

Template for the review of the document on scientific and technical information to support the review of the proposed goals and targets in the updated zero draft of the post-2020 global biodiversity framework

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<i>General comments</i>	
<p>WCS focuses these peer review comments on the content of CBD/SBSTTA/24/3/Add.2. Although the current (draft) formulation of post-2020 goals and targets are presented in this document, we have restricted our comments to the substantive, scientific and technical issues underlying those formulations, as well as the content provided in numbered paragraphs. We do not provide recommendations here on the formulation of goals and targets, as that will be discussed at the third meeting of the Open-Ended Working Group.</p> <p>Further information, including on the formulation of goals and targets, will be available in WCS position statements for SBSTTA-24, SBI-3 and OEWG-3. Our position statements, policy papers, fact sheets, and some relevant scientific papers can be found at www.wcs.org/cbd.</p>	
<p>WCS welcomes the attention to the concept of ecosystem integrity, and the need to conserve ecosystem integrity, throughout the document, particularly with regards to Goals A and B, as well as Target 1.</p> <p>Definitions of ecosystem integrity (or ecological integrity) from peer-reviewed literature tend to center on how close an ecosystem is to its natural state (or, more precisely, its natural range of variation) and most highlight three aspects of the combined biotic and abiotic system that should be considered in judging this – composition, structure and function (Noss 1990; Parrish, Braun and Unnasch 2003). Ecological integrity is closely related to, or includes, several other widely used terms used to describe ecosystems. Some commonly used terms, such as ecosystem “function” and “resilience,” are actually addressed by ecological integrity. More information, including the relationship of ecological integrity to other terms, can be found in WCS’s Frequently Asked Questions (FAQ) document on the concept of ecosystem integrity, available online here.</p> <p>Conserving the integrity of <u>all</u> ecosystems - natural and semi-natural, those inside of protected areas and outside of them - is essential to achieve our collective biodiversity conservation objectives, and also to protect globally important ecosystem services. This includes carbon sequestration and storage that is essential to achieving the objectives of the Paris Agreement (Watson et al. 2018), as well as a critical role in reducing the emergence of zoonotic diseases (Evans et al. 2020). It was also noted during the virtual informal SBSTTA sessions that marine ecosystems are often monitored in terms of</p>	

condition (integrity) rather than extent. It is therefore critical to reflect this concept in the post-2020 global biodiversity framework as an overarching goal, and make it central to conservation interventions over the next decade through various action targets.

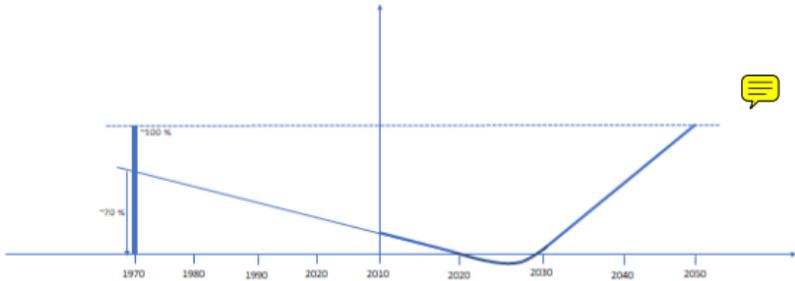
In the terrestrial realm, there are numerous papers in the peer-reviewed literature that assess ecosystem integrity at global scales using a range of approaches that incorporate global datasets for human activities – thereby using the proxy method of measuring integrity (e.g. [Beyer et al. 2019](#); [Watson et al. 2016](#); [Venter et al. 2016](#)). There are also measures developed for specific ecosystems (e.g. [Grantham et al. 2020](#); [Potapov et al. 2017](#); [Hansen et al. 2019](#) for forests). Similar studies have been undertaken in the marine realm, using datasets of cumulative human pressures on marine ecosystems ([Halpern et al. 2015](#); [Jones et al. 2018](#)). Our comments and recommendations on specific, practical indicators for ecosystem integrity in the post-2020 global biodiversity framework will be presented in our position statement for SBSTTA-24 and are not addressed in detail in this document.

WCS is a member of the [International Coral Reef Initiative \(ICRI\)](#), along with over 40 government members that are Parties to the CBD. ICRI members shared a consensus recommendation with all CBD Parties on how to best address coral reef ecosystems in the post-2020 framework, available at [coralpost2020.org](#). We note with concern that with generalized goals and targets applicable across ecosystems, as currently presented in the updated zero draft, we lose the opportunity for nuanced, specific targets with appropriate thresholds and indicators that prioritize uniquely biodiverse and threatened ecosystems like coral reefs. We urge Parties to ensure that these hugely important ecosystems are prioritized through a robust and thoughtful monitoring framework (see ICRI guidance [here](#)), as well as through other means in the GBF and guidance from CoP15 to the financial mechanism (the Global Environment Facility). Further inputs will be provided in advance of SBTTA-24.

There is a growing recognition that under the post-2020 global biodiversity framework, any expansion of protected and conserved areas must be in the right places. [Key Biodiversity Areas](#) (KBAs) are sites of significance for the global persistence of biodiversity, and have been identified in all countries and in terrestrial, freshwater and marine realms for some species. While KBAs have not yet been identified for all taxonomic groups and ecosystems in each country, using the agreed KBA Standard, and their comprehensiveness will be increased considerably by 2030, given ongoing efforts and the growing interest, resources and tools available. The criteria, published in 2016 ([IUCN 2016](#)), used to identify KBAs recognize sites supporting globally significant populations of a species, or extent or integrity of an ecosystem. KBAs provide a tool that governments can use to focus their spatial planning efforts to conserve species and ecosystems within each country. For example, KBAs can guide the expansion of networks of protected areas and other effective area-based conservation measures (OECMs) (see the metadata for Indicator 2.0.1), and can inform management actions at these sites. KBAs can also be integrated into spatial land- and sea-use plans to mainstream nature across sectors. KBA identification and conservation could therefore help achieve multiple targets in the post-2020 global biodiversity framework. A more detailed submission will also be provided on behalf of the KBA Partnership to this call for peer review comments.

Note 1: In the specific comments below, where we generally agree with the text in Add.2, we have highlighted the entry in green. Where we have concerns about the text as presented, we have highlighted the entry in orange.

*Note 2: In the specific comments below, we have **bolded** certain quotations from the Add.2 document. Bold text is our emphasis and meant to highlight specific elements or words.*

<i>Specific comments</i>		
Page	Paragraph	Comment
3	11-12	<p>WCS, and many partner organizations, all propose that SBSTTA-24 recommends that OEWG-3 refine the draft mission statement to clarify that it aims for a net gain in the status of biodiversity and nature’s contributions to people (‘nature positive’) by 2030. Paragraph 11, suggests two approaches to further define the draft mission statement. We are convinced that only the approach that provides a clear path to net gain of biodiversity and nature’s contributions to people by 2030 (‘curve A’) reflects the level of ambition that is needed if we are to keep the biosphere operating in a manner that produces the goods and services on which humankind is dependent, as well as to effectively combat the interrelated biodiversity, climate, and health crises. This is confirmed in para 18 of the document, which states that, “to reach the 2050 Vision, a significant net increase in both area and integrity of natural ecosystems is needed. (...) Models, scenarios and other studies suggest that an increase in the extent of natural ecosystems of the order of 10 to 15 per cent, globally, across all ecosystem types, by 2050 may be feasible. A viable pathway towards such an outcome requires that a path to net gain, or at minimum no net loss, be achieved by 2030.” This requires that ambitious actions start immediately. We know that achieving a net gain in ecosystem extent and species abundance (paragraph 27) and preventing human-induced extinctions of known threatened species (paragraph 58) by 2030, necessitates transformative changes in land and sea use, resource use efficiency, production and consumption patterns (particularly for food), resource mobilization and inclusive decision-making. These changes will require the political will to agree and implement ambitious targets for 2030.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Note for information: The biodiversity loss side of the ‘curve A’ appears to be too steep if, for example, the 70% population loss of mammals from 1970 onwards is taken as an indication. We are therefore proposing an adjustment to the graph as follows:</p>  </div>
Goal A		
4	14	We recognize that Parties would like to see an equitable balance of goals and targets that address the three objectives of the Convention. However, we also note that having separate goals on ecosystem conservation and species conservation would make more sense, so as to not combine too many elements (and therefore indicators). Therefore, we recommend disaggregating Goal A as proposed by some Parties during the informal virtual sessions of SBSTTA-24.
4	15	WCS agrees that the “ <i>extent and integrity of ecosystems are essential for the protection of species and genetic diversity, ecosystem functioning and for the</i>

		<p><i>continued provision of ecosystem services or nature’s contributions to people”</i>. Integrity captures compositional aspects (e.g. species composition) and functional aspects (e.g. ecological processes such as connectivity) that are essential to evaluate to determine whether nature is capable of sustaining itself, and delivering the contributions to people that we depend on. See more detail in paragraphs 16 and 37, below.</p>
4	16	<p>We generally concur with the definition of ecosystem integrity provided, namely that it “<i>refers to the compositional, functional, structural and spatial components of ecosystems.</i>” [Note: See general comment above for the link to our FAQ document, which proposes a definition of ecosystem integrity.] Although this term has been used widely in international policy, we would support a definition being added to the informal annotations (glossary) document provided as an Inf. Doc. for SBSTTA-24 (CBD/SBSTTA/24/INF/11) in order to clarify this term and its use for Parties during their deliberations, including its relationship to “intact areas” (already included in the glossary, and the relationship is further explained in WCS’s FAQ on this subject).</p> <p>We also welcome the additional reference to connectivity, which “<i>is important to maintain the integrity of ecosystems across otherwise fragmented patches.</i>”</p>
4	16	<p>Goal A may also address an additional component of ecosystem collapse, in addition to area and integrity. When ecosystems collapse, we lose a fundamental part of biodiversity, analogous to the extinction of a species. Including collapse risk in the goal’s language and components provides a benchmark for unacceptable declines in ecosystem area and integrity and its consequences for biodiversity and human well-being. It averts the potential perverse outcome of any net change in area or integrity being fungible across or within ecosystems. Because ecosystem collapse risk is analogous to considering species extinction risk, alternative wording could include: viability, threat status, threatened ecosystems, or ecosystems at risk of or threatened by collapse, similar to proposed species goals. For more information on the scientific basis, see Nicholson et al. (2020).</p>
5	19	<p>WCS welcomes the statement that “<i>priority should be given to retaining existing natural ecosystems. In particular, the loss of existing intact and wilderness areas, areas with high integrity and biodiversity value, rare or vulnerable ecosystems, those essential for planetary function, and those which cannot be restored should be avoided.</i>” Achieving no net loss or net gain of natural ecosystems at a global scale cannot be achieved without retaining and restoring our planet’s remaining intact ecosystems (Diaz et al. 2020, Bull et al. 2019, Maron et al. 2018). Unfortunately, intact natural ecosystems, both terrestrial and marine, are declining steadily (Williams et al. 2020; Venter et al. 2017; Halpern et al. 2019; Jones et al. 2018). Preventing the <u>degradation</u> or loss of intact ecosystems must therefore be a very high priority and measured globally through the monitoring framework under Goal A. Several of the draft targets will contribute to this effort; for example, Target 1 on spatial planning and management of ecosystems must explicitly prioritize avoiding direct and indirect impacts on intact ecosystems, and Target 2 on area-based conservation measures must prioritize intact ecosystems for protection and conservation. It is critical that all CBD Parties contribute to the global effort to secure the last remaining intact</p>

		ecosystems by 2030, including by addressing extra-territorial impacts in other countries, where appropriate, from supply chains, foreign investment, development assistance, trade, etc.
5	19	Add.2 states that the “with regards to restoration, recovery of ecosystem integrity (including species diversity and abundance and communities of interacting species within ecosystems) lags behind recovery of ecosystem extent. So, achieving no net loss in biodiversity by a certain date would require achieving no net loss in ecosystem extent at an earlier date.” It is true that we must halt the loss of natural ecosystem extent in order to effectively achieve no net loss of natural ecosystems. It is also true that restoration of severely degraded or lost ecosystems may require extent before integrity. However, there are many restoration efforts that can take place within the extent of ecosystems that may still exist, but that are degraded. To use an example, forests may be present, but have experienced defaunation due to hunting/wildlife exploitation. In these cases, an expansion of ecosystem extent is not necessarily required to increase ecosystem integrity (the efforts can be restoring species populations). There will be many such examples of degraded ecosystems that require different interventions to halt the immediate human pressures and improve their conservation outlook, or proactive interventions to restore them.
6	26	We note the assertion that “Halting human-induced extinction completely by 2030 is likely not realistic, especially given that certain threats such as climate change will continue to intensify and there are unavoidable time lags associated with conservation action.” Based on existing trajectories, this may be true. However, we urge Parties to set a higher level of ambition through the GBF to halt human-induced extinctions – enshrining extinctions as allowable through any target will induce the process of choosing which species to allow to go extinct.
6	27	We welcome the attention to “halting and reversing the currently ongoing decline of both threatened and common species .” Attention to conserving population abundance of common species and preventing their decline is essential to achieving the 2030 and 2050 objectives for both conservation <i>and</i> sustainable use. Only by ensuring that species populations are viable; are exhibiting the full range of their ecological interactions, functions, and other roles in their ecosystem; and occur in a representative set of ecosystems and communities throughout their range, will we truly achieve our biodiversity conservation goals. For further reflections on formulations of species goals and targets in the GBF, please refer to Williams et al. 2020 .
Goal B		
8	37	We agree with the statement that the “only categories of nature’s contributions to people showing an increasing trend are those relating to material benefits, such as the provision of food, feed, materials and energy. However, the continued provision of these contributions may be compromised by the ongoing decline in ecosystems extent and integrity as well as in the decline of the regulating services that support such provision . Poorer groups of people are often most likely to suffer the impacts of declining contributions of nature.” We strongly agree that ecosystem extent and integrity are essential to the continued delivery of

		different types of ecosystem services, including provisioning, regulating, cultural, etc. It is therefore essential to understand that achieving our collective goals on ecosystems and species is inextricable from, and foundational to, achieving the objectives on nature’s benefits to people. For example, WCS scientists have done extensive work to demonstrate the exceptional contribution of intact forest ecosystems to threatened biodiversity, carbon sequestration and storage, water provision, indigenous cultures and the maintenance of human health (Watson et al. 2018). The same is true of other ecosystem types, e.g. coral reefs (Cinner et al. 2020), grasslands, etc. There is extensive scientific research connecting declining ecosystem integrity to the emergence of zoonotic diseases and other impacts on human health (Evans et al. 2020).
9	40	Per the comment above, WCS concurs that, “ <i>Nature’s capacity to continue delivering its contributions to people is reliant on the area and integrity of both natural and managed ecosystems and their constituent species.</i> ” Both natural, and semi-natural or managed, ecosystems need to be managed for overall ecosystem integrity (as they often depend on one another). However, per comments above, intact ecosystems are essential to combating and adapting to climate change (Martin and Watson, 2016).
Target 1		
11-12	51-52	<p>WCS strongly agrees with the following two statements in paras 51-52:</p> <ul style="list-style-type: none"> • “<i>To achieve the 2050 Vision and the proposed Goals, the loss of existing intact and wilderness areas through land/sea use change must be avoided, reduced and reversed.</i>” • “<i>In order to put biodiversity on a path to recovery by 2030 in line with the proposed Mission of the post-2020 global biodiversity framework, there would need to be a net gain of natural ecosystem area by 2030, while preventing the loss of existing intact and wilderness areas, as well as areas with high biodiversity value (see proposed Target 2) or keeping such loss to an absolute minimum.</i>” <p>The science is clear that intact ecosystems provide exceptional value for biodiversity conservation, climate change mitigation and adaptation, etc. (Watson et al. 2018; Cinner et al. 2020); and yet they are disappearing rapidly (Williams et al. 2020; Venter et al. 2017; Halpern et al. 2019; Jones et al. 2018). We concur that the retention of intact areas should be central to any spatial planning processes outlined in Target 1, given that we cannot achieve the GBF conservation goals (i.e. Goal A) without doing this (Diaz et al. 2020, Bull et al. 2019, Maron et al. 2018). There are many practical indicators for Parties to measure progress in this regard, such as the Forest Landscape Integrity Index (Grantham et al. 2020) and the Ecosystem Intactness Index (Beyer et al. 2019), and there are complementary indices in the marine realm (Halpern et al. 2019).</p>
Target 2		
13	56	We note that the document states, “ <i>Many recent proposals converge on protecting about 30 per cent of the land surface by 2030, with the possibility of higher targets established subsequently...</i> ” We also would note that a large number of governments have committed to protecting at least 30% of the global

		<p>ocean by 2030 – indeed a larger number than those committed to the 30% figure on land (terrestrially) when considering the membership of the High Ambition Coalition for Nature and People, the Global Ocean Alliance, and the governments represented by the High Level Panel on a Sustainable Ocean Economy. In total, more than 70 governments, from all geographic regions, have committed to conserving 30% of the global ocean. WCS scientists (e.g. in Jones et al. 2020) have contributed an extensive body of peer-reviewed research that justifies these political commitments – the science is clear that conservation and protection of 30% of the ocean is a minimum to start protecting biodiversity based on the information that we have available, but it is likely such a figure would be far higher when taking into account ecological processes, marine ecosystems’ contributions to climate change mitigation and adaptation, etc. We therefore urge this scientific and political consensus on converging proposals to protect and conserve at least 30% of the global ocean to be accurately represented in a revision to this document.</p> <p>The best available science strongly indicates that protection or conservation of at least 30% of global land and sea areas through area-based measures by 2030 is vital to the achievement of the global goals on biodiversity conservation and sustainable use (including the goal described above), as well as shared climate and sustainable development objectives. Surveys of peer-reviewed scientific research have demonstrated that greater ambition is needed to achieve conservation and sustainable use objectives (IPBES 2019; Woodley et al. 2019; O’Leary et al. 2016; Noss et al. 2012), and 30% is generally considered to be a global minimum threshold with broad political support (High Ambition Coalition 2020; IUCN 2016). More specifically, using available data on species’ ranges and biological needs, we can infer that that a greater proportion of the planet must be protected or conserved to avoid endangered status on the IUCN Red List, particularly with projections for climate change and land use change (Hanson et al. 2020; Hannah et al. 2020; Allan et al. in review). Similar approaches for marine species and ecosystems have demonstrated that a minimum of 26 percent to 41 percent of the ocean needs to be effectively conserved and managed, with a higher figure likely with additional data on marine biodiversity and ecological processes (Jones et al. 2020). Protected areas can also secure ecosystem integrity and function, protecting valuable ecosystem services like fisheries (Leary et al. 2016), climate change regulation (Dinerstein et al. 2019), and can also contribute significantly to prevention of pathogen spillover leading to epidemics and pandemics (IPBES 2020; Evans et al. 2020; Pizarro et al. in press; Terraube et al. 2017). Finally, Indigenous Peoples manage or have rights to the majority of highly intact ecosystems worldwide (Garnett et al. 2018; Shuster et al. 2019; Fa et al. 2019), and therefore successful Indigenous-led conservation and customary co-management approaches are essential to ensuring the success of Target 2 and the GBF (Rights and Resources Initiative 2020).</p>
13	56	<p>WCS concurs with a later sentence in paragraph 56, which states, “...<i>The importance of focusing on biodiversity outcomes rather than spatial area is emphasized; an increase in coverage alone will not be sufficient.</i>” Monitoring the ecological and social outcomes of area-based conservation measures is essential, and should be addressed through the monitoring framework for the GBF (both at the goal level, by measuring the state of ecosystems and ecosystem services, and at the target level, e.g. through tools such as the Green List of Protected and</p>

		Conserved Areas that assess ecological outcomes at the site level). However, there is a need to simultaneously expand the existing coverage of area-based measures while improving their effectiveness, and one does not need to come at the expense of the other. Indeed, the GBF should set an appropriate level of ambition to achieve its 2030 and 2050 milestones/goals, and the international community must mobilize the necessary resources and enhance national and subnational capacity to achieve them.
13	56	Paragraph 56 also addresses the need to maintain and restore natural ecosystems beyond protected areas, including nurturing biodiversity in managed ecosystems, <i>“to ensure provision of ecosystem services and to maintain integrity of planetary ecological processes...”</i> WCS agrees with this statement. Protecting or conserving at least 30% of land and sea is a foundation to achieving the broader goals on biodiversity and sustainable development. Many Parties already protect more than 30% of their land and sea areas, and some areas may not be designated for specific contextual reasons. Area-based targets should be co-designed with other targets that address land and sea use change, sustainable use, etc. in order to ensure that overall objectives are achieved, including nature’s contribution to regulating services such as carbon sequestration.
Target 3		
14	62	WCS agrees that human-wildlife conflict is <i>“exacerbated by poorly planned development including encroachment into wild areas, conversion, distractions, degrading or reducing area of natural habitats...”</i> We concur that upstream planning (addressed by Target 1, among others) is critical to mitigate the occurrence of human-wildlife conflict and therefore reduce the efforts needed to mitigate its impacts. Here, there is a direct link to the retention and prevention of disturbance to intact habitats (paragraphs 19, 51-52 above).
Target 4		
15	63	The IPBES Global Assessment made it clear that the <i>“direct exploitation of wild populations of species is the largest direct driver of biodiversity loss in marine ecosystems and the second largest in terrestrial and freshwater ecosystems. ... it often also causes collateral harm to other species and affects the functioning of ecosystems.”</i> It is also clear that <i>“many species on the IUCN Red List are threatened by overexploitation and trade, including illegal trade,”</i> and that <i>“unregulated harvesting, trade and use of wild species can also increase the risk of...the emergence of disease.”</i> There is clear scientific evidence that both regulated and unregulated offtake, trade and use of wildlife, particularly birds and mammals, present an increasingly frequent and imminent threat of pathogen spillover, outbreaks, epidemics, and pandemics, and associated significant threats to human health and wellbeing (see, e.g., IPBES 2020 ; Carroll et al. 2018 ; Johnson et al. 2015 ; Jones et al. 2008 ; Taylor et al. 2001). It is therefore essential to more directly address and eliminate the commercial trade and markets in birds and mammals (whether from the wild or captive bred/farming situations), in the GBF through a revision to Target 4 -- whether such exploitation is legal or illegal, sustainable or unsustainable. A truly One Health approach necessitates addressing urban markets for live and freshly slaughtered animals, and the trade that supplies those markets, through an integrated biodiversity and zoonotic disease perspective.

15	63	<p>The ending to paragraph 63 is inaccurate. It correctly states that “<i>legal use is not necessarily sustainable.</i>” However, it then states, incorrectly, that “<i>illegal trade is associated with threats to biodiversity and human health</i>” which is true of <u>both illegal and legal or unregulated (effectively legal) trade</u> (IPBES 2020; Nijman 2021). It is vital to correct this, since both illegal and legal trade and markets can be a threat to both biodiversity and human health; we note that the majority of live animals in urban markets, and in commercial trade, are legally obtained. The following sentence should be written more clearly: “<i>Further, while broad concepts of sustainability might include safety for human and animal health inter alia, reducing the risk of future pandemics is useful for clarity.</i>” It is essential for Parties to agree that trade that allows for or increases the risk of future pandemics of zoonotic origin is inherently unsustainable, and must be curbed. As this sentence is followed by “<i>Promoting sustainable use is therefore integral to achieving the 2050 Vision and the proposed Goals of the post-2020 global biodiversity framework,</i>” there is some confusion as to the conclusion of this paragraph.</p> <p>There is an implicit conclusion in this paragraph that trade posing a health risk for humans is unsustainable, and therefore should not be promoted to achieve the 2050 Vision and goals/targets of the GBF. This is a critical reality to reflect in an updated Target 4, as well as its accompanying monitoring framework. It may also be valuable to clarify this in a glossary of terms relating to sustainable use in the GBF.</p> <p>We prefer text that clearly and explicitly states that any commercial trade that is unsustainable, or illegal, or poses a threat of zoonotic disease to humans or other animals, should not continue. In light of the devastation of the COVID-19 pandemic, we urge Parties to take strong, meaningful action in the GBF and in this target to help prevent future such pandemics.</p>
15-16	64	<p>We concur with several of the actions proposed to achieve draft Target 4, including the need to “<i>reduce demand for unsustainably managed and/or illegal wild meat in towns and cities ...while respecting customary sustainable use</i>” and “<i>the introduction and enforcement of stronger regulation, through national measures as well as CITES [to] drastically reduce the illegal and unregulated trade...</i>” This is supported by WCS policy statements and recommendation documents on local, national and international policy responses to the COVID-19 pandemic. However, we note that CITES is well placed to reduce illegal trade and trade that is biologically unsustainable (for species in the wild), but for CITES-listed species and for international trade only. There is <u>no mandate at present</u> for CITES to consider the “sustainability” of potential human health impacts of trade (see above). We encourage the CBD Parties to discuss this issue, and to consider a One Health, trans-sectoral multilateral response.</p>
Target 6		
17	71	<p>WCS welcomes the reference to noise pollution in paragraph 71: “<i>Noise and light pollution also disrupt the behaviour of many species.</i>” WCS has undertaken extensive work on the impacts of underwater anthropogenic noise, particularly on marine mammals, and relevant governmental and intergovernmental responses to</p>

		<p>this issue (Chou et al. 2021). It is critical to reflect the threat posed by underwater anthropogenic noise to marine species in the GBF, with a wide variety of potential indicators already available (to be further elaborated in our position statement to SBSTTA-24).</p>
Target 7		
18-19	74	<p>WCS agrees that <i>“a number of ecosystem-based approaches, such as conservation, ecosystem restoration and improved management of agriculture, can contribute to both mitigation and adaptation, while also contributing to biodiversity goals, the provision of ecosystem services and disaster-risk reduction.”</i> We note that the term “ecosystem-based approaches” is used here. WCS believes that “nature-based solutions,” including to climate change mitigation and adaptation, is a more comprehensive term that should be reflected in the GBF. The term “nature-based solutions,” has been defined by the international community through IUCN, and guidelines exist for their implementation.</p>
19	75	<p>WCS agrees that while some ecosystem-based approaches or nature-based solutions <i>“have co-benefits for biodiversity, this is not always the case, and careful assessment of synergies and trade-offs is required.”</i> The paragraph later states that, <i>“Inevitably, renewable energy as well as some adaptation measures, have potential impacts on biodiversity.”</i> This is true, and robust safeguards must be put in place to ensure that nature-based solutions are nature-positive and support biodiversity conservation outcomes. To this point, WCS scientists contributed to the IUCN guidelines on mitigating biodiversity impacts associated with solar and wind energy development (Bennun et al. 2021), which provide guidance on implementing such safeguards for solar and wind energy.</p>
Target 13		
23	91	<p>WCS agrees that biodiversity must move <i>“from the periphery of decision making to become a core consideration in decision and planning processes across government and all sectors of the economy and of society, recognizing the multiple values of biodiversity.”</i></p>
Target 14		
24	95	<p>WCS agrees that, <i>“trade patterns have...also created a situation where the spatial impacts of production are decoupled from consumption.”</i> We are significantly concerned about the extra-territorial impacts of supply chains on legal and illegal deforestation and the impacts on intact forests and other ecosystems. We believe that the GBF should provide a clear directive for Parties to consider the extra-territorial impacts of their supply chains through the goals and targets.</p>
Target 17		
27	104	<p>WCS agrees that there are a variety of government subsidies that involve the environment, and while not all will necessarily be harmful, a good first step is <i>“the identification of those incentives which are harmful to biodiversity.”</i> And indeed those that are deemed most harmful should be prioritized, and efforts undertaken to eliminate them, regardless of the political sensitivity. However, we recommend that phrasing be clearer that <i>“a total phase out of such incentives”</i> is</p>

		necessary (as opposed to “could be envisaged”) to close the biodiversity finance gap (Deutz et al. 2020) and secure the means necessary to achieve 2030 and 2050 goals and milestones. Mere consideration of phasing out such perverse subsidies will undermine the entire GBF, and efforts to phase them out are critical to resource mobilization to deliver on the GBF.
Target 18		
28	109	WCS agrees that a “ <i>combination of resources from domestic and international sources as well as from the public and private sectors will be needed</i> ” to close the global biodiversity finance gap. Even increasing the current levels of official development assistance (ODA) by 100% (again) following the adoption of the GBF would be insufficient – on its own – to provide sufficient means of implementation (Deutz et al. 2020). However, there is a distinct role that ODA must play in implementing the GBF, and it is urgently necessary for additional resources mobilized post-2020 to be dedicated to developing countries and concessional in nature, avoiding challenges with implementing international resource mobilization commitments in the climate regime (Oxfam International 2020). As noted during the virtual informal sessions of SBI, Parties are interested in seeing a post-2020 target related specifically to ODA, and we agree.
28	109	WCS supports the action presented in paragraph d), “ <i>making use of funds which also serve other objectives, such as addressing climate change, where objectives coincide or overlap.</i> ” Many nature-based solutions to climate change can and should be designed to provide biodiversity co-benefits. However, it is also essential to recognize that not all biodiversity investments – e.g. elimination of invasive alien species -- will have immediate and clear climate co-benefits, so it is essential to continue mobilizing resources for a broad variety of biodiversity-related actions and interventions.
Target 19		
29	113-114	WCS agrees that “ <i>traditional and indigenous knowledge remains poorly recognized, and is still often marginalized</i> ” and that there needs to be “ <i>greater recognition and support for the role of indigenous peoples and local communities in monitoring the status, trends and threats to biodiversity.</i> ” WCS has undertaken extensive research, and collaboration with Indigenous partners, that demonstrates the importance and the effectiveness of indigenous-led conservation and management of ecosystems and biodiversity (for forests, see Fa et al. 2019 and WCS 2018). We therefore urge that free, prior and informed consent protections for traditional or local knowledge from Indigenous Peoples and local communities be recognized in this document, and re-instated into the updated zero draft.