education and by developing knowledge and communication tools and enhance international cooperation, through technology transfer<br>3. Co-develop and implement early warning systems to predict disease outbreaks in terrestrial, inland water and marine ecosystems by incorporating interoperable[f] climate and environmental information and epidemiological information on appropriate spatial and temporal scales to support local decision-making.[2,3]<br>4. Promote research on potential climate change biodiversity and health interlinkages, for example, on vector-borne and waterborne diseases and mental health. |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
|---|---|---|
| | ecosystems.1,2 Nature-based solutions and/or ecosystem-based approaches can help to mitigate and adapt to climate change<br><br>1. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Global Assessment Report on Biodiversity and Ecosystem Services, Summary for Policymakers | 5. Integrate holistic health considerations into the design, implementation and monitoring of nature-based solutions and/or ecosystem-based approaches. <u>5bisPromote the development of indicators on the climate, biodiversity and health linkages</u><br><br>[1] World Health Organization, *WHO Policy Brief: Loss and Damage*, (Geneva, World Health Organization, 2022).<br>[3] *CBD/SBSTTA/24/9* |
| **Agriculture, aquaculture, fisheries and forestry** | | |
| Target 10 | Biodiversity at every level (genetic, species and ecosystem levels) is a pillar of food security, nutrition and dietary quality.[1] 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 crops depends, among other things, on pollinators and the diversity of beneficial microorganisms in the soil. Sustainable intensification, integrated pest management, breeding of adapted crop varieties and agroecological approaches can reduce the need for pesticides, including those harmful to people and pollinators. | 1. Raise awareness of the interlinkages between biodiversity and health for nutrition, food security, livelihoods and food system resilience.[1,2,3,4]<br>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, breeding of adapted crop varieties and the use of integrated pest management to reduce the need for and use of, pesticides, fertilizers and other chemical inputs, among other sustainable practices<br>3. Promote improved standards of animal welfare for their health and well-being[5], 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.<br>4. Recognize the value of traditional food practices, the foodways of indigenous peoples[6] and local communities in strategies for health, well-being and disease prevention.<br>5. Support initiatives to conserve genetic diversity for healthy ecosystems and food security, including from *inter alia* seeds, livestock, forestry, fisheries and pollinators.[7]<br>[1] World Health Organization, *Guidance on mainstreaming biodiversity for nutrition and health*, (Geneva, World Health Organization, 2020) |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
|---|---|---|
| | [1] World Health Organization, *Guidance on mainstreaming biodiversity for nutrition and health*, (Geneva, World Health Organization, 2020) | [2] Food and Agriculture Organisation of the United Nations, Biodiversity and nutrition: a common path, (Rome, Nutrition and Consumer Protection Division,<br>[3] Food and Agriculture Organisation of the United Nations Commission on Genetic Resources for Food and Agriculture, The State of the World's Biodiversity for Food and Agriculture, (Rome, Food an Agriculture Organisation of the United Nations, 2019).<br>[4] Food and Agriculture Organisation of the United Nations Commission on Genetic Resources for Food and Agriculture, *Framework for Action on Biodiversity for Food and Agriculture*, (Rome, Food and Agriculture Organisation of the United Nations 2022).<br>[5] World Organisation for Animal Health, *Global Animal Welfare Strategy*, (Paris, World Organisation for Animal Health, 2017).<br>[6] United Nations Permanent Forum on Indigenous Issues, Note by the Secretariat, *Indigenous Determinants of Health in the 2030 Agenda for Sustainable Development*, (2023) (E/C.19/2023/5)<br>[7] Consultative Group on International Agricultural Research, initiative on Environmental health and biodiversity, webpage available at https://www.cgiar.org/research/cgiar-portfolio/environmental-health-biodiversity/ |
| **Nature's contributions to people** | | |
| Target 11 | Biodiversity underpins nature's contributions to people.[g] Safeguarding those contributions benefits human health, including physical and mental health, and reduces mortality and morbidity. The contributions include[1]:<br>(a) The regulation of climate, ocean acidification and hydrological cycles;<br>(b) The regulation and improvement of air and fresh and coastal water quality and the regulation of water flows;<br>(c) Soil biodiversity, quality and fertility and the degradation or storage of pollutants; | 1. Consider biodiversity's contributions in national policies, strategies and programmes including across the life course and for different community groups, recognizing nature's positive contributions to all dimensions of human health and well-being.<br>2. Take steps to address the adverse impacts of biodiversity loss on health, for example, by:<br>(a) supporting initiatives that assist individuals and communities suffering from those impacts;<br>(b) fostering positive narratives on the environment for the future, especially among children and youth;<br>(c) recognizing relevant public health tools, such as nature prescriptions and nature-based therapy, traditional medicine and phytotherapeutic products to engage the health sector in building capacity to minimize, prevent and treat adverse impacts[1]. |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
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| | (d) The regulation of natural hazards and extreme events;<br>(e) Pollination and seed dispersal;<br>(f) Food and feed production from wild, managed or domesticated land or sea organisms;<br>(g) The regulation of pests, pathogens, predators, competitors, parasites and potentially harmful organisms;<br>(h) Learning (education, knowledge acquisition and inspiration for art and technological design, such as biomimicry);<br>(i) Healing, relaxation, recreation and leisure;<br>(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);<br>(k) The provision of medicinal, biochemical and genetic resources<br>[1] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, *Global Assessment Report on Biodiversity and Ecosystem Services, Summary for Policymakers*, available at https://www.ipbes.net/document-library-catalogue/summary-policymakers-global-assessment-laid-out | 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, waste management, medicines and vaccines, and for disaster risk reduction, relief and recovery.<br>[1] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, *Global Assessment Report on Biodiversity and Ecosystem Services, Summary for Policymakers*, available at https://www.ipbes.net/document-library-catalogue/summary-policymakers-global-assessment-laid-out |
| **Urban areas** | | |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
|---|---|---|
| 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. | 1. Consider benefits for human health, in all its dimensions, in biodiversity-inclusive urban planning policies and the provision of blue and green spaces.<br>2. Improve access to and accessibility of biodiversity- rich green and blue spaces for all, especially for those more vulnerable to the negative impacts from social or environmental determinants, such as children, youth, the elderly and people with disabilities, migrants, racial minorities or low income populations<br>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.<br>3bis. Improve green and blue infrastructure and connectivity to foster biodiversity and optimize ecosystem services, especially those of high relevance to health in urban areas such as air pollution removal, acoustic pollution absorption, avoiding run-off and soil erosion, spaces to contact with nature, to practice physical exercise, among others<br>3ter. Promote nature's contributions to people relating to healing, relaxation, recreation and leisure in particular urban and densely populated areas. |
| **Access and benefit-sharing** | | |
| Target 13 | Access to genetic resources and the fair and equitable sharing of benefits arising 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 traditional knowledge and traditional medicine practice of indigenous peoples and local communities | 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 products and services, and the importance of the fair and equitable sharing of benefits arising from their utilization in this regard[1],<br>2.Ensure that the benefits arising from the utilization of genetic resources and digital sequence information as well as subsequent applications and commercialization are shared in a fair and equitable way ,<br>3. Promote the effective participation of developing countries in health-related biotechnological research activities, including Parties, that are in a position to |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
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| | | provide the genetic resources for such research, consistent with national circumstances,<br>4. Take all practicable measures to promote and advance priority access on a fair and equitable basis by developing countries to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties.<br>5.Ensure compliance with access and benefit-sharing frameworks, including across the pharmaceutical industry, to prevent the misappropriation of genetic resources and digital sequence information and associated traditional knowledge.<br>[1] *CBD/COP/DEC/15/29* |
| **Biosafety and biotechnology** | | |
| **Target 17** | 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 | 1. Ensure that means are in place to evaluate, regulate, manage and control the risks associated with the use and release of living modified organisms resulting from biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, also taking risks to human health into account.<br>2. Support research, development and coordination mechanisms where potential benefits and risks from biotechnology applications could be assessed in a multidisciplinary manner, taking health and environmental perspectives into account.<br>3.Strengthening the application of biosafety measures, where applicable, to ensure safeguards in research, development and commercialization of activities involving living modified organisms;<br>4. Promote the sharing of benefits for health arising out of biotechnological developments |
| **Mainstreaming** | | |
| Targets 14, 15 and 18 | The consideration of biodiversity and health interlinkages in decision-making across all sectors can improve awareness | 1. Take biodiversity and health interlinkages into account in corporate environmental social governance standards[h] through active dialogues with the |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
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| | of the benefits of biodiversity to foster more equitable health systems. | business community, and in assessments of the values and beneficiaries of biodiversity.<br>2. Include biodiversity and health interlinkages in nature-related financial disclosures.<br>3. Promote private and public investment and incentives that safeguard a broad spectrum of biodiversity and health interlinkages.<br>4. 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 engagement of knowledge holders and communicators from indigenous peoples and local communities and the health sector, among others.[1,2]<br>5. Take into account biodiversity and health interlinkages in processes for reforming incentives and subsidies harmful for biodiversity including promoting positive incentives.<br>5. bis Developing sector-specific information material such as fact sheets to mainstream biodiversity and health interlinkages into key sectors.[3]<br>[1] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Methodological assessment of the diverse values and valuation of nature, (Bonn, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2022).<br>[2] World Health Organization, *Global Strategy on Health, Environment, and Climate Change,* (Geneva, World Health Organization, 2020).<br>[3] Willetts, Elizabeth and others, *Advancing integrated governance for health through national biodiversity strategies and action plans, The Lancet, vol 402, No:10404* (July 2023) |
| **Consumption** | | |
| 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. | 1. Promote co-benefits from sustainable consumption choices by:<br>(a) Identifying opportunities to promote healthy lifestyles, sustainable consumption patterns, waste reduction and associated behavioural change that would benefit biodiversity and health;[1] |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
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| | | (b) 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. |
| | | [1] *CBD/COP/DEC/XIII/6* |
| **Means of implementation** | | |
| Targets 19 | Understanding the health co-benefits of investing in strategies and activities to halt biodiversity loss can help to mobilize necessary financial resources | 1. Increase international public funding, including official development assistance to support projects and programmes in developing countries for integrating biodiversity and health interlinkages in relevant policies, strategies, programmes and accounts. |
| Target 20 | Improving capacity-building, technical and scientific cooperation and access to and transfer of technology relevant to interlinkages between biodiversity and health, through North-South, South-South and triangular partnerships. | 1. Incorporate biodiversity and health interlinkage in capacity-building and development, technical and scientific cooperation and technology transfer activities by supporting 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 and traditional knowledge.<br>2. Provide and facilitate access for and transfer to other Contracting Parties, in particular developing countries, of technologies that are relevant to the conservation and sustainable use of biological diversity and to integrate biodiversity and health interlinkages into relevant policies and initiatives<br>3. Take legislative, administrative or policy measures, as appropriate, with the aim that the private sector facilitates access to, joint development and transfer of technology relevant to integrating biodiversity and health interlinkages into relevant policies and initiatives<br>4. Facilitate the exchange of information, from all publicly available sources, relevant to the conservation and sustainable use of biological diversity and to the integration of biodiversity and health interlinkages into relevant policies and initiatives, taking into account the special needs of developing countries |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
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| | | 5. Promote technical and scientific cooperation with other Contracting Parties, in particular developing countries, in implementing this Plan, inter alia, through the development and implementation of national policies. In promoting such cooperation, special attention should be given to the development and strengthening of national capabilities, by means of human resources development and institution building.<br>6. Support efforts to document traditional medicine practices, in particular those used by indigenous peoples and local communities, with their free, prior and informed consent, and recognizing and respecting their rights over their traditional knowledge. |
| **Knowledge and engagement of people** | | |
| 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. | 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, taking into account the needs of groups in vulnerable situations and of indigenous peoples and local communities<br>(1bis) Promote and disseminate awareness raising materials, advocacy tools, best practice and policies that maximize biodiversity and health co-benefits and highlight the relevant contributions of indigenous peoples, and local communities, and vulnerable groups such as women, children, youth and the elderly and persons with disabilities.<br>(1ter) Incorporate the health benefits from nature into formal education systems from primary to post-secondary schooling to further enhance the interlinkages of biodiversity and health.<br>2. Recognize traditional and local knowledge as an important knowledge system that contributes to scientific, technical, social and economic advancements for human well-being.<br>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 and people with disabilities, also recognizing their unique contributions to and active roles in the mainstreaming of biodiversity and health interlinkages. |

| *Action areas and related Framework targets*[a] | *Relevance to health*[b] | *Actions to ensure biodiversity and health co-benefits, to be implemented taking the One Health and other holistic approaches into consideration* |
|---|---|---|
| | | 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.<br>5. Implement the Gender Plan of Action adopted by the Conference of the Parties to support a gender-responsive consideration of biodiversity and health interlinkages.<br>5bis. Communicate on the health risk and costs arising from inaction and continued ecosystem degradation and biodiversity loss. |

[a] For the text of the targets, see decision 15/4, annex, sect. H.

[b] See CBD/SBSTTA/26/INF/3 for additional information on biodiversity and health interlinkages.

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

[d] 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)).

[e] 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).

[f] 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.

[g] 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.

[h] Environmental, social governance considerations and standards for corporate sustainable investing.

# Annex II

## 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[1] and by the following additional 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 and impacts on 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 systems and worldviews;

(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 and programmes

(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) Effective participation of developing countries in health-related biotechnological research;

[1] Decision 15/5, annex I.

(r) Means of implementation provided by developed countries to developing countries to support the integration of biodiversity and health in policy and planning instruments related to biodiversity and health;

(s) National dialogues are convened and knowledge-sharing platforms are established to discuss biodiversity and health interlinkages;

(t) Biodiversity and health interlinkages are incorporated into medical and health curricula and the curricula of environmental management professionals;

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

(u)bis Biosecurity protocols and practices at national borders and within countries.

# Annex III

## 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[2]
- 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)
- Health of indigenous peoples and local communities (Minamata)

[2] Eg. Melting of permafrost and permafrost threads can release strains of microorganisms potentially harmful to human health

# Annex IV

## 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 agreements and intergovernmental bodies, indigenous peoples and local communities, women, children and youth and relevant stakeholders.

**1. Biodiversity[3] 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 and social determinant of human health, and the conservation, restoration 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 health**

(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, for example disproportionately affecting populations in situations of vulnerability, women, children and youth, elderly people and people with disabilities/and people in vulnerable situations;

(c) Environmental degradation has severe adverse impacts on indigenous peoples and local communities and their interdependent and unbreakable 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 global health crisis that shapes the epidemiology of communicable and non-communicable diseases, tests community resilience and puts future generations at risk.

2. **Promoting the sustainable use of biodiversity and ensuring the fair and equitable sharing of benefits arising from the utilization of genetic resources are indispensable tools to generate benefits for human health.**

(a) Genetic resources and DSI contribute to health-related research and development which results in the development of vaccines, medicines, etc.

**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 traditional and diverse knowledge and health practices, should be considered together to exchange best practices knowledge and revise the scientific validation of different approaches to improving and promoting health and well-being. Overcoming dualism,

[3] 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).

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) All ecosystems, including man-made ecosystems, as well as the use of wildlife, should be sustainably managed to promote healthy ecosystems, animal, plant and human well-being;

(b) Safeguarding environmental and social determinants of health is a shared challenge. Integrated environmental and health policies and practices are mutually reinforcing, while siloed approaches to addressing environmental, social and health challenges and risks are ineffective and may have unintended adverse impacts on health especially of poor and vulnerable populations 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 improve resilience in light of the effects of climate change, and to minimizing the adverse impacts of climate change on health.

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

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

**6.bis Biosecurity is essential to regulate and control the movement of invasive alien species, emerging infectious diseases, other organisms that can have negative impacts on biodiversity and health, and synergistic interactions between these.**

Effective biosecurity is often a foundation for biodiversity and health, recognising prevention is often much more cost effective than remediation.