

### GUIDANCE FOR REVIEWING THE NON-PAPER

1. The co-chairs of the contact group on agenda Item 9, biodiversity and health, circulate herein a revised non-paper presenting the operational paragraphs, recommendations and the annex containing a draft global action plan for biodiversity and health, of the pre-session document on item 9. This non-paper supersedes the non-paper on item 9 published on 19 November 2021.
2. This non paper reflects comments received during the first and second sessions of the contact group on health, respectively held on Tuesday 16 March and Wednesday 17 March, from 7.30 to 10.30 pm.
3. Comments made during the two sessions of the contact groups are reflected as follows:
  - (a) All new text is bold (**x**) and bracketed (||);
  - (b) All deletions are strikethrough (~~⌘~~) and bracketed (||), except where Parties proposed text insertions within these deleted sections;
  - (c) Forward slashes (/) have been used for alternative formulations;
  - (d) Italics (*x*) indicate linkages or guidance with regard to the post-2020 global biodiversity framework.

NON-PAPER

**BIODIVERSITY AND HEALTH**

The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties at its fifteenth meeting adopt a decision along the following lines:

*The Conference of the Parties,*

*Recognizing* that ~~[human]~~health and well-being are not possible without biodiversity and the ecosystem functions and services~~[that biodiversity underpins]~~, that the loss of biodiversity **[and ecosystem degradation]** can impact health negatively, and that health-related activities can have potential impacts on biodiversity which may threaten the provision of ecosystem functions and services,

*Recalling* decisions XII/21, XIII/6 and 14/4 on biodiversity and health and decision XIII/3 on the mainstreaming and integration of biodiversity within and across sectors, and acknowledging the guidance on integrating biodiversity considerations into One Health approaches, among other holistic approaches,

*Recognizing* that the COVID-19 pandemic has further highlighted the importance of the relationship between people and **[other components of]** biodiversity, the urgency of addressing ~~[the]~~ biodiversity **[loss]** ~~[erisis]~~ alongside ~~[the]~~ climate **[change]** ~~[erisis]~~, **[the importance of early data and information-sharing, the need to address inequities in global health and to strengthen health systems in developing countries]**, the need for a sustainable and inclusive recovery **[from COVID-19]** ~~[within the “build back better” agenda]~~, and that a biodiversity-inclusive One Health approach, among other holistic approaches, would help to prevent and reduce the risk of future diseases of zoonotic origin and other infectious diseases, **[as well as chronic and non-communicable diseases, while optimizing the health of people, animals and ecosystems, and achieving better public health outcomes]**.

*[Stressing* that mainstreaming biodiversity in the health **[and productive sector[s]]** and strengthening cooperation as recognized in the long-term approach to mainstreaming biodiversity (CBD/COP/DEC/15/--) and cooperation with other conventions and organizations (CBD/COP/DEC/15/--), and leveraging biodiversity and health co-benefits are very important for halting the loss of biodiversity and for the achievement of the post-2020 global biodiversity framework and the 2030 Agenda for Sustainable Development],

*[Emphasizing]/[Recalling]/[Recognizing]* the **[critical]**~~[-essential]~~ role of **[genetic resources]**/~~[the Nagoya Protocol on]~~ **[efficient and effective]** Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization~~[, as appropriate,]~~ **[instruments]** ~~[[for health-related technological developments, and]~~ **[including]** the need **[for special consideration regarding emergencies that threaten or damage the health of human and wild species]** to achieve the fair and equitable sharing of the benefits arising out of the utilization ~~[of genetic resources]~~ and to foster scientific and technological research in the field of **[biodiversity and health linkages]** ~~[healthcare and other health-related activities]~~,

*Recognizing* the importance of the sustainable use of biodiversity to support food security and to provide co-benefits for human health, in line with the 2030 Agenda for Sustainable Development,

*Recognizing* the long-standing collaboration between the Secretariat of the Convention on Biological Diversity and the World Health Organization, which contributes to a strengthened understanding of biodiversity-health linkages and to raising the importance of One Health approaches,

*[[Taking note of] /[Welcoming]* the report on the Workshop on Biodiversity and Pandemics<sup>1</sup> convened by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services,]

*[Welcoming]/[Taking note of]* the World Health Organization's report launched on 20 May 2021<sup>2</sup> on *Nature, Biodiversity and Health: an overview of interconnections*, [presenting ways nature and

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<sup>1</sup> <https://www.ipbes.net/pandemics>

<sup>2</sup> [www.euro.who.int/en/nature-biodiv-health](http://www.euro.who.int/en/nature-biodiv-health)

ecosystems can support and protect health and well-being, and describing how nature degradation and the loss of biodiversity can **[affect]** ~~[threaten]~~ human health],

**[Recognizing that negotiations are underway for a World Health Organization convention, agreement or other international instrument to strengthen pandemic prevention, preparedness and response and noting the importance of integrating a biodiversity-inclusive One Health approach, among other holistic approaches, into these discussions.]**

**[[Welcoming]/[Taking note of] the resolution 5/11 on biodiversity and health of the United Nations Environment Assembly]**

1. **[Welcomes]/[Takes note of]** the strengthened collaboration on the One Health approach by the World Health Organization, the World Organization for Animal Health, the Food and Agriculture Organization of the United Nations, and the United Nations Environment Programme, including the recent establishment of the One Health High-level Expert Panel;

**[1. bis. Also welcomes the operational definition of One Health developed by the One Health High Level Expert Panel (OHHLEP) established by the Tripartite Alliance (FAO, OIE and WHO) and the United Nations Environment Programme, which provides a common language and understanding of One Health,]**

**[2. [Encourages] [~~Invites~~] Parties, [and invites] other Governments, [subnational and local governments], and relevant stakeholders to [take actions] [~~consider opportunities~~] for a sustainable and inclusive recovery from the COVID-19 pandemic, [including] [~~also~~] through short-term stimulus measures<sup>3</sup>] and longer-term approaches that contribute to the conservation, [restoration] and sustainable use of biodiversity, and [the need to achieve the fair and equitable sharing of benefits arising out of utilization of genetic resources] [~~benefit sharing~~], and thereby contribute to minimizing the risk of future diseases of zoonotic origin, taking into account a biodiversity-inclusive One Health approach among other relevant approaches and making use, as appropriate and in accordance with national circumstances and priorities, of the information provided in the fifth edition of the *Global Biodiversity Outlook* and the note prepared by the Executive Secretary for the special virtual sessions of the Subsidiary Body on Scientific, Technical and Technological Advice and the Subsidiary Body on Implementation on Biodiversity, One Health, and the response to COVID-19 and pandemics, convened in December 2020];<sup>4</sup>**

**[3. [Endorses]/[Adopts]/[Takes note of the voluntary guidelines for biodiversity and health][the global action plan for biodiversity and health] annexed to the present decision, [encourages]/[urges] Parties, and invites other Governments, [subnational and local governments], and relevant stakeholders, to implement this plan, including through the mainstreaming of biodiversity and health linkages into existing and future policies, plans and strategies, [on a voluntary basis and in a flexible manner], as appropriate, and in accordance with national priorities and circumstances, and [through] [strengthened] [~~reinforcement of~~] collaboration among ministries and agencies responsible for all the sectors identified in the global action plan for biodiversity and health, with a view to enhancing implementation of the three objectives of the Convention, the post-2020 global biodiversity framework, and the 2030 Agenda for Sustainable Development, with the full and effective participation of indigenous peoples and local communities, women, youth and older persons],**

**[3. alt. Invites Parties, other Governments, subnational and local governments, and relevant stakeholders to consider the options, annexed to the present decision, for promoting and supporting the mainstreaming of biodiversity and health linkages]**

**3.bis. Invites Parties, other Governments, [subnational and local governments, and] relevant stakeholders to consider opportunities for raising awareness on linkages between biodiversity and health,**

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<sup>3</sup> Appendix 2 presents options to integrate biodiversity considerations into COVID-19 stimulus and recovery measures.

<sup>4</sup> [CBD/SBSTTA-SBI-SS/2/2](#)

~~[recognizing the need to address the common drivers of biodiversity loss and climate change]~~, and thereby promoting better health and well-being outcomes;

**[3. *ter.* Recognizes the need for strengthened cross-sectoral, inter-agency collaboration at all levels to ensure coherent and mutually supportive implementation of this global action plan and review of its progress, as described below in paragraph 5 (d), through engaging all the relevant sectors and government agencies;]**

[4. *Invites* the World Health Organization, the World Organization for Animal Health, the Food and Agriculture Organization of the United Nations and the United Nations Environment Programme, to continue collaboration with the Convention on Biological Diversity through the recently established One Health High-Level Expert Panel, other relevant expert groups and multilateral initiatives, among others:

~~[(a *ante*) To promote a biodiversity-inclusive and whole-of-society One Health approach;]~~

(a) To support the implementation of the global action plan for biodiversity and health in cooperation with indigenous peoples and local communities, women, youth, ~~and~~ older persons, **[persons with disabilities, research institutions and the private sector]**, and relevant partners;

(b) To further support the development and implementation of measures, guidance and tools for promoting and supporting the mainstreaming of biodiversity and health linkages;

(c) To support reporting on health-related indicators **[and implementation milestones]** for the monitoring of the global action plan for biodiversity and health;]

[4 *bis.* *Also invites* the Global Environment Facility (GEF), donors and other organizations, **[in accordance with their respective mandates, as appropriate, to consider]** ~~[-to]~~ provid[ing][e] **[developing country]** Parties, ~~and~~ in particular **[least developing countries and]** ~~[developing countries,~~ small island developing States as well as countries with economies in transition, with technical and financial support for **[mainstreaming biodiversity and health linkages]** ~~[the effective implementation of the global action plan for biodiversity and health];]~~

[5. *Requests* the Executive Secretary, subject to the availability of resources, and in collaboration with the World Health Organization, **[the World Organization for Animal Health, the Food and Agriculture Organization of the United Nations, and UNEP, including as appropriate, the One Health High-level Expert Panel,]** and other partners and indigenous peoples and local communities, women, youth and older persons, and relevant partners, **[to]**:

(a) ~~[To]~~facilitate the implementation of the global action plan for biodiversity and health, and promote a biodiversity-inclusive One Health approach;

~~[(b) To continue collaboration with the World Health Organization, the World Organisation for Animal Health, the Food and Agriculture Organization of the United Nations and the United Nations Environment Programme, including, as appropriate, the One Health High-level Expert Panel, to promote a biodiversity-inclusive One Health approach;]~~

**[(b) *bis.* Contribute, as appropriate, to ongoing negotiations under the World Health Organization to establish a convention, agreement or other international instrument on pandemic prevention, preparedness and response;]**

(c) Report on progress to the Subsidiary Body on Scientific, Technical and Technological Advice prior to the sixteenth meeting of the Conference of the Parties;]

**[(d) *Invite* Parties to provide, on a voluntary basis, information on their activities and results from the implementation of the global action plan for biodiversity and health, as contained in the annex to the present decision, in alignment with the post-2020 global biodiversity framework, as appropriate, and *requests* the Executive Secretary to compile these submissions and make a progress report on the implementation available for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice at a meeting to be held prior to the nineteenth meeting of the Conference of the Parties;]**

**[(e) *Provide* capacity-building opportunities for developing country Parties for the implementation and monitoring of the global action plan for biodiversity and health.]]**

*Annex I***[DRAFT GLOBAL ACTION PLAN FOR BIODIVERSITY AND HEALTH (2020/22-2030)]****[Draft options for promoting and supporting the mainstreaming of biodiversity and health linkages]***Leveraging biodiversity and health linkages to achieve a healthy living in harmony with nature***Contents**

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**I. OVERVIEW**

1. [The global action plan]/[**These options**] for biodiversity and health, developed in line with decisions [XII/21](#), [XIII/6](#), and [14/4](#) of the Conference of the Parties to the Convention on Biological Diversity, **[are]**[is] aimed at catalysing the mainstreaming of **[all the provisions of the Convention on Biological Diversity into the]** ~~[biodiversity and]~~ health **[sector]** linkages and accelerating efforts towards a [biodiversity-inclusive] One Health transition **[that fully respects the sovereign rights of States [with respect to the objectives of the Convention on Biological Diversity]]**[to determine access to their genetic resources, including genetic sequence data, and guarantees the fair and equitable sharing of benefits arising from their utilization.]]~~[recognizing the One Health approach among other holistic approaches to health]~~. Recognizing the complexity and wide range of interlinkages between biodiversity and health, the [action plan defines action areas and activities]/**[options are]** framed under six elements in line with the specified strategic and supporting objectives: cross-sectoral mainstreaming, **[inter]**-sector-specific mainstreaming, education and awareness-raising, ~~[surveillance and]~~ monitoring, research, **[fair and equitable benefit-sharing]**, and capacity-building and funding. Parties and other Governments, at all levels, relevant organizations and initiatives, indigenous peoples and local communities, women, youth, older persons, **[persons living with disabilities]**, and relevant stakeholders, including business and civil society organizations are encouraged to **[consider these options]**/[implement this action plan], in accordance with national, **[subnational and local]** circumstances and priorities. [The implementation of this action plan is]/**[These options are]** envisaged to contribute to support the implementation of the post-2020 global biodiversity framework and the achievement of the 2050 Biodiversity Vision of living in harmony with nature, [responding to challenges for the health of people], ~~[animals, plants, other organisms and our environment]~~ **[and nature]**][in a holistic manner.]

## II. BACKGROUND

[2. In decision 14/4, the Conference of the Parties of the Convention on Biological Diversity requested the Executive Secretary, subject to the availability of financial resources, and invited the World Health Organization, in collaboration, as appropriate, with other members of the Inter-agency Liaison Group on Biodiversity and Health as well as other partners, to develop a draft global action plan to mainstream biodiversity and health linkages into national policies, strategies, programmes and accounts. The action plan has been developed in pursuance of this request and in line with other decisions of the Conference of the Parties of the Convention on Biological Diversity, in particular decisions XII/21, XIII/6, and 14/4.]

3. In decision XII/21, the Conference of the Parties recognized the value of the One Health approach to address the cross-cutting issue of biodiversity and human health, as an integrated approach consistent with the ecosystem approach (decision V/6) that takes in consideration the complex relationships between humans, microorganisms, animals, plants, agriculture, wildlife and the environment. In decision XIII/6, the Conference of the Parties welcomed the *State of Knowledge Review on Connecting Global Priorities: Biodiversity and Human Health*<sup>5</sup> and requested a guidance to support the consideration of biodiversity and ecosystem management in the application of the “One Health” approach, among other holistic approaches. A *guidance on integrating biodiversity considerations into One Health approaches*<sup>6</sup> was subsequently adopted in decision 14/4.

## III. INTRODUCTION TO A GLOBAL ACTION PLAN FOR BIODIVERSITY AND HEALTH

4. As a fundamental element of sustainable development and as a human right, health has a central place in the 2030 Agenda for Sustainable Development, with Sustainable Development Goal 3 calling on all stakeholders to “ensure healthy lives and promote well-being for all at all ages”. In addition to socioeconomic determinants of human health and well-being and in light of intellectual property considerations for health, the impact of environmental, climate, biodiversity loss, including ecosystem change and degradation, on health is increasingly recognized. Human health ultimately depends upon biodiversity, [and]ecosystem services [**and the fair and equitable access to vaccinations, therapies and treatments**]. Human rights and a healthy planet are mutually dependent. [**In its resolution 48/13 the UN Human Rights Council recognized the right to a**][A safe], clean, healthy and sustainable environment [**and equitable access to medical care are**]/[**as a human right that is important for the enjoyment of human rights and which requires the full implementation of multilateral environmental agreements under the principles of international environmental law.**][**This right**] is integral to the full enjoyment of a wide range of human rights, including the rights to life, health, food, water and sanitation.<sup>7</sup> To realize our human rights, we must heal, protect and sustainably live on our planet [**and provide**] universal health coverage [**to all**].<sup>8</sup>

5. Biodiversity underpins nature’s contributions to people (NCP) that are essential to human health and well-being. As defined by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES),<sup>9</sup> NCP impact health through, among other things: (a) dietary health, (b) environmental exposure which includes the health risk associated with degradation of environmental quality, (c) exposure to communicable diseases, (d) hazard risk reduction relating to exposure to extreme weather, drought or fire, (e) psychological health as interaction with nature are known to improve mental health, and (f) use of

<sup>5</sup> WHO/CBD, Connecting global priorities: biodiversity and human health: a state of knowledge review, 2015, <https://www.cbd.int/health/SOK-biodiversity-en.pdf>

<sup>6</sup> CBD/SBSTTA/21/9.

<sup>7</sup> In line with resolution [A/HRC/48/L.23/Rev.1](#) on the right to a clean, healthy and sustainable environment adopted by the UN Human Rights Council on 8 October 2021.

<sup>8</sup> Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Human rights depend on a healthy biosphere, [A/75/161](#) and annex on good practices, 2020.

<sup>9</sup> IPBES, Global Assessment on Biodiversity and Ecosystem Services, Chapter 2.3. Status and Trends - Nature’s Contributions to People (NCP), May 2019, [https://www.ipbes.net/sites/default/files/ipbes\\_global\\_assessment\\_chapter\\_2\\_3\\_ncp\\_unedited\\_31may.pdf](https://www.ipbes.net/sites/default/files/ipbes_global_assessment_chapter_2_3_ncp_unedited_31may.pdf)

natural compounds in medicinal products and biochemical compounds. Many of nature's contributions to people, including those conveying [social], mental and physical benefits, are essential for human health and well-being. Biodiversity, **[and access and benefit-sharing in particular]**, is also integral to key development sectors that modulate health outcomes directly or indirectly, such as pharmacy, biochemistry, biotechnology, agriculture, or tourism.

6. With biodiversity declining faster than at any time in human history, the deterioration in nature's contributions to people threatens a good quality of life.<sup>10</sup> The costs of inaction on biodiversity loss are high and are anticipated to increase.<sup>11</sup> Although the impact of environmental degradation and biodiversity loss on health outcomes is more direct on vulnerable population groups **[and at the local level]**, it **[can potentially]** affects all people worldwide, as has become even more clear in the light of the COVID-19 pandemic.

7. Emerging infectious **[and zoonotic]** diseases<sup>12</sup> (e.g. Ebola virus disease, HIV/AIDS, Monkeypox, SARS, MERS, COVID-19) highlight the complex linkages among biodiversity, global environmental change and human health,<sup>13</sup> and the critical need for integrated, transdisciplinary approaches such as One Health among other holistic approaches to address the intricate linkages between the health of all people, animals, plants and other organisms, and ~~[our shared]~~ **[the]** environment. ~~[Taking note of the findings of the IPBES Workshop Report on Biodiversity and Pandemics,<sup>14</sup> almost all pandemics, and the majority of emerging infectious diseases (EIDs), are caused by wildlife origin pathogens, and pandemics risk is increasing rapidly, driven by exponentially increasing anthropogenic changes,]~~ **[and equal access to medical supplies, in view of poverty and other development challenges]**, ~~[with more than five new diseases emerging in people every year.]~~ The COVID-19 pandemic also shed light on the importance of nature for people, as people sought increasingly the outdoors and nature during the pandemic in order to keep themselves mentally and physically healthy. The COVID-19 pandemic highlights the urgent need to provide adequate means of implementation to developing countries, **[small island developing states, and countries with economies in transition]** to enable them to respond to health emergencies, while supporting the conservation and sustainable use of biodiversity and addressing their social and economic challenges; **[the COVID-19 pandemic also highlights the urgent need to take all necessary actions to prevent the spillover of pathogens at source, from wildlife]**.

8. One Health, among other holistic approaches such as EcoHealth and Planetary Health,<sup>15</sup> recognizes that human health is intimately connected to the health of the planet, **[as well as with]** all living beings, **with our** ecosystems, our environment, and **[with]** relevant systemic drivers **[through a transdisciplinary**

<sup>10</sup> Ibid.

<sup>11</sup> Organisation for Economic Co-operation and Development (OECD), Biodiversity: Finance and the Economic and Business Case for Action, May 2019, <https://www.oecd.org/environment/resources/biodiversity/G7-report-Biodiversity-Finance-and-the-Economic-and-Business-Case-for-Action.pdf>

<sup>12</sup> See WHO definition - <https://www.who.int/news-room/fact-sheets/detail/zoonoses#:~:text=A%20zoonosis%20is%20an%20infectious,food%2C%20water%20or%20the%20environment.>

<sup>13</sup> As highlighted in CBD/SBSTTA-SBI-SS/2/INF/1, with regard to links between biodiversity and infectious diseases, higher biodiversity may be expected to increase the *hazard* of emerging infectious diseases, because host diversity (for example of wild mammals) is correlated with the diversity of pathogens (organisms that cause disease). However, this relationship is not necessarily predictive of disease risk since some event is needed to convert a hazard into a risk of pathogen emergence. Such risk factors include encroachment into natural habitats and contact with wildlife. Also, paradoxically, greater host diversity may actually decrease risk of zoonotic pathogen spillover by reducing the prevalence of pathogens among a diversity of host species ("dilution effect" - though this is not always the case). Thus, efforts to minimize biodiversity loss can also reduce disease risk, mostly by reducing contact between humans and wildlife and limiting introduction of exotic species, even if these efforts maintain areas of high disease hazard through the diversity of pathogens.

<sup>14</sup> IPBES Workshop Report on Biodiversity and Pandemics, 27-31 July 2020, <https://www.ipbes.net/pandemics>. This workshop report and any recommendations or conclusions contained therein have not been reviewed, endorsed or approved by the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

<sup>15</sup> EcoHealth and Planetary Health are presented as other holistic approaches to health in the *Guidance on integrating biodiversity considerations into One Health approaches*, CBD/SBSTTA/21/9. The Action plan builds on the value of the One Health approach, which has been recognized in the guidance and former decisions of the Conference of the Parties, while acknowledging other holistic approaches.

**and multi-sectoral approach].** ~~While there is no universal definition, One Health is defined by [the One Health High Level Expert Panel (OHHLEP) established by the Food and Agriculture Organization of the United Nations (FAO), the World Health Organization (WHO), the World Organisation for Animal Health (OIE) and the United Nations Environment Programme (UNEP), as an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent. The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development]. [as “an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes” and by the United Nations Environment Programme (UNEP) as “a cross cutting and systemic approach to health based on the fact that human health and animal health are interdependent and linked to the health of the ecosystems in which they co-exist”].~~ As biodiversity conservation, ecosystem dynamics, and socioeconomic drivers of human activities impacting biodiversity and ecosystems, have often received less attention in One Health approaches than human-animal interconnections, it is critical to further integrate the full range of biodiversity and health linkages and relevant systemic drivers through a transdisciplinary [**and multisectoral**] approach and consider the importance of the three pillars of the Convention for human health in a balanced manner.

9. Over the last decade, the multiplicity and complexity of linkages between biodiversity and human health have been increasingly recognized, as reflected in the findings of the *State of Knowledge Review on Connecting Global Priorities: Biodiversity and Human Health*.<sup>16</sup> The action plan builds on resources and reports developed by the Secretariat of the Convention, WHO, the Inter-agency Liaison Group on biodiversity and health and other partners over the last years, including the Guidance on integrating biodiversity considerations into One Health approaches. The action plan supports a “biodiversity-inclusive One Health transition” identified in the fifth edition of the *Global Biodiversity Outlook*<sup>17</sup> as part of the eight areas of transition that may be needed to achieve living in harmony with nature by 2050 and takes the WHO *Global Strategy on Health, Environment and Climate Change*<sup>18</sup> into consideration. With regard to the agenda on mainstreaming biodiversity and health linkages, the action plan complements the long-term approach to mainstreaming biodiversity and its related action plan for the long-term approach to mainstreaming biodiversity,<sup>19</sup> noting that mainstreaming of biodiversity within and across sectors is crucial in the promotion of an integrated approach to health.

10. The action plan also takes into account the preparatory documents of the special virtual session of the Subsidiary Body on Scientific, Technical and Technological Advice and the Subsidiary Body on Implementation convened in December 2020 to discuss interlinkages between biodiversity and health, the One Health approach, and the response to COVID-19 and pandemics.<sup>20</sup> It also builds on the findings of the report by UNEP on *Preventing the next pandemic - Zoonotic diseases and how to break the chain of transmission*<sup>21</sup> and the publication entitled *The COVID-19 challenge: Zoonotic diseases and wildlife. Collaborative Partnership on Sustainable Wildlife Management's four guiding principles to reduce risk*

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<sup>16</sup> WHO/CBD, Connecting global priorities: biodiversity and human health: a state of knowledge review, 2015, <https://www.cbd.int/health/SOK-biodiversity-en.pdf>

<sup>17</sup> *Global Biodiversity Outlook*, fifth edition, Secretariat of the Convention on Biological Diversity, 2020,

<sup>18</sup> WHO Global Strategy on Health, Environment and Climate Change, WHO, 2020, <https://apps.who.int/iris/bitstream/handle/10665/331959/9789240000377-eng.pdf?ua=1>

<sup>19</sup> CBD/SBI/3/13 and CBD/SBI/3/13/Add.1.

<sup>20</sup> CBD/SBSTA-SBI-SS/2/2 and CBD/SBSTA-SBI-SS/2/INF/1.

<sup>21</sup> UNEP, Preventing the next pandemic - Zoonotic diseases and how to break the chain of transmission, July 2020, <https://www.unep.org/resources/report/preventing-future-zoonotic-disease-outbreaks-protecting-environment-animals-and>

from zoonotic diseases<sup>22</sup> developed by the Members of the Collaborative Partnership on Sustainable Wildlife Management (CPW) and the Food and Agriculture Organization of the United Nations (FAO), [as well as the work of the Group constituted under the Permanent Committee of CITES Convention “Working Group on the Role of CITES in reducing risk of future zoonotic disease emergence associated with international wildlife trade”. It further recognizes the role of the Sustainable Wildlife Management Programme (SWM), a joint programme of FAO, Centre for International Forestry Research (CIFOR), French Agriculture Research Centre for International Development (CIRAD), and Wildlife Conservation Society (WCS), with funding from the European Union, the French Facility for Global Environment (FFEM), and the French Development Agency (AFD)]. The action plan also takes note of the work programme of IPBES adopted at its seventh plenary<sup>23</sup> foreseeing the elaboration of a biodiversity nexus assessment, which will include linkages between biodiversity and health, taking into account the Workshop report on Biodiversity and Pandemics.<sup>24</sup> The action plan also supports the ‘build back better’ agenda, which includes economic recovery by protecting nature and thus protecting health, in line with the *WHO Manifesto for a Healthy Recovery from COVID-19*<sup>25</sup> with particular attention to the first prescription to *Protect and Preserve the Source of Human health: Nature*.

11. In the context of the COVID-19 pandemic and the [~~“build back better”~~] agenda, there is a growing momentum on environmental components of One Health, as illustrated by [~~the joining of UNEP~~] [**the enhanced collaboration of UNEP with**] the Tripartite [**Alliance**] consisting of WHO, the World Organisation for Animal Health (OIE) and FAO, as well as the creation of a One Health High Level Expert Panel.<sup>26</sup> In the context of the COVID-19 pandemic and the [~~“build back better”~~] agenda, there is a growing momentum on environmental components of One Health, as illustrated by [~~the joining of UNEP~~] [**the enhanced collaboration of UNEP with**] [~~to~~] the Tripartite [**Alliance**] consisting of WHO, the World Organisation for Animal Health (OIE) and FAO, as well as the creation of a One Health High Level Expert Panel.<sup>27</sup> Given the evolving landscape and building on this momentum, the Secretariat of the Convention on Biological diversity will continue to facilitate awareness of biodiversity and health linkages and work closely with its partners, including WHO and through the Inter-agency Liaison Group on Biodiversity and Health, as well as UNEP, with a view to contributing to those ongoing initiatives and promoting a biodiversity-inclusive One Health approach, among other holistic approaches, while seeking synergies and ensuring there is no duplication of work. [*By recognizing the value of One Health as part of the post-2020 global biodiversity framework and through this action plan, the Parties to the Convention on Biological Diversity have an opportunity to reinforce the importance of the biodiversity components of One Health and accelerate the achievement of a biodiversity-inclusive One Health transition, recognizing the One Health approach among other holistic approaches to health, in the next decade.*]

12. Achieving this transition in a manner that remains economically sustainable for populations in developing countries, [**small island developing states, and countries with economies in transition**]; fully supports human health, all living beings, ecosystems and relevant systemic drivers; and addresses the common drivers of biodiversity loss, habitats disruption, disease risk, and health impacts will enable a virtuous cycle. A One Health transition [**can help**] [~~can play a critical and catalytic role~~] in reducing the loss and degradation of biodiversity, restoring healthy ecosystems, enhancing the health, well-being and livelihood of all living beings, including humans, animals and plants, and preventing [**future pandemics**]

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<sup>22</sup> FAO, The COVID-19 challenge: Zoonotic diseases and wildlife. Collaborative Partnership on Sustainable Wildlife Management’s four guiding principles to reduce risk from zoonotic diseases, 2020, <http://www.fao.org/3/cb1163en/CB1163EN.pdf>

<sup>23</sup> <https://www.ipbes.net/work-programme>, under Objective 1: thematic assessment of the interlinkages among biodiversity, water, food and health

<sup>24</sup> [IPBES Workshop Report on Biodiversity and Pandemics, 27-31 July 2020, https://www.ipbes.net/pandemics](https://www.ipbes.net/pandemics)

<sup>25</sup> WHO, WHO Manifesto for a healthy recovery from COVID-19, 2020, [https://www.who.int/docs/default-source/climate-change/who-manifesto-for-a-healthy-and-green-post-covid-recovery.pdf?sfvrsn=f32ecfa7\\_8](https://www.who.int/docs/default-source/climate-change/who-manifesto-for-a-healthy-and-green-post-covid-recovery.pdf?sfvrsn=f32ecfa7_8)

<sup>26</sup> <https://news.un.org/en/story/2021/02/1084982>

<sup>27</sup> <https://news.un.org/en/story/2021/02/1084982>

[the emergence of future zoonotic diseases, including those with pandemic potential]/[epidemics and pandemics.]

#### IV. STRATEGIC OBJECTIVES AND RATIONALE OF THE [ACTION PLAN]/[OPTIONS]

13. The *main and overall objective* of the [action plan is] /**[these options are]** to support Parties and other Governments, at all levels, relevant organizations and initiatives, indigenous peoples and local communities, women, youth, ~~and~~ older persons, **[persons with disabilities,]** business and civil society organizations, as well as other stakeholders, in (a) mainstreaming ~~[biodiversity and health]~~ linkages **[between health and all the provisions of the CBD]** into policies, strategies, programmes and accounts at all levels, **[and]** (b) accelerating and upscaling efforts towards a One Health approach, among other holistic approaches, to the conservation and sustainable use of biodiversity and the promotion of health, **[through the fair and equitable benefit sharing]** in line with the *Guidance on integrating biodiversity considerations into One Health approaches*,<sup>28</sup> **[c) implementing the Post-2020 Global Biodiversity Framework's goals and targets under the One Health approach.]**

14. The *rationale* of the [action plan]/**[options]** is to work towards achieving health and well-being for all, in harmony with nature, and to respond to challenges that threaten the health of the planet and people animals, plants, other organisms, and ~~our shared~~ **[the]** environment **[through]** ~~in~~ a holistic **[implementation of all three CBD objectives]** ~~manner~~ by 2030 and within the post-2020 global biodiversity framework, while recognizing the importance of the three pillars of the Convention for promoting global health. The *rationale* of the [action plan]/**[options]** is to work towards achieving health and well-being for all, in harmony with nature, and to respond to challenges that threaten the health of the planet and people animals, plants, other organisms, and ~~our shared~~ **[the]** environment **[through]** ~~in~~ a holistic **[implementation of all three CBD objectives]** ~~manner~~ by 2030 and within the post-2020 global biodiversity framework, **[while recognizing the importance of the three pillars of the Convention for promoting global health.]**

15. The [action plan is]/**[options are]** articulated through the following strategic *operational objectives*:

(a) To mainstream<sup>29</sup> health, well-being and biodiversity linkages in cross-sectoral **[inter-sector]** plans, in the development and implementation of health, biodiversity and environment-related policies and in the work and practices of relevant ministries or agencies, with a view to contributing to human health and biodiversity recovery as well as the conservation and sustainable use of biodiversity, and ~~[achieving co-benefits]/~~**[the fair and equitable sharing of benefits]** **[as far as possible and as appropriate];**

(b) To mainstream biodiversity and health linkages through sector-specific plans, including in the health sector, and through the use and application of open standards methodology for conservation **[and sustainable use and application of fair and equitable benefit sharing measures]**, with a view to reducing the common drivers of biodiversity loss and health impacts and thus promoting the conservation and sustainable use of biodiversity **[and the application of fair and equitable benefit sharing measures]** alongside human well-being and animal welfare **[as far as possible and as appropriate];**

(c) To promote education, including on conservation **[and sustainable use]**, increase awareness and improve the understanding of biodiversity and health linkages, including among the general public and non-State actors, and **[promote]**/~~[leverage]~~ the role of indigenous peoples and local communities and their traditional knowledge, with a view to catalysing sustainable patterns of consumption and production **[while upholding fair and equitable sharing norms].**

16. The implementation of the aforementioned strategic *operational objectives* will enable and be reinforced by the following strategic *supporting objectives*:

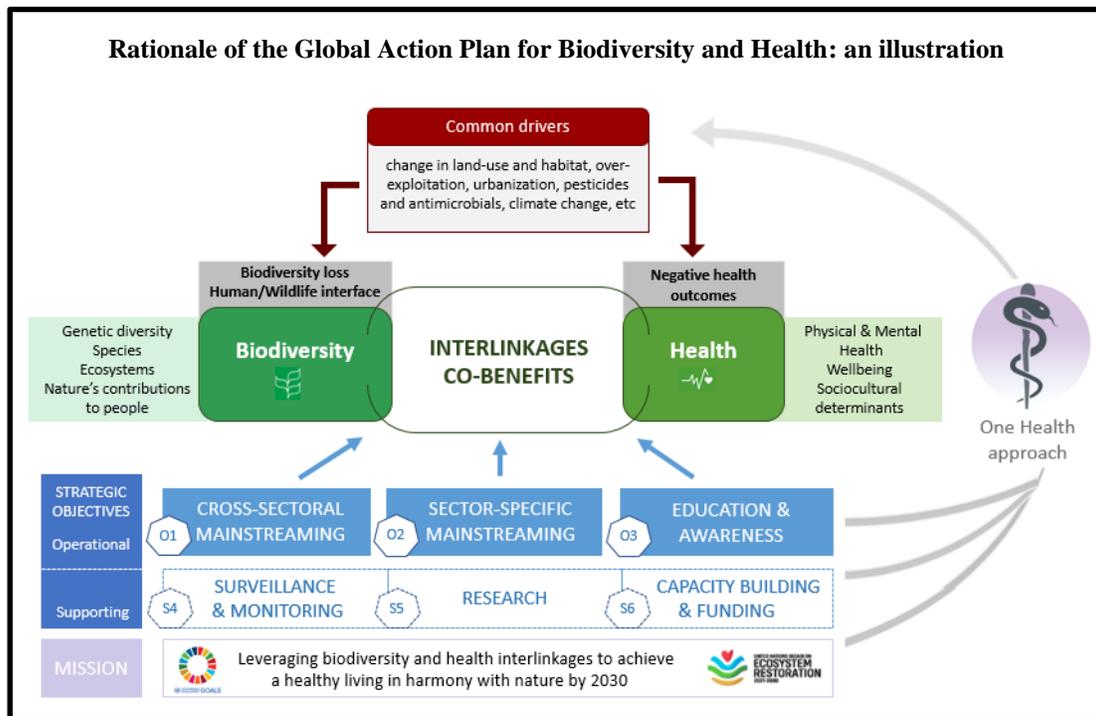
<sup>28</sup> [CBD/SBSTTA/21/9](#).

<sup>29</sup> Following the narrative of the long-term approach to biodiversity mainstreaming and its complementary action plan (CBD/SBI/3/13 and CBD/SBI/3/13/Add.1), and CBD's definition of mainstreaming (glossary).

(a) To strengthen planning, **[monitoring]** and surveillance, through **[capacity building and technology transfer,]** information sharing and knowledge management, **[integrated across the interface of human, animals and ecosystems]**, to address health threats, including the risk[s] of **[environmental contaminants to human health and the health of environments, as well as risk of]** pathogen spillover, epidemics and pandemics, and prevent diseases, through a biodiversity-inclusive One Health approach among other holistic approaches, with due consideration of the specific capacity as well as technical and technological gaps faced by developing countries, **[small island developing states, and countries with economies in transition];**

(b) To consolidate scientific research to further investigate the full range of linkages between biodiversity and health, particularly the complex trophic relations within ecosystems, the role of pathogens, vectors, hosts and predators, in line with a biodiversity-inclusive One Health approach among other holistic approaches **[and to support scientific research and innovation to develop new interventions that will allow the reduction of insecticide use, which negatively impacts biodiversity, without compromising our ability to meet global health targets on disease elimination];**

(c) To support capacity-building and ensure allocation of predictable and sustainable funding to policies and programmes promoting biodiversity and health linkages and One Health approaches, **[in developing countries]** including least developed countries, small island developing States, **[and countries with economies in transition]** as well as countries with economies in transition, with investments aiming to **[reverse]** **[unsustainable]/[promote] [sustainable] [anthropogenic]consumption and [production] [exploitation]** patterns and promote ecosystem-based approaches.



[16 bis. The action plan will ensure the establishment of a benefit-sharing mechanism based on the full scope of the Nagoya Protocol, insuring a broad scope instrument that assures adequate benefit sharing insuring developing country response measures, including the removal of financial barriers to quality health care, medical supplies, enhancing public health response and improving the delivery of social protection, employment and the economic response to future pandemics and the eradication

of poverty. The Executive Secretary will undertake the actions to fully implement the functions of the mechanism by formulating proposals of decisions to be approved at COP16].

## V. PRINCIPLES OF THE ACTION PLAN

17. The [action plan is]/[options are] [~~based on six guiding principles~~]-adapted from the *Guidance on integrating biodiversity considerations into One Health approaches*,<sup>30</sup> as follows:

(a) *A rights-based approach*: A safe, clean, healthy and sustainable environment is integral to the full enjoyment of a wide range of human rights, including the rights to life, health, food, water [and] sanitation [and the sovereign right of States to control access to their genetic resources, including genetic sequence data] [and equitable access to primary health services]. Principle 1 of the Rio Declaration recalls that human beings are at the centre of concerns for sustainable development and are entitled to a healthy and productive life in harmony with nature. Individuals and communities have a vital role to play in protecting ecosystems and biodiversity.<sup>31</sup> The WHO Constitution enshrines that the highest attainable standard of health is a fundamental right of every human being. The implementation of the action plan employs a rights-based approach empowering individuals and communities to actively participate in [and benefit from] the development of solutions and activities;

**[(a)bis Compliance with fair and equitable benefit sharing: All sharing of biological and genetic resources including digital sequence and other similar information made pursuant to the activities mentioned in the global action plan shall guarantee fair and equitable sharing of benefits arising out of the use of such resources, on equal footing with access][in line with ABS instruments, Nagoya Protocol and other relevant international instruments];**

(b) *A holistic consideration of the health of all people, as well as of animals, plants and other organisms*. The [action plan]/[options] encompass[es] the full range of sociocultural and environmental determinants of health, including [~~food security,~~] food safety and nutrition, water quantity and quality, clean air, infectious and non-communicable diseases status, social support networks and culture, in line with WHO's definition of health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". As highlighted by WHO,<sup>32</sup> clean air, stable climate, adequate water, sanitation and hygiene, safe use of chemicals, protection from radiation, healthy and safe workplaces, [sound] [sustainable] agricultural practices, health-supportive cities and built environments, and a conserved nature are all prerequisites for good health;

(c) *An application of the ecosystem approach [and nature-based solutions]* to promote conservation, recovery and sustainable use of biodiversity and ecosystem services in an equitable way, recognizing that people are an integral component of ecosystems. The ecosystem approach is based on the application of scientific evidence on levels of biological integrity of the ecosystems which encompass the essential processes, functions and interactions among organisms and their environment;

(d) *An engagement that relies on participation and inclusiveness, social justice and gender equality*, through an effective involvement of all stakeholders with participation of indigenous peoples and local communities, as well as women, youth, older persons, [persons with disabilities,] and relevant stakeholders. The integration of a gender, intergenerational perspective and an appropriate representation, particularly of women and girls who have a differentiated and fundamental role in the maintenance of family health and in the healthcare workforce, should be ensured, alongside a full and effective participation of indigenous peoples and local communities, recognizing the value of health-related and culturally relevant traditional knowledge;

<sup>30</sup> CBD/SBSTTA/21/9.

<sup>31</sup> Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Human rights depend on a healthy biosphere, [A/75/161](#) and annex on good practices, 2020.

<sup>32</sup> [https://www.who.int/health-topics/environmental-health#tab=tab\\_1](https://www.who.int/health-topics/environmental-health#tab=tab_1)

(e) *A cross-sectoral, multinational, and transdisciplinary collaboration.* Managing complex socio-ecological systems and addressing the drivers of biodiversity loss that have a clear link with health require a cross-sectoral, multinational, and transdisciplinary collaboration. The establishment of broad-based- partnerships across sectors, the formation of relevant bodies within governments, the creation of networks along the research-to-delivery continuum in ways that support the sharing of information, data, samples, ~~and~~ experience **[and benefits arising from the utilization of genetic resources and genetic sequence data]**, are essential for surveillance and policy action;

~~[(e)bis ——— A consideration of biosafety and biosecurity aspects, to ensure biodiversity safeguards measures in research, development and commercialization activities involving any living organism;]~~

**[(e)alt A consideration of biosafety aspects, to ensure an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements, in line with relevant international obligations and national legislations.]**

(f) *A flexible approach with due consideration of local contexts and specificities.* A flexible approach is needed to address the circumstances and needs of **[indigenous peoples and]** local communities, and ensure an effective implementation that supports good health and living in harmony with nature. While the action plan provides an overall framework and objectives to further mainstream biodiversity and health linkages, its strength will lie in the commitment from stakeholders at all levels. Although Parties will be encouraged to apply the action plan on a voluntary basis in a flexible manner according to their national conditions, priorities and capabilities, a gender approach must be included as part of the considerations of local contexts and specificities.]

**[(g) A consideration of national and international access and benefit sharing measures, recognizing the importance of access to genetic resources for scientific and technological advances in the health-related sectors and the need for benefit-sharing.]**

## VI. KEY ELEMENTS OF THE ACTION PLAN

18. For each of the action plan's objectives, specific action areas and activities are provided below. The suggested activities are primarily directed to the Parties and other Governments, to be undertaken as appropriate and on a voluntary basis. Parties and other Governments are invited to involve, as appropriate and at all levels of government, relevant organizations and initiatives, indigenous peoples and local communities, women, youth, ~~and~~ older persons, **[persons with disabilities,]** business and civil society organizations, as well as other stakeholders.

19. Within the mandate and objectives of the Convention of Biological Diversity, the Secretariat will work closely with its partners, including academia, biodiversity and health experts, international and United Nations organizations, regional bodies and organizations, existing and newly-established cross-sectoral initiatives, experts and inter-agency liaison groups, to support countries **[as well as subnational governments]** in implementing the action plan. The Secretariat will implement activities in line with the decisions from the Conference of the Parties, provide and disseminate policy guidance, necessary documentation and evidence, as appropriate, and will ensure that duplication with existing organizations and initiatives is avoided, building on the expertise areas of the Convention with regards to biodiversity and the promotion of a biodiversity-inclusive One Health approach. The Secretariat will leverage opportunities for synergies and ensure activities related to biodiversity and health linkages are coherent and mutually supportive ~~[of activities undertaken by partners, other relevant multilateral agreements, multilateral organizations, and the different sectors they convene.]~~

20. [The action plan should be implemented mindful of the International Health Regulations **[and the Global Health Security Agenda (GHSa)]** and in a manner consistent with the World Health Organization

(WHO)'s function to stimulate and advance work to eradicate epidemic, endemic and other diseases,<sup>33</sup>] and recognizing the leading roles of the WHO and the World Organisation for Animal Health (OIE), [**and the FAO/WHO Codex Alimentarius Commission,**] as well as their regional and representation offices, and other relevant regional health organizations.]

21. The strategic elements responding to the *operational and supporting* objectives and corresponding actions areas/activities are presented as follows.

### **ELEMENT 1: CROSS-SECTORAL MAINSTREAMING OF BIODIVERSITY AND HEALTH LINKAGES IN HEALTH, BIODIVERSITY AND ENVIRONMENT-RELATED POLICIES**

#### *Strategic objective*

To [**contribute to**] /[protect] human, animal, plant, other organisms, and environmental health by mainstreaming biodiversity and health linkages in the development and implementation of health, biodiversity and environment-related policies,<sup>34</sup> and in the work and practices of governments [**at all levels**] through a whole-of-government approach involving all relevant ministries, agencies, and institutions, [**as far as possible and as appropriate**].

#### *Rationale*

[Ensuring the conservation of biodiversity, making sure that its use is sustainable and without risk to health, and limiting the health risks from biodiversity loss, including ecosystem degradation and destruction, is imperative for the continued functioning of ecosystems at all scales and the delivery of ecosystem services that are essential for health and well-being. [**Facilitating appropriate access to genetic resources and**]/[Achieving]/[**Promoting**] the fair and equitable sharing of the benefits arising out of the utilization of genetic resources [**contributes to conservation and sustainable use of biological diversity while also**] [~~is of utmost importance~~] [~~to~~]foster[**ing**] scientific and technological developments and collaboration [~~in the field of healthcare.~~] The importance of the three pillars of the Convention for promoting human, animal, plant, other organisms, and environmental health highlights the importance of achieving a balanced approach towards its three objectives. Mainstreaming biodiversity and health linkages in respective health, biodiversity and environment-related policies, including in the implementation of agricultural, forest, marine, freshwater, air, water, and water- and land-use policies, and promoting mutually reinforcing policy action enables greater co-benefits. There is a potential to better mainstream the full range of biodiversity and health linkages across policies, relevant platforms- and responsible authorities, including relevant Ministries agencies, and institutions.

**Action area 1.1. [Contribute to]/[Safeguard] human, animal, plant, other living organisms, and environmental health by promoting biodiversity and health linkages in the work and practices of Ministries, agencies and institutions responsible for biodiversity and health dimensions**

#### *Activities*

**1.1.1.** Based on the national, [**subnational and local**] context, define specific entry-points to help set out the mainstreaming of biodiversity and health linkages in relevant policies and practices of ministries, agencies and institutions, [**across all levels of government**], as appropriate;

**1.1.2.** Promote and facilitate dialogue between Ministries, agencies and relevant bodies responsible for biodiversity and those responsible for health and other relevant sectors, across all levels of government;

**1.1.3.** Ensure that agencies and stakeholders responsible for biodiversity conservation [**and sustainable use**] are included in inter-sectoral national, [**subnational and local**] coordination mechanisms promoting One Health among other holistic approaches to health, and work to ensure structural and policy improvements to bring sectors together;

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<sup>33</sup> WHO Constitution, paragraph (g), [https://www.who.int/governance/eb/who\\_constitution\\_en.pdf](https://www.who.int/governance/eb/who_constitution_en.pdf)

<sup>34</sup> Following the narrative of the action plan for the long-term approach to biodiversity mainstreaming, CBD/SBI/3/13/Add.1, especially strategy area I - Mainstreaming biodiversity across government and its policies.

**1.1.4.** Ensure that civil society, indigenous peoples and local communities, women, youth, older persons, **[and persons with disabilities]**, are effectively involved in national dialogues and coordination mechanisms related to biodiversity and health, recognizing their relevant contributions and active role to the conservation, **[sustainable use]** and mainstreaming of biodiversity, **[including access to traditional knowledge associated with genetic resources and genetic sequence data and the fair and equitable sharing of the benefits arising from their utilization];**

**1.1.5.** Promote the recognition of linkages between **[all provisions of the CBD]** ~~[biodiversity and health]~~ in global instruments, platforms, fora and relevant international processes through interministerial collaboration and **[whole of government coordination]** within the mandate and remit of each organization or convention, especially those with a focus on environmental and/or health issues.

**Action area 1.2. [Protect]/[Contribute to] human, animal, plant and environmental health by promoting biodiversity and health linkages in the development and implementation of health, biodiversity, [environment, forest] and other related or relevant policies**

*Activities*

**1.2.1.** Consider relevant **[linkages between health and all provisions of the CBD]** ~~[/biodiversity and health linkages]<sup>35]</sup> in developing and updating national policies and programmes, strategies, plans, and accounts, including national, **[and subnational]** public health and environmental health policies, national biodiversity strategies and action plans (NBSAPs), **[and]** sustainable development and poverty eradication strategies, **[and technology transfer and capacity development activities,]** in accordance with national circumstances and priorities;~~

**1.2.2.** Take into consideration ~~[biodiversity and health]~~ linkages **[between health and all provisions of the CBD]** ~~[in]/[from]~~ **[a strategic]** environmental ~~[impact]~~ assessment **[approach]**, risk assessments **[based on science]** ~~[including for the use of living modified organisms (LMOs),<sup>36]</sup>~~ national ecosystem assessments, non-monetary valuation of ecosystem services, as well as in health impact assessments, and in the evaluation of trade-offs;

**1.2.3.** Mainstream biodiversity considerations and biodiversity-health linkages in health policies, **[as far as possible and as appropriate]** recognizing the importance of ecosystems **[integrity]** for human health, including for the development and sustainable production~~[/harvesting, and the use of organisms for~~ **[the development of ABS-compliant medicines]**~~[medicine use], and nutritious and safe food]~~ **[and for animal and welfare, and taking into account biosafety and biosecurity measures];**

**1.2.4.** Apply ecosystem-based approaches **[and nature-based solutions]** for health and **[increase]** access to **[urban]** biodiversity ~~[[rich green and blue spaces]~~ within **[cities, urban and rural landscapes]**~~[[built]~~ landscapes], to improve the health and quality of life, ~~[and promote the co-benefits for biodiversity and health arising from~~ **[sustainable consumption and]** ~~[dietary patterns and]~~ healthy diets];

**1.2.5.** ~~[Identify any unintended and undesirable negative impacts of biodiversity conservation and restoration measures on health [(e.g. conservation or restoration measures potentially increasing pathogen/parasite reservoirs or pathogen/parasite vector populations, including both human, animal and plant pathogens or creating new ecological connections between such populations)] and of health interventions on biodiversity (e.g. risk of medicine residues in freshwater systems~~ **[and environmental release of engineered gene drives<sup>37]</sup>**, and define specific entry-points to help evaluate, monitor and mitigate undesirable impacts.]

*Implementation milestones for monitoring purpose by 2030:*

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<sup>35</sup> Appendix 1 provides an overview of some of interlinkages between biodiversity and health, and opportunities for integration.

<sup>37</sup> Consistent with [CBD/COP/DEC/14/19](#)

(a) Collaboration among Ministries **[and]** agencies **[across all levels of government, as well as]** ~~[and]~~ stakeholders responsible for biodiversity and health related issues is effective and implemented through dedicated coordination mechanisms or dialogue;

(b) Coordination mechanisms or initiatives enable the implementation of **[a]** One Health approach and other holistic approaches to health, with appropriate representation from Ministries **[and]** agencies ~~[and]~~ **[at all levels of government, as well as]** stakeholders **[all of which are]** committed to the sustainable use and conservation of biodiversity;(c) Biodiversity and health linkages and One Health approaches are considered and included in national biodiversity strategies and action plans, in national environmental and health strategies and action plans.

## **ELEMENT 2: SECTOR-SPECIFIC MAINSTREAMING OF BIODIVERSITY AND HEALTH LINKAGES**

### *Strategic objective*

To mainstream **[all provisions of the CBD]** ~~[biodiversity and health linkages]~~ within specific sectors, by leveraging common interests and co-benefits **[as far as possible and as appropriate]**.<sup>38</sup>

### *Rationale*

[Biodiversity loss, ecosystem degradation and negative health outcomes share many common drivers, including ~~[deforestation and forest degradation and other]~~][Changes in land-/sea-use and habitats overexploitation ~~[(including overharvesting, overfishing, overgrazing)]~~, unsustainable food production practices, unsustainable consumption **[and trade]** of natural resources ~~[including unsustainable [trade and]~~ consumption of wildlife, **[unsustainable]** water management processes, unsustainable urbanization, pollution and use of chemicals of concern, ~~[inappropriate or excessive]~~ **[unsustainable]** use of chemicals (such as fertilizers, pesticides and pharmaceuticals)], invasive alien species, climate change, **[contribute to aggravating biodiversity loss and producing negative health outcomes]**, [as well as underlying factors such as travel, migration, population growth, ~~[and]~~ social inequality **[and abuse of intellectual property rights]**, among others]. In addition, the health sector<sup>39</sup> can contribute to mainstreaming biodiversity by recognizing nature's contribution to human **social**, mental and physical health, and by promoting biodiversity resilient and environmentally sustainable practices **[and by sharing fairly and equitably the benefits arising from the utilization of genetic resources, digital sequence information and associated traditional knowledge and by fostering innovation in [health-related biotechnological][biological and health research.]]**

### **Action area 2.1. Mainstream biodiversity and health linkages through specific sectoral policies**

#### *Activities*

**2.1.1.** Among sectors prioritized for mainstreaming biodiversity - agriculture, forests, fisheries and aquaculture, tourism, energy and mining, infrastructure, manufacturing and processing, and health<sup>40</sup> - the following sectors have a particularly important role to play in mainstreaming ~~[biodiversity and health]~~ linkages **[between health and all provisions of the CBD]**, by leveraging specific entry-points:

#### **[2.1.2. ante Science, technology and innovation**

<sup>38</sup> Following the narrative of the action plan for the long-term approach to biodiversity mainstreaming, CBD/SBI/3/13/Add.1, especially strategy area II - Integrate nature and biodiversity into business models, operations and practices of key economic sectors, including the financial sector.

<sup>39</sup> Health has been identified as one of the areas for mainstreaming biodiversity within and across sectors, in line with decisions XIII/3 and 14/3.

<sup>40</sup> In line with decisions XIII/3 and 14/3.

**2.1.2.1.ante Leverage the role of biodiversity research, biotechnology, technology development and innovation for biopharmaceuticals health benefits, including pharmaceutical developments and the vaccines, therapeutics, and diagnostics;**

**2.1.2.2.ante Promote the recognition of science technology and innovation in sustainable biodiversity conservation and management, and biosciences industrial development. ]**

## **2.1.2. Infrastructure**

2.1.2.1. Leverage the important role of biodiversity in providing physical and mental health benefits, in particular the beneficial role of native plants and vegetation, in urban planning and development;

2.1.2.2. Create and enhance [**urban**] biodiversity [~~rich green and blue spaces~~] and promote urban forest stands and single trees, to better contribute to the health, well-being and quality of life;

2.1.2.3. In water supply, sanitation and wastewater treatment policies and programmes, including the planning and design of water-related infrastructure, consider the role of terrestrial and inland water ecosystems as [**urban biodiversity**] [“green and blue spaces”] in regulating the quantity, quality and supply of freshwater and flood regulation.

## **2.1.3. Food systems**

2.1.3.1. Enable a sustainable [**and ABS compliant**] transformation of food systems, by leveraging sustainable agricultural practices, integrated landscape planning, biodiversity for food and agriculture<sup>41</sup> including associated biodiversity, [**traditional knowledge**] and the use of integrated pest management to reduce the need for chemical pesticides;<sup>42</sup>

2.1.3.2. Promote the diversity and sustainable use of wild foods, local crops and livestock, fisheries, including from marine and inland water sources, considering local characteristics and national needs and priorities, while ensuring the implementation of adequate sanitary controls in particular for the sustainable consumption of wild meat [**and facilitating imported legally hunted game trophies**] [**and adequate monitoring and surveillance (in humans and wildlife) of environmental chemicals for the safe consumption of local and wild foods**] [**and the elimination of all harmful subsidies**];

2.1.3.3. With consideration of local characteristics, promote the use of [**ABS-compliant**]/[effective] tools, technology development and technology transfer for developing countries, [**small island developing states, and countries with economies in transition**], to contribute to sustainable production, food security and [**food**] safety, [**through, among others, the conservation of local and sustainable diets**], minimize, and ensure the responsible use of antibiotics, chemical pesticides and other chemical inputs;<sup>43</sup>

2.1.3.4. Promote the recognition of [**sustainable**] traditional, national, and local food cultures [**providing the basis for intergenerational continuity of indigenous peoples and local communities knowledge and practices, the right to healthy nutritional foods as well as**] [~~and~~] provide information on the nutritional value of diverse foods, [**and local biodiversity**] [~~as well as their carbon footprint~~], [**focusing on promoting the conservation of associated traditional knowledge as well as preparation and foods that can contribute to a healthy diet, while fully respecting all rights of indigenous peoples and local communities to their cultural and genetic heritage**];

2.1.3.5. [~~Limit the negative effects of telecoupling and~~] Promote sustainable production and consumption, implement policies that address [~~local production and consumption~~], food safety and [**food**] security and

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<sup>41</sup> FAO, *The State of the World's biodiversity for food and agriculture*, 2019, <http://www.fao.org/3/CA3129EN/ca3129en.pdf>

<sup>42</sup> In line with WHO, *Guidance on mainstreaming biodiversity for nutrition and health*, 2020, <https://www.who.int/publications/i/item/guidance-mainstreaming-biodiversity-for-nutrition-and-health>

<sup>43</sup> Noting the relevance of the programme of work on agricultural biodiversity (decision V/5), and of the international initiative on pollinators (decision VIII/23 B).

access, food ~~[excess and]~~ waste, including through information sharing and public awareness activities **[and access to sustainable alternatives, where appropriate].**

**2.1.3.6 [Establish and support networks for the conservation, custody, defence and reproduction of species and seeds as a measure of resistance to the effects of climate change, affection by pests and diseases, preservation of agro-biodiversity, and practices and traditional agricultural knowledge.]**

**Action area 2.2. Mainstream biodiversity and health linkages in ecosystem, wildlife and land/sea use management, as well as in the context of climate change and pollution**

### *Activities*

#### **2.2.1. Land and sea use planning, and ecosystem management**

2.2.1.1. Promote **[the]** One Health approach~~[es]~~ among other holistic approaches to the management of ecosystems, **[associated human settlements and livestock]**, associated degradation of natural habitats, and minimize disturbance to natural ecosystems;

2.2.1.2. Promote measures to halt or minimize **[deforestation and]** the degradation, **[loss and fragmentation]** of terrestrial, freshwater, coastal and marine aquatic ecosystems and increase sustainable land management, halt overexploitation, **[and reduce the risks of infectious disease spillover from wildlife to humans and domestic livestock]** ~~[and avoid encroachment into natural habitats]~~, considering the importance of species and habitats in guaranteeing food security for populations;

2.2.1.3. Encourage land reform efforts and enforcement of regulations that avoid human encroachment, while recognizing and ensuring access for indigenous peoples and local communities, including through inclusive governance systems, and promote sustainable, inclusive land use;

~~[2.2.1.4. Increase the conservation and [sustainable use] [protection] of areas of importance for biodiversity and ecosystem services and native habitats within working landscapes to increase connectivity, including those provided by natural regulation and resistance to pathogens that local animal communities have developed through coevolution with these pathogens,<sup>44</sup> especially around or near intact ecosystems<sup>45</sup> and potential hotspots of disease emergence;]~~

2.2.1.5. Consider human, ~~[plant]~~ and ~~[wildlife]~~ **[wild species]** health when carrying out ecosystem restoration and mitigation activities, in particular in areas of habitat fragmentation and environmental degradation and within human settlements where there may be increased contact with wildlife.

#### **2.2.2. ~~[Wildlife]~~ **[Wild species]** management**

2.2.2.1. Ensure **[that the harvesting trade and use of wild species is regulated where necessary to achieve health benefits or reduce risks to health]** ~~[, including harvesting, hunting, fishing], [gathering], [trading and], [observing][using of wild species is] [are] regulated [where necessary to achieve health benefits or to reduce risks to health] and [ensure [all] practices, [including] [particularly] in communities that depend on such practices for their livelihood], are legal, sustainable and safe, [for human, animal, plant and ecosystem health],[respecting customary law and customary sustainable use];~~

2.2.2.2. Enhance the **[legal and]** sustainable management of wild meat at the source and improve the regulation of markets selling wild and domesticated animals through improved hygiene, sustainable practices, **[good game and manufacturing practices]** and with consideration of food safety measures, **[including traceability measures where appropriate,]** while refraining from and addressing measures

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<sup>44</sup> In the natural areas where pathogens are found among wild host populations, the long history of coevolution between these pathogens and their hosts may have brought some natural resistance to these pathogens on wild populations, which may be used to cure human populations from these pathogens, as reflected in Beans et al., Studying immunity to zoonotic diseases in the natural host — keeping it real, Nature reviews immunology, 2013, <https://www.nature.com/articles/nri3551>

<sup>45</sup> Hotspots for pathogen spillover are generally the environments just around or near intact ecosystems, the risk within these intact ecosystems themselves are less because of lower human activity, as reflected in Gibb R. et al, Zoonotic host diversity increases in human-dominated ecosystems, Nature, 2020, <https://www.nature.com/articles/s41586-020-2562-8>

which would negatively affect [**indigenous peoples and**] local communities who depend on wildlife, [**such as the imports of legally-hunted game trophies, and**] including through traditional foods and cultural practices;<sup>46</sup>

2.2.2.3. Recognize [~~wildlife~~] [**wild species**] health in the design, resourcing, and operations of national biodiversity and health programmes, national development and infrastructure programmes, and the contribution of wildlife health to One health strategies;<sup>47</sup>

2.2.2.4. Promote the understanding of disease processes in wildlife populations and develop appropriate strategies to prevent, manage and control wildlife diseases;

2.2.2.5. Reduce pressures on wildlife including habitat and ecosystem degradation, capture, transport, and contact with animals in farms and markets, and consequently reduce the risk of zoonotic disease spillover and outbreak;

2.2.2.6. Develop approaches for the prevention, control and management of invasive alien species to address biological invasions of pathogenic agents, to improve risk analysis and identify potential “sleeper” alien species that are likely to become invasive as a result of climate change or other anthropogenic factors;

2.2.2.6.bis. Promote biodiversity conservation and sustainable use measures to address the prevention of health associated risks.

### 2.2.3. Climate change

2.2.3.1. Prioritize [**nature-based resilient solutions**]/[**ecosystem-based approaches**] and measures that jointly contribute to health and well-being, ensure the safety and security of vulnerable populations, and promote the conservation and sustainable use of biodiversity;

2.2.3.2. Promote [**legal and**] joint actions between climate change and biodiversity plans and strategies, considering that climate change adaptation measures impact biodiversity and health (both positively and negatively) and that biodiversity loss exacerbates climate change.

### 2.2.4. Pollution

2.2.4.1. Develop coherent multi-sectoral research and policies [**including robust monitoring and surveillance of environmental contaminants**] across sectors for [**identifying**], preventing [**and mitigating**] air, soil, water pollutions, as well as for avoiding and reducing the use of chemicals of concerns [~~(including but not limited to developmental neurotoxicants, endocrine disruptors, insecticides, chemical herbicides, heavy metals, pharmaceutical wastes, and nano particles)~~];

2.2.4.1.bis Promote strategies to reduce light and noise pollution, especially in urban areas, that affect the survival and healthy development of fauna and flora [~~and the health, including mental health, of human beings~~];

2.2.4.2. Raise global awareness of the negative impact of pollution [**on biodiversity**] to mobilize the resources and re-enforce national, [**subnational and local**], and international regulations that are needed to effectively tackle pollution to prevent harm to people, biodiversity and ecosystem services.<sup>48</sup>

**2.2.4.3. [Promote joint actions between chemicals management, pollution and biodiversity plans and strategies, considering that chemical exposures and pollution impact biodiversity and health, and**

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<sup>46</sup> In line with OIE, WHO, UNEP Interim guidance, Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets, April 2021, [https://www.oie.int/fileadmin/Home/MM/OIE-WHO-UNEP\\_Guidance\\_for\\_traditional\\_food\\_markets.pdf](https://www.oie.int/fileadmin/Home/MM/OIE-WHO-UNEP_Guidance_for_traditional_food_markets.pdf)

<sup>47</sup> In line with OIE wildlife health framework “Protecting wildlife health to achieve One health”, concept note, 2021, [https://rr-asia.oie.int/wp-content/uploads/2021/01/wildlifehealth\\_conceptnote\\_final.pdf](https://rr-asia.oie.int/wp-content/uploads/2021/01/wildlifehealth_conceptnote_final.pdf)

<sup>48</sup> In line with the recommendations of the Lancet Commission on pollution and health, Vol. 391, Issue 10119, 2018, [https://doi.org/10.1016/S0140-6736\(17\)32345-0](https://doi.org/10.1016/S0140-6736(17)32345-0)

that biodiversity loss exacerbates health effects as well as human health and environmental resilience to other emergencies and disasters like climate change and pandemic risk.]

### Action area 2.3. Mainstream biodiversity in the health sector

#### *Activities*

**2.3.1.** Encourage health supply chains, health care facilities,<sup>49</sup> businesses and the pharmaceutical sector, including for veterinarian purposes, to actively transition towards more sustainable technologies and practices and thus avoid biodiversity negative impacts, **[in line with multilaterally-agreed rules] and [complying with all ABS provisions and to fairly and equitably share the benefits arising from the utilisation of genetic resources, digital sequence information and associated traditional knowledge];**

**2.3.1.bis** Promote access to genetic resources **[and their associated knowledge]** and **[ensure]** the fair and equitable sharing of benefits arising from their utilization consistent with the Convention, **[and]** the Nagoya Protocol **[and other specialized] [international access and benefit-sharing instruments][Access and benefit-sharing initiatives]** on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity;

**[2.3.1.ter [Strengthen]/[Support]** the implementation of **[fair and equitable]** access and benefit sharing measures, **[where appropriate,]** within the health sector to promote compliance with international and national obligations **[consistent with the Convention and the Nagoya Protocol];]**

**2.3.1.quarter** Promote capacity-building to foster the participation of Parties in biotechnological research activities, in developing countries, **[in particular small island developing States, least developed countries and countries with economies in transition,]** which provide genetic resources for health-related research;

**[2.3.1. quinques Promote the effective participation in health-related biotechnological research activities by Parties, especially developing countries, which provide the genetic resources for such research, in health-related research];**

**2.3.2.** Promote the **[legal and]** sustainable use, **[harvest]** **[and avoid the illegal use, management]** and trade of **wild species** **[plants and animals]** used in traditional medicine, **[eliminate their illegal use]** as well as **[promote]** the integration and sharing of knowledge and experiences, **[including those]** based on prior and informed consent, **[mutually agreed terms]** and the fair and equitable sharing of benefits between traditional medical practitioners and the broader medical community, and consistent with the regulatory framework of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);

**2.3.3.** Identify through scientific evidence and **[/or]** risk assessment medicinal products with negative impacts on biodiversity, both for human and for veterinary uses, in order to **[prevent and address their impacts]** **[phase them out]**, **[and replace them with products that are safe for biodiversity]**, target risk management and communication strategies, and avoid the inappropriate use and disposal of antimicrobial agents<sup>50</sup> in human medicine, veterinary practice, plant breeding, agricultural and aquaculture use<sup>51</sup>;

<sup>49</sup> In line with WHO Guidance for Climate Resilient and Environmentally Sustainable Health Care Facilities, WHO, 2020, <https://www.who.int/publications/i/item/9789240012226>

<sup>50</sup> In line with WHO Global action plan on antimicrobial resistance, WHO, 2015, [https://apps.who.int/iris/bitstream/handle/10665/193736/9789241509763\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/193736/9789241509763_eng.pdf?sequence=1), FAO-WHO, Codex of Practice to Minimize and Contain Antimicrobial Resistance, 2005 and Guidelines for Risk Analysis of Foodborne Antimicrobial Resistance, 2011, <http://www.fao.org/fao-who-codexalimentarius/thematic-areas/antimicrobial-resistance/en/> and OIE Strategy on Antimicrobial resistance and the prudent use of antimicrobials, November 2016, [https://www.oie.int/fileadmin/Home/eng/Media\\_Center/docs/pdf/PortailAMR/EN\\_OIE-AMRstrategy.pdf](https://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/PortailAMR/EN_OIE-AMRstrategy.pdf)

<sup>51</sup> In line with the Cartagena protocol on Biosafety to the Convention on Biological Diversity, when appropriate, <https://bch.cbd.int/protocol/text/>

**2.3.4.** [Avoid]/[End]/[Eliminate] the unsustainable and illegal [**or unsafe**] use of [~~€~~] wild [**species**] [~~animals and plants~~] for prescriptions for medicinal use,<sup>52</sup> and wherever possible, use alternative, sustainable sources for medicinal use;

**2.3.5.** Promote environmental surveillance through routine assessment including antimicrobial resistance screening in some specific environments, to identify contamination hotspots and emissions;

**2.3.6.** Enhance the sustainability of all streams of waste in the health sector by conducting a life cycle impact assessment in regulatory approval and incentivizing the reduction of impact of products and disposal practices;

**2.3.6.bis** Promote the role of [**urban**] biodiversity [~~rich green / blue spaces~~] in supporting and enhancing [**social**], mental and physical health and well-being.

#### **Action area 2.4. Mainstream biodiversity in economic stimulus measures that can also contribute to the enhancement of health<sup>53</sup>**

##### *Activities*

**2.4.1.** Integrate biodiversity considerations while developing economic stimulus measures and recovery plans, including in the context of the post COVID-19 recovery, [~~as highlighted in appendix 2,~~] in all economic sectors, to support the conservation and sustainable use of biodiversity, [**as far as possible and as appropriate**], including by maintaining or enhancing support for developing countries, [**small island developing states, least developed countries and countries with economies in transition**] to safeguard [**and sustainably use**] their biodiversity;

**2.4.2.** Screen and monitor stimulus measures [**in the health sector**] for their biodiversity impacts to ensure they are aligned with long-term policy goals for the three objectives of the Convention and the 2030 Agenda for Sustainable Development, and contribute to better health outcomes and/or the mainstreaming of biodiversity-health linkages;

[**2.4.3.** Employ sustainable public procurement, [**including, where appropriate,**] with environmental certification [**and other financial and trade incentives**] to support companies and producers that contribute to the conservation and sustainable use of biodiversity;]

**2.4.4.** Promote jobs and income support for biodiversity conservation, [**for the knowledge and conservation of local/native agrobiodiversity**], sustainable use and restoration to stimulate economic recovery as well as in research, including in the field of One Health;

**2.4.5.** Promote a bioeconomy, based on the sustainable management of biodiversity and biomass to generate new products, processes and value-added services based on knowledge and innovation;

[**2.4.5.bis** [Promote]/[Ensure] compliance across economic sectors with international agreements and national provisions on access and benefit sharing [**consistent with the [Convention and the] Nagoya Protocol**[-]], to ensure [**the implementation of ABS obligations**] [~~timely access~~] and [~~increase~~][**fair and equitable**] benefit sharing [~~arising from health-related economic activities~~] [**on an equal footing**].]

##### *Implementation milestones for monitoring purpose by 2030:*

(a) Biodiversity and health linkages are recognized in sector-specific policies, with a view to promoting better health outcomes alongside the conservation and sustainable use of biodiversity;

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<sup>52</sup> In line with the sustainable trade strategies established through other global instruments such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

<sup>53</sup> In accordance with Appendix 2 which presents options to integrate biodiversity considerations into COVID-19 stimulus and recovery measures.

(b) The health sector follows biodiversity-inclusive sustainable practices ~~and~~ implements policies to avoid or limit potential adverse effect on biodiversity **[and shares monetary benefits with the custodians of biodiversity]**;

(b)*bis* Other sectors follow biodiversity-inclusive sustainable practices and implement policies to avoid or limit potential adverse effect on biodiversity;

(c) Funding is allocated to biodiversity conservation, restoration and sustainable use programmes and/or activities also providing health benefits;

(d) Biodiversity investment targets are established and implemented under economic stimulus measures and recovery plans, including in the context of the post-COVID-19 recovery.

### **ELEMENT 3: EDUCATION AND AWARENESS ON BIODIVERSITY AND HEALTH LINKAGES**

#### *Strategic objective*

To improve awareness and understanding of biodiversity and health linkages ~~[to catalyse a transformative behavioural and attitude change at all levels]~~, and foster sustainable consumption and production patterns, including through educational programmes **[grounded in conservation [and sustainable use] education]**.

#### *Rationale*

~~[A common narrative and vision are needed to raise the issue of biodiversity and health linkages in the global agenda.]~~ While linkages between biodiversity and health are multiple and complex, clear messages which present the current policy approaches to health, biodiversity and the environment are needed for decision- and policymakers, as well as the general public. Guidance and recommendations on potential trade-offs and synergies should be provided to policymakers and the general public. Aligning messages and developing advocacy tools will catalyse ~~[a transformative]~~ change at all levels.

#### **Action area 3.1. Define key messages and advocacy tools on biodiversity and health interlinkages and co-benefits, building on traditional knowledge and conservation education**

##### *Activities*

**3.1.1.** Promote and disseminate advocacy tools, best practices and examples of policies that maximize biodiversity and health co-benefits, ~~[building upon the key messages provided in appendix 3]~~ and highlighting the relevant contributions of indigenous peoples and local communities, women, youth, older persons **[and persons with disabilities]**;

**3.1.2.** Demonstrate through case studies how conservation and sustainable use of biodiversity, the fair and equitable sharing of benefits arising from the utilization of genetic resources **[and associated traditional knowledge]**, can result in multiple health benefits and improved resilience for ecosystems and ~~[our shared]~~ **[the]** environment;

**3.1.3.** Leverage biodiversity and health linkages to promote sustainable consumption, including in the context of the ~~['build back better' agenda and the]~~ need for a sustainable recovery from the current COVID-19 ~~[and future]~~ pandemic[s];

**3.1.4.** Support campaigns and activities to engage stakeholders in the promotion of biodiversity and health linkages and One Health approaches among other holistic approaches, including through World Days,<sup>54</sup> multilateral fora and associated communication networks;

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<sup>54</sup> Including World Wildlife Day (3 March), World Health Day (7 April), International Day of Biological Diversity (22 May), World Environment Day (5 June), World Environmental Health Day (26 September), World Mental Health Day (10 October) and World Antibiotic Awareness Week (18-24 November).

**3.1.5.** Communicate on health risks arising from the cost of inaction and continued ecosystem degradation and biodiversity loss, including unsustainable land management, depletion of marine environment, wildlife exploitation or illegal trade.

**3.1.6. [Develop educational measures to reduce the risk of contact among wildlife, domestic animals and humans, thereby preventing pathogen transmission or spillover.]**

### **Action area 3.2. Raise awareness among general public and non-State actors**

#### *Activities*

**3.2.1.** Engage the education sector, especially at the primary and secondary levels, and empower citizen scientists to gain knowledge and invest in their own communities, with a view to internalizing biodiversity and health linkages and generating a multiplying impact;

**3.2.2.** Include educational programmes on One Health among other holistic approaches and biodiversity-health linkages in national education curricula and national biodiversity strategies and action plans, as appropriate, and support citizen projects promoting biodiversity-health linkages;

**3.2.3.** Introduce biodiversity and health interlinkages into the curricula of human and animal healthcare and welfare professionals, as well as professionals in areas related to agriculture, forestry, fisheries and aquaculture, tourism, energy and mining, infrastructure, manufacturing and processing, and health, as appropriate, as part of life-long learning and skills development;

**3.2.4.** Encourage network-building activities, including through conferences, dissemination of information on biodiversity-health linkages [**provided by Parties**] through public databases, web portals, social media and information networks that facilitate access to all relevant stakeholders;

**3.2.5.** Promote global advocacy efforts for mainstreaming biodiversity and health linkages, [**as far as possible and as appropriate**], into the sustainable development agenda, [*the post-2020 global biodiversity framework*], the United Nations Decade on Ecosystem Restoration, the United Nations Decade of Ocean Science for Sustainable Development and all areas to which biodiversity and health linkages can contribute, [~~building on existing messages developed in appendix 3~~];

**3.2.6.** Raise the awareness of the private sector and encourage non-State actors to contribute to broader initiatives led by partners including the Sharm El Sheik to Kunming Action Agenda for Nature and People “Reversing Biodiversity Loss and Promoting Positive Gains to 2030”,<sup>55</sup> among other initiatives,<sup>56</sup> with a view to [~~instilling a transformative change to catalyse a healthy~~]living in harmony with nature.

#### *Implementation milestones for monitoring purpose by 2030:*

(a) Communication materials and tools, including culturally appropriate materials and available in indigenous languages, promoting the understanding of biodiversity and health linkages are developed and adapted [**and disseminated**] to the national context, building on key messages;

(b) Key messages on biodiversity and health linkages are defined and incorporated in national biodiversity strategies and action plans, in health strategies and action plans, in accordance with national circumstances and priorities;

(c) Education programmes for the sustainable use and conservation of biodiversity and the promotion of biodiversity and health linkages are incorporated in national education curricula, national biodiversity strategies and action plans, in health strategies and action plans, in accordance with national circumstances and priorities;

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<sup>55</sup> An agenda for action, Reversing Biodiversity Loss and Promoting Positive Gains to 2030, <https://www.cbd.int/action-agenda/>

<sup>56</sup> Note for example the Call to Action on the Berlin Principles on One Health, <https://oneworldonehealth.wcs.org/About-Us/Mission/The-2019-Berlin-Principles-on-One-Health.aspx>, as well as other relevant frameworks and documents that deliver precise recommendations, listed in CBD/SBSTTA/24/INF/25.

(d) Non-state actors from various countries pledge to commitments on biodiversity and health under Action Agenda “Reversing Biodiversity Loss and Promoting Positive Gains to 2030”.<sup>57</sup>

#### **ELEMENT 4: SURVEILLANCE AND MONITORING TO ADDRESS HEALTH THREATS**

##### *Supporting objective*

To strengthen planning, surveillance, **[monitoring]** and mitigation efforts to address health threats [to **humans and wildlife and the role of biodiversity therein**], including the risk of foodborne diseases, plant and animal diseases, neglected tropical diseases, emerging infectious diseases, vector-borne diseases and zoonotic pathogen spillover, **[antimicrobial resistance]**, outbreaks, epidemics, and pandemics of zoonotic origin **[and exposure to environmental chemicals, and how these are magnified or modulated by available levels of biodiversity, considering the implementation of the goals and targets to the global biodiversity framework in the context of the]** ~~[through]~~ One Health approaches among other holistic approaches, and the rapid international sharing of information, data, **[and samples [, complemented by an equally rapid sharing of diagnostics, vaccines, treatments and relevant intellectual property, with the providers of such information, data and samples, on fair, equitable and most favourable terms]]** ~~[samples, and fair and equitable sharing of benefits arising from the utilization on equal access footing].~~

##### *Rationale*

Reinforcing surveillance of biodiversity, including on wildlife habitats and assessing zoonotic pathogen spillover risk is instrumental to better address health threats and disease risks. Zoonotic disease and pandemics risk can be reduced, **[including][mostly]** by conserving **[and sustainably using]** natural ecosystems and by reducing contact between humans and livestock ~~[with wild species that may act as reservoirs for potential pathogens,]~~ and also by limiting the introduction of invasive alien species. Reinforcing surveillance also requires a substantial increase of adequate means of implementation, such as capacity-building and development, technology transfer, scientific and technical cooperation and funding, especially for developing countries, **[small island developing states, and countries with economies in transition]**.

#### **Action area 4.1. Reinforce surveillance and monitoring systems through cross-sectoral collaboration, in line with One Health approaches**

##### *Activities*

**[4.1.1. Strengthen [pandemic prevention and preparedness through enhanced] cross-sectoral and trans-disciplinary surveillance of [essential components of pandemics preparedness, including on] emerging infectious pathogens and diseases, [antimicrobial resistance] vector-borne diseases, neglected tropical diseases, transboundary animal diseases, zoonotic pathogen spillover risk, alien species, plants and habitats of wildlife;]**

**[4.1.2. Promote community-based surveillance, and participatory monitoring from indigenous peoples and local communities, as elements of pandemic preparedness, with particular attention to people who have contact with wildlife, livestock and farmed animals;]**

**4.1.3. Monitor wildlife population resilience and maintain wildlife [monitoring and chemicals of concerns as well as] surveillance for high-risk pathogens, especially where there is a [risk of exposure to chemical contaminants or] large diversity of viral strains in wildlife with significant potential for spillover to people;**

**[4.1.4. Increase surveillance of wildlife disease events and emerging/re-emerging and exacerbated communicable disease threats, [and the role of biodiversity therein], including water-borne, vector-borne, food-borne, [air borne] diseases and transboundary animal diseases;]**

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<sup>57</sup> <https://www.cbd.int/action-agenda/>

**4.1.5.** Promote, **[where possible and appropriate]**, prompt and clear, timely, and publicly accessible information sharing and systematic collection, analysis, interpretation and dissemination of data on health, **[including through mobilization and sharing of data on the distribution of species that act as pathogens, vectors, hosts and reservoirs of human diseases]**, **[and fair and equitable sharing of benefits arising from their utilization and equal footing]****[in line with [national and international measures][other multilateral agreements / in accordance with relevant ABS frameworks and legislations] ;]**

**4.1.6.** Enable the timely, **[open and secure][and ABS-compliant]** **[sharing of]/[access to]** pathogens, specimens, sequence information and relevant meta data which are essential for the rapid development of medical biotechnology, diagnostic assays, therapeutic interventions, vaccine development and prophylactic measures;<sup>58</sup>**[and [subject to the establishment of][the][while [ensuring the][complying with the established] fair and equitable benefit-sharing] [on an equal footing][ through an intergovernmental process, consistent with the Convention and the Nagoya Protocol to facilitate equitable access to health care products, technologies and knowhow to developing countries in a timely and prompt manner for robust public health response, and the fair, equitable and equally rapid sharing of such medical biotechnology, diagnostics assays, therapeutic interventions, vaccine development and prophylactic measures, as well as associated intellectual property][as relevant to the ABS measures and consistent with the Convention and the Nagoya Protocol]];**

**4.1.7.** **[Consider integrating and employing]**~~Design, implement and ensure the use of~~ early warning systems for eventual invasions, by alien species, including through E-DNA analysis and monitoring, and warning systems such as the WAHIS and WAHIS-Wild developed by the World Organisation for Animal Health (OIE), the Global Outbreak Alert and Response Network-(GOARN) developed by the World Health Organization (WHO), and the implementation of International Health Regulations (IHR) **[and the Global Health Security Agenda (GHSa)]**, **[subject to the establishment of a fair and equitable benefit sharing mechanism consistent with the Convention and the Nagoya Protocol, through an intergovernmental process][while preventing the misappropriation of digital sequence information created as a result of such E-DNA analysis];**

**4.1.7.bis** Invest in early warning systems and matching infrastructure that can provide rapid, effective responses to emerging threats, including epidemiological and laboratory capacity, with appropriate data systems, taking into account the specific capacity gaps faced by developing countries, **[small island developing states, and countries with economies in transition];**

**4.1.8.** Foster effective and efficient collaboration among experts,<sup>59</sup> to provide cross-sectoral scientific guidance, contribute to disease surveillance programmes, assess and discuss potential trade-offs.<sup>60</sup>

**4.1.9.** **[Support the capacity and capability of developing countries, small island developing states, and countries with economies in transition, for timely detection and responses to health risks linked to environmental factors.]**

*Implementation milestones for monitoring purpose by 2030:*

- (a) Cross-sectoral and transdisciplinary efforts on surveillance and monitoring are strengthened, through effective collaboration, reporting or information sharing systems;
- (b) Proportion of potential hotspots of disease emergence that are under strict protection regime;

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<sup>58</sup> In line with the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization and the International Health Regulations, see WHO/CBD, Questions and Answers, Implementation of the Nagoya Protocol in the context of human and animal health, food safety: Access to pathogens and fair and equitable sharing of benefits, Living document, May 2018, [https://www.who.int/influenza/pip/QA\\_NP\\_Public\\_Health.pdf?ua=1](https://www.who.int/influenza/pip/QA_NP_Public_Health.pdf?ua=1)

<sup>59</sup> Including biologists, microbiologists, ecologists, public health experts including epidemiologists and virologists, veterinarians, health practitioners, social scientists, indigenous peoples and local communities and relevant professionals across disciplines.

<sup>60</sup> McShane T.O et al, Hard choices: Making trade-offs between biodiversity conservation and human well-being, *Biological Conservation*, vol. 144, issue No. 3, p.966–972, 2011, <https://doi.org/10.1016/j.biocon.2010.04.038>.

(c) Disease alerts are detected and reported through surveillance systems, including **[the joint FAO, OIE, WHO Global Early Warning System for health threats and emerging risks at the human-animal-ecosystems interface (GLEW)]**, the OIE-led “World Animal Health Information System” WAHIS and WAHIS–Wild and under the International Health Regulations (IHRs) **[and Global Health Security Agenda (GHSa)]**, as appropriate and in line with a “plan–do–check–act” (PDCA) cycle approach.

(d) **[Establishment of a fair and equitable benefit sharing mechanism, through an intergovernmental process, consistent with the Convention and the Nagoya Protocol, that ensures fair and equitable sharing of the benefits arising out of the utilization of the genetic resources, including digital sequence and other similar information, and that addresses developing country health care requirements, including equitable access to health care products and technologies required for public health response to health emergencies].**

## **ELEMENT 5: RESEARCH ON BIODIVERSITY AND HEALTH LINKAGES**

### *Supporting objective*

To consolidate scientific research and knowledge management to further investigate the full range of linkages between biodiversity **[at ecosystem, species and genetic diversity levels]** and health within the framework of One Health among other holistic approaches, including at the regional and local levels, considering and respecting the traditional knowledge and skills of indigenous peoples and local communities, **[recognizing]** ~~[ensuring]~~ that access to traditional knowledge is based on their ~~[free, prior and informed consent, prior and informed consent, or]~~ approval and involvement, and **[encourage the]** ~~[ensuring]~~ fair and equitable sharing of benefits.

### *Rationale*

Scientific research contributes to further explore and understanding the full range of biodiversity and health linkages within the framework of One Health among other holistic approaches. Scientific research plays an essential role in protecting health and conserving biodiversity alongside traditional knowledge - not only in understanding, measuring and assessing change, but also in providing innovative solutions to long standing challenges. Ongoing efforts to conduct environmental and health assessments, to strengthen national monitoring capacities and data collection, to develop interdisciplinary, **[intercultural]** education, training and research programmes are instrumental to inform and support policy action.

**Action area 5.1. Strengthen the understanding of the full range of biodiversity and health linkages and support access to scientific evidence, data and good practices, based on the identification of research gaps and needs**

### *Activities*

**5.1.1.** Invest in **[ABS-compliant]** traditional knowledge programmes ~~[based on access and benefit-sharing [mechanisms][standards]]~~ and scientific research, and support universities, research institutes, collaborating centres and other leading research actors including indigenous peoples and local communities, to increase data, experience, and scientific evidence **[based on applicable access and benefit sharing measures]**;

**5.1.1.bis** **[Ensure]**~~[Facilitate]~~ access to and transfer of technology **[on mutually agreed terms]**, including biotechnology and innovative health-related technology, scientific and technical cooperation and capacity-building, to enable Parties in particular, developing countries **[small island developing States, and countries with economies in transition]**, to benefit from access to scientific materials, data and good practices;

**5.1.1.ter** Promote the effective participation of Parties which provide genetic resources and associated information for biotechnological health-related research activities in such research;

**[5.1.2. Invest in early warning system and matching infrastructure that can provide rapid, effective responses to emerging threats, including epidemiological and laboratory capacity, with appropriate data systems;]**

**5.1.3.** Invest in [**multisectoral and**] inter/transdisciplinary [**ABS-compliant**] research efforts to capture the full breadth of the complex biodiversity and health linkages with the framework of One Health [**and bio risk management principal**], and when relevant enable gender, age and indigenous status disaggregated data, including for example in below research areas:

5.1.3.1. Invest in [**urban**] biodiversity-~~[rich green and blue spaces]~~ which enhance [**social**], mental and physical health and the contribution of biodiversity for new medicine and food;

5.1.3.1.bis. [**Promote the contribution of biodiversity for new medicine and food production while ensuring fair and equitable benefit sharing mechanisms**];

5.1.3.2. Promote research on the linkages between the diversity [**and species richness**] of the human microbiome, [**and its relation with human health**], environmental biodiversity, benefits for [**social**], mental and physical health, and their implications for human settlements, [**cognizant that organisms compromised in the human microbiome are not human genetic resources and are therefore subject to the ABS provisions of the CBD and the Nagoya Protocol**];

5.1.3.3. Promote research on the relationships between hosts populations, pathogens and natural resistance to these pathogens, and coevolution in these systems [**with**],<sup>61</sup> biodiversity [**loss and**], ecosystem ~~[destruction and]~~ degradation;

5.1.3.4. Promote research on the linkages between ~~[unregulated]~~ [**and illegal**] wildlife and livestock markets, and incidence in zoonotic diseases;

[5.1.3.5. Promote research on the interlinkages between [**biodiversity and**] health [**in the context of**][and sustainable, ~~[increased plant-based,~~] diverse and healthy diets,] [**including traditional, national, and local food cultures, as well as their production and influenced by**]diversity of crops, [**and the genetic variability within a crop cultivar or species**], livestock and seafood, soil biodiversity, pollinators and other associated agrobiodiversity, marine and inland water ecosystems, and the effects of [**pesticides**][~~agrochemicals~~]on human health and agrobiodiversity;]

**[5.1.3.5. bis. Promote research on the interlinkages between protected and conserved areas that conserve intact, healthy ecosystems, and potential reductions in the emergence and spread of infectious diseases and pathogen spillover risks;]**

5.1.3.6. Promote research on [**the significance**]/[**the linkages between the loss of ecosystems species and genetic diversity** significance for health] of marine and terrestrial, [**aquatic and marine**] biodiversity, [**including for infectious disease risk food security and safety**][**such as that from forests**]including for infectious emerging disease risk, food security and food safety, and the consequences of multiple stressors and overexploitation on [**terrestrial and marine**]/[**all**] ecosystems (e.g. [~~pathogens, chemicals, plastics and microplastics, climate change and~~] habitat degradation);

5.1.3.6.bis Promote research on the linkages between the loss of [**ecosystems**], species [**and genetic diversity**] or ecological functions and the consequences on human health (e.g. the disappearance of the bee populations);

5.1.3.7. Promote research on the linkages between migratory species and human health, including links between migratory behaviour and pathogen dynamics, and the impact of climate change and habitat changes;

5.1.3.8. Promote research on the linkages between invasive alien species and human health [**and**] [~~animal health, plant health and~~]wild[life][species] [**health**], considering that alien species may act as vectors or hosts of pathogens [**and displace important species for sustaining human and ecosystem health**];

5.1.3.9. Promote research on the linkages between climate change, biodiversity and human health, including research into soil health and climate change impact on health;

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<sup>61</sup> Beans et al., Studying immunity to zoonotic diseases in the natural host — keeping it real, *Nature Reviews Immunology*, 2013, <https://www.nature.com/articles/nri3551>.

5.1.3.10. Promote pollution-related research to understand the consequences of the different forms of pollution on the interlinkages between biodiversity and health, to control pollution and drive change in pollution prevention and monitoring policy;

[5.1.3.10.*bis* Promote research benefits provided by nature, including in monetary terms, to human physical and mental health.]

[5.1.4. Strengthen international, regional, **[sub-regional]**, national and subnational monitoring and surveillance capacities **[including monitoring and surveillance of chemical contaminants]** through active surveillance systems that facilitate systematic inputs and data exchange between public health, animal health and welfare, environment, wildlife and other sectors, taking into account the specific capacity gaps of developing countries, **[small island developing states, and countries with economies in transition].**]

**Action area 5.2. Promote cross-sectoral collaboration and foster the implementation of One Health approaches among other holistic approaches at local, [subnational], national, regional and international levels**

*Activities*

**5.2.1.** Strengthen collaboration among experts,<sup>62</sup> to build comprehensive scientific guidance for policy action and the application of One Health approaches among other holistic approaches, including through **[Party-driven,] [ABS-compliant][innovative]** knowledge-sharing platforms, digital technologies, tools and data gathering and dissemination methods;

**5.2.2.** Promote and sustain existing national, regional and international networks and partnerships, joint work programmes, cross-sectoral collaboration on biodiversity and health linkages, to identify and manage health risks posed by ecosystem degradation and biodiversity loss;

**5.2.3.** Harness findings, reports and recommendations from **[inter-governmental] [global]** platforms, partnerships and initiatives, ~~[including experts and inter-agency liaison groups]~~, which can inform risk analysis and emergence response protocols to improve the science-policy interface **[and relevant application in national planning and implementation];**

**5.2.4.** Promote community engagement and stewardship for disease risk reduction and sustainable use of **[biodiversity] [natural resources]** and expand attention to socioeconomic and behavioural factors.

*Implementation milestones for monitoring purpose by 2030:*

(a) Funding is allocated to **[multisectoral and]** transdisciplinary research on the full range of linkages between biodiversity and health and One Health at the national level **[and, as appropriate, at subnational levels];**

(b) Increase in number of **[multisectoral and]** transdisciplinary research publications and projects on biodiversity and health linkages;

(c) Countries are promoting One Health collaborations, by establishing collaborating centres and joint programmes, participating in international One Health collaborations, and providing funding to One Health project or schemes dedicated to the promotion of biodiversity and health.

**[d] Developing countries, in particular [small island developing States, and countries with economies in transition] have access to technology including biotechnology and innovative health-related technology, scientific and technical cooperation, capacity building, and scientific outputs, data and good practices.]**

e) **[Benefits from utilization of genetic resources in health research and development are shared equitably]**

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<sup>62</sup> Including biologists, microbiologists, ecologists, public health experts including epidemiologists and virologists, veterinarians, health practitioners, social scientists, indigenous peoples and local communities and other relevant professionals.

## ELEMENT 6: CAPACITY-BUILDING AND FUNDING

### *Supporting objective*

To support capacity-building and ~~[ensure predictable and]~~ sustainable funding to policies and programmes promoting biodiversity and health linkages and One Health approaches, among other holistic approaches.

### *Rationale*

Building capacities and mobilizing resources, **[in particular towards countries]** [from all sources, private and public, national[, **sub-regional, regional**] and international, in a transparent and efficient manner], to **[mainstream and]** implement biodiversity and health related policies, while maximizing synergies with measures related to other goals and approaches and avoiding double structures in implementation of measures and monitoring and evaluation, is key to ~~[ensure]~~ **[deliver]** action and long-lasting impact, **[in particular for developing countries, taking into account the significant inequalities across Parties prompted by the COVID-19 pandemic and uneven capacities to respond to health emergencies]**. Investing upstream, in **[surveillance]**, prevention, **[early detection]** and **[relevant]** early warning systems is a priority and less costly than emergency response once an epidemic has emerged.

### **Action area 6.1. Promote capacity-building at all levels, across disciplines and sectors**

#### *Activities*

**6.1.1.** Strengthen the capacity of health, environment, agriculture, fisheries, aquaculture, forestry, food and nutrition, and other relevant ministries, agencies and organizations to promote biodiversity and health linkages, and One Health approaches, among other holistic approaches;

**[6.1.2.** Drive cooperation and collaboration between sectors to align interventions, develop best management practices, building on existing expertise developed within governments, **[subregional, regional]**, international and non-governmental organizations, indigenous peoples and local communities, and other stakeholders;

**6.1.3.** Promote mutual learning and collaborative activities, by leveraging peer-to-peer learning and building on current transdisciplinary training schemes;

**6.1.4.** Promote collaboration between traditional and scientific knowledge that contribute to enhance the understanding of biodiversity and health linkages and the promotion of One Health approaches, among other holistic approaches, where it is sustainable and there is no known risk to human or animal health and well-being;

**6.1.5.** Develop **[ABS-compliant]** tools, technology transfer and digital technology to reinforce knowledge sharing, and develop partnerships and alliances that support multi-disciplinary, cross-sectoral approaches and address the capacity gaps **[in particular in]** developing countries, **[small island developing states, and countries with economies in transition]**;

**6.1.6.** Enhance technical and scientific cooperation, including North-South and South-South **[and triangular]** cooperation, to strengthen the capacity of developing countries, **[small island developing states, and countries with economies in transition]** in adopting technologies and developing skills that are key to promoting biodiversity and health linkages;]

~~[[6.1.6.bis Improve risk assessment of disease emergence and develop prevention strategies adapted to the local socioeconomic and cultural context in cooperation with local communities, stakeholders and policymakers.]]~~**Strengthen systems and frameworks for risk assessment, risk management and risk communication and develop prevention strategies adapted to the local socio-economic and cultural context in cooperation between local communities, stakeholders and policy makers]]**

## Action area 6.2. Mobilize ~~[predictable and sustainable]~~ resources ~~[sufficient]~~ to enable implementation of biodiversity-health related policies

### Activities

**6.2.1.** Investigate the costs of inaction in relation to the conservation, restoration, and sustainable ~~[management]~~**[use]** of biodiversity as a means to reduce health risks and related costs of possible pandemics, and develop investment case-studies to help quantify the positive impact and return on investment from biodiversity-inclusive One Health policies, among other holistic approaches, which can be reflected in national accounting practices, provide cost-effectiveness evidence including on the impact of nature's benefits to human **[social]**, mental and physical health, and identify funding needs with greater granularity;

~~[6.2.2. Consistent with the resource mobilization component of the post-2020 global biodiversity framework,<sup>63</sup> set national targets for domestic resource mobilization, include budget lines for biodiversity and health as part of national biodiversity finance plans or similar instruments and prioritize finances on integrative and co-beneficial actions for other environmental issues, as appropriate;]~~

~~[6.2.3. [Consistent with the resource mobilization component of the post-2020 global biodiversity framework];<sup>64</sup> identify gaps in financial sources to secure adequate resources from all sources for programmes and [projects related to biodiversity and health linkages and/or One Health approaches]]~~**[projects related to biodiversity and health linkages]** ~~[in accordance with Article 20 of the Convention]];~~

**[6.2.4.** Leverage direct and indirect biodiversity and health-related international finance, **[including official development assistance]**, as well as private sector investment and engage the financial sector in mainstreaming biodiversity, including for developing countries, **[in particular small island developing States, and countries with economies in transition];]**

~~[6.2.5. Involve multilateral development banks and development finance institutions in considering investments in biodiversity and health, including in portfolios related to sustainable recovery plans;]~~

~~[6.2.5.bis Consider opportunities for the Global Environment Facility (GEF) to support eligible countries in the implementation of this action plan;]~~

**[6.2.6.** Scale up investment by governments, public authorities, development banks, **[private]** and others in measures to reduce health threats, provide early warning systems, invest in health systems as a foundation of societal cohesion and well-being, and strengthen the capacity of Parties, in particular developing countries, **[in particular small island developing States, and countries with economies in transition]**, **[to enhance rapid response]**~~][to respond to health emergencies.]~~

### Implementation milestones for monitoring purpose by 2030:

(a) Capacities of relevant Ministries, agencies and organizations are strengthened through specific programmes, tools and platforms, and enhanced collaboration mechanisms;

(b) Domestic ~~[finance]~~ **[resources]**, including funding for indigenous peoples and communities, enables the funding of programmes related to biodiversity-health linkages and/or One Health approaches, among other holistic approaches;

(c) Financial **[support]** ~~[assistance]~~ enables the funding of projects related to biodiversity-health linkages and/or One Health approaches, among other holistic approaches, in developing countries, **[small island developing states, and countries with economies in transition, and]** in particular least developed countries, and including for indigenous peoples and local communities, women, youth ~~[and]~~ older persons, **[and persons with disabilities]**.

<sup>63</sup> A draft strategy is provided in CBD/SBI/3/5.

## [VII. MONITORING THE ACTION PLAN PROGRESS

22. Monitoring progress and milestones will be instrumental to assess progress made towards the mainstreaming of biodiversity and health linkages, and to ensure that vulnerable populations most directly dependent on biodiversity are protected from health impacts associated with biodiversity loss, ecosystem degradation and other risk factors, including climate change.

23. The *implementation milestones* suggested for each element in section VI will help to monitor progress towards achieving the strategic *operational or supporting objectives* of the action plan. Based on those proposed *implementation milestones*, it is suggested that countries set their own targets taking into consideration the local context, priority, baseline, and capacity.

24. In addition, the implementation of the action plan will be monitored against [**relevant**] indicators from the [~~draft~~] post-2020 global biodiversity framework, with a view to supporting synergies and avoiding additional monitoring and reporting. [~~Consequently, it is suggested to use selected headline indicators from the monitoring framework of the post-2020 global biodiversity framework which are relevant for the monitoring of the action plan, once the list of indicators for the post-2020 global biodiversity framework is finalized.~~] [**Parties and other stakeholders are encouraged to develop indicators appropriate for measuring implementation of the global action plan for biodiversity and health.**]

[25. As the post-2020 global biodiversity framework is under elaboration, the below suggested indicators could also be used as possible candidate supplementary indicator inputs to inform the monitoring framework of the post-2020 global biodiversity framework:

(a) [**Consistency of measures taken pursuant to**] [~~Implementation of~~] International Health Regulations (WHO indicator on Zoonotic Events and the Human-animal Interface, IHR State Party Self-Assessment Annual Report) [**with the Convention and its Protocols**];

(b) Effective reporting under the World Animal Health Information System (WAHIS), a database system providing information on zoonosis and (re-)emerging diseases affecting animals & Performance of Veterinary Services (PVS)<sup>65</sup> to assess veterinary services at the national level;

(c) Environmental burden of disease per year (WHO indicator, percentage).]]

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<sup>65</sup> OIE tool for the evaluation of performance of veterinary services, 2019,  
[https://www.oie.int/fileadmin/Home/eng/Support\\_to\\_OIE\\_Members/docs/pdf/2019\\_PVS\\_Tool\\_FINAL.pdf](https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/2019_PVS_Tool_FINAL.pdf)