Criteria for a digital ecosystem

A digital ecosystem of data is crucial for generating the insight required to address the interconnected biodiversity, health and climate crises and to shape global and national policies[1]. To ensure that these 'global public good' datasets are fit-for-purpose, we developed a set of proposed selection criteria to assess the suitability and 'readiness' of these data for use in informing the evidence base necessary to make informed decisions that create positive outcomes for people and nature.

The proposed selection criteria

We propose a set of nine selection criteria for evaluating the suitability and 'readiness' of data for integration as 'global public good' datasets. Using these criteria, datasets are classified into three tiers based on their level of alignment, as described below. Broadly speaking, these tiers can be described as:

- **Tier 1:** These datasets currently meet the criteria and could be included as 'global public good' datasets to, for example, the World Environment Situation Room, UN Biodiversity Lab and other UN-level platforms.
- **Tier 2:** These data can be used for assessing global goals, but do not yet meet all criteria fully. These datasets should be prioritized for investment and upgrading to meet these criteria.
- **Tier 3:** Datasets that meet some of the essential criteria (i.e. authoritative; policy- and decision-relevance; transparency) and should be prioritised for further development to facilitate their use.

The tiered system is intended solely to assist in the development and implementation of global datasets that are fit-for-purpose in supporting progress toward the 2030 Sustainable Development Agenda, the emerging targets of the post-2020 global biodiversity framework and related global targets.

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[1] See: UNEP. (2019). The Case for a Digital Ecosystem for the Environment. Available at: https://un-spbf.org/wp-content/uploads/2019/03/Digital-Ecosystem-final.pdf.

Criterion	Description of threshold for inclusion
Policy- or decision- relevance	**Formally listed, recognized or proposed/suitable for use in an MEA** for informing and reporting on indicators to track progress toward target(s) in the 2011-2020 Strategic Plan for Biodiversity, proposed target areas in the emerging post-2020 framework, Sustainable Development Goals, International Finance Corporation Performance Standards or other equivalent global public- or private-sector goal.
Terms of use	**Open access with minimal restrictions**, while recognising the preferences and rights of data providers to manage access to sensitive information, in accordance with best practice.
Availability	**Easily accessible online in different open access, machine readable formats** (e.g. SHP, CSV, KML) and ways to access (e.g. APIs, direct download), including open and free access to associated journal publications and supplementary materials.
Frequency of update	**Where applicable, regularly updated (i.e. at least every five years, or at a rate necessary to be 'current')**, with an exception for data that doesn't change on decadal timescales (e.g. bathymetry, mountains).
Temporality	**Can be used to track change over time (where applicable),** with a known dataset baseline (three temporal data points minimum, ideally over at least 10 years).
Geographic coverage	**Globally consistent dataset,** with comprehensive coverage. Flexible to account for national variation but can be aggregated at a global level.
Transparency	**Detailed metadata in accordance with global standards**[2] are provided. Methodology for the development of the dataset is openly and freely published online and includes a statement on known accuracy and precision. Where applicable, metadata notes that traditional knowledge has been collected in an appropriate way.
Scalability	**Minimum spatial scale** at which dataset can be resolved, while still remaining fit for use, to be stated (e.g. global datasets not always useful at national or site level).
Authoritative	**Dataset has been through a peer-review process, whether published in the scientific literature, reviewed by peers, or recognised through a mandated process (e.g. CBD),** and is recognised as accurate and authoritative.

Next steps

We welcome feedback on these proposed criteria to help inform their development and the accompanying methodology.

Disclaimer: The datasets on UN Biodiversity Lab and other UN-level platforms have not yet been formally assessed against these criteria. An initial pilot assessment is underway.

Get in touch
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[2] Such as ISO 19115, Dublin Core, Darwin Core, and EU INSPIRE standards.