

Template for the review of the draft Global Action Plan for Biodiversity and Health

TEMPLATE FOR COMMENTS

<i>Contact information</i>	
Surname:	Lieberman
Given Name:	Susan
Government (as applicable):	N/A
Organization (as applicable):	Wildlife Conservation Society (WCS)
Address:	2300 Southern Boulevard
City:	Bronx, NY
Country:	USA
E-mail:	slieberman@wcs.org
<i>General comments</i>	
<p><i>The Wildlife Conservation Society (WCS) is an international non-governmental organization (NGO) that has been working across the globe for more than 120 years to save wildlife and wild places. We have field programs in more than 60 countries across Asia, Africa, the Pacific, and the Americas that work in partnership with governments, Indigenous Peoples and local communities, the private sector, and other stakeholders on science-based conservation efforts.</i></p> <p><i>WCS has published extensive advice on issues related to COVID-19 and the emergence of zoonoses that lead to pandemics like the one we are currently experiencing. WCS has a web page (see here) dedicated to storing our relevant policy statements and resources related to COVID-19. However, our work at the intersection of biodiversity, the environment, and health precedes and goes far beyond zoonotic pandemics. The WCS Health Program is one of the oldest zoological veterinary programs in the world and a global thought leader in One Health approaches. We are the only large international conservation organization with an embedded wildlife health program, but we also engage at the international and intergovernmental policy level. For example, WCS and the German Federal Foreign Office co-hosted a October 2019 event in Berlin titled “One Planet, One Health, One Future.” Participants at this high-level event endorsed the Berlin Principles, which has now been published in a peer-reviewed journal and serves as a framework document for the One Health approach (Gruetzmacher et al. 2020).</i></p> <p><i>It is this collective expertise we rely on in the peer review comments provided below. We thank the CBD Secretariat and Parties for the opportunity to provide comments on the draft Global Action Plan for Biodiversity and Health.</i></p>	
<p>Some general notes on the draft Global Action Plan:</p> <ol style="list-style-type: none"> 1. General note: This is a Global <u>Action</u> Plan; therefore, we believe it requires greater urgency and an indication of the transformative changes that must be implemented in order to achieve the CBD’s 2050 vision of living in harmony with nature (also part of the title of this document). This Global Action Plan should be clear and specific, science-based, honest and forthright about the changes that are needed, as identifying them in a document like this is the first step to effecting on-the-ground transformation. 	

Such changes should include urgent ambitious transformations to existing policies and practices in order to strive to prevent pathogen spillover from wildlife as well as the next global pandemic of zoonotic origin. Although the origins of the COVID-19 pandemic, and many others in recent history (HIV/AIDS, SARS, Ebola) are zoonotic in nature, and emerged due to human interactions with biodiversity, this Global Action Plan is not specific about how to make changes that fundamentally reduce this risk and address this serious threat. Such actions should include closing commercial markets and trade for live and fresh wildlife, particularly birds and mammals, for human consumption ([WCS 2020](#); [Xiao et al. 2021](#)). However, this is not the only action needed. There is a large body of evidence tying the loss of integrity in natural ecosystems to emerging infectious diseases, and to other negative impacts on human health ([Evans et al. 2020](#); [Morand and Lajaunie 2021](#); [Gibb et al. 2020](#)). There is therefore an urgent need to take actions from planning and impact assessment all the way through exploitation, trade and use of wildlife in order to change our relationship with the natural world. The Global Action Plan should be far more specific about the changes needed between now and 2030 in order to guide Parties for implementation and facilitate reporting against its objectives. It is disappointing that the current draft of the Global Action Plan does not yet achieve these goals.

2. **General note:** All efforts must be made to ensure that this Global Action Plan is not only “cross-sectoral,” which can mean that its underlying concepts or proposed activities are implemented by different sectors, but “trans-sectoral” – meaning that it avoids silo-ing of approaches and activities by different sectors ([de la Rocque and Formenty 2014](#); [Hadorn et al. 2008](#)). For example, a cross-sectoral approach could entail each sector devising their own action plan in accordance with their mandate, while a trans-sectoral approach wouldn’t acknowledge artificial administrative silos and would instead orchestrate planning and action with a true whole-of-government, or whole-of-society, approach. As such, it is essential that the human health/medical sector and community, the wildlife health sector and community, as well as other key stakeholders, be involved in the future drafting and review of this document. It is not clear from the introductory paragraphs or the document itself whether and how WHO and other multilateral organizations such as the OIE, FAO, etc. were consulted through the Inter-Agency Liaison Group on Biodiversity and Health (IALG) during the drafting of this document (though we acknowledge that this may be clarified in the working document for SBSTTA-24 agenda item 9). There are also areas where individuals and organizations with expertise in exploitation and trade in wildlife, and in wildlife health, should be consulted in order to strengthen the proposed activities.

We also note that CBD Decision 14/4 also invited the WHO “*to further support the development and implementation of measures, guidance and tools for promoting and supporting the mainstreaming of biodiversity and health linkages in the health sector, and to consider establishing a regular reporting mechanism for the progress of activities on biodiversity and health under the joint work programme of the Convention on Biological Diversity and the World Health Organization*” (operative paragraph 11(b)). It is not clear from this document how this CBD Global Action Plan will be aligned with, or otherwise mutually reinforce, those activities mentioned throughout that involve national health plans or multilateral governance under e.g. the WHO or OIE. The Global Action Plan should strive for greater collaborative design among these multilateral organizations, and the different sectors they convene, to ensure coherent and mutually supportive implementation. This should include indicators that are identified through stakeholder consultation and shared across multilateral frameworks, including the CBD post-2020 framework, to streamline reporting for Parties on key activities and outcomes.

We therefore believe this document should be seen as a first draft, and Parties should launch a process of further review, revision, and strengthening by members of the IALG and technically qualified experts. **We strongly recommend that further intersessional review of this document, by a broad range of biodiversity, human health, wildlife health, One Health, wildlife conservation experts, and others, take place following SBSTTA-24 and before, and after, CoP15 (depending on when it takes place).** Indeed, with the launch of the One Health High Level Expert Panel (OHHLEP) under the guidance of the WHO,

FAO, OIE and UNEP (Tripartite+), it is essential to keep this document under review to ensure that it is aligned with the findings and recommendations of this process. In short, we recommend that this document be considered by all relevant sectors and multilateral frameworks to transcend silos and be as trans-sectoral and trans-disciplinary as possible. With additional review and sufficient buy-in, this Global Action Plan can become central to our efforts to address the biodiversity and health nexus.

3. **General note:** There are several references to “disease spillover;” however, to be technically precise, **it is pathogens that spill over and not diseases**. Sometimes, organisms that act as reservoirs for pathogens ([inclusive of](#) viruses, bacteria, fungi, protozoa, and worms) are not affected by the presence of these pathogens in their systems, and exhibit no clinical disease symptoms. We have made notes below where the text should be amended accordingly. It is important to use precise language.
4. **General note:** We are significantly concerned that the wildlife-livestock interface is rarely mentioned in this Global Action Plan. The complex relationships between wildlife, humans and livestock (or domesticated animals, which are a broader group that is mentioned periodically) are essential to understand and, more importantly, to address these relationships as part of a robust global One Health approach. We also note that plant health is less prominent in this document than animal health. The interrelationships between humans, wild animals, domesticated animals and wild and domesticated plants are essential to highlight continuously throughout this document.
5. **General note:** Throughout the document, the integration of scientific knowledge with traditional, holistic knowledge on the health-biodiversity-environment nexus is missing, and it is important to both explicitly acknowledge and support this integration through proposed actions. It is also necessary to highlight the potential leadership role that Indigenous Peoples and members of local communities will and should play in implementing this Global Action Plan. They are therefore key stakeholders in its development.
6. **General note:** Although this will be dealt separately within the CBD policy processes from the post-2020 global biodiversity framework (GBF), it would be short-sighted to miss opportunities to ensure that they are mutually coherent and supportive. This includes ensuring that the objectives of this Global Action Plan directly support the desired outcomes of the post-2020 GBF, and ensuring that comparable indicators allow Parties to streamline reporting across these obligations. This should be present across both 2030 action targets (i.e. spatial planning, area-based conservation, etc.) contributing to the biodiversity and health goals (i.e. the desired outcomes for human health and wellbeing, including reduced risk from zoonotic pandemics, being achieved).
7. **Post-2020 GBF Target 4:** In addition to the points outlined above, WCS has serious concerns about the updated zero draft of the global biodiversity framework and its formulations for a target on exploitation (currently included as “harvest”), trade and use of wildlife. The target as currently worded, and some aspects of the monitoring framework, incorrectly and non-scientifically conflate the threat of pathogen spillover from live wildlife, with legal and sustainable exploitation. Across both the GBF and this Global Action Plan, we stress that the focus should be two-fold: first, ensuring that any commercial trade that is illegal, unsustainable or presents any risk to human health is ended, and second, ensuring that all permitted trade is sustainable and is not known to be a threat to human health, wildlife, or ecosystem health. The implementation of the Precautionary Approach ([Rio Principle 15](#)) necessitates such actions and commitments.

<i>Specific comments¹</i>		
Page	Paragraph	Comment
Introduction		
1	1	<p>Despite the parenthetical highlighted below, we note that the Global Action Plan is sometimes referred to as just an action plan. It will be important to agree to an easy reference so that governments and other stakeholders can refer back to this document during implementation.</p> <p><i>“The Global Action Plan for Biodiversity and Health (here after, Global action plan)...”</i></p>
1	4	<p>This paragraph is technically correct, but incomplete. Viewing biodiversity solely through the lens of provisioning services or genetic resources misses a fundamental contribution of biodiversity and nature as a regulating service – namely, that effective biodiversity conservation (with appropriate, holistic actions and their attendant outcomes) mitigate the risk of pathogen spillover to humans, wildlife and other animals (Dobson et al. 2020). Please note, the joint 2015 report from WHO and the CBD Secretariat recognizes, ‘Anthropogenic activities are rapidly altering ecological and evolutionary systems under which hosts and pathogens operate, creating new dynamics and opportunities for disease transmission and spread’ (WHO 2015). Biodiversity conservation at all levels (genes, species, and ecosystems) increases resilience by mitigating the risks to severe disruptions caused by climate change and pathogen spillover that can lead to global pandemics (Evans et al. 2020). This has been well documented for over a decade, including since the Millennium Ecosystem Assessment (Patz et. al. 2005). At a minimum, this paragraph should explicitly recognize these regulating services.</p>
2	5	<p>The last sentence of this paragraph should be amended:</p> <p><i>“As biodiversity conservation and ecosystem dynamics have often received less attention in One Health approaches than human-animal interconnections, there are opportunities to <u>it is critical to</u> further integrate the full range of biodiversity-health interlinkages.”</i></p> <p>It is necessary to integrate the full range of biodiversity and health linkages to be successful in our efforts to live in harmony with biodiversity; a fractured, piecemeal approach will not be sufficient and the evidence suggests this is necessary.</p>
2	7	<p>Multiple amendments are needed at the beginning of paragraph 7 in order to: a) to clarify that it is pathogens that spill over and not diseases themselves; and b) shift the focus from <i>understanding</i> the linkages between biodiversity and health, many of which are widely studied, to integrated and trans-sectoral <i>actions</i> that address critical issues at the nexus of biodiversity and health. Indeed, the joint report from the WHO and CBD in 2015 makes this same recommendation (WHO 2015).²</p>

¹ These specific comments are in addition to, and inform, General notes 1-7, above.

² *“In order to move from the currently reactive response to infectious disease emergence and spread, we must also go a step further to address the underlying drivers of disease emergence, many which also overlap with drivers of biodiversity loss (FAO 2013; Karesh et al. 2012; CBD 2012). This requires an integrated effort around ecosystems, human, and animal health, rather than a siloed one-species or one-discipline perspective. A One Health or ecohealth approach that considers the links between humans, animals (domestic and wild), and the environment can improve understanding of infectious disease drivers and dynamics and move from response to prevention measures (FAO 2013; Karesh et al. 2012).”*

		<p>“The COVID-19 pandemic shed light on the <u>has demonstrated the threat and</u> impact of biodiversity loss and the risk of disease <u>pathogen</u> spillover from wildlife to humans, reinforcing a narrative for holistic <u>the critical need for integrated, trans-sectoral</u> approaches such as One Health to understand <u>address</u> the intricate linkages between the health of plants, animals, humans, and our shared environment. <u>It is critical that urgent action be taken to prevent pathogen spillover from wildlife to other animals, and humans, if we are to prevent the next pandemic of zoonotic origin.</u>”</p> <p>Here, we recommend a reference to the precautionary principle (enshrined in Principle 15 of the Rio Declaration). The existential risks presented by the complex and delicate relationships between biodiversity and health require actions in line with the precautionary principle. We note that more scientific study is always of value, but we have enough information now to act on these issues. The risk of another global pandemic of zoonotic origin is too great to postpone action.</p>
2	8	<p>We recommend the amendment below to strengthen the call to action in this Global Action Plan, recognizing that incomplete or insufficient action will not fundamentally alter our trajectory and the outcomes for biodiversity or human health.</p> <p>“Achieving a biodiversity-inclusive One Health transition that supports <u>fully acts upon</u> the full range of linkages between biodiversity and human health, and <u>seriously</u> addresses the common drivers.”</p>
Objectives and Rationale		
2	9	<p>Overall objective</p> <p>We recommend an amendment below to clarify that a One Health approach is needed, in line with previous decisions by CBD Parties (Decision 14/4).</p> <p>“...to accelerate and upscale efforts towards the <u>a One Health approach to the conservation and sustainable use</u> of biodiversity...”</p> <p>However, this section does not address pandemic prevention. While that is only one aspect of the biodiversity-health nexus, it is critical to reflect the urgency of actions such as preventing pathogen spillover clearly in the text here.</p>
3	10	<p>Paragraph 10(1)</p> <p>We recommend the amendment below, noting that it is not just cross-sectoral policies (although those are of course important). Policies will have to be adopted within individual sectors as well that are complementary to cross- or trans-sectoral approaches to operationalize One Health.</p> <p>“within and across sectors and into <u>all policies, including but not limited to</u> cross-sectoral policies”</p>
3	10	<p>Paragraph 10(3)</p>

		<p>We are concerned that this sub-paragraph overlooks existing knowledge, awareness and the leadership potential of Indigenous Peoples (see, e.g., Copper Jack et al. 2020; Kutz & Tomaselli 2019) Although collaboration with Indigenous Peoples is addressed later, we recommend that this paragraph more clearly address the importance of, and the role for, traditional, holistic knowledge alongside scientific knowledge and the leadership of Indigenous Peoples in implementing this Global Action Plan, including surveillance efforts.</p>
3	10	<p>Paragraph 10(4)</p> <p>Per the general comment and throughout the document: Rather than zoonotic disease, we should focus on pathogen spillover. SARS-CoV-2 is not a zoonotic disease in the classic sense of the definition.</p> <p>Furthermore, it is essential to not just focus actions and investments on surveilling for, and responding to, the next potential epidemic or pandemic of zoonotic origin. Instead investments and actions must be prioritized to change the fundamental patterns of resource extraction and use, and wildlife exploitation and use, that underlie spillover events, including the fragmentation and degradation of natural ecosystems, and risks presented by wildlife markets and trade.</p>
3	10	<p>Paragraph 10(6)</p> <p>It’s not only biodiversity loss (also in the graph)—there needs to be a meaningful discussion of the human/wildlife interface, and our (human) relationships with wildlife—including in particular the exploitation, trade, farming, and marketing of live wildlife (particularly birds and mammals).</p>
Principles		
4	11	<p>Paragraph 11(3)</p> <p>We recommend the following amendment to separate issues of ecological sustainability and risks to human health from pathogen spillover (which, while inherently unsustainable, are not measured the same way as biological or ecological sustainability and therefore could be dropped from consideration). We note that if exploitation of a particular taxon or population, based on sound science and management, could be ecologically sustainable, that does not mean that the species in question should be exploited (including farmed), from a health perspective.</p> <p><i>“An application of the ecosystem approach to promote conservation and sustainable use of biodiversity and ecosystem services in an equitable way. <u>That must however include actions that prevent uses, even if they are sustainable, that increase the risk of pathogen spillover from wildlife.</u>”</i></p>
4	11	<p>Paragraph 11(6)</p> <p>We welcome the need for flexible approaches, and recommend the following amendment to draw a distinction between the roles of actions in urban or peri-urban contexts and those of local communities living alongside and dependent upon wildlife:</p>

		<p>“A flexible approach with due consideration of local contexts and specificities <i>to address the circumstances and needs of <u>local</u> communities and ensure an effective implementation that supports good health and living in harmony with nature, <u>and clearly differentiates between actions that impact local, rural communities and urban/peri-urban communities.</u>”</i></p>
4	13	<p>Indigenous Peoples should be recognized and valued as key experts and stakeholders that can provide significant leadership during the implementation of the Global Action Plan.</p> <p><i>The issue of gender balance in One Health approaches is also critical to ensure equity, and is referenced in CBD Decision 14/4 operative paragraph 4.</i></p>
Element 1		
5	[14]	<p>Element 1, Strategic Objective:</p> <p>We recommend an additional amendment to break down siloes and ensure that governments adopt a “whole-of-government” or trans-sectoral approach that engages all relevant stakeholders and sectors in a collaborative and synchronized set of actions and investments.</p> <p><i>“To integrate health and biodiversity linkages in the development and implementation of health, biodiversity and environment- related policies, and in the work and practices of <u>governments through a whole-of-government approach involving integration of all relevant Ministries or agencies.</u>”</i></p>
5	[14]	<p>Element 1, Rationale:</p> <p>We recommend the following amendments, which would: a) highlight that sustainable use is not absolutely imperative for the continued functioning of ecosystems, and b) that a trans-sectoral approach that breaks down silos and promotes collaborative and coordinated action is essential. The text as drafted gives the erroneous impression that biodiversity should be used if it is to be conserved; of course, if there is any use it must be legal and sustainable, but we suggest rewording to clarify misunderstandings:</p> <p><i>“The conservation and sustainable use of biodiversity (<u>and ensuring that any use is sustainable and without risk to human health</u>) is imperative for the continued functioning of ecosystems at all scales, and for the delivery of ecosystem services that are essential for human health <u>and well-being</u>. Further integrating health and biodiversity linkages in respective health, biodiversity and environment- related policies, <u>and across all sectors</u>, and promoting mutually-reinforcing policy action enables to catalyse <u>catalysis of</u> greater co- benefits, while contributing to the promotion of better health outcomes and the conservation of biodiversity. There is a potential to better integrate the full range of biodiversity-health linkages across policies and responsible authorities, including relevant Ministries and agencies. <u>All efforts must be taken to ensure a trans-sectoral, all of government approach that breaks down rather than reinforces lack of integration between ministries/agencies, and between and within intergovernmental organizations.</u>”</i></p>
5	[14]	Element 1, Action Area 1.1., Activity 1.1.1

		<p>It is essential to go beyond dialogue between various sectors and ministries/agencies responsible for coordinating relevant activities by government. This activity should also clearly state the need for Parties to make structural and policy changes that produce collaboration and action by different sectors as part of a trans-sectoral approach. We therefore recommend the following addition:</p> <p><i>“Facilitate dialogue between agencies responsible for biodiversity and those responsible for health and other relevant sectors, across all levels of government, <u>and work to ensure structural and policy changes that bring sectors together.</u>”</i></p>
5	[14]	<p>Element 1, Action Area 1.1., Activity 1.1.7.</p> <p>We recommend the following amendment to ensure that organizations or conventions operate within their legal mandate provided by governments:</p> <p><i>“<u>Within the mandate and remit of each organization or convention, p</u>Promote the recognition of interlinkages between biodiversity and health in global instruments and relevant international processes...”</i></p>
5	[14]	<p>Element 1, Implementation milestones:</p> <p>It is essential to include explicit references to One Health, trans-sectoral approaches that demonstrate a whole-of-government approach to the linkages between biodiversity and health. This should be further complemented and strengthened using the Guidance on integrating biodiversity into One Health approaches, which was welcomed by CBD Parties and referenced in the chapeau to this document.</p> <p>We therefore recommend the following amendment:</p> <p><i>“Health and biodiversity linkages <u>and a One Health trans-sectoral approach</u> are considered and included...”</i></p>
Element 2		
6	[14]	<p>Element 2, Rationale</p> <p>We recommend the following amendments to reflect language used by IPBES, to address the role of forest degradation alongside full deforestation in pathogen spillover and disease emergence, and to note that urbanization can take place sustainably and unsustainably:</p> <p><i>“Biodiversity loss, ecosystem degradation and negative health outcomes share many common drivers, such as change in land-use and habitat, unsustainable food production practices, over-harvesting over-exploitation, deforestation <u>and forest degradation</u>, water management processes, <u>unsustainable</u> urbanization, use of pesticides and antimicrobials, climate change, migration, international travel and trade.”</i></p>
6	[14]	<p>Element 2, Rationale</p> <p>We note the following text in the rationale:</p>

		<p><i>“In addition, the health sector can contribute to further mainstreaming biodiversity, by adopting resilient and environmentally sustainable practices and preventing unsustainable exploitation of biodiversity for medicinal use or research that endangers species and ecosystems.”</i></p> <p>While exploitation and trade of some species for medicinal use is directly related to species declines (e.g. the use of certain endangered species such as pangolins [<i>Manis</i> spp.] in Traditional Medicine), broadly speaking the risk to human health from the trade in species for medicine is small, particularly since much of the trade is in finished or manufactured products. The taxonomic groups that tend to be exploited (e.g. plant species) do not pose a human health risk at the end of the supply chain due to less chance for amplification, etc.). However, when trade for medicinal products (or other practices) involves live animals in trade then it can also threaten human and livestock health. Furthermore, even those taxonomic groups like plants that present less threat of pathogen spillover later in the supply chain still must be exploited, and this process of exploitation from natural ecosystems or native habitat is often associated with increased opportunity for pathogen spillover.</p>
6	[14]	<p>Element 2, Action Area 2.1, Activity 2.1.4</p> <p>Although the <i>“use of social and economic incentives”</i> can be helpful, we note that there is no mention here of the need to eliminate those harmful, and discriminatory, incentives and perverse subsidies that underlie agro-industrial practices that threaten human health. An increased emphasis on eliminating harmful incentives and subsidies, captured in Target 17 of the draft post-2020 GBF, would be critical to include in any Global Action Plan.</p>
6	[14]	<p>Element 2, Action Area 2.1, Activity 2.1.4</p> <p>Decision VIII/23 A does not adequately address the use of wildlife for food, and the threats to biodiversity from unsustainable exploitation for consumption. It also does not address the risks presented to human health when such trade involves live or freshly slaughtered or freshly butchered animals (which is even more important for a Global Action Plan on biodiversity and health).</p>
7	[14]	<p>Element 2, Action Area 2.1, Activity 2.1.5</p> <p>This activity would benefit from revisions to improve clarity.</p> <p>Directly addressing and incorporating externalities into the economic system through biodiversity trade-relevant taxes could be addressed here. For example, where industries such as livestock contribute to global risk of pathogen spillover and zoonotic pandemics, and where it is not possible to eliminate these activities, they should have a role in funding policy and action on the preventative side through appropriate taxes and fees. However, it is essential to note that economic incentives or disincentives such as taxes are no substitute for broad and ambitious policy change by governments, including legislative and regulatory approaches to ending harmful activities such as commercial trade in live birds or mammals.</p> <p>We also note that there appears to be a typo:</p>

		<p>“...Especially large those with the most significant impacts on biodiversity.”</p>
7	[14]	<p>Element 2, Action Area 2.2, Activity 2.2.1</p> <p>This activity is insufficiently transformative. We recommend the following amendments to make it clear that all efforts and actions must minimize any disturbance of natural ecosystems and that all possible actions must be taken to reduce the risk of transmission of pathogens between humans, livestock and wildlife.</p> <p><i>“Promote an integrated (“One Health”) approach to the management of ecosystems, associated human settlements and livestock, minimizing unnecessary disturbance to natural systems and so avoid or mitigate the potential emergence of new pathogens, and manage <u>take all actions to reduce</u> the risk of transmission of pathogens between humans, livestock and wildlife <u>as much as possible</u>, in order to reduce the risk and incidence of infectious diseases, including zoonotic and vector-borne diseases;”</i></p>
7	[14]	<p>Element 2, Action Area 2.2, Activity 2.2.2.</p> <p>This proposed activity is insufficiently transformative. We support ensuring that any allowable exploitation of wildlife is legal and sustainable—but even if it is, it still poses a health risk. Instead, this activity should explicitly encourage governments to address exploitation of wildlife as a key threat to biodiversity by ending the commercial trade in, and markets for, live animals for consumption and to close wildlife farms in birds and mammals, as they present a risk to human or wildlife health.</p> <p>Additionally, we recommend the following amendments to use proper terminology, including using “exploitation” rather than harvest in accordance with IPBES conclusions:</p> <p><i>“Ensure harvesting exploitation, hunting, trading and using of wild species is regulated and ensure practices are legal, sustainable and safe, with enhanced regulations on bushmeat wild meat, live-animal markets, and livestock production practices, including through the implementation of hygienic practices, while refraining from measures which would negatively affect communities who depend on wildlife.”</i></p>
7	[14]	<p>Element 2, Action Area 2.2, Activity 2.2.3.</p> <p>We recommend the following amendment to recognize that capacity building for surveillance does not exist in many geographies.</p> <p><i>“Recognize wildlife health in the design, resourcing, and operations of national biodiversity and health programs, promote the understanding of disease processes in wildlife populations and develop appropriate strategies for management and control of wildlife disease epidemics, including by <u>establishing or</u> reinforcing capacities in <u>surveillance</u>, diagnostics and investigation, reporting, planning and response;”</i></p> <p>Furthermore, although it is implicit, we recommend making explicit the need to integrate the surveillance described above and in Action Area 4.1 with public health and domestic animal/livestock surveillance.</p>

7	[14]	<p>Element 2, Action Area 2.2, Activity 2.2.4.</p> <p>We recommend the following amendment, which flags a significant issue – that plant health is not addressed throughout this document. There is no mention of, e.g. plant health surveillance under Action Area 4.1.</p> <p>“Ecosystems restoration: Consider human, <u>plant</u> and wildlife health when carrying out ecosystem restoration activities...”</p>
7	[14]	<p>Element 2, Action Area 2.2, Activity 2.2.5.</p> <p>We recommend the amendment below to reflect that hotspots for pathogen spillover are generally the environments just around or near intact ecosystems (Gibb et al. 2020) – the risk within these intact ecosystems themselves are less because there is by definition lower human activity (including farming and livestock management) within them.</p> <p>“Ecosystems conservation: Promote measures to halt or reduce deforestation and degradation of terrestrial, freshwater, coastal and marine aquatic ecosystems, reduce overexploitation and encroachment into natural habitats, while increasing protection of areas of importance for biodiversity and ecosystem services, especially <u>around or near</u> intact or near <u>highly</u> intact areas and potential hotspots of disease emergence;”</p>
8	[14]	<p>Element 2, Action Area 2.3, Activity 2.3.2</p> <p>We recommend the following amendments to address the need to appropriately reflect the need to integrate the perspectives of rights holders in making decisions around traditional medical knowledge.</p> <p>“Protect, <u>value</u>, and promote traditional medical knowledge, innovations and practices of indigenous peoples and local communities, <u>make decisions</u> based on prior and informed consent of the traditional knowledge <u>and rights</u> holders, ensuring through mutually agreed terms, the fair and equitable sharing of benefits with the knowledge <u>and rights</u> holders.”</p>
8	[14]	<p>Element 2, Action Area 2.4.</p> <p>Direct payments for biodiversity conservation, or direct payments for changing practices to ensure inclusive and proactive transition, should be explored somewhere in this section as an attractive option in some contexts.</p>
8	[14]	<p>Element 2, Action Area 2.4, Activity 2.4.4.</p> <p>It is essential that this activity also address the need to ensure that economic stimulus and recovery policy measures, investments, and programs are designed to proactively prevent the next pandemic – rather than setting up reactive systems that would kick in once a spillover event has already turned into an epidemic or pandemic. It will be far less expensive to prevent pandemics at source—at the point of spillover—than to address an outbreak, epidemic, or pandemic once it has occurred.</p>

Element 3		
8	[14]	<p>Element 3, Rationale</p> <p>We do not agree that messaging must be simple – this runs the risk of oversimplification or restricting necessary attention and actions to certain issues where the public is already well informed. Instead, governments much work with other stakeholders to create awareness of the significant risks present in our current policy approaches to health, biodiversity and the environment. Communications should be honest, clear and provide the impetus for more significant engagement of citizens with the political and ecological systems in which they are key stakeholders. The public should not hear an overly simplified message.</p>
9	[14]	<p>Element 3, Action Area 3.1.</p> <p>Key messages are also needed on the risk created by activities such as deforestation, encroachment, wildlife exploitation and trade in markets in order to increase understanding of the significant threat to human health posed by these activities. There should be an additional activity in this action area:</p> <p><i>3.1.x. Communicate the significant risk to human health from continued ecosystem degradation and loss (including deforestation) and wildlife exploitation/trade, and the potential for national and sub-national policy change, through multilateral fora and associated communications networks.</i></p>
9	[14]	<p>Element 3, Action Area 3.2, Activity 3.2.1.</p> <p>This activity should explicitly address the need to promote changes in consumption, particularly in urban and peri-urban settings, of wildlife species where sustainability cannot be proven and where there exists any risk of pathogen spillover.</p>
Element 4		
10	[14]	<p>Element 4, Supporting Objective</p> <p>We recommend the following amendments to clarify the scope of this sentence and the need to focus on policy change and actions:</p> <p><i>“To strengthen planning, surveillance and address health threats, including the risk of zoonotic <u>pathogen spillover, and outbreaks, epidemics, and pandemics of zoonotic origin, through One Health approaches, and legislative and regulatory changes.</u>”</i></p> <p>Note that this is inclusive of spillover events, outbreaks and epidemics – in other words, it is not just focused on pandemics, as the final stage in the process, which entail significant global risk.</p>
10	[14]	<p>Element 4, Rationale</p> <p><i>“Reinforcing planning and surveillance on wildlife habitats and zoonotic disease pathogen spillover risk is instrumental to better assess and address health threats and disease risks. Efforts to minimize prevent biodiversity loss, <u>including through the retention and maintenance of natural ecosystem integrity</u>, can also reduce zoonotic</i></p>

		<p><i>disease and pandemics risk, between humans and wildlife and also limiting introduction of invasive alien species.”</i></p> <p>There are two distinct issues here: planning and surveillance. Effective, multi-sectoral, biodiversity-inclusive planning that is accompanied by robust regulation and oversight can help reduce the spillover of pathogens by ensuring that we maintain ecosystem integrity and reduce opportunities for spillover. Surveillance, on the other hand, can help identify high risk situations for pathogen spillover, or spillover events once they’ve taken place. This can help identify and contain potential pandemics, but it does not fundamentally alter the frequency of spillover events the same way that more effective planning and regulation can. We therefore support surveillance, but urge the prioritization of efforts to prevent spillover (through legislative and regulatory actions).</p>
10	[14]	<p>Element 4, Activity Area 4.1, Activity 4.1.1.</p> <p>We recommend another edit to make the distinction between pathogens and diseases:</p> <p><i>“Strengthen cross-sectoral and trans-disciplinary surveillance of essential components of pandemics preparedness, including through the monitoring of emerging infectious <u>pathogens and</u> diseases, zoonotic disease <u>pathogen</u> spillover risk and habitats of wildlife.”</i></p>
10	[14]	<p>Element 4, Activity Area 4.1, Activity 4.1.2.</p> <p>We urge Parties to revise the following language, or proceed with caution:</p> <p><i>“...Monitor people who have contact with wildlife to identify early spillover events...”</i></p> <p>We urge Parties to recognize the significant human rights implications with such monitoring efforts and responses in accordance with these monitoring efforts. We recommend substituting with alternate language that directs Parties to provide or strengthen frontline and community health care systems, provide universal access to healthcare, etc.</p>
10	[14]	<p>Element 4, Activity Area 4.1, Activity 4.1.2.</p> <p>We note that the WAHIS-Wild reporting system would need to be significantly revamped in order to meet the stated objectives here. For example, there is no way to report novel pathogen spillover into this reporting system – a critical component of any surveillance/monitoring effort that can help prevent the next global pandemic of zoonotic origin. Instead, this activity should focus on developing, improving and synchronizing, where appropriate, different reporting and early warning systems, and building the capacity of Parties and key stakeholders to engage with these reporting systems. We recommend removing a reference to this early warning system until a broad consultation has been undertaken to identify those early warning systems that exist or may be developed in the near future that are best designed to suit this purpose.</p>
10	[14]	<p>Element 4, Activity Area 4.1, Activity 4.1.7.</p>

		The reference to “cross-scientific” is not clear here. We recommend that this be replaced by “trans-sectoral” or trans-disciplinary” here in line with previous comments. We also recommend human and veterinary medical experts are engaged as part of the different disciplines to co-create and administer disease surveillance programs.
10	[14]	Element 4, Activity Area 4.1, Activity 4.1.2. See comment above re: WAHIS-Wild reporting system. We recommend revising this reference.
Element 5		
11	[14]	Element 5, Action Area 5.1 The activities here do not address the relationship between livestock diseases and their impact on both wildlife/biodiversity and human health.
11	[14]	Element 5, Action Area 5.2, Activity 5.2.3. We support the implementation milestone “Significant percentage of GDP allocated to research on health-biodiversity linkages and One Health,”; however, we should set targets and measure against not only investments made in research but also in policy change and trans-sectoral action to ensure that prevention is prioritized. In the absence of strong regulations and governance, all the research in the world won’t prevent the next pandemic.
Element 6		
12	[14]	Element 6, Action Area 6.1., Activity 6.1.1. In line with previous comments, this Global Action Plan should be trans-sectoral rather than cross-sectoral, as discussed above. As such, this activity should go beyond strengthening the capacity of other sectors to address biodiversity, and should instead drive cooperation and collaboration between sectors to align interventions and take advantage of existing expertise and capacity that is already present within governments, IGOs, NGOs, Indigenous Peoples, and other stakeholder groups.
12	[14]	Element 6, Action Area 6.2. Many of the avoidance steps highlighted that would prevent pathogen spillover at the source are “cheaper” or more cost effective than some other steps. In many cases, investments in reducing pathogen spillover are changes in planning, policy and practice rather than searching for or mobilizing additional resources for investment in remedial infrastructure.
13	18	Components 4.1-4.3 As stated previously, the term “exploitation,” the term used by IPBES, should be used in place of the term “harvest” (in all cases): <i>“Harvest-Exploitation, trade and use of wild species of fauna and flora is legal, sustainable and safe for human health and biodiversity”</i>

		<p>However, as detailed in our comments on the draft post-2020 global biodiversity framework, WCS is concerned about the imprecise conflation of the concepts of legality, sustainability and safety – which is also present in draft Target 4 in the updated zero draft of the GBF.</p> <p>Generally speaking, we would urge the text, both here and in the draft GBF, convey that exploitation, trade and use of wild species of fauna should not be allowed <u>unless</u> it is demonstrably legal, sustainable, and of no risk to human health or other wildlife species. This is clearer about the need to prohibit exploitation and trade that threatens species and human health, while allowing for trade that can be proven to be safe, sustainable and legal.</p>
13	18	<p>In line with the general comment above, there are several gaps here that should be addressed by the post-2020 global biodiversity framework as well as this Global Action Plan, since they would measure critical steps outlined in this document. For example, there is nothing listed on ensuring that impact assessments, strategic environmental assessments, spatial planning processes address health concerns. There is nothing on how area-based conservation measures could incorporate health considerations into their management plans.</p>
13	18	<p>Components 16.1-3</p> <p>For this to be included, it would be advisable to clarify (throughout the document) exactly how biotechnology is relevant to this Global Action Plan on Biodiversity and Health.</p>
13	18	<p>Complementary indicator B.1.1.6. “Zoonotic disease in wildlife & Illegal trade by CITES species classification”</p> <p>We recommend deleting this indicator, which is not clearly written and does not yet exist. CITES-listed species capture only a subset of wildlife species, with particularly poor representation of some taxonomic groups that harbor zoonoses. Furthermore, CITES only addresses international trade (and only of CITES-listed species); domestic trade, which can also create the risk of pathogen spillover, is not covered. Furthermore, the structure of this proposed indicator conflates several concepts (illegal trade, CITES-compliant trade, zoonotic disease risk), and therefore should be broken up into several constituent indicators.</p> <p>Key indicators should address trends in commercial trade in taxonomic groups that harbor zoonoses, (via UN ComTrade, or CITES trade database as a less comprehensive subset of species); the trends in conservation status and population abundance of commercially exploited and traded species; etc.</p>
15	N/A	<p>Annex 1: Interlinkages between biodiversity and health: An overview</p> <p>The purpose of this table is not clear.</p>