

COMMENTS ON THE POST-2020 GBF INDICATORS AND MONITORING FRAMEWORK

24 February 2021

Submitted by *CORDIO East Africa*
David Obura (dobura@cordioea.net)

Submissions in relation to the documents:

- CBD/SBSTTA/24/3 on the updated monitoring framework for the Global Biodiversity Framework, and
- CBD/SBSTTA/24/3Add.1 with the full list of indicators for the updated monitoring framework for the Global Biodiversity Framework.

Summary of recommendations:	1
Detailed recommendations	1
1) Coral reef indicators – merge “Live coral cover” (A.1.1.13) and “Hard coral cover and composition” (A.1.1.14)	1
2) Integrate action, indicators, and targets for a people-positive and nature-positive approach to conservation	3
a. Linked indicators across multiple goals and targets	3
b. Integrated monitoring framework	4
c. Landscape/seascape approach to conservation, ‘from the bottom up’	4
References	7

Summary of recommendations:

- 1) Coral reef indicators “Live coral cover” (A.1.1.13) and “Hard coral cover and composition” (A.1.1.14) are the same quantity. These two indicators should be merged into one and only one name used, ‘**Hard coral cover**’ for brevity and greatest taxonomic and ecological clarity.
- 2) Adopt indicators that can be integrated across goals a, b and c and Targets 1–20, align the GBF monitoring framework with that for Sustainable Development Goals implementation, and promote integrated ‘**people-positive and nature-positive**’ outcomes across the full range of land and seascapes, from pristine to highly altered.

Detailed recommendations

- 1) Coral reef indicators – merge “Live coral cover” (A.1.1.13) and “Hard coral cover and composition” (A.1.1.14)

The indicators “Live coral cover” (A.1.1.13) and “Hard coral cover and composition” (A.1.1.14) are both listed as Complementary indicators on page 6 of CBD/SBSTTA/24/3Add.1. However, they are

the same biological quantity or indicator and should be merged into one a single name used. The most authoritative definition is by the UNESCO-IOC supported Global ocean Observing System Biology and Ecosystems Panel, so this term should be used. Further, it is more important and specific to indicate that only hard corals, not soft corals, are included in the indicator (soft corals do not construct coral reef frameworks), while it is widely accepted and more logical to include only live coral in the indicator, not dead coral. So we recommend ‘Hard coral cover and composition’, or ‘Hard coral cover’ for short, be the formally used term.

We note that the International Coral Reef Initiative, in its guidance to negotiators for SBSTTA 24 makes the same recommendation, to merge these two indicators.

The difference in name reflects a synonymy that is widespread in the literature. While they may potentially have different meanings if deep and cold water corals are considered, or soft corals on coral reefs, effectively these two additional classes are not considered when using either term, and they are effectively the same, focusing on the cover of hard (Scleractinian) corals on shallow tropical coral reefs.

There are two primary sources for these variables, listed in the table below. The issue of this synonymy is not specified in these documents. To resolve this, with inputs from relevant technical groups – GCRMN, IUCN, and GOOS – these sources will be updated to support clarity in the GBF (and other) monitoring frameworks, and for these two indicators in the GBF to be merged into one.

Indicator	Source	Explanation
Live coral cover (A.1.1.13)	Biodiversity Indicators Partnership	The Biodiversity Indicators Partnership description page for “live coral cover” (A.1.1.13), available at has been developed with inputs from the Global Coral Reef Monitoring Network (GCRMN) of the International Coral Reef Initiative
<p>Description (extract from the main source): https://www.bipindicators.net/indicators/live-coral-cover</p> <p>Live hard coral cover is the primary indicator of the health of coral reefs, from local to larger scales, including national, regional and global. Hard coral cover is measured visually <i>in situ</i> or from photographic images or from multispectral sensors, as the percentage cover of hard corals of the surface area of a coral community or assemblage. The indicator directly addresses the health of the ecosystem, and thus of management and policy measures taken to protect, maintain or restore the health of the coral reef. It answers questions such as ‘what is the status or health of a coral reef?’, or ‘what is the impact of a certain management or policy intervention?’.</p> <p>The percent cover of hard corals has been measured in coral reef science and monitoring for over 100 years, recognized as a key variable for distinguishing a coral community from one dominated by other taxa (eg. algae, other invertebrates). It has been the primary measure for reef monitoring and reporting, in the scientific literature, and adopted by the Global Coral Reef Monitoring Network (GCRMN) (Wilkinson 2000). It is identified as one of the two most advanced Essential Ocean Variables in 2016 and as an ecosystem structure Essential Biodiversity Variable (Obura et al. 2019, Muller-Karger et al. 2018). The GCRMN Implementation and Governance Plan adopted in December 2018 defines it as the core variable for coral reef monitoring, supported by algal cover and fish diversity and biomass, for global monitoring and reporting of coral reef health.</p>		
Hard coral cover and composition (A.1.1.14)	Global Ocean Observing System (GOOS)	The GOOS Essential Ocean Variable specification sheet for “Hard coral cover and composition” (A.1.1.14), has been developed by the GOOS Biology and Ecosystems Panel from 2016-2018 to clarify the headline indicator – percent cover of hard corals on coral reefs – and a range of subsidiary indicators related to composition of the coral community
<p>Description (extract from the main source): https://www.goosocean.org/index.php?option=com_oe&task=viewDocumentRecord&docID=17512</p> <p>Multiple measures give fundamental information on the health of a coral reef: live hard coral cover and the areal extent of a reef are the most important indicators of whether a reef is in a coral-dominated state or not; the composition and diversity of coral taxa is an important index of reef health; coral condition (e.g.</p>		

bleaching, disease) gives fundamental information on the health of a reef; the size class structure (and recruitment) of hard corals gives fundamental information on the resilience, disturbance history and recovery potential of a reef.

‘Hard’ and ‘soft’ corals are key taxonomic groups dominating hard and some soft substrates in subtidal habitats from the shallows to the deep ocean, and from the equator to polar regions. This wide range of habitats can be grouped into three principal assemblages: tropical hard coral communities (coral reefs), soft coral-dominated habitats, and deep- or cold-water coral communities. This specification sheet is focused on the former – tropical hard coral communities – to meet the immediate need there. Parallel specification sheets have been developed for other hard- and soft-coral dominated habitats.

2) Integrate action, indicators, and targets for a people-positive and nature-positive approach to conservation

CORDIO commends the broad reach of the 20 Targets and their associated indicators established in the GBF, but notes that historical commitment to objectives 2 and 3 of the convention have been insufficient up to and including in the Strategic Plan for Biodiversity for 2011-2020. This is particularly important for a continent such as Africa, where the majority of people are highly dependent on direct provision of services from nature, and levels of poverty and vulnerability are high.

In particular, we note that the focus in the last decade on achieving Aichi Target 11 of the Strategic Plan, though nominally successful for two sub-targets (achieving specific areas of land and sea under legal protection, fig. 1) was woefully inadequate under the complementary sub-targets of effective management and across almost all of the other 19 Targets, particularly those elements focused on tangible results for biodiversity and people. As documented by IPBES (2019), biodiversity continues to decline.

CORDIO strongly supports a more integrative approach than that proposed by area-based campaigns, that focus just on ‘protecting the most significant biodiversity areas’. While this is important, it will fail as a singular approach to safeguard biodiversity, as well as wellbeing for people. Approaches that support integrating people with nature through sustainable use and equitable benefit sharing across all land- and sea-scapes may be the only opportunity for success across most biodiverse countries with high development needs such as in Africa.

This comment presents three parts to help in support the broad basis of the Global Biodiversity Framework, through:

- a) Assuring indicators are established across multiple goals and targets,
- b) That the framework of targets, indicators and implementation is closely linked to the Sustainable Development Goals to assure synergies and alignment with critical sectors that are not biodiversity-focused. The monitoring framework can support this by being strongly linked to the SDG indicators and monitoring framework.
- c) That conservation actions are integrated across land and seascapes, particularly where people live closely off nature’s contributions, for a ‘bottom-up’ approach to achieving all Targets in the GBF.

a. Linked indicators across multiple goals and targets

To support a people-oriented approach to conservation, indicators under goals a, b and c, and across Targets 1 to 20 are equally important, and a balance of these across the GBF monitoring framework will be essential.

Critical indicators to include are summarized below, and we note that a many of these are already included in the draft Monitoring Framework, and summarized below based on CBD/SBSTTA/24/INF/9 (Diaz 2020; Díaz et al. 2020):

Goal a

- area and extent of ecosystems
- abundance and status of species populations

Goal b

- abundance and status of species and ecosystem components delivering key NCPs mentioned in Goal d
- indicators of use/offtake of NCPs, including in relation to supply, regeneration and sustainability
- benefits (direct and indirect) provided by NCPs

Goals c (genetic resources) and b (access/equity in relation so species & ecosystems)

- access to and use of NCPs/benefits from nature
- disaggregation of all indicators (as possible) by gender, disadvantaged groups.

b. Integrated monitoring framework

To support the integrated targets approach and rational identification of indicators across multiple levels, a monitoring framework compatible with an ‘SDG framework’ can be used to assure consistency within a place and country, and also across the many different indicators relevant to different countries and facilitating aggregation to national and higher levels.

Mapping to SDG indicators and targets is already specified in CBD/SBSTTA/24/3Add.1, which we commend. In addition we recommend establishing a conceptual framework linked to the Theory of Change of the GBF and founded on the Sustainable Development Goals. This facilitates identification of cause-effect linkages, as well as other interactions, and in identifying indicators relevant to these. In addition, while national frameworks are the focus of the Parties to the Convention, and SDG framework allows for development of compatible models at smaller scales, down to land/seascape levels where people and biodiversity interact.

A presentation of an approach to do this, and outline for such a monitoring framework is presented in the publication (Obura 2020), <https://doi.org/10.1016/j.marpol.2020.103973> and builds on CORDIO’s submissions of 13 November 2019 (Aligning the Sustainable Development Goals (SDGs) and the post-2020 Global Biodiversity Framework (GBF)) and 3 February 2020 (Comments on the Post-2020 Targets Zero Draft).

c. Landscape/seascape approach to conservation, ‘from the bottom up’

To support actions across the widest possible range of targets in the GBF, an integrated land/seascape approach is needed. This is in contrast to the campaigns focusing on individual targets, which though understandable for their focus, can result in failure to meet other targets, and even exclusion of consideration of other targets.

This approach focuses on integrating the three CBD objectives across all land- and seascapes, lined up on the x axis from good to poor condition (left to right, fig. 1a,b). Thus, rather than focusing on ‘the best’ biodiversity most remote from people where PAs are currently focused (fig. 1c, d), this approach builds ‘from the bottom-up’ with a **focus on peoples’ needs**, and grounded in local contexts (fig. 2b).

People need to access benefits from nature locally, with emerging guidance for protecting and/or re-establishing parcels of nature in all landscapes where people live.

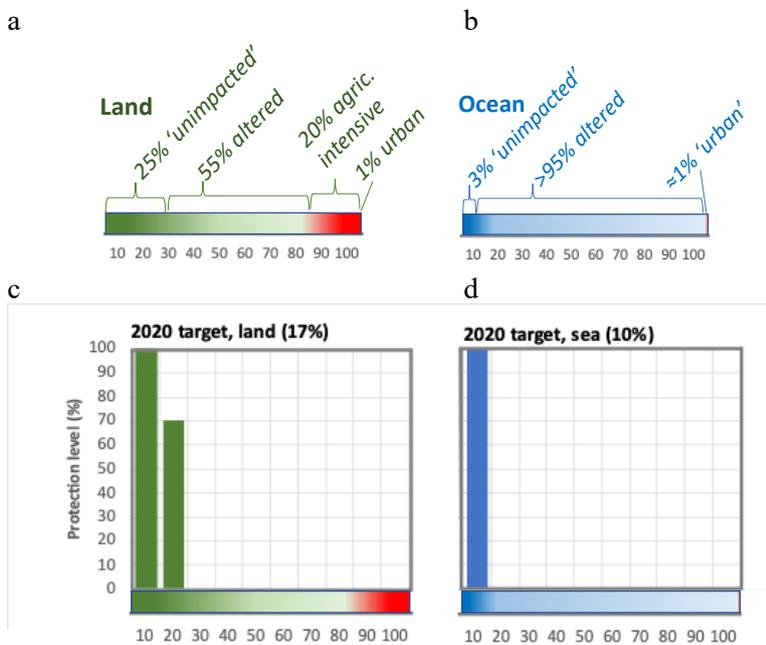


Fig. 1. Proportion of land (a) and sea (b) and the condition of nature across them (IPBES 2019), and representation of the dominant approach historically to biodiversity protection, focusing on areas with highest and most intact biodiversity for reaching the 2020 Aichi Target 11 on protection of land (c) and sea (d).

For equity reasons nature’s benefits should be accessible down to the smallest scales of even a square kilometer, with **20% of area under natural habitat** being estimated as a critical threshold (Garibaldi et al. 2020). Applying this implies spreading effective protection across the full extent of the x axis (fig. 2a), thus across ‘shared’ spaces (Phalan et al. 2011) and under the ambit of multiple management options, such as OECMs (fig. 2b).

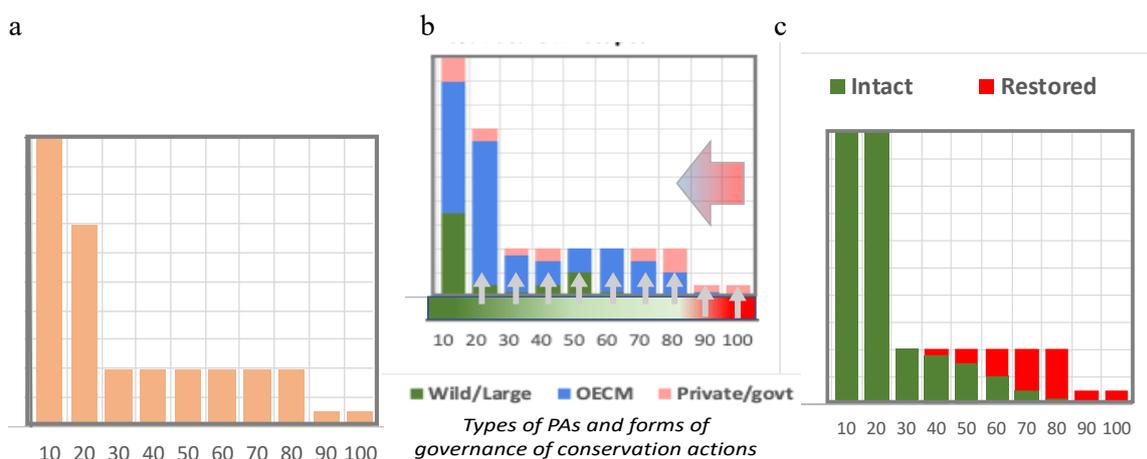


Fig. 2. Partition of area across all land and sea areas (a) meeting an aggregate goal of 30% protected and 20% in natural habitat in all biomes (5% in urban areas and intensive agriculture). Within each decile (10% range), the contribution of different management regimes may vary between government/private protected areas, OECMs and wilderness/traditional areas (b), and by the proportion that is intact or regenerated through restoration actions (c). Multiple scenarios are possible across ‘shared space’ deciles to meet any specific target, such as for 30% (a,d,e).

Importantly, in many cases such areas will be in a degraded state and not suitable in their current state to count significantly towards conservation value (Mehrabi et al. 2018). Thus the importance and contribution of **restoration** to meet conservation goals (Díaz et al. 2020) (fig. 2c). Restoration can provide significant benefits for both benefits to people and nature, if long enough time horizons are applied, to accommodate the time it takes to rebuild diversity and functional characteristics through restoration.

This framework allows for integrated application of multiple targets simultaneously, as illustrated in Table 1, replacing the recent and current focus on single/apex targets, particularly the area under protection.

Table 1. Application of this integrated ‘bottom-up’ conservation paradigm across Targets within the zero draft of the Global Biodiversity Framework.

Post-2020 Target, zero draft (November 2020)	Cross-target achievement
Target 1. Spatial planning, land/sea use change, intact and wilderness areas, restoration, connectivity among them.	Direct linkage and mechanism.
Target 2. protect at least 30 per cent of the planet, areas particularly important for biodiversity.	Direct linkage, partition of 30% target across land/seascapes, blending national and global priorities for biodiversity and uses of nature.
Target 3. species recovery and conservation, reduce human-wildlife conflict	Explicitly addresses interactions between wildlife and people in all land and seascapes.
Target 4. harvest, trade and use of wild species of fauna and flora	Directly addressed through sustainable use in all land and seascapes
Target 5. invasive alien species	Directly addressed through full landscape and seascape level planning and engagement
Target 6. reduce pollution from all sources	Directly addressed through coverage of land/sea including urban and agricultural areas, under polluting uses
Target 7. climate change mitigation adaption and disaster risk reduction	Directly addressed through landscape/seascape planning and application of NbS/EbA approaches integral to natural habitat patches, restoration, etc.
Target 8. nutrition, food security, livelihoods, health and well-being ... sustainable management	Ensuring nature presence/access in all land/seascapes supporting direct provision of NCPs to people, across multiple benefit areas.
Target 9. By biodiversity in agricultural and other managed ecosystems	Directly addressed through land/seascape mosaics of use at multiple levels.
Target 10. air quality, hazards and extreme events	Regulatory NCP in natural/ agricultural/ managed ecosystems integrated with human population.
Target 11. green/blue spaces for human health and well-being.	Incorporate nature spaces in urban areas, to an illustrative level of 5%.
Target 12. equitable sharing of benefits (genetic resources and associated traditional knowledge).	Positive/mutually supportive, addresses interests of IPLC in all land/seascapes.
Target 13. development and poverty reduction strategies, assessments of environmental impacts.	Integration of development and conservation goals across land/seascapes
Target 14. Sustainable production practices and supply chains.	Integrated through land/seascape planning, and balancing economic and nature-based activities at all levels.
Target 15. eliminate unsustainable consumption.	Integrated through land/seascape planning, and balancing economic and nature-based activities at all levels.

Target 16. impacts of biotechnology	Linked to Target 13, integrated spatial planning
Target 17. incentives harmful for biodiversity	Requires specific policy approaches
Target 18. increase financial resources	Requires specific policy approaches, promoted by close integration between people and nature at all levels.
Target 19: quality information, including traditional knowledge	Primary enabling factor, essential. Promoted by close integration between people and nature at all levels
Target 20: participation in decision-making	Primary enabling factor, essential. Promoted by close integration between people and nature at all levels

References

- Diaz S (2020) Synthesizing the scientific evidence to inform the development of the post-2020 Global Framework on Biodiversity. 66
- Díaz S, Zafra-Calvo N, et al. (2020) Set ambitious goals for biodiversity and sustainability. *Science* 370:411–413
- Garibaldi LA, Oddi FJ, et al. (2020) Working landscapes need more than 20% native habitat. 44
- Mehrabi Z, Ellis EC, Ramankutty N (2018) The challenge of feeding the world while conserving half the planet. *Nature Sustainability* 1:409–412
- Obura DO (2020) Getting to 2030 - Scaling effort to ambition through a narrative model of the SDGs. *Marine Policy* 117:103973
- Phalan B, Onial M, Balmford A, Green RE (2011) Reconciling Food Production and Biodiversity Conservation: Land Sharing and Land Sparing Compared. *Science* 333:1289–1291