

## **Guidelines and template for the review of the draft monitoring framework for the post-2020 global biodiversity framework**

### ***I. Background***

1. The second meeting of the Open-ended Working Group<sup>1</sup> on the Post-2020 Global Biodiversity Framework invited the Subsidiary Body on Scientific, Technical and Technological Advice at its twenty-fourth meeting to, among other things, carry out a scientific and technical review of the updated goals and targets, and related indicators and baselines, of the draft global biodiversity framework. Under agenda item 3 the Subsidiary Body will consider this issue.

2. Tables 1 and 2, presents a draft monitoring framework for the 2050 Goals and the 2030 targets respectively. These tables are being made available for the purposes of peer review. In both tables' interim formulations of the proposed 2050 goals and milestones and the 2030 targets are provided for context. Review comments are not being sought on these parts of the post-2020 global biodiversity framework at this time. Columns A, B of the tables provide draft monitoring elements and indicators to be used at the global level to monitor progress in the implementation of the post-2020 global biodiversity framework. Further column C provides information on the baseline year for the indicator and on the frequency that the indicator is updated where known. Review comments are being sought on columns A, B and C only.

### ***II. Submitting Comments***

1. To ensure that your comments are given due consideration, please send them by e-mail to [secretariat@cbd.int](mailto:secretariat@cbd.int), at your earliest convenience but **no later than 25 July 2020**
2. When submitting comments, please adhere to the following guidelines as much as possible:
  - a. Please provide all comments in writing and in an MS Word or similar document format using the table provided below.
  - b. Please provide full contact information for the individual/Government/organization submitting the comments.
  - c. Please avoid commenting on issues related to grammar, spelling, or punctuation, unless it affects the overall meaning of the text, as the document will be edited as the final draft is prepared.
  - d. To facilitate the revision process please be as specific as possible in your comments. In areas where you feel additional or alternative text or information is required, please suggest, if possible, what this text may look like or what should be included.
  - e. If you refer to additional sources of information, please include these with your comments when possible or provide a complete reference or hyperlink.
  - f. Please focus your comments on columns A (monitoring elements), B (indicators) and C (Indicator baseline year and frequency of updates) of the tables 1 and 2.
  - g. If you are suggestion the inclusion of additional indicators please provide information on if the indicator is currently operational, the organization supporting its development, its

---

<sup>1</sup> [CBD/WG2020/REC/2/1](#)

baseline (i.e. the year data is first available) and how frequently the indicator is updated (i.e. monthly, yearly, every two years etc.).

- h. All review comments will be posted on the webpage<sup>2</sup> for the post-2020 global biodiversity framework in the interests of transparency
3. Should you have any questions regarding the review process, please contact [secretariat@cbd.int](mailto:secretariat@cbd.int).

### **III. Template for Comments**

4. Please use the review template below when providing comments.
5. The complete draft of the monitoring framework has been released in a portable document format (PDF). For tables 1, 2 and 3 column letters and row numbers have been provided as well as page numbers. Please use these as a reference as illustrated in the table below. General comments can be included in the table by referring to Page 0 and Line 0.

#### **TEMPLATE FOR COMMENTS**

<b>Review comments on the draft monitoring framework for the post-2020 global biodiversity framework</b>				
<i>Contact information</i>				
<b>Surname:</b>	Perino			
<b>Given Name:</b>	Andrea			
<b>Government (if applicable):</b>	n/a			
<b>Organization:</b>	German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig			
<b>Address:</b>	Deutscher Platz 5e			
<b>City:</b>	04103 Leipzig			
<b>Country:</b>	Germany			
<b>E-mail:</b>	Andrea.perino@idiv.de			
<i>Comments</i>				
<b>Table</b>	<b>Page</b>	<b>Column letter</b>	<b>Row number</b>	<b>Comment</b>
1	2	B	1 – 14	Goal A aims at increasing “the area, connectivity and integrity of natural ecosystems increased by at least [X%] supporting healthy and resilient populations of all species while reducing the number of species that are threatened by [X%] and maintaining genetic diversity”. While the language of this Goal rightfully acknowledges the importance of habitat and the negative impact of habitat loss on species trends, the proposed monitoring elements and indicators associated to the Goal do not reflect this relationship. Whereas we stress the need for monitoring elements and indicators that are able to capture and assess changes in habitats and consequent changes in the status of species, we want to draw special attention to the issue of ecosystem decay. That is, smaller habitat

<sup>2</sup> <https://www.cbd.int/conferences/post2020>

				fragments often contain fewer individuals, species and species communities than would be expected from larger habitat fragments, due to altered demography of the remaining species. Due to this effect it is impossible to accurately assess changes in threat-levels to species populations from changes in area of habitats or species distribution alone. More realistic projections of biodiversity loss could be obtained by including demographic effects in projections of biodiversity loss ( <a href="#">Chase et al. 2020</a> ).
1	2	B	1 – 14	Different components of ecosystems interact, promoting or hampering ecosystem integrity. Monitoring elements targeting single components should therefore be complemented by a composite index to better reflect the complexity of ecosystems and to measure ecosystem integrity more accurately. Rewilding aims at restoring such interacting processes and thereby increasing ecosystem resilience ( <a href="#">Perino et al. 2019</a> ). <a href="#">Torres et al.</a> recently suggested an approach to measure and monitor rewilding progress that accounts for interacting processes.
1	2	B	1 – 14	Increases in a certain ecosystem type mathematically require decreases in one or several other ecosystem types. Indicators to capture such dynamics and to assess trends in natural ecosystems should address the regional/global status of specific ecosystem types and the inherent spatiotemporal dynamics of most ecosystem distributions. Availability of global annual data time-series (since 1992) for scalable indicators is given for ecosystem types corresponding to IUCN species habitat classes ( <a href="#">Remelgado &amp; Meyer, under review.</a> ). Specific indicators still in conceptual development phase.
1	3	C	15 - 21	Suggested additional indicator for functional connectivity in terrestrial ecosystems: <a href="#">Volk et al. 2018</a>
1	3	B	15 - 21	Natural succession can be an important tool for ecosystem restoration and should be integrated in assessments of ecosystem integrity. Suggested additional monitoring element: Evaluation of successional trends: <a href="#">Prach &amp; Walker, 2018</a> , <a href="https://doi.org/10.1111/1365-2745.13078">https://doi.org/10.1111/1365-2745.13078</a>
1	3	C	29 - 35	We notice that soil ecosystems are not explicitly considered in the monitoring elements. This likely results in an important gap in the assessment of soil invertebrates. Only a minor fraction of soil biodiversity has been described and information on the threats below-ground biodiversity is facing is largely lacking ( <a href="#">Philips et al. 2019</a> ). This lack is particularly severe in tropical and subtropical ecosystems ( <a href="#">Guerra at al. 2020</a> ). While invertebrates are critical for ecosystem functioning, they are suffering rapid declines ( <a href="#">Eisenhauer et al. 2019</a> ). Moreover, patterns of diversity, abundance and biomass of belowground taxa can differ markedly from those of aboveground taxa ( <a href="#">Phillips et al. 2019</a> ). We therefore suggest to include indicators explicitly for belowground taxa to assess trends in species extinctions, conservation status and abundance.
1	4	C	42 - 50	Outcome based indicators for protected areas can be

				more effective than generic aerial targets. Outcome based indicators have been proposed by <a href="#">Leberger et al. (2019)</a> <a href="https://doi.org/10.1016/j.biocon.2019.108299">https://doi.org/10.1016/j.biocon.2019.108299</a> and <a href="#">Visconti et al. (2019)</a> .
1	4	B	42 - 50	Suggested additional monitoring element: Trends in area and integrity of belowground ecosystems.
2	8	B	24 - 29	Below-ground biodiversity is of central importance for ecosystem functioning, yet does not follow the same patterns as above-ground biodiversity (e.g., <a href="#">Phillips et al. 2019</a> ). We suggest to include a monitoring element addressing trends in the area and status of degraded soil ecosystems.
2	8	C	28	Suggested additional indicator: Composite of wetland protection and anthropogenic pressures, namely climate and land cover change, and the subsequent impact on species such as waterbirds, endemic fish and amphibians ( <a href="#">Leberger et al. 2020</a> ).
2	10	B	35 - 37	Monitoring should not only be based on the average response within protected areas, but also capture changes in species community composition that occur across spatial scales, i.e. changes in alpha and beta diversity, evenness, abundance and biomass (e.g., <a href="#">Blowes et al. 2020</a> ).
2	10	C	35 - 37	Suggested indicator: local assemblage time series, e.g. BioTIME database.
2	11	B	39 - 42	Target 2.2 should include outcome based monitoring elements in addition to area-based elements only ( <a href="#">Visconti et al. 2019</a> ).
2	14	C	69	Suggested additional indicator: number of species introductions per region over time (compared to a baseline period e.g. 2000-2020).
2	14	B	70-72	Suggested additional monitoring element: Impact of known invasive species per region over time.
2	15	C	77	An indicator to monitor the impact of IAS should capture the issues of spread, impact, and intervention effectiveness ( <a href="#">McGeoch &amp; Jetz 2019</a> ).
2	15	C	86	Suggested indicator (for aquatic ecosystems): Change in the rate of pesticide use, e.g., SPEAR index ( <a href="#">Beketov et al. 2009</a> )
2	16	B	98	We suggest additional indicators to address water retention; nutrient retention; water quality, soil protection and erosion control.
2	16	B	101	Suggested additional indicators, e.g., tCO <sub>2</sub> eq avoided emissions per ha; tC stored per ha including indicators from soil systems (e.g. soil respiration rate, litter decomposition).
2	20	C	117 - 119	Land-cover and land-use indicators, combined with yield and income data, may offer efficient indicators to assess impacts of agriculture and avoid intensification and loss of natural landscape features.
2	21	C	132	Biodiversity can contribute to mental and physical health. Contact with nature can facilitate pro-environmental behavior. The WHO as well as the non-departmental public body Natural England have provided indicators of accessibility to greenspace that meets certain ecological and social standards. ( <a href="https://www.euro.who.int/en/health-topics/environment-and-health/urban-health">https://www.euro.who.int/en/health-topics/environment-and-health/urban-health</a> ); <a href="#">The Accessible Natural Greenspace</a>

				<a href="#">Standard.</a>
2	21	C	132	Suggested additional indicators: Social interventions to increase use of urban green space (e.g. Number of school field trips, creation of a national health walk programme); Cities green space exposure (% green area).
2	22, 23	C	140 - 145	To assure that access to and benefits from genetic resources can be shared fairly and equitably, it is critical that data adhere to certain standards, for example following the FAIR (Findable, Accessible, Interoperable, Reusable) principles. In addition to these also data quality should be monitored with appropriate indicators. We suggest to include the proportion of data that is FAIR and open access (globally and nationally) into the monitoring framework but point out that indicators to monitor each of the principles are currently under development but not yet available for application.
2	25	C	152	Multiple nonmarket benefits of Biodiversity (insurance value, regulating services, recreation, existence values, etc.) play an important role in biodiversity conservation. There is increasing scientific knowledge on the trade-offs and synergies between these multiple nonmarket benefits. Effective implementation of biodiversity policy requires mainstreaming across governmental ministries and key economic sectors. Suggested additional indicators: Number of countries that have included biodiversity values into planning process and social cost-benefit analysis. Existence of legislation foreseeing integrated land use planning / or more broadly, integrated planning processes.
2	26	C	156	Suggested additional indicators: Number of countries that have removed disincentives (including subsidies) for biodiversity friendly forestry and farming. Number of national sectoral strategies/programs that consider the value of biodiversity and their contribution to biodiversity conservation.
2	26	C	157	Suggested additional indicator: Number of countries that have adopted a widely accepted and binding biodiversity value concept.
2	26	C	158	Suggested additional indicator: Proportion of economic sectors that have aligned financial incentives with biodiversity benefits.
2	27	C	159	Suggested additional indicator: Percentage of biodiversity relevant policy decisions that are based on the consideration of biodiversity values.
2	29	C	177	Suggested additional indicators: Number of companies that disclose biodiversity impacts throughout the value chain. Number of countries that implement biodiversity footprint labels and metrics. Number of countries that assess and report the biodiversity impacts embodied in their international trade (see <a href="#">Marques et al. 2019</a> ).
2	29	C	178	Suggested additional indicator:

				Percentage of stock-exchange-listed companies in each country that mention biodiversity in their corporate responsibility statements, or that participate in zero-deforestation commitments or other initiatives.
2	31	C	190 - 192	Suggested additional indicators: Number of people with diets close to WHO standards. Number of km/flights/person. Number of tCO2 emissions/person. Number of countries that tax food according to the impact on biodiversity and climate change.
2	37	B	234	Suggested additional monitoring element: Trends in integration of biodiversity into teaching curricula primary education.
2	38	C	237	Suggested additional indicator: Proportion of data that is FAIR and open access (globally and nationally).

*Comments should be sent by e-mail to [secretariat@cbd.int](mailto:secretariat@cbd.int) no later than 25 July 2020.*