Headline Indicators for Goal A in the GBF

CBD Parties need a small number of key indicators to track the status of biodiversity at national and global scales. In the current draft of the GBF, these types of globally relevant indicators for the status of biodiversity (ecosystem, species and genetic diversity) are **most clearly reflected as headline indicators under Goal A.** Some of these indicators may also be relevant for 2030 action targets that contain outcomes (e.g., the retention of intact ecosystems in Target 1).[1]

Several leading conservation organizations have collectively identified four essential indicators for the status of biodiversity that meet the following criteria:

- They measure the status of biodiversity, using key metrics of quantity *and* quality for species and ecosystems, to track the net outcomes of the 2030 action targets.
- They rely on peer reviewed scientific research and wide support from the global scientific community, who share an understanding of their limitations but also their utility.
- Data is available for use by Parties, including baseline data from recent years. Parties may provide, or validate, data, but global tools will also be updated regularly to support Parties.

We therefore recommend the following four headline indicators for Goal A in the GBF:

Ecosystem Extent: Extent of Selected Natural and Modified Ecosystems
- *Is it in the draft monitoring framework[2]?* Yes, as headline indicator A.0.1.
- *What does it measure?* Changes in ecosystem extent can affect the ecological dynamics for species (e.g. carrying capacity of ecosystems) and overall ecosystem integrity, including their functionality and services provided.[3]
- *How is data collected and managed?* Many spatially-explicit tools have been developed to measure the extent of specific ecosystem types (such as forests), often using remote sensing. New frameworks like the UN SEEA EA provide a methodology to integrate different measurements of ecosystem extent using the IUCN Global Ecosystem Typology. Where data gaps exist or where Parties have not yet engaged with the SEEA EA, many existing tools will continue to provide reliable data on the extent of different ecosystem types at multiple scales.

Ecosystem Integrity: Integrity of Selected Natural and Modified Ecosystems
- *Is it in the draft monitoring framework?* Yes, but at component/complementary levels.
- *What does it measure?* Ecosystem integrity is defined as the composition, structure, and function of ecosystems relative to a natural or other reference state.[4]
- *How is data collected and managed?* Many datasets, held by governments or collected through global remote sensing and other tools, can provide information on ecosystem composition, structure, and function. There is also spatially explicit data on anthropogenic drivers of ecosystem degradation, which serve as comprehensive "proxy" measures of integrity. New frameworks like the UN SEEA EA, or global partnerships like the GCRMN, have developed methodologies to integrate these different measurements of ecosystem integrity. Where data gaps exist, or where Parties have not yet engaged with the SEEA EA, global remote sensing tools and/or proxy measures of anthropogenic disturbance to ecosystems, such as the Ecosystem Intactness Index (included as "a.32"), are updated regularly and may be used.

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[1] The importance of Goal A in reflecting outcomes of the full GBF is reflected in CBD/WG2020/3/INF/11
[2] SBSTTA 24 Non paper on Item 3 - Proposed Monitoring Framework for the Post-2020 GBF
[3] Nicholson et al., 2021
[4] See WCS FAQ on ecosystem integrity at www.wcs.org/cbd

- *Why does it need to be added as a headline indicator?* Ecosystem extent alone does not capture the ability to sustain biodiversity and deliver ecosystem services. For example, forest cover may capture forests devoid of wildlife. Ecosystem integrity is therefore an essential metric.

Species Extinction Risk **: [The Red List Index](#)**
- *Is it in the draft monitoring framework?* Yes, as headline indicator A.0.3.
- *What does it measure?* The Red List Index measures change in aggregate extinction risk across groups of species. It is the only metric that measures extinction risk that is available globally and for all countries. It determines extinction risk from assessments of the size, structure and trends of both species population and range, as well as other parameters. It is currently based on assessments for five taxonomic groups, and can be disaggregated in various ways, including geographically (regional, national, etc.), thematically (e.g for different habitats, internationally traded species etc.) and to show trends driven by different threats (e.g. invasive species).
- *How is data collected and managed?* Red List assessments are carried out by a wide range of actors, including IUCN Red List Partner organizations (such as NGOs and universities) and individual scientists, many of which are members of IUCN SSC Specialist Groups. The data come from a wide variety of sources, including scientific publications, grey literature, field surveys, academia, government agencies, NGOs etc. The data are managed in the Species Information Service, a database managed by IUCN. The RLI is managed by the IUCN and Red List Partnership.

*Species Population Abundance***: [The Living Planet Index](#)**
- *Is it in the draft monitoring framework?* Yes, but only at the component indicator level (as component indicator A.4.2) - it should be a headline indicator.
- *What does it measure?* The Living Planet Index is a measure of the state of the world's biodiversity based on vertebrate population trends from around the world. It is the best-known global indicator of population abundance, is based on a body of peer-reviewed research, and comprises data on nearly 28,000 populations of nearly 5,000 species spanning five decades.
- *How is data collected and managed?* The index is built from high quality annual time-series of population sizes (or proxies) for species from terrestrial, freshwater, and marine habitats around the world. The data sources are listed for each data set and are checked and verified before use. Data comes primarily from scientific studies of species and habitats, or from national species monitoring programmes.
- *Why does it need to be reinstated as a headline indicator?* There is currently no high-quality, well-established and well-respected indicator for species population abundance in the headline indicators proposed in the draft monitoring framework. This is a significant and critical gap, given that species population abundance is an [essential biodiversity variable](#).

A note on A.0.2, "Species Habitat Index (SHI)": We have significant concerns about the Species Habitat Index (SHI), which is currently included as Headline Indicator A.0.2. We note that this indicator does not measure overall ecosystem integrity, does not look at specific abundance trends, is not peer-reviewed, and has major gaps for marine species. We therefore recommend <u>removing the Species Habitat Index</u> as a headline indicator.

A note on A.0.4, "The proportion of populations within species with a genetically effective population size > 500": Genetic diversity is an essential component of biodiversity. However, in order to limit a large number of headline indicators, and to build on indicators already widely in use and supported by custodian institutions, we recommend the indicators above as proxy measures for the status of genetic diversity.