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)

- COP16 in Cali, Colombia in December 2024 (and resumed session in Rome in February 2025) adopts the indicator metadata

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https://www.cbd.int/gbf

The Kunming-Montreal Global Biodiversity Framework

Global Goals for 2050

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

23 Targets for 2030

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

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Indicators in the GBF

- Adopted in decision 15/5: Headline indicators; Binary indicators; Component indicators and Complementary indicators

- 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

- Indicator metadata adopted at the COP16 in Cali, Colombia in December 2024 (and resumed session in Rome in February 2025)

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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 Environmental-Economic Accounting** statistical standard in order to mainstream biodiversity in national statistical systems and to strengthen national monitoring systems and reporting as appropriate and according to their national priorities and circumstances; "

- "Invites the **Statistical Commission**,…….. and other relevant organizations to support the operationalization of the monitoring framework for the Kunming-Montreal global biodiversity framework;"

- "When possible, indicators are aligned with existing intergovernmental processes under the Statistical Commission, such as the SDGs, the FDES or the SEEA"

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Each indicator has a metadata document

- Available at https://gbf-indicators.org/

- Official document with metadata as adopted by the COP: CBD/COP/16/INF/3/Rev.1

- 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 resilienc
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.

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

- Through CBD Online Reporting Tool https://ort.cbd.int/

- Templates for reporting on indicators will be provided for countries

Countries will have three options for reporting each headline indicator:

- Use national data

- Use global data

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

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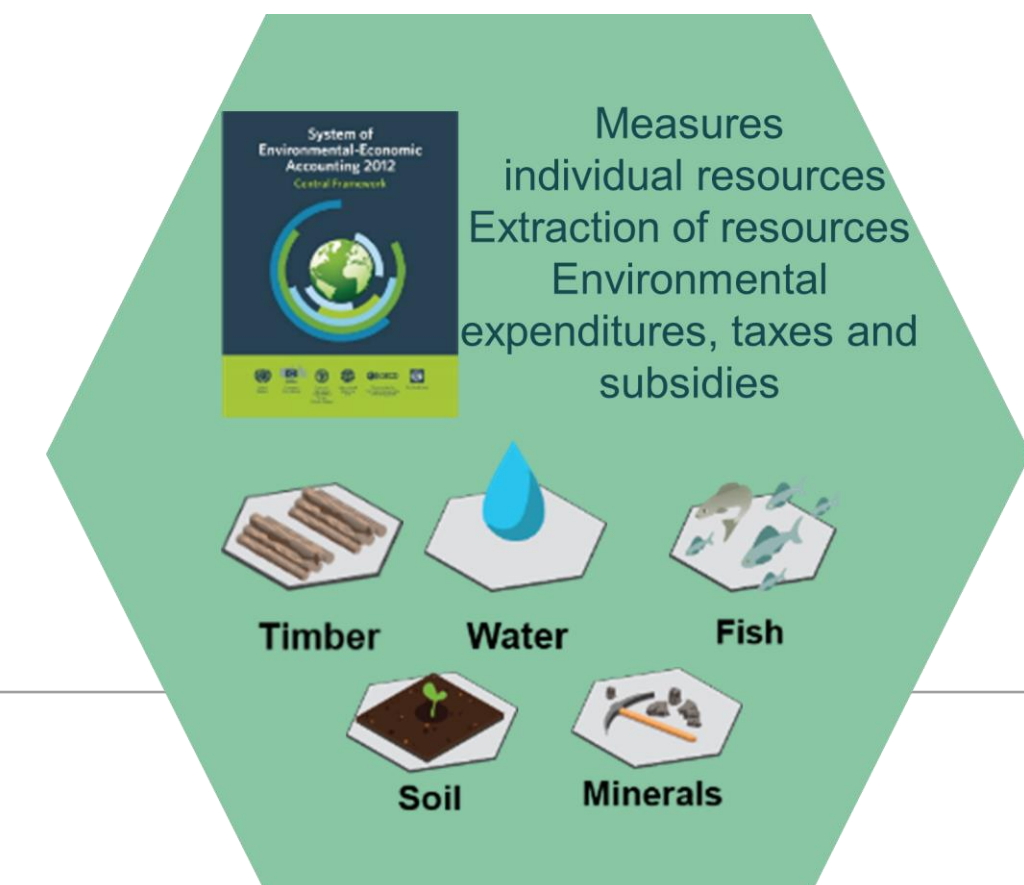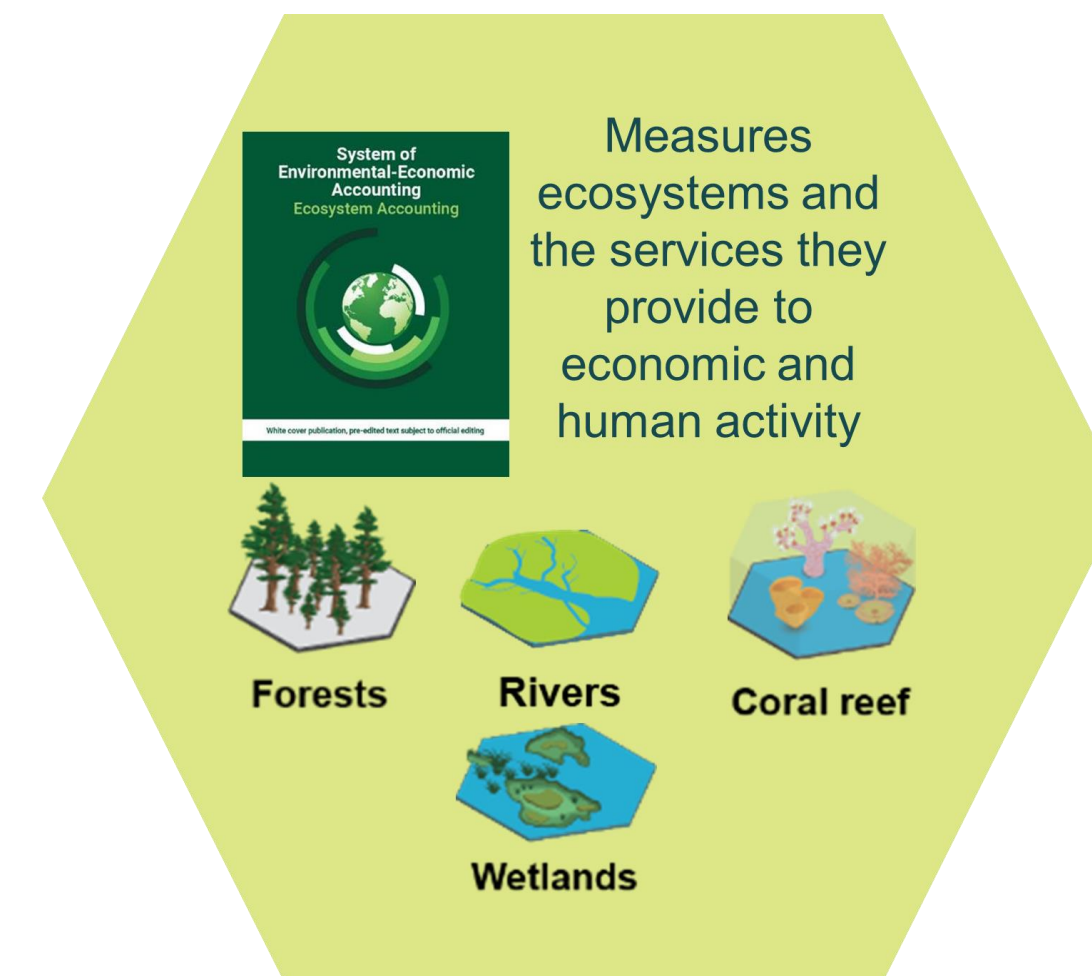
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SEEA and the GBF goals and targets

GBF indicators and the SEEA

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

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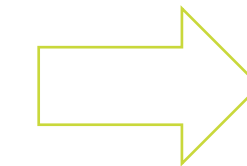
List of CBD National Focal Points: https://www.cbd.int/information/nfp.shtml

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GBF Goal A: Protect and Restore

Three elements:

Headline indicators:

Ecosystems

The integrity, connectivity and resilience of all **ecosystems** are maintained, enhanced, or restored, *substantially increasing the area of natural ecosystems by 2050*;
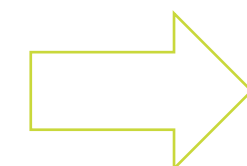
A.1 Red List of Ecosystems

A.2 Extent of natural ecosystems (based on SEEA Ecosystem Accounting)

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;

A.3 Red List Index for Species

Genetic diversity

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

A.4 The proportion of populations within species with an effective population size > 500

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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.

Headline indicator
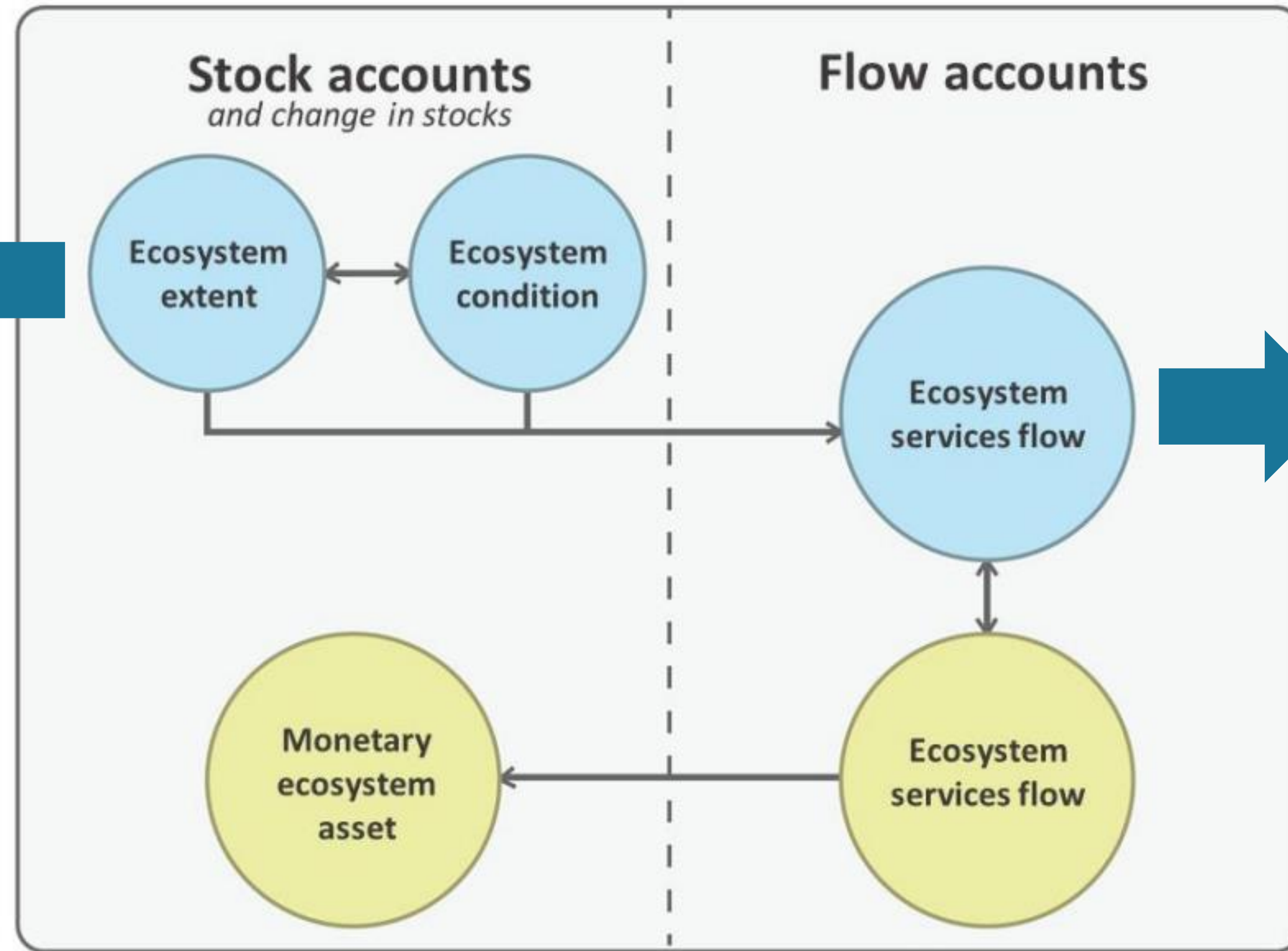
B.1 Services provided by ecosystems

(based on SEEA Ecosystem Accounting)

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.

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Five core ecosystem accounts in SEEA

Ecosystem extent account provides the basis for **Indicator A.2 Extent of natural ecosystems**

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

Stock accounts
and change in stocks

Flow accounts

Ecosystem extent ↔ Ecosystem condition

Ecosystem services flow

Monetary ecosystem asset ← Ecosystem services flow

Physical accounts

Monetary accounts

Figure 2.2 from SEEA Ecosystem Accounting

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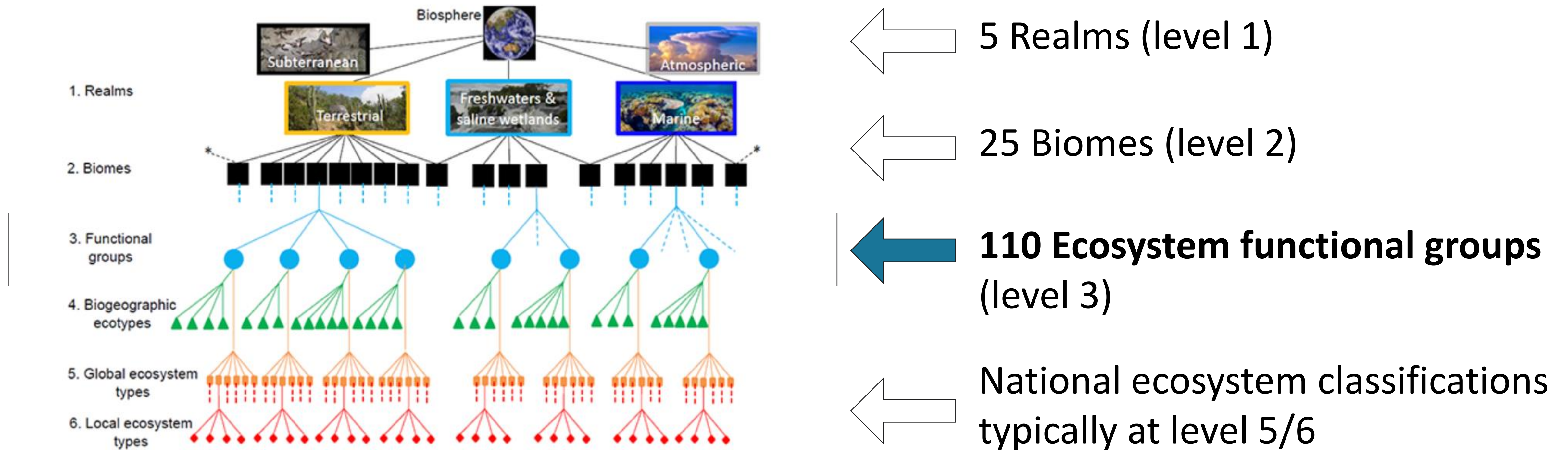# Details on indicators A.2 and B.1

United Nations

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

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

5 Realms (level 1)

25 Biomes (level 2)

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

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

Realm	Biome	Ecosystem functional group
Terrestrial	T7 Intensive land-use systems[6]	T7.1 Annual croplands
		T7.2 Sown pastures and fields
		T7.3 Plantations
		T7.4 Urban and industrial ecosystems
Freshwater	F3 Artificial fresh waters	F3.1 Large reservoirs
		F3.2 Constructed lacustrine wetlands
		F3.3 Rice paddies
		F3.4 Freshwater aquafarms
		F3.5 Canals, ditches and drains
Marine	M4 Anthropogenic marine systems	M4.1 Submerged artificial structures
		M4.2 Marine aquafarms
Marine-terrestrial	MT3 Anthropogenic shorelines	MT 3.1 Artificial shorelines

Anthropogenic or intensively modified ecosystems are *predominantly* influenced by human activities → 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]
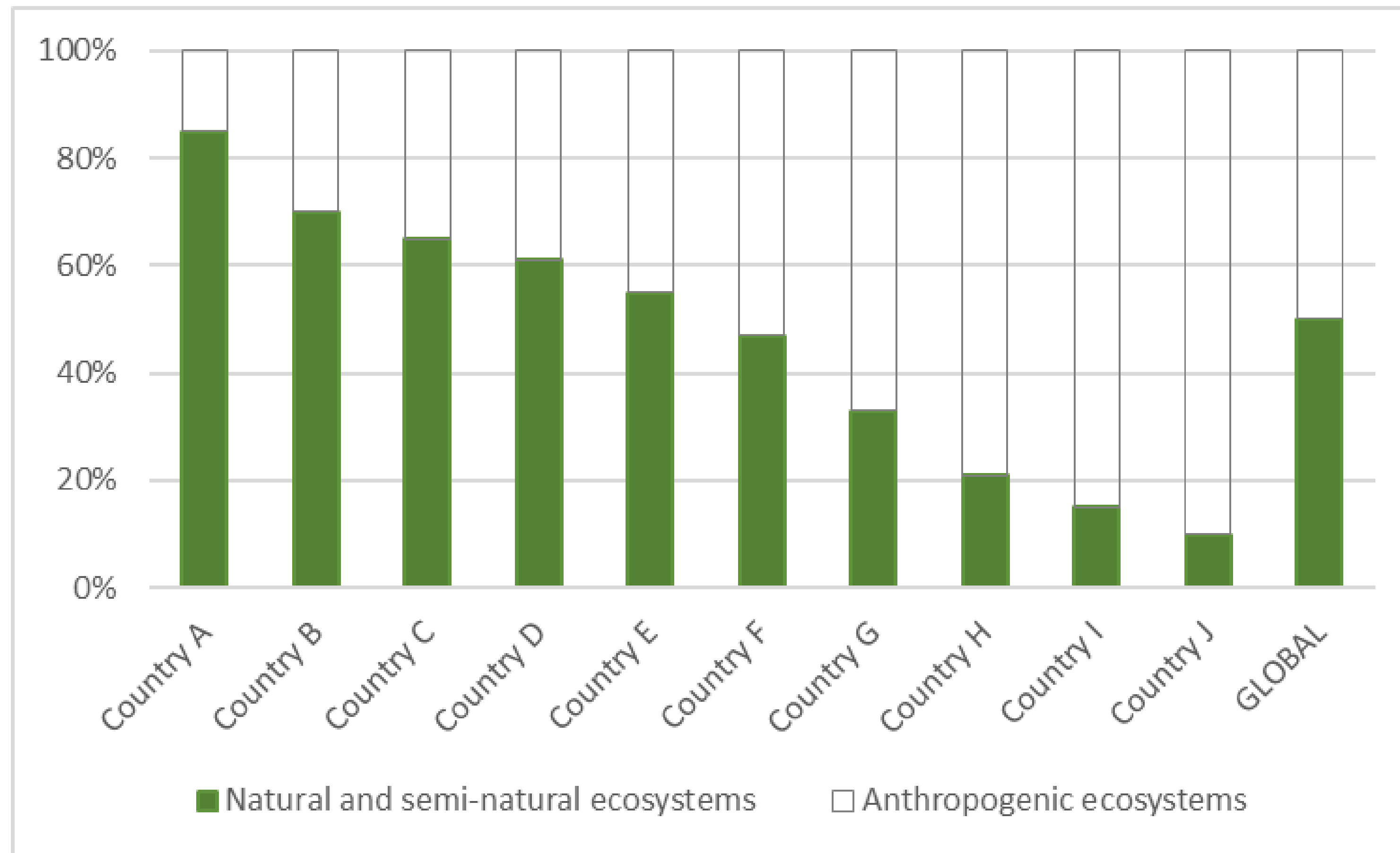
- Easy to understand snapshot of the relative area of natural ecosystems at national and global level

- 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

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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/km^2) per EFG, allowing for global aggregation based on the absolute values

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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:
  - > Selection of ecosystem services: based on the reference list of ecosystem services
  - > Required and recommended ecosystem services
  - > Alignment between supply and use
  - > Aggregation method: geometric mean of trends of ecosystem services

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

Country A

Country B
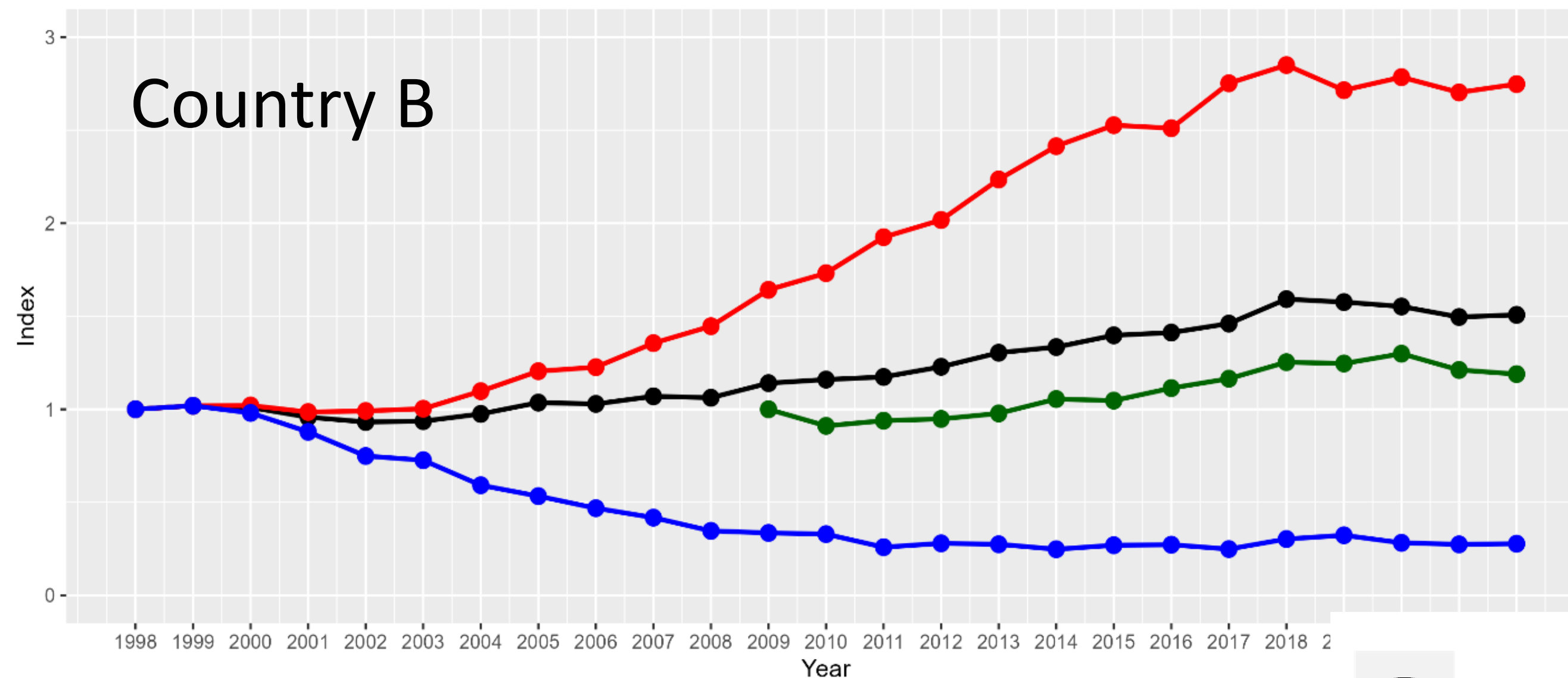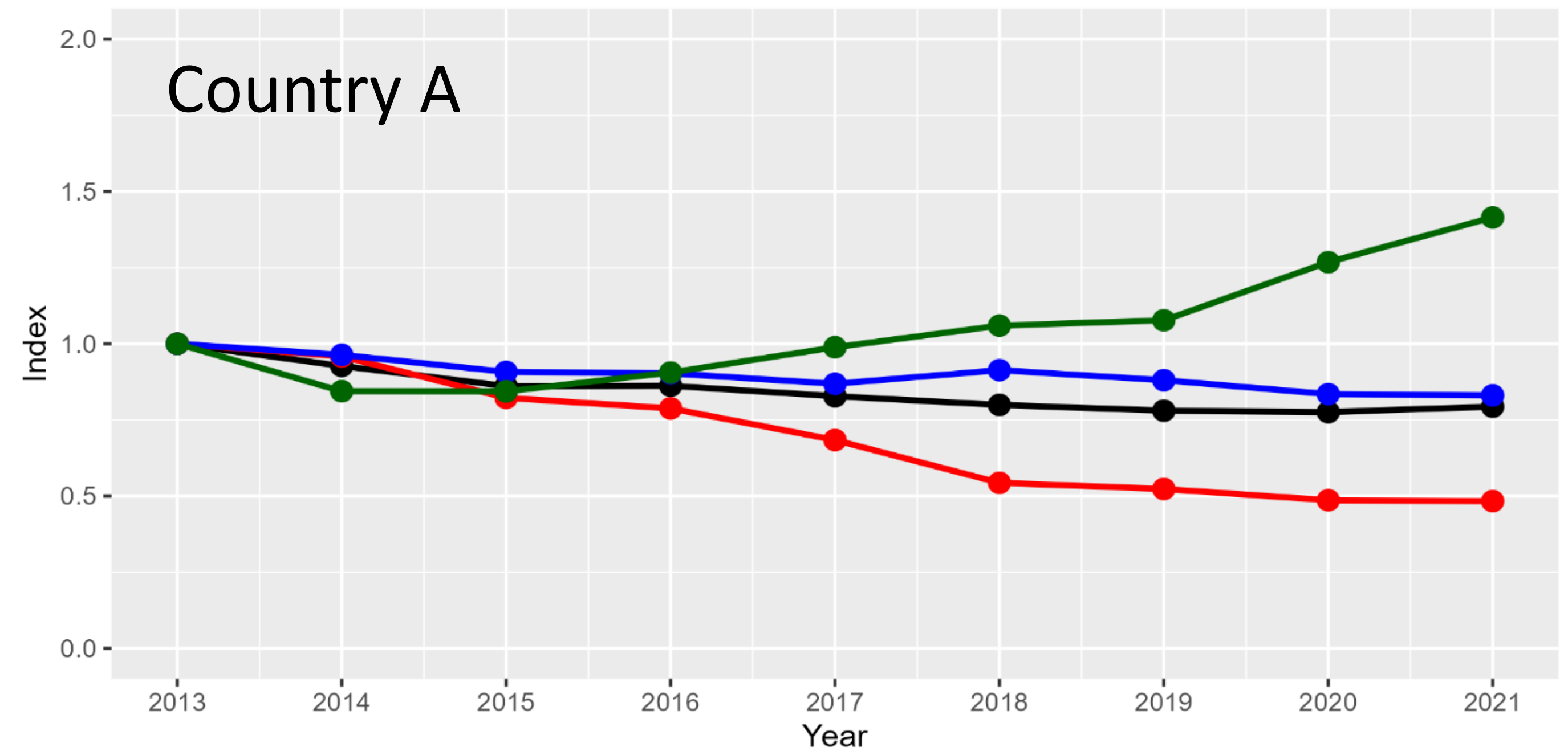
Shows trend in provision of ecosystem services relative to a base year represented by the value 1

Three sub-indices

Full index   Provisioning   Regulating   Cultural

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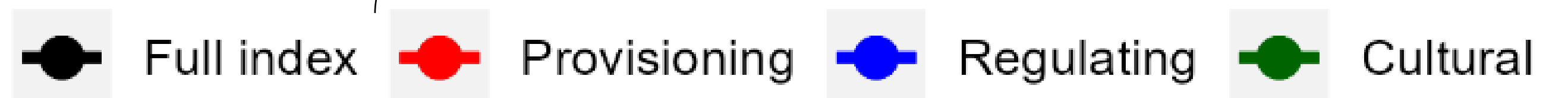
Indicator B.1 methodology

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

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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

- Applying agricultural ecosystem types in the GET – published by IUCN

- Compilation guides for indicators A.2 and B.1 and testing in countries

- Development of modules for the modelling of four ecosystem services in ARIES for SEEA (in partnership with BC3)

- Development of global estimates for the SEEA-related indicators (in partnership with BC3)

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THANK YOU