

System of Environmental Economic Accounting

Introduction the GBF monitoring framework and the SEEA-related indicators

Training Workshop on an Accounting Approach to Climate Change and Biodiversity in **Central Asia** 9-12 September 2024, Bishkek, Kyrgyzstan

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Overview of the Kunming-Montreal Global Biodiversity Framework (GBF)





COP15 Major Outcomes





- The 2022 United Nations Biodiversity Conference (COP 15) took place on 7-19 December 2022 in Montreal, Canada
- Kunming-Montreal GBF (decision 15/4)
- GBF Monitoring Framework (decision 15/5)
- Mechanisms for planning, monitoring, reporting and review (decision 15/6)

https://www.cbd.int/gbf



The Kunming-Montreal Global Biodiversity Framework

'Goal A -Ecosystems maintained, enhanced, or restored, extinctions are halted, extinction rate reduced tenfold and genetic diversity is maintained

Goal B - Biodiversity is sustainably used and its contributions to people are maintained, enhanced or restored

Goal C - Benefits from the use of genetic resources are shared and sustainably increased

Goal D - The biodiversity funding gap of 700 billion USD is closed by ensuring adequate means of implementation are available

Targets 1-8: Reducing threats to biodiversity

Targets 9-13: Meeting people's needs through sustainable use and benefit-sharing

Targets 14-23: Tools and solutions for implementation and mainstreaming

The monitoring framework for the GBF contains indicators for the Goals and Targets



Global Goals for 2050

23 Targets for 2030



Indicators in the GBF

- Adopted in decision 15/5: <u>Headline indicators</u>; <u>Binary indicators</u>; <u>Component indicators</u> and <u>Complementary indicators</u>
- Parties are urged to use the headline indicators in their national reports
- Ad Hoc Technical Expert Group (AHTEG) established to guide work on the following:
 - > technical advice on remaining and unresolved issues relating to the monitoring framework for the GBF
 - > guidance on the use of indicators in national planning and reporting,
 - > guidance on ways to fill temporal and spatial data gaps, including through the use of big data, citizen science, community-based monitoring and information systems, remote sensing, modelling and statistical analysis, and other forms of data and other knowledge systems, > guidance on the existing capacity, gaps and needs



The GBF Monitoring framework and statistics

Monitoring framework for the GBF (COP 15 decision 15/5) :

- "Notes the value of aligning national monitoring with the United Nations System of appropriate and according to their national priorities and circumstances; "
- "Invites the Statistical Commission,...... and other relevant organizations to support the framework;"
- "When possible, indicators are aligned with existing intergovernmental processes under the Statistical Commission, such as the SDGs, the FDES or the SEEA"



Environmental-Economic Accounting statistical standard in order to mainstream biodiversity in national statistical systems and to strengthen national monitoring systems and reporting as

operationalization of the monitoring framework for the Kunming-Montreal global biodiversity

Each indicator has a metadata document

- Available at <u>https://gbf-indicators.org/</u>
- Includes rationale, definition, concepts, method of computation

1. Indicator name

Extent of natural ecosystems

2. Date of metadata update

2024-03-28 12:00:00 UTC

3. Goals and Targets addressed

3a. Goal

Headline Indicator for Goal A: The integrity, connectivity and resilien substantially increasing the area of natural ecosystems by 2050; Hu 2050, the extinction rate and risk of all species are reduced tenfold a resilient levels; The genetic diversity within populations of wild and (potential.

1. Indicator name

Services provided by ecosystems

2. Date of metadata update

2024-03-28 12:00:00 UTC

3. Goals and Targets addressed

3a. Goal

Headline indicator for Goal B: Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.



Under the Technical Committee we set up a task team for each indicator, consisting of TC members, members of CBD Ad Hoc Technical Expert Group on monitoring framework and additional experts





Headline indicators will be reported as part of country's National Reports to the CBD

- First report early 2026
- Next one 2029
- Then every four years

Countries will have three options for reporting each headline indicator:

- Use national data
- Use global data

AHTEG recommended that ecosystem-related indicators should be disaggregated by ecosystem functional group (Level 3) in the Global Ecosystem Typology SEEA

- Through CBD Online Reporting Tool https://ort.cbd.int/
- Templates for reporting on indicators will be provided for countries

• Do not report the indicator (if national data not available and global data not suitable)





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SEEA and the GBF goals and targets





GBF indicators and the SEEA

SEEA:

- Extent of natural ecosystems (Goal A)
- Services provided by ecosystems (Goal B and Target 11)
- Integrating Biodiversity in Decision-Making (Target 14)

• International public funding (including ODA), domestic public funding, and private funding on conservation and sustainable use of biodiversity and ecosystems (Goal D and Target 19)





Headline indicators were adopted to monitor each Goal and Target. A few indicators related to the



United Nations Statistical Commission

At its 55th session in March 2024:

Welcomed the use of the SEEA Ecosystem Accounting as the methodological basis for multiple headline indicators of the monitoring framework of the Kunming-Montréal Global Biodiversity Framework, called on national statistical offices to engage with their biodiversity focal points, encouraged the Committee to support the implementation of the monitoring framework and to facilitate collaboration between the statistical and the biodiversity communities to strengthen national monitoring and reporting.

List of CBD National Focal Points: <u>https://www.cbd.int/information/nfp.shtml</u>



GBF Goal A: Protect and Restore

Three elements:

cosystems

The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050;

Species

Human induced extinction of known threatened **species** is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels;

tic Gene **D**

SEEA

The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.



Headline indicators:



GBF Goal B: Prosper with Nature

Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being *restored*, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

Also used for Target 11: Restore, Maintain and Enhance Nature's Contributions to People

Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as regulation of air, water, and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.



Headline indicator B.1 Services provided by ecosystems (based on SEEA Ecosystem Accounting)



Five core ecosystem accounts in SEEA





Ecosystem services account (physical) provides the basis for **Indicator B.1 Services from** ecosystems





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Details on indicators A.2 and B.1







Indicator definitions A.2 Extent of natural ecosystems

- A.2 The extent of natural* ecosystems as a proportion of the total area of the country, at a particular point in time, expressed as a percentage
 - > With various possible disaggregations



* "natural" defined broadly to include natural and semi-natural



The scope of natural ecosystems is defined based on level 3 of the Global Ecosystem Typology











110 Ecosystem functional groups (level 3)



National ecosystem classifications typically at level 5/6

Of the 110 ecosystem functional groups, 98 are natural and 12 are anthropogenic



Of the 110 ecosystem functional groups in the GET, **12 are anthropogenic:**

Realm	Biome	Ecosystem
Terrestrial	T7 Intensive land-use systems ⁶	T7.1 Annual
		T7.2 Sown p
		T7.3 Plantat
		T7.4 Urban a
Freshwater	F3 Artificial fresh waters	F3.1 Large r
		F3.2 Constru
		F3.3 Rice pa
		F3.4 Freshw
		F3.5 Canals
Marine	M4 Anthropogenic marine systems	M4.1 Subme
		M4.2 Marine
Marine- errestrial	MT3 Anthropogenic shorelines	MT 3.1 Artifi

functional group

- croplands
- pastures and fields
- ions
- and industrial ecosystems
- reservoirs
- ucted lacustrine wetlands
- addies
- vater aquafarms
- , ditches and drains
- erged artificial structures
- e aquafarms

icial shorelines

Anthropogenic or intensively modified ecosystems are predominantly influenced by human activities \rightarrow determines ecosystem properties

In contrast: Natural ecosystems (not shown here) are ecosystems in which the impacts of humans on ecosystem composition, structure and function are low compared to natural factors





Mock-up of Indicator A.2: Extent of natural ecosystems



Figure 1. Proportion of natural ecosystems as at [end of accounting period]



- Easy to understand snapshot of the relative area of natural ecosystems at national and global level
- Can be shown for all natural ecosystems combined, OR disaggregated by realm, biome, EFG (or more detail at national level)
- Trends evident from changes in the proportion over time









Indicator A.2 methodology

Steps:

- Compile ecosystem extent account using national ecosystem classification
- Cross-walk to ecosystem functional groups (level 3) in the Global Ecosystem Typology
- Calculate indicator by summing the area of natural ecosystems and dividing by total area of the country, expressed as a percentage
- Report indicator, but also the absolute extent (ha/km²) per EFG, allowing for global aggregation based on the absolute values





Indicator definitions B.1 Services provided by ecosystems

- B.1 The average rate of change in the provision of a set of ecosystem services in a particular time period, compared to a baseline year.
 - > Overall index
 - > Sub-indices for provisioning, regulating and cultural services
 - > Various other possible disaggregations
- Considerations:

 - > Required and recommended ecosystem services
 - > Alignment between supply and use
 - > Aggregation method: geometric mean of trends of ecosystem services



> Selection of ecosystem services: based on the reference list of ecosystem services

Some testing results for Indicator B.1 based on existing national ecosystem services accounts





Index



ecosystem services relative to a base year represented by the value 1

Three sub-indices 🔶 Provisioning 🔶 Regulating Cultural Full index





Indicator B.1 methodology

Steps:

- Select ecosystem services to be included in the indicator > Blended approach, including global and national priorities
- Compile accounts for those services
- Calculate the indicator (index and sub-indices) based on information from the accounts
- Report indictor, but also the absolute values for each ecosystem service to allow flexibility in global aggregation





Practical guidance for countries currently being developed by the TC

- "Comparative grid" for ecosystem services accounts unpacking assumptions, approaches and methods, led by JRC
- Defining and classifying forest ecosystems
- with IUCN

In 2025:

• Compilation guides for Indicators A.2 and B.1



• Applying agricultural ecosystem types in the GET – small partnership project on this

