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OPEN-ENDED WORKING GROUP on the post-2020 global biodiversity framework

Third meeting

Online, 23 August – 3 September 2021

Item 4 of the provisional agenda[[1]](#footnote-2)\*\*

**Proposed headline indicators of the monitoring framework for the post-2020 global biodiversity framework**

Note by the Executive Secretary

# introduction

1. In the light of the relevant requests by the Conference of the Parties at its fourteenth meeting, by the Subsidiary Body on Scientific, Technical and Technological Advice at its twenty-third and twenty fourth meetings, by the Subsidiary Body on Implementation at its third meeting and by the Open-ended Working Group on the Post-2020 Global Biodiversity Framework at its first and second meetings, the present document identifies a set of possible headline indicators which could be used to monitor the implementation of the post-2020 global biodiversity framework nationally as well as used to track progress globally. The proposed headline indicators have been identified taking into account document CBD/SBSTTA/24/3/Add.1 and the views expressed during the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice,[[2]](#footnote-3) including the results of an in-session survey,[[3]](#footnote-4) as well as the first draft of the post‑2020 global biodiversity framework.[[4]](#footnote-5)
2. Section II of the present document outlines the criteria that were used to identify the proposed headline indicators and section III sets out some general considerations which the Working Group may wish to bear in mind when considering this issue. The proposed headline indicators are listed in the annex below and have been aligned to the goals and targets of the first draft of the post‑2020 global biodiversity framework. The details and characteristics of each indicator are also reflected in the annex.
3. The present note is supported by information documents providing further information on possible component and thematic indicators as well as more detailed technical information on some of the proposed indicators.

# Criteria used in identifying the proposed headline indicators for the post-2020 global biodiversity framework

1. Each of the proposed headline indicators in the monitoring framework for the post-2020 global biodiversity framework meet the following criteria:
   1. The indicator is either currently available for use, is under active development and is expected to available soon, or could be developed by Secretariat of the Convention on Biological Diversity and its partners on the basis of existing processes;
   2. The indicator is directly relevant to at least one goal or target in first draft of the post-2020 global biodiversity framework;
   3. The indicator is nationally relevant, and can be disaggregated from global to national levels and/or aggregated from national to global levels without compromising the reliability of the indicator;
   4. The methodology for the indicator is either published in a peer reviewed academic journal or has gone through a scientific peer review process;
   5. The data and metadata related to the indicator are publicly available;
   6. The indicator will be regularly updated with a gap of less than five years between updates.
2. In reference to the first criteria related to data availability and existing processes, an effort was made to align with the intergovernmental processes under the United Nations Statistical Commission, including the Sustainable Development Goals or the System of Environmental-Economic Accounting. Additionally, an effort was made to utilize the existing work on essential biodiversity variables under GEO-BON (noting that many of the essential biodiversity variables also serve as the underlying data for the System of Environmental-Economic Accounting). Currently, 89 countries have implemented the System of Environmental-Economic Accounting and an additional 27 countries have existing plans to do so.[[5]](#footnote-6) Thus, although additional support for monitoring will be needed to build capacity in some countries, there is already an existing programme of work on these indicators.
3. For some of the proposed goals and targets in the first draft of the post-2020 global biodiversity framework, it is not possible to identify headline indicators which meet all of the criteria above. Where this is the case, these gaps have been noted in the annex, and Parties may wish to consider how these gaps could be filled.

# Other considerations in the identification of headline indicators

1. In addition to the criteria above, the following considerations were taken into account when identifying possible headline indicators:
   1. The views expressed during the twenty-fourth meeting of the Subsidiary Body on Scientific and Technological Advice, including through the in-session survey undertaken by the co-chairs of the contact group addressing this issue;[[6]](#footnote-7)
   2. Headline indicators should constitute a limited set of high-level indicators which capture the overall scope of the goals and targets of the post-2020 global biodiversity framework. Headline indicators, by definition, cannot capture all elements of each goal or a target and, therefore, for analytical purposes, will need to be complemented, as appropriate, with component and complementary indicators. These component indicators are also nationally relevant, covering a more specific component of a goal or target. The complimentary indicators may or may not be nationally relevant but would provide important global-level information for monitoring progress towards the goals and targets of the post-2020 global biodiversity framework and may be drawn upon in global analysis. Possible component and complementary indicators are identified in document CBD/WG2020/3/INF/2;
   3. Priority has been given to indicators that have been agreed through an established scientific or intergovernmental process and where there is an existing body that will continue to review the indicator, as is the case, for example, for the indicators identified for monitoring implementation of the 2030 Agenda for Sustainable Development. These indicators would not constitute additional national capacity-building needs or reporting burden on Parties as the indicators are already being compiled and nationally validated through other processes; however, there remains a need to build capacity around the SDG indicators as is well recognized in the SDG process. Similarly, data on some of the proposed headline indicators is already envisioned to be available through established reporting processes under the Convention or its protocols (for example through the reporting processes related to the financial Resource Mobilization Reporting Framework or under the review and assessment processes established under the Cartagena and Nagoya Protocols). Hence, the of use these indicators would not entail a significant additional reporting burden as reporting would continue through the existing process. Where the proposed indicators meet one of these two characteristics, it is indicated in the annex.

# SuMMARY of headline indicators

1. There are 38 total Headline indicators. This includes 15 indicators which are an exact match with an SDG indicator and thus for these indicators data would continue to be collected and validated through the SDG process and not require additional effort under the CBD process. Of the remaining indicators, 7 relate to the GEO-BON essential biodiversity variables indicators or the System of Environmental Economic Accounting indicators, and 6 are covered by an existing intergovernmental process or by an international data provider. The remaining 10 indicators need further research and development, but many of them are indicators of policy measures which will be developed on the basis on existing reporting through national reports under the Convention, national biodiversity finance plans or reporting under the Nagoya or Cartagena Protocols.
2. There are 9 Headline indicators for the four Goals and 29 Headline indicators for the 21 targets. On average, there are two or three indicators per Goal and one or two per target.
3. To facilitate the use of Headline indicators at the national level, capacity-building activities and other support, including support for developing and accessing data and the further development of national monitoring systems, will be needed in many developing countries, in particular least developed countries and small island developing States, as well as countries with economies in transition. This support would need to be coordinated and aligned with existing support being provided under other existing initiatives, such as GEO-BON, the Sustainable Development Goals or the System of Environmental-Economic Accounting. Parties may wish to consider this issue when developing the monitoring framework for the post-2020 global biodiversity framework.

*Annex*

**Proposed headline indicators for the post-2020 global biodiversity framework**

In the table below, for each of the proposed goals and targets in the first draft of the post-2020 global biodiversity framework, possible headline indicators have been identified on the basis of the criteria and considerations set out above. Additional supporting technical information is also provided in the table to facilitate consideration of this issue by the Working Group.

| *Proposed goal or target* | *Proposed indicators[[7]](#footnote-8)* | *Proposed disaggregation* | *Existing national reporting/ validation process* | *Methodological basis* | *Global data set for national disaggregation[[8]](#footnote-9)* |
| --- | --- | --- | --- | --- | --- |
| **Goal A.** The integrity of all ecosystems is enhanced, with an increase of at least 15% in the area, connectivity and integrity of natural ecosystems, supporting healthy and resilient populations of all species, the rate of extinctions has been reduced at least tenfold, and the risk of species extinctions across all taxonomic and functional groups, is halved, and genetic diversity of wild and domesticated species is safeguarded, with at least 90% of genetic diversity within all species maintained. | A.0.1 Extent of selected natural and modified ecosystems (i.e. forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats) | By terrestrial and marine ecosystem types  By mountains |  | UN System of Environmental-Economic Accounting (SEEA): <https://seea.un.org/ecosystem-accounting>  Ecosystem types based on IUCN categories | Near ready\*\* |
| A.0.2 Species Habitat Index | By species group |  | GEOBON: <https://geobon.org/ebvs/indicators/> (Measures connectivity and integrity of habitats) | Existing, 2001 to present\*\* |
| A.0.3 Red list index | By species group | SDG (15.5.1) | SDG: IUCN: <https://www.iucnredlist.org/> | Existing, data from 1996 to present |
| A.0.4 The proportion of populations within species with a genetically effective population size > 500 | By species group |  | GEOBON, see: <https://www.sciencedirect.com/science/article/pii/S0006320720307126> | Near ready\*\* |
| **Goal B.** Nature’s contributions to people have been valued, maintained or enhanced through conservation and sustainable use supporting the global development agenda for the benefit of all. | B.0.1 National environmental economic accounts of ecosystem services\* | By ecosystem type and type of service |  | UN System of Environmental Economic Accounting: <https://seea.un.org/ecosystem-accounting>. This indicator would be measured in physical and monetary terms and links with the concept of a Gross Ecosystem Product. | Near ready\*\* |
| **Goal C.** The benefits from the utilization of genetic resources are shared fairly and equitably, with a substantial increase in both monetary and non-monetary benefits shared, including for the conservation and sustainable use of biodiversity. | C.0.1 Monetary benefits received from utilization of genetic resources as a result of an ABS agreement, including traditional knowledge\* | Tbd |  | CBD: An estimate of monetary benefits would fill a key knowledge gap; however, additional coordination would be required. | Needs developed\*\* |
| C.0.2 Number of research and development products from an ABS agreement\* | Tbd |  | CBD: An estimate of monetary benefits would fill a key knowledge gap; however, additional coordination would be required. | Needs developed\*\* |
| **Goal D.** The gap between available financial and other means of implementation, and those necessary to achieve the 2050 Vision, is closed. | D.0.1 Funding for implementation of the global biodiversity framework\* | By funding source |  | CBD: To be collected through National Biodiversity Finance Plans | Needs developed through national biodiversity finance plans |
| D.0.2 Indicator on national biodiversity planning processes and means of implementation\* | Tbd |  | CBD: To be collected through national reporting to capture gaps in alignment with the GBF, mainstreaming and means of implementation. | Needs developed would be collected via self-assessment in national reports. |
| **Target 1.** Ensure that all land and sea areas globally are under integrated biodiversity-inclusive spatial planning addressing land- and sea-use change, retaining existing intact and wilderness areas. | 1.0.1 Percentage of land and seas covered by spatial plans that integrate biodiversity\* | By terrestrial and marine ecosystem type |  | CBD: Collected through national reporting and would link with SDG 6.5.1, 14.2.1 and 15.2.1. | Needs developed would be collected via self-assessment in national reports |
| **Target 2.** Ensure that at least 20% of degraded freshwater, marine and terrestrial ecosystems are under restoration, ensuring connectivity among them and focusing on priority ecosystems. | 2.0.1 Percentage of degraded or converted ecosystems that are under restoration | By ecosystem type | FAO through the Decade on Ecosystem Restoration | Task Force on Monitoring in support of the United Nations Decade on Ecosystem Restoration: 2021-2030 <http://www.fao.org/in-action/forest-landscape-restoration-mechanism/resources/detail/es/c/1315004/> | Near ready (INF paper from the Task Force) |
| **Target 3.** Ensure that at least 30% globally of land areas and of sea areas, especially areas of particular importance for biodiversity and its contributions to people, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes. | 3.0.1 Coverage of Protected areas and OECMS (by effectiveness) | By ecosystem type  By key biodiversity area  By effectiveness category (PAME)  By mountains | SDG (14.2.1, 15.1.2 and 15.4.1) | SDG: Protected Planet: <https://www.protectedplanet.net/en> | Existing, PA data from pre-1970 to present, OECM data under compilation |
| **Target 4.** Ensure active management actions to enable the recovery and conservation of species and the genetic diversity of wild and domesticated species, including through ex situ conservation, and effectively manage human-wildlife interactions to avoid or reduce human-wildlife conflict. | 4.0.1 Proportion of species populations that are affected by human wildlife conflict |  |  | IUCN SSC Human-Wildlife Conflict Task Force: <https://www.hwctf.org/> | Near ready, 2020/21\*\* |
| 4.0.2 Number of plant genetic resources for food and agriculture secured in medium or long-term conservation facilities |  | SDG (2.5.1a) | SDG: FAO: <http://www.fao.org/sustainable-development-goals/indicators/251a/en/> (currently captures plants but there is work on livestock under 2.5.1b which is under way) | Existing, 2000 to present |
| **Target 5.** Ensure that the harvesting, trade and use of wild species is sustainable, legal, and safe for human health. | 5.0.1 Proportion of wildlife that is harvested legally and sustainably\* | By species group  By use: domestic or traded |  | CBD: This indicator would fill a knowledge gap but would require additional research and development. | Needs developed |
| 5.0.2 Proportion of fish stocks within biologically sustainable levels | By type of fish | SDG (14.4.1) | SDG: FAO: <http://www.fao.org/sustainable-development-goals/indicators/1441/en/> | Existing, data from 1970 to present |
| **Target 6.** Manage pathways for the introduction of invasive alien species, preventing, or reducing their rate of introduction and establishment by at least 50%, and control or eradicate invasive alien species to eliminate or reduce their impacts, focusing on priority species and priority sites. | 6.0.1 Rate of invasive alien species spread | By pathway |  | GEOBON: <https://geobon.org/ebvs/working-groups/species-populations/ebv-for-invasion-monitoring/> | Near ready will be 1980 forward\*\* |
| **Target 7.** Reduce pollution from all sources to levels that are not harmful to biodiversity, ecosystem functions or human health, including by reducing nutrients lost to the environment by at least half, and pesticides by at least two thirds and eliminating the discharge of plastic waste. | 7.0.1 Index of coastal eutrophication potential (excess nitrogen and phosphate loading, exported from national boundaries) | By water body type | SDG (14.1.1a) | SDG: UNEP: <https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-14> | Existing, data from 2010 to present |
| 7.0.2 Plastic debris density | By location (beach, floating, sea column, sea floor) | SDG (14.1.1.b) | SDG: UNEP: <https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-14> | Existing on beach litter, from 2020 |
| 7.0.3 Pesticide use per area of cropland | By pesticide type | FAO | FAO: <http://www.fao.org/faostat/en/#data/EP/visualize> | Existing, data from 1990 to present |
| **Target 8.** Minimize the impact of climate change on biodiversity, contribute to mitigation and adaptation through ecosystem-based approaches, contributing at least 10 GtCO2e per year to global mitigation efforts, and ensure that all mitigation and adaptation efforts avoid negative impacts on biodiversity. | 8.0.1 National green-house gas inventories from land use and land use change |  |  | IPCC: <https://www.ipcc-nggip.iges.or.jp/public/2019rf/index.html> | Near ready |
| **Target 9.** Ensure benefits, including nutrition, food security, medicines, and livelihoods for people especially for the most vulnerable through sustainable management of wild terrestrial, freshwater and marine species and protecting customary sustainable use by indigenous peoples and local communities. | 9.0.1 National environmental-economic accounts of benefits from the use of wild species |  |  | SEEA: <https://seea.un.org/ecosystem-accounting> (disaggregation of accounting information from Goal B) | Near ready \*\* |
| **Target 10**. Ensure all areas under agriculture, aquaculture and forestry are managed sustainably, in particular through the conservation and sustainable use of biodiversity, increasing the productivity and resilience of these production systems. | 10.0.1 Proportion of agricultural area under productive and sustainable agriculture |  | SDG (2.4.1) | SDG: FAO: <http://www.fao.org/sustainable-development-goals/indicators/241/en/> (Measures sustainable agriculture as a percentage of total agricultural area) | Near ready through SDG process |
| 10.0.2 Progress towards sustainable forest management (Proportion of forest area under a long-term forest management plan) |  | SDG (15.2.1) | SDG: FAO: <https://unstats.un.org/sdgs/metadata/?Text&Goal=15&Target> (Measures sustainable forest as a percentage of total forest area) | Near ready through SDG process |
| **Target 11.** Maintain and enhance nature’s contributions to regulation of air quality, quality and quantity of water, and protection from hazards and extreme events for all people | 11.0.1 National environmental-economic accounts of regulation of air quality, quality and quantity of water, and protection from hazards and extreme events for all people, from ecosystems |  |  | SEEA: <https://seea.un.org/ecosystem-accounting> (disaggregation of accounting information from Goal B) | Near ready\*\* |
| **Target 12.** Increase the area of, access to, and benefits from green and blue spaces, for human health and well-being in urban areas and other densely populated areas. | 12.0.1 Average share of the built-up area of cities that is green/blue space for public use for all |  | SDG (11.7.1) | SDG: UN-Habitat: <https://urban-data-guo-un-habitat.hub.arcgis.com/documents/metadata-on-sdg-indicator-11-7-1/explore> | Existing, data from 2020 |
| **Target 13.** Implement measures at global level and in all countries to facilitate access to genetic resources and to ensure the fair and equitable sharing of benefits arising from the use of genetic resources and, as relevant, of associated traditional knowledge, including through mutually agreed terms and prior and informed consent. | 13.0.1 Indicators of operational legislative, administrative or policy frameworks which ensure fair and equitable sharing of benefits, including those based on PIC and MAT\* | Tbd |  | CBD: This index would need to be developed to capture all ABS mechanisms in a coherent way. | Needs developed\*\* |
| **Target 14.** Fully integrate biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies, accounts, and assessments of environmental impacts at all levels of government and across all sectors of the economy, ensuring that all activities and financial flows are aligned with biodiversity values. | 14.0.1 Extent to which national targets for integrating biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts |  | Existing in CBD National Reports and used for SDG 15.9.1a | SDG: CBD: <https://unstats.un.org/sdgs/metadata/?Text=&Goal=15&Target=15.9> | Existing, data from 2015 to present |
| 14.0.2 Integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting |  | SDG 15.9.1b | SDG: UNSD: <https://unstats.un.org/sdgs/metadata/?Text=&Goal=15&Target=15.9> | Existing, data from 2015 to present |
| **Target 15.** All businesses (public and private, large, medium and small) assess and report on their dependencies and impacts on biodiversity, from local to global, and progressively reduce negative impacts, by at least half and increase positive impacts, reducing biodiversity-related risks to businesses and moving towards the full sustainability of extraction and production practices, sourcing and supply chains, and use and disposal. | 15.0.1 Dependencies and impacts of businesses on biodiversity | By industrial classification |  | CBD: Would need to be developed, but could be based on corporate sustainability reporting under SDG 12.6.1 and methodological work by TFND, IPBES, etc. <https://unstats.un.org/sdgs/metadata/?Text=&Goal=12&Target=12.6> | Needs developed |
| **Target 16.** Ensure that people are encouraged and enabled to make responsible choices and have access to relevant information and alternatives, taking into account cultural preferences, to reduce by at least half the waste and, where relevant the overconsumption, of food and other materials. | 16.0.1 Food waste index |  | SDG (12.3.1b) | SDG : UNEP : https://www.unep.org/thinkeatsave/about/sdg-123-food-waste-index | Near ready through the SDG process |
| 16.0.2 Material footprint per capita | By type of material | SDG (8.4.1,12.2.1) | SDG: UNEP : <https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-12-1> | Existing, data from 1970 to present |
| **Target 17.** Establish, strengthen capacity for, and implement measures in all countries to prevent, manage or control potential adverse impacts of biotechnology on biodiversity and human health, reducing the risk of these impacts. | 17.0.1 Indicator of measures in place to prevent, manage and control potential adverse impacts of biotechnology on biodiversity taking into account human health\* |  |  | CBD: This index would need to be developed. | Needs developed |
| **Target 18.** Redirect, repurpose, reform or eliminate incentives harmful for biodiversity, in a just and equitable way, reducing them by at least 500 billion per year, including all of the most harmful subsidies, and ensure that incentives, including public and private economic and regulatory incentives, are either positive or neutral for biodiversity. | 18.0.1 Value of subsidies and other incentives harmful to biodiversity, that are redirected, repurposed or eliminated. | By type of instrument | OECD | Based on OECD methodology https://www.oecd.org/fr/tad/environmentallyharmfulsubsidieschallengesforreform.htm | Existing, data from 1990s |
| **Target 19.** Increase financial resources from all sources to at least 200 billion per year, including new, additional and effective financial resources, increasing by at least 10 billion per year international financial flows to developing countries, leveraging private finance, and increasing domestic resource mobilization, taking into account national biodiversity finance planning, and strengthen capacity-building and technology transfer and scientific cooperation, to meet the needs for implementing the post-2020 global biodiversity framework implementation, commensurate with the ambition of the goals and targets of the framework. | 19.0.1 Official development assistance for biodiversity | By type of expenditure | SDG (15.a.1) | SDG: OECD: <https://unstats.un.org/sdgs/metadata/?Text=&Goal=15&Target=15.a> | Existing data, 1950 - present |
|  | 19.0.2 Public expenditure and private expenditure on conservation and sustainable use of biodiversity and ecosystems |  |  | Existing methodologies and research by the CBD, BIOFIN and SEEA. Data can be collected through national biodiversity finance plans. | Needs developed |
| **Target 20.** Ensure that relevant knowledge, including the traditional knowledge, innovations and practices of indigenous and local communities with their free, prior, and informed consent, guides decision making for the effective management of biodiversity, enabling monitoring, and by promoting awareness, education and research. | 20.0.1 Indicator on biodiversity information and monitoring, including traditional knowledge, for management\* |  |  | To be developed with GEOBON, IIFB and others to capture biodiversity observation systems and traditional knowledge. This indicator would aim to capture different elements of data and knowledge availability and access. | Needs developed\*\* |
| **Target 21.** Ensure equitable and effective participation in decision-making related to biodiversity by indigenous peoples and local communities, and respect their rights over lands, territories and resources, as well as by women and girls, and youth. | 21.0.2 Land tenure in the traditional territories of indigenous peoples and local communities | By sex  By IPLC status  By type of tenure | SDG 1.4.2 and 5.a.1 | SDG: World Bank and UN-Habitat: <https://www.worldbank.org/en/programs/lsms/land-tenure> | Near ready (existing survey collection from World Bank and UN-Habitat |
| 21.0.1 Degree to which indigenous peoples and local communities, women and girls as well as youth participate in decision-making related to biodiversity.\* |  |  | Data on engagement of stakeholders is already included in NBSAPs and national reports. This would be based on self-reporting. | Needs developed |

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1. \*\* CBD/WG2020/3/1 [↑](#footnote-ref-2)
2. Co-chairs’ text on item 3 and its annex [↑](#footnote-ref-3)
3. CBD/SBSTTA/24/INF/29 [↑](#footnote-ref-4)
4. CBD/WG2020/3/3 [↑](#footnote-ref-5)
5. Global Assessment of Environmental-Economic Accounting and Supporting Statistics. <https://unstats.un.org/unsd/statcom/52nd-session/documents/BG-3f-2020_GA_report_%20draft_%20ver7_nomap-E.pdf> [↑](#footnote-ref-6)
6. Co-chairs’ text on item 3 and its annex. [↑](#footnote-ref-7)
7. Indicators marked with an asterisk “\*” are not yet developed. [↑](#footnote-ref-8)
8. Two asterisks (\*\*) indicate that additional information will be provided for the third meeting of the Working Group on the Post-2020 Global Biodiversity Framework in an information document. [↑](#footnote-ref-9)