Ref. Ares(2021)2048841 - 23/03/2021

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

TEMPLATE FOR COMMENTS

Contact information	
Surname:	TELLER
Given Name:	Anne
Government (if applicable)**:**	European Union
Organization:	
Address:	Avenue de Beaulieu 5
City:	1160 Brussels
Country:	Belgium
E-mail:	Anne.Teller@outlook.fr

General comments

This paper is very relevant for setting the ambition of the post-2020 biodiversity goals and targets and would have been useful for supporting the discussions at OEWG-2 and in case will require further review by SBI. The value of this paper to support the identification of proposed list of headline indicators is not clear. Hence the role of SBSTTA in this peer-review is not obvious as it is not clear to us why SBSTTA-24 is being asked to review this, when SBSTTA-24 is not supposed to discuss ambition of goals and targets. It's really a pity for the process that there is not more clarify from CBD and clarity in CBD documents in their purpose, how they relate to each other. In particular, the indicator issue suffers from that.

Specific comments

Page	Paragraph	Comment
7	29	Add "Genetic diversity also supports material, non-material, and regulating Nature's contributions to people", linking to the recent study of Des Roches et al. 2021 (https://www.nature.com/articles/s41559-021-01403-5)
7	32	Replace "Though there are knowledge gaps in genetic diversity data, with technical advances in "omics", specifically genomic analysis, decreasing costs and better data stewardship, more frequent genetic monitoring could occur" by "Though there are knowledge gaps in genetic diversity data, recent studies have assessed worldwide genetic diversity of plant and animal populations and suggested pragmatic genetic indicators to monitor genetic diversity. In addition, with technical advances in "omics", specifically genomic analysis, decreasing costs and better data stewardship, more frequent genetic monitoring could occur" The "recent studies" are Hoban et al. 2020 (https://www.sciencedirect.com/science/article/pii/S0006320720307126#f0005) and De Kort et al. 2021 (https://www.nature.com/articles/s41467-021-20958-2)
8	38	Since many categories of NCP are declining, please change with "[…] scenarios, with for example water quality regulation, coastal protection and pollination […]"
9	41	At the end of the para it is stated that "Access and benefit-sharing (ABS) also provides an important incentive for the conservation and sustainable use of biodiversity". It would be useful to support this affirmation with some concrete

		examples, or figures, if available, and make reference to the source of this information.
9	42	The last part of the paragraph reports that "...corporate reports and websites of cosmetic and food companies found that references to ABS appear to be receiving increasing attention including by 17 per cent of beauty companies (up from 2 per cent in 2009) and 5 per cent of food and beverage companies (up from 2 per cent in 2012). It is not clear how this information is directly relevant or would be useful to find information on benefits generated and shared. This should be further clarified.
9	43	The first sentence in this para seems expressing a guess or a personal point of view, and does not provide for precise data nor an estimate of the proportion of benefits that is allegedly assessed as small. The whole paragraph risks to be inaccurate and misleading if not supported by a more articulated analysis and explanation on the figures reported. When saying that information on benefits shared, in particularly in monetary terms, is likely a very small proportion of the total revenues of the relevant sectors, the amount of this proportion and how is calculated should be clarified. It should also be clarified what it is considered as total revenues, whether these revenues are only or mostly derived from the use of genetic resources, whether the costs of investments in R&D are or should be taken into account when assessing the adequacy of this proportion.
10	47	Replace the sentence by "[…] knowledge and technology transfer [...]".
12	54	Add at the end of the paragraph; " and further work should ensure effective management to avoid paper parks with the involvement of IPLC and other stakeholders."
15	64 a	"Scenarios suggest that investing in sustainable fisheries management (inclusive of distant water fleets) in terms of catches and fishing practices, combatting illegal, unreported and unregulated fishing and removing harmful subsidies,…."
16	67	Add references to other factors, suggested text: There is also increasing evidence that already established alien species can be triggered by an environmental factor to become invasive (https://doi.org/10.1093/biosci/biaa168)[1]. Furthermore, climate change is expected to alter/facilitate the transport, introduction, establishment and spread of invasive alien species (https://doi.org/10.3897/neobiota.62.55729)[2].
16	68	Explicit reference to the need to address both "intentional" and "unintentional" introductions should be included.
16-17	68	The wording "significant risk" and "particularly detrimental" are open to very broad interpretation and could mean that only very few IAS will be addressed in the end, resulting in not achieving the target.
17	69	The paragraph suggests as an indicator of progress the "cumulative number of invasive alien species". As the document aims to provide "scientific and technical

[1] Spear et al (2021) The Invasion Ecology of Sleeper Populations: Prevalence, Persistence, and Abrupt Shifts https://doi.org/10.1093/biosci/biaa168

[2] Robertson et al (2020) Double trouble: the implications of climate change for biological invasions https://doi.org/10.3897/neobiota.62.55729

		information to support the review of the proposed goals and targets", this paragraph should discuss more elements, e.g. the difference between monitoring "cumulative number of invasive alien species" and "cumulative number of alien species". Measuring numbers of "invasive alien species" requires to assess whether "alien species" are "invasive" or not. See also our comment above on the wording "significant risk" and "particularly detrimental". There is an issue of non-consistent definitions of "invasiveness" used in such assessments e.g. as regards the threshold of impact beyond which an alien species is to be considered as "invasive". Furthermore, the "cumulative number of invasive alien species" is ignoring the potentially very long lag time between introduction, establishment and manifestation of invasiveness, a phenomenon that is expected to be aggravated by climate change (alien species already established may under climate change conditions become invasive).
17	71	"…Noise and light pollution also disrupt the behavior of many species and seriously threatens their conservation status…" Add at the end of the paragraph, "…unless stringent measures are adopted and implemented in line with UNEA5."
18	72	Add after quote 73; "Furthermore, the ad hoc open-ended expert group (AHEG) established through United Nations Environment Assembly (UNEA) has identified potential options to tackle Marine litter and Microplastics to be discussed at the next UNEA 5[1]. One of the options was to develop a new global agreement to provide a legal framework of global response and to facilitate national responses especially for those countries with limited resources and capacities that could contain either legally binding and/or non-binding elements [1] https://papersmart.unon.org/resolution/uploads/chair_summary_final.pdf#overlay-context=Fourth-adhoc-oeeg
19	75	The paragraph should be revised as follows: *As clearly stated in COP 14/5 to ensure fairness, equity and effectiveness, indigenous peoples and local communities must be fully involved in the development and implementation of ecosystem-based approaches. ~~In addition, while many ecosystem-based approaches have co-benefits for biodiversity, this is not always the case, and careful assessment of synergies and trade-offs is required. In particular, tree planting is not always appropriate, especially of non-native species in monoculture plantations.~~ The phase-out of fossil fuels requires the development of alternative, renewable energy sources, as well as improved energy efficiency. Inevitably, renewable energy as well as some adaptation measures, have potential impacts on biodiversity. Recalling COP X/33 it will be important ~~therefore~~ to avoid or minimize any such negative impacts. Nature-based solutions with safeguards are estimated to provide 37 per cent of climate change mitigation until 2030 needed to meet the goal of keeping climate warming below 2°C, with likely co-benefits for biodiversity. Therefore, land-use actions are indispensable, in addition to strong actions to reduce greenhouse gas emissions from fossil fuel use and other industrial and agricultural activities. However, the large-scale deployment of intensive bioenergy plantations,*

		including monocultures, replacing natural forests and subsistence farmlands, will likely have negative impacts on biodiversity and can threaten food and water security as well as local livelihoods, including by intensifying social conflict. [IPBES GA D8 (2019)]
19 JPP	78	Add the following; "The actions needed to reach this target will also overlap with those required for proposed target 3 and the actions for target 4 related to the active sustainable management of wild species of fauna and flora."
20 KZ	82	The paragraph should be revised as follows: The proposed target relates to the benefits provided to people in relation to the services provided by ecosystems (or nature's contributions to people) such as regulating climate, climate change adaptation and disaster risk reduction, regulating water flow, preventing erosion, providing protection against extreme events through physical barriers, or filtering pollutants. Such key ecosystems may include forests and wetlands especially in upstream areas, coral reefs, mangroves and sea-grass beds. These ecosystem services are vital and underpin the health and well-being of people, therefore safeguarding these ecosystem services is a key element of the 2050 Vision for Biodiversity. The protection and restoration of such ecosystems to address societal needs are ~~variously~~ known also as 'ecosystem-based approaches', 'nature-based solutions', 'green infrastructure' or "blue-green infrastructure".
20 JRC	Target 9	Although the term "aquaculture" has been used, texts under this target are mainly focusing on land-use, neglecting the marine aquaculture and the associated positive / negative impacts (see e.g. Alleway et al., 2018 https://academic.oup.com/bioscience/article/69/1/59/5209352)
20	Target 9	The objective would be to increase agriculture and other managed areas under sustainable practices rather 'productivity gap' mainly, given the risk is that it invites on ways to narrow the productivity gap that are actually harmful to biodiversity. To focus on productivity is inadequate and problematic. This target could be rephrased as following: "By 2030, increase by [XX] agricultural and other managed ecosystems that are under management practices based on the sustainable use of natural resources, such as agroecology and other biodiversity friendly production systems, and that support and enhance food security and nutrition, farmers' incomes and livelihood and ecosystem services while supporting biodiversity.
20	80	This para should be rephrased as follows: Currently, land-use change from the expansion of agriculture is the largest driver of biodiversity loss. In addition, many agricultural practices, such as intensive tillage, inappropriate or excessive fertilizer and pesticide use as well as the overuse of antibiotics in livestock also tend to reduce biodiversity. Unsustainable practices in other managed ecosystems, such as those used for pasture, forestry and aquaculture, are also having negative impacts on biodiversity. To achieve the 2050 Vision and the proposed Goals of the post-2020 global biodiversity framework there is a need to increase agricultural and other managed ecosystems

		that are under management practices based on the sustainable use of natural resources, such as agroecology and other biodiversity friendly production systems, and in particular of existing agricultural areas, in order to limit and reduce the demand for land and water resources. Achieving the 2050 Vision and the proposed Goals will also require reducing pesticide use, overuse of fertilizers and water and improve the management of soils and forests. This proposed target focuses on these objectives and specifically on how enhanced biodiversity in agricultural and other managed ecosystems can contribute to these objectives, as well as supporting and enhancing food security and nutrition, farmers' incomes and livelihood and ecosystem services.
20	81	This para should be rephrased as follows: A number of possible actions can be taken to support the , sustainability and resilience of biodiversity in agricultural and managed ecosystems by increasing agricultural and other managed ecosystems under management practices based on the sustainable use of natural resources, such as agroecology and other biodiversity friendly production systems. Most of these actions centre around the sustainable intensification of production practices which includes improving the efficiency of use of land and inputs of water, fertilizers and pesticides, including though genetic improvements to crops and livestock, substituting external inputs, and designing or redesigning systems based on agroecological principles. Examples of the types of actions needed include all practices set under agroecology principles, increasing the use of integrated pest management, reducing and more targeted use of pesticides, antibiotics, fertilizers and irrigation water, decreasing soil erosion, decreasing residues and runoff of pesticides and excess nutrients, increasing resource use efficiency and reducing pollinator-dependent yield deficits. Some of these actions would also contribute to proposed target 6 related to reducing pollution from all sources, including excess nutrients. The actions to reach this target would also have co-benefits for biodiversity and help to improve the diversity and abundance of organisms, in particular insects and birds, including the abundance of pollinators and natural enemies of pests. Other actions could include the conservation or restoration of native habitats within working landscapes of agricultural and other managed ecosystems. A recent study recommended that 20 per cent of native habitat to support conservation and ecosystem services.79
21 RTD	Target 10, para 84	The para should be revised as follows: Nature-based solutions or ecosystem-based approaches have co-benefits for biodiversity and help to create incentives for their use and their mainstreaming into decision making and planning processes, . See: EU definition of NBS as "Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions. Nature-based solutions must therefore benefit biodiversity and support the delivery of a range of ecosystem services" on https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en) and

		https://ec.europa.eu/info/publications/biodiversity-and-nature-based-solutions_en
21	Target 11	While the target currently mentions "increase benefits from biodiversity and green/blue spaces for human health and well-being", the quantitative target to reach only refers to the access to green/blue spaces. Therefore, biodiversity benefits that do not result from access to green/blue spaces are overlooked in this target, and are not reflected in other targets – while they are clearly mentioned in goal B "Nature's contributions to people have been valued, maintained or enhanced through conservation and sustainable use supporting global development agenda for the benefit of all". Proper quantitative targets that reflect the maintenance/enhancement of all categories of NCPs could be added, using the indicators of the *IPBES Global Assessment on Biodiversity and Ecosystem Services* to measure progress towards them.
22	85	Please add reference for "[…] the critical importance of urban nature in providing resilience in time of crisis have been **demonstrated** by the COVID-19 pandemic […]"
22	87	Add at the end of the paragraph: … and to targets related to nature-based solutions (targets 7 and 10) . Further info on benefits on https://cordis.europa.eu/article/id/421853-nature-based-solutions
22,23 MC	88-90	It is questionable whether the suggested action (namely, putting in place appropriate measures for ABS) would directly contribute to achieve the goal. Even if several countries have established ABS measures, information about the benefits generated is scarce and often not available, and this does not allow to assess whether the measures effectively contribute to benefit sharing. The document recognizes that this is an issue, but does not seem to clarify how this could be addressed. Further analysis on this aspect and the measurability of this target would be useful/needed.
24	Target 14 (and 15)	The role of retailers in defining production and consumption patterns, and their sustainability should be added
26	99	- For clarity purposes, add after the first sentence the following: 'For the purposes of the Convention "Biotechnology" means any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use. Cartagena Protocol applies to the transboundary movement, transit, handling and use of all living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health.' - The second sentence of the paragraph reads: '*A target on biotechnology therefore has the potential to advance biosafety considerations under the Convention including CP on biosafety*'. Biosafety is not defined or mentioned as such in the convention; therefore, we propose to replace 'biosafety considerations' with 'biotechnology considerations' in this sentence.
26	102	Since fishing subsidies are also harmful incentives, please replace "[…] around land-use" by "around land-/sea-use"
27	Target 18	Replace the sentence by "[…] capacity-building, knowledge and technology transfer [...]".
28-29	Target 19	The evidence provided covers only knowledge component of the target. Evidence

		on the awareness raising and educational efforts and their role as enablers for transformative change is missing. Such evidence could include e.g. demonstration how the improved understanding of value of biodiversity to our economy and society can drive support for the GBF and the behavioral change by all actors (public, stakeholders, policy makers) needed to implement it.
29	Target 19, 11-114	Add the research element of this target – research and innovation is essential to create information to understand biodiversity and the drivers for its loss, to make it available for policy makers, to develop, test, demonstrate, assess solutions for its sustainable management and recovery.
29	Target 19 / 112	Add after the first sentence: "Quality and timely biodiversity information is required …' a new phrase: " It is also necessary to develop relevant and effective communication and education materials."

Comments should be sent by e-mail to secretariat@cbd.int by 22 March 2021