

Contribution of the Group on Earth Observations Biodiversity Observation Network on the scope and content of the post-2020 global biodiversity framework

In response to Notification SCBD/OES/DC/RH/KNM/87538, and after consultation with its Implementation Committee, the Group on Earth Observations Biodiversity Observation Network (GEO BON) hereby submits its view on the scope and content of the post-2020 global biodiversity framework:

1. GEO BON acknowledges the efforts made to improve, share and transfer the knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, in accordance to Aichi Biodiversity Target 19. In particular, GEO BON recognizes the significant progress made in the past decades in collecting and sharing biodiversity observations and in developing indicators of biodiversity change. Nonetheless, significant gaps and barriers remain that still impair both the assessment and implementation of conservation policies. Thus, **GEO BON calls on the Parties to the CBD to significantly step up their efforts on the collection, analysis and delivery of marine, freshwater and terrestrial biodiversity observations to advance the world towards the 2050 Vision for Biodiversity.** To achieve such a step change in action, GEO BON proposes that the **post-2020 targets explicitly include the development of sustained operational national biodiversity observation networks.** The details of this proposal can be found in the Beijing call on biodiversity Observations for post-2020 decision-making in Appendix A.
2. The increased availability of primary observations on biodiversity and ecosystem services, and access to state-of-the-art modeling techniques promoted by GEO BON and its members will allow:
 - a. the spatial interpolation needed to fill current geographical gaps in our knowledge on biodiversity and ecosystem services,
 - b. the assessment of the effectiveness of the implementation of conservation policies and of the synergies and trade-offs with other global policies (e.g. climate),
 - c. the projection of likely futures for the state of biodiversity and ecosystem services based on scenarios of changes in drivers, pressures and responses.
3. GEO BON also highlights the importance of designing **science-based and SMART** (i.e. Specific, Measurable, Achievable, Realistic, Time-bound) **targets to efficiently and transparently assess the implementation of the post-2020 global biodiversity framework.** Specifically, the progress towards these targets must rely on scalable indicators that integrate open access *in situ* and Remote Sensing observations via state-of-the-art and transparent modeling approaches. As part of the potential pool of indicators for the post-2020 targets, GEO BON invites the CBD to

consider the following Global Biodiversity Change Indicators¹ (adopted in decision XIII/28 in CBD/COP/13/25 for the current global biodiversity framework, approved as core and highlighted indicators of the IPBES global, regional and thematic assessments – IPBES/5/INF/5, approved – partially - by the Biodiversity Indicator Partnership).

- a. Specifically for targets related to protected areas:
 - i. the Species Protection Index developed by Map of Life
 - ii. the Protected Area Representativeness and Connectedness (PARC) Indices^{2,3} developed by CSIRO.
 - b. Specifically for targets that track the impact of habitat loss and/or habitat change on biodiversity:
 - i. The Biodiversity Habitat Index⁴ developed by CSIRO
 - ii. The Species Habitat Index developed by Map of Life
 - c. Specifically for targets that rely on changes in species richness and taxonomic diversity:
 - i. The Biodiversity Intactness Index⁵ developed by the Natural History Museum.
4. GEO BON, a flagship of the Group on Earth Observation (GEO) and a strategic partner of the CBD and IPBES, is a community of practice with scientific and technological expertise on biodiversity observation and modelling, data harmonization and indicators production. GEO BON and its members stand ready to take an active role in the discussion and the development of the CBD post-2020 biodiversity framework, on target setting and indicators selection, and for hands-on collaboration with institutions and countries that need scientific and technical support in the production, integration and application of biodiversity observation data. GEO BON also commits, in turn, to support capacity building on interoperable biodiversity observations design and indicators production and utilization that are demand-driven, thereby relevant and useful for tracking the progress towards the post-2020 targets and for providing scientific evidence in support of efficient decision making across scale.

¹ <https://geobon.org/downloads/biodiversity-monitoring/technical-reports/GEOBON/2015/GBCI-Version1.2-high.pdf>

² <https://www.bipindicators.net/indicators/protected-area-connectedness-index-parc-connectedness>

³ <https://www.bipindicators.net/indicators/protected-area-representativeness-index-parc-representativeness>

⁴ <https://www.bipindicators.net/indicators/biodiversity-habitat-index>

⁵ <https://www.bipindicators.net/indicators/biodiversity-intactness-index>

Appendix A:

THE BEIJING 2018 CALL ON BIODIVERSITY OBSERVATIONS FOR POST-2020 DECISION-MAKING

We, the Group on Earth Observation Biodiversity Observation Network (GEO BON), have gathered scientists and practitioners from 25 countries, on the occasion of our 10th anniversary, in Beijing, to discuss the future of biodiversity monitoring globally. We call on the Parties to the CBD to significantly step up their efforts on the collection, analysis and delivery of biodiversity observations to advance the world towards the 2050 Vision for Biodiversity.

Despite significant progress over the last decade in gathering biodiversity observations and on the development of indicators, numerous gaps and barriers remain. At the time of the mid-term assessment of progress towards the Aichi biodiversity targets for 2020, uncertainties remained in the evaluation of most of the targets. Repeated, long-term biodiversity observations are crucial to detect and understand changes in biodiversity and ecosystem services and for assessing current and future policy options through scenarios and models. Without a significant increase in the global investment in biodiversity monitoring, existing observation gaps will remain and continue to impair the assessment of policy goals as well as limit their effective implementation.

To achieve a step change in action, we propose that the post-2020 targets explicitly include the development of sustained operational national biodiversity observation networks. Such national monitoring systems would routinely collect in situ and remote sensing data in the terrestrial, marine, and freshwater realms; aggregate and publish the data into public repositories; model Essential Biodiversity Variables; report on indicators relevant to national biodiversity strategies and targets; and greatly facilitate policy implementation at a critical time for the world's biodiversity. Developing such national biodiversity observation networks should be a priority in the post-2020 period and GEO BON stands ready to support these efforts.

Beijing, 13 July 2018