

System of
Environmental
Economic
Accounting

SEEA EA-related headline indicators for the GBF and the UNSD project

London Group meeting
22-25 September 2025

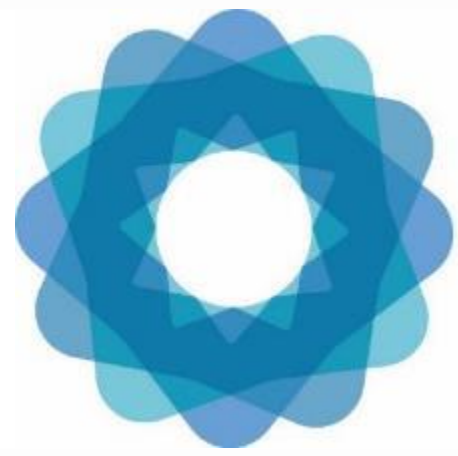
Marko Javorsek
United Nations Statistics Division



United Nations



Funded by
the European Union



System of
Environmental
Economic
Accounting

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



United Nations

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

<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

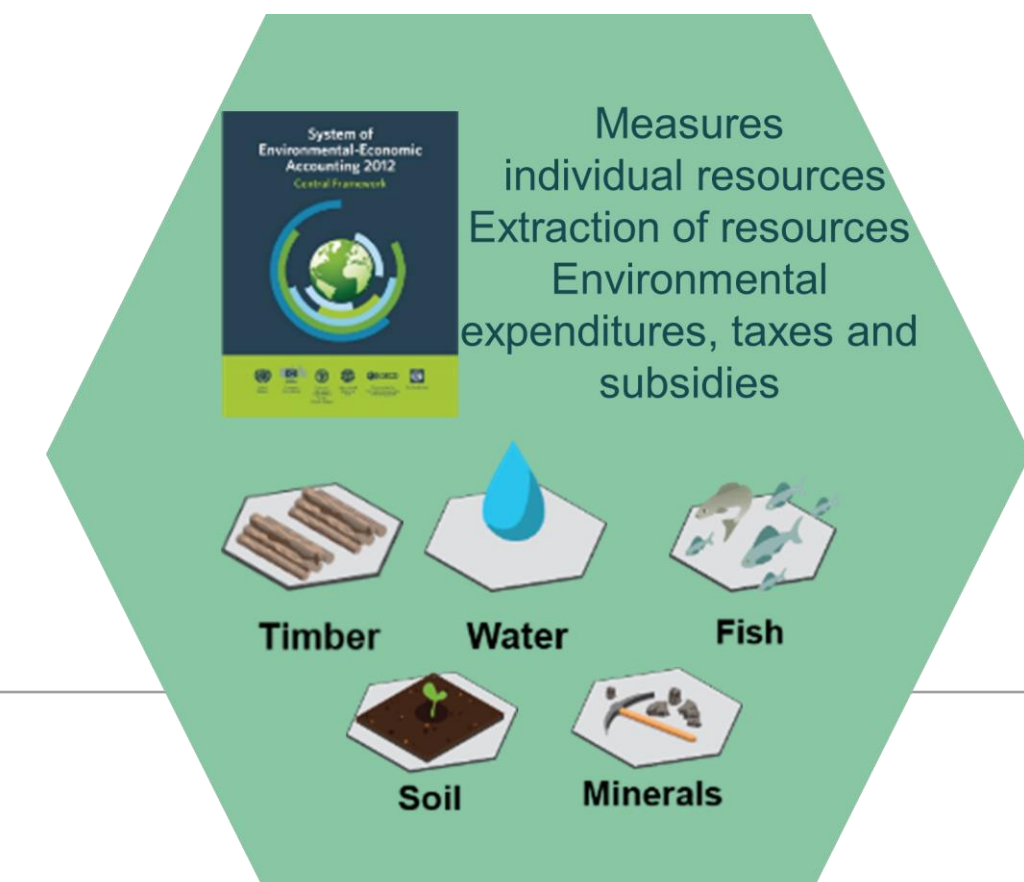
Indicators in the GBF

- 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
- Specifically calls on:
 - > “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;”
- [Indicator metadata](#) adopted at the COP16 in Cali, Colombia in December 2024 (and resumed session in Rome in February 2025)

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)



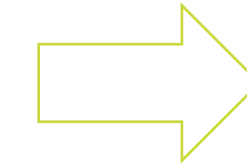
GBF Goal A: Protect and Restore

Three elements:

Headline indicators:

Ecosystems

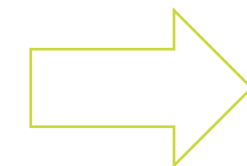
The integrity, connectivity and resilience of all **ecosystems** are maintained, enhanced, or restored, *substantially increasing the area of natural ecosystems by 2050*;



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



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

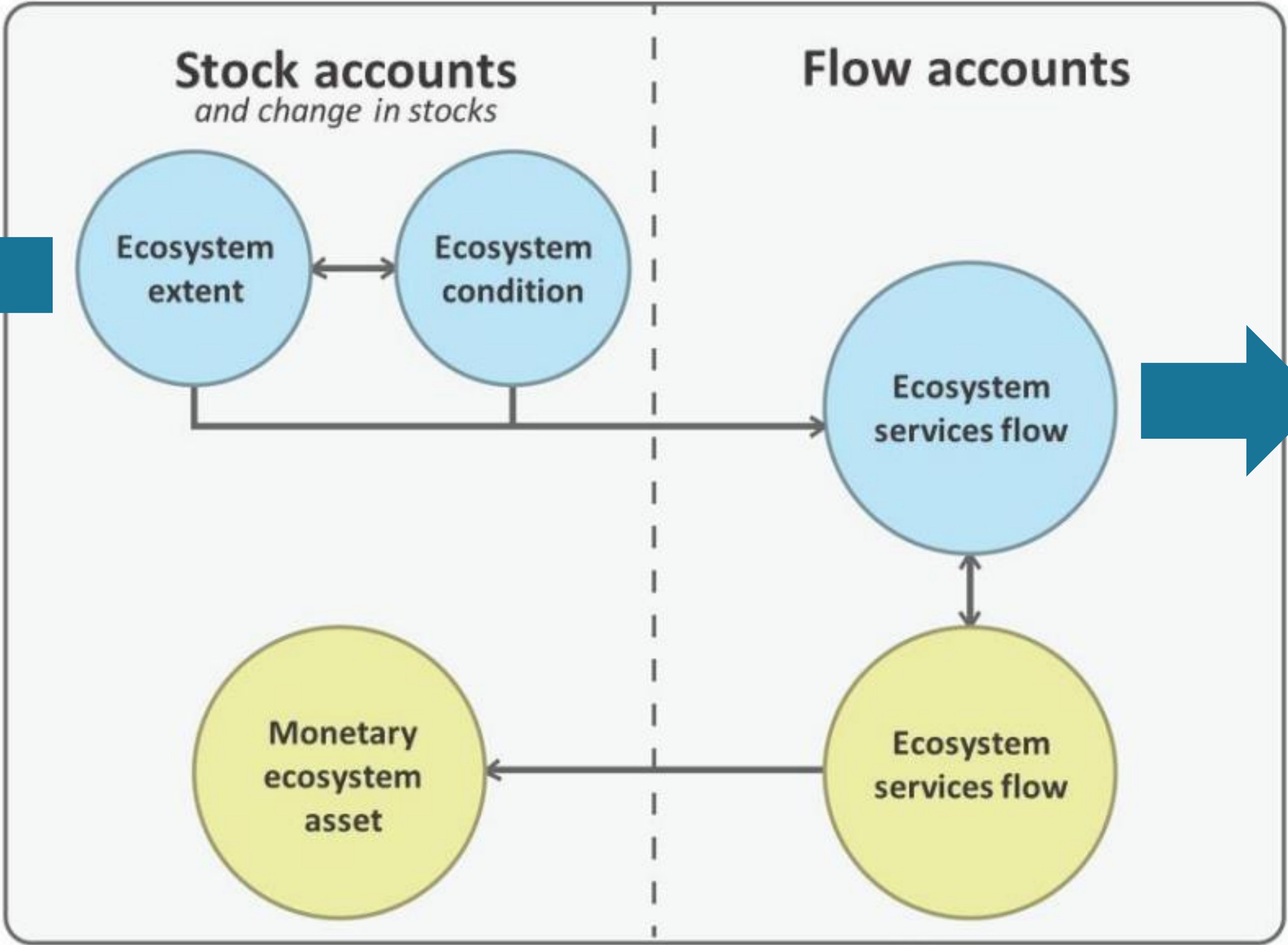
(based on SEEA Ecosystem Accounting)

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.

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**

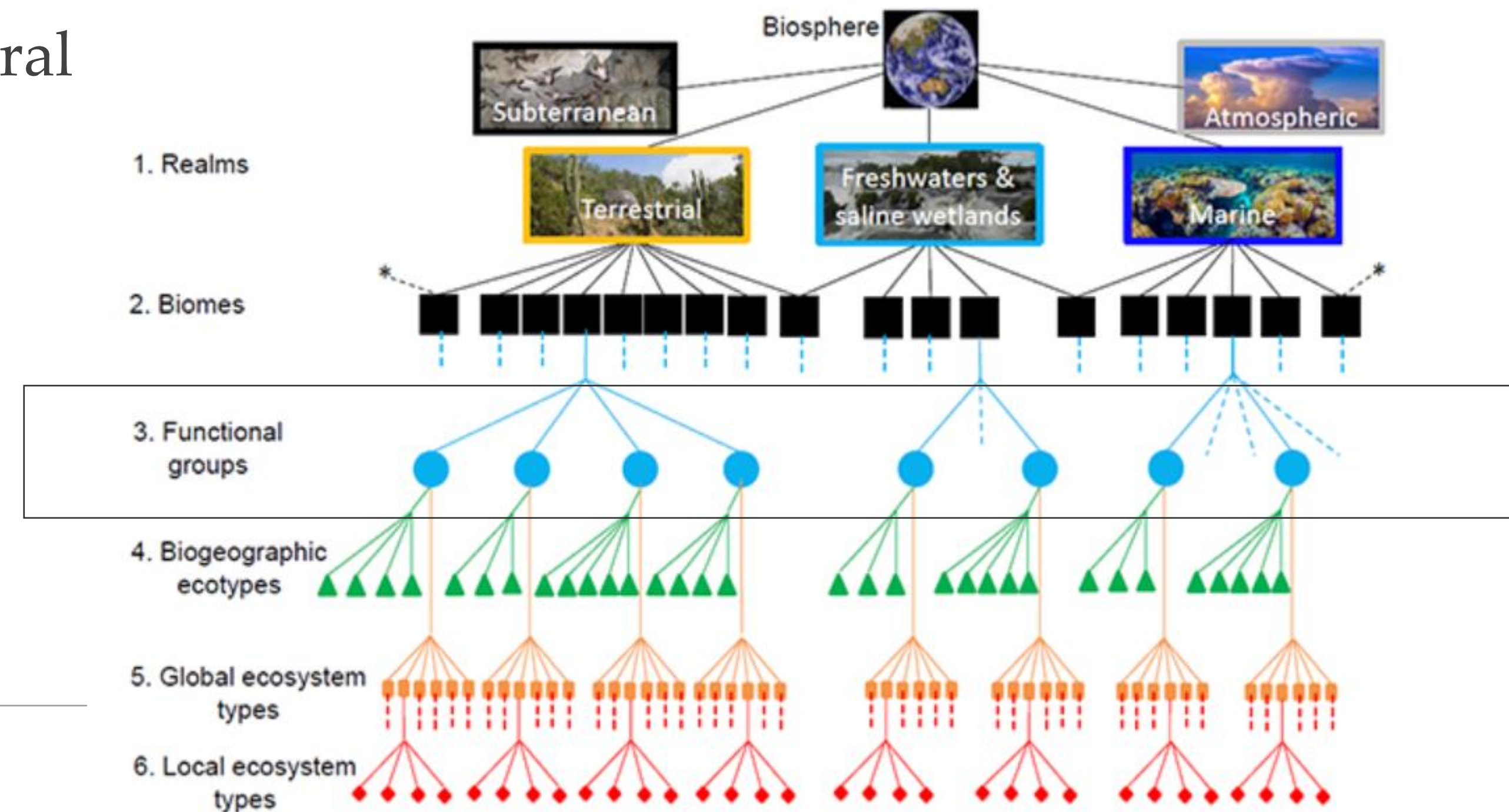


Figure 2.2 from SEEA Ecosystem Accounting

● Physical accounts
● Monetary accounts

Indicator 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 use of IUCN Global Ecosystem Typology



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

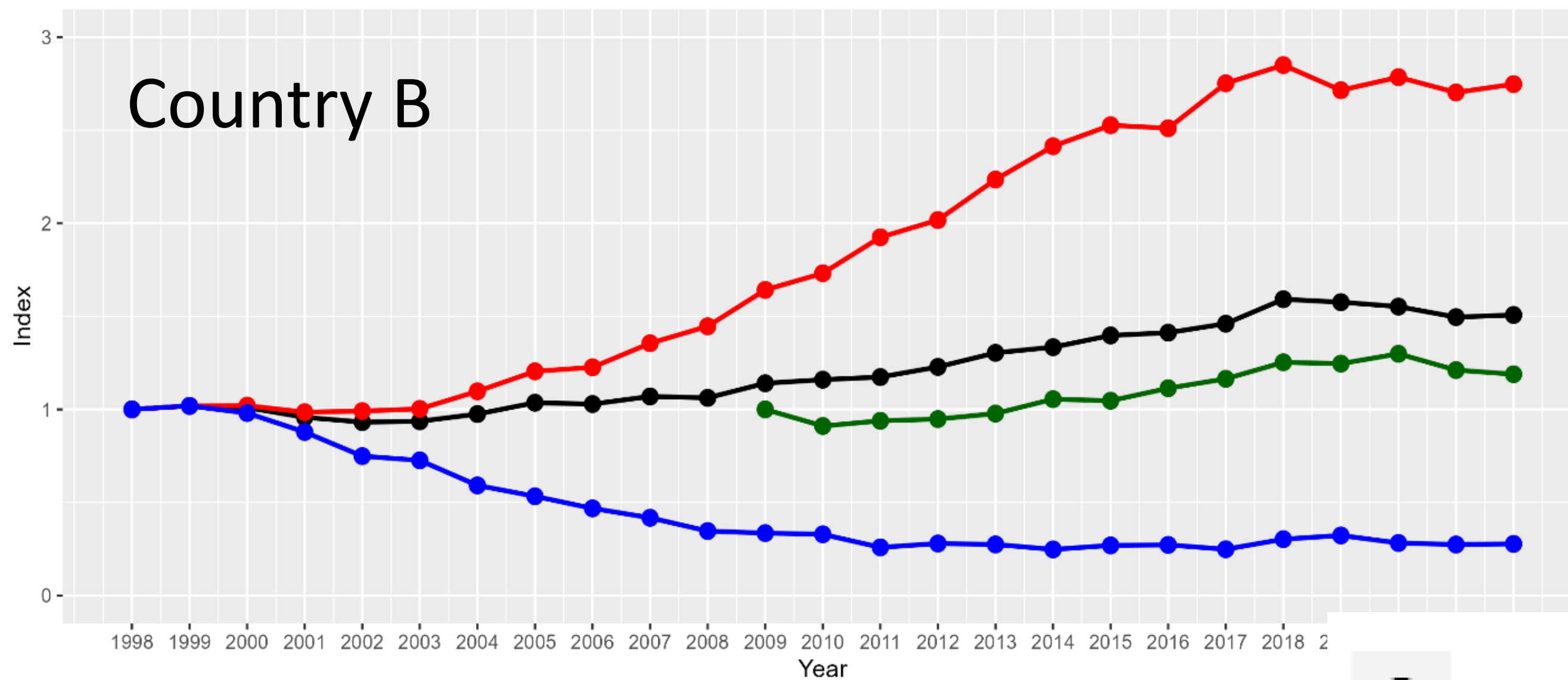
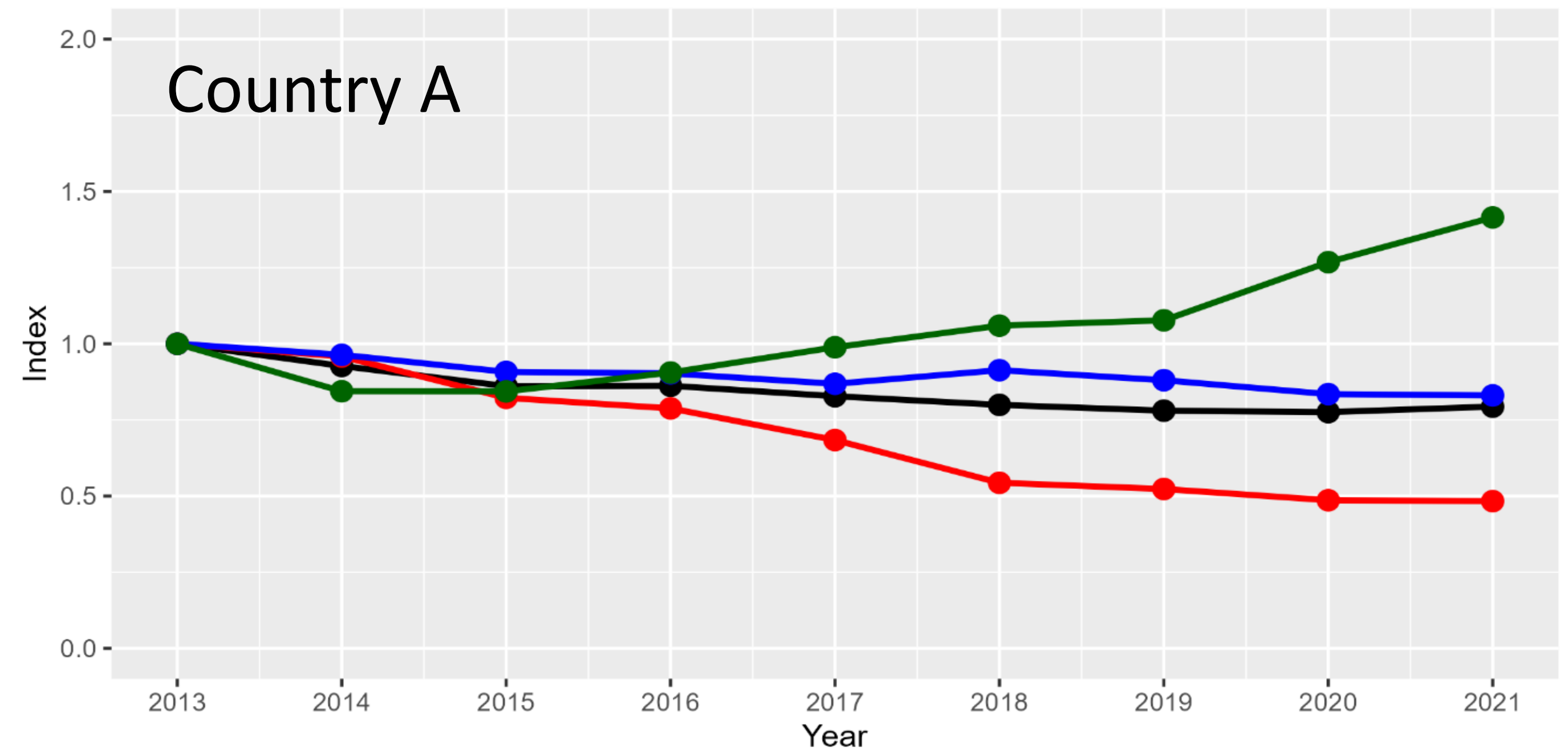
Anthropogenic or intensively modified ecosystems are *predominantly* influenced by human activities → determines ecosystem properties

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

Indicator B.1: Services provided by ecosystems

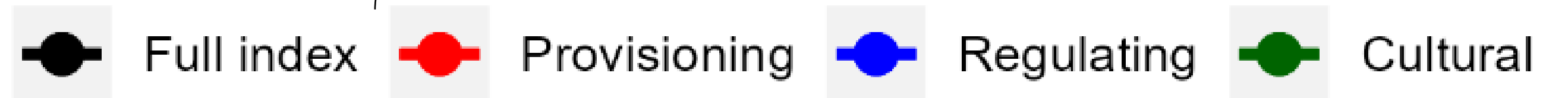
- B.1 The average **rate of change** in the provision of a set of ecosystem services in a particular time period, compared to a baseline year.
 - > Overall index
 - > Sub-indices for provisioning, regulating and cultural services
 - > Various other possible disaggregations
- Considerations:
 - > Selection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

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



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

Three sub-indices





System of
Environmental
Economic
Accounting

Project overview: “SEEA-related indicators for the GBF”



Funded by
the European Union



United Nations

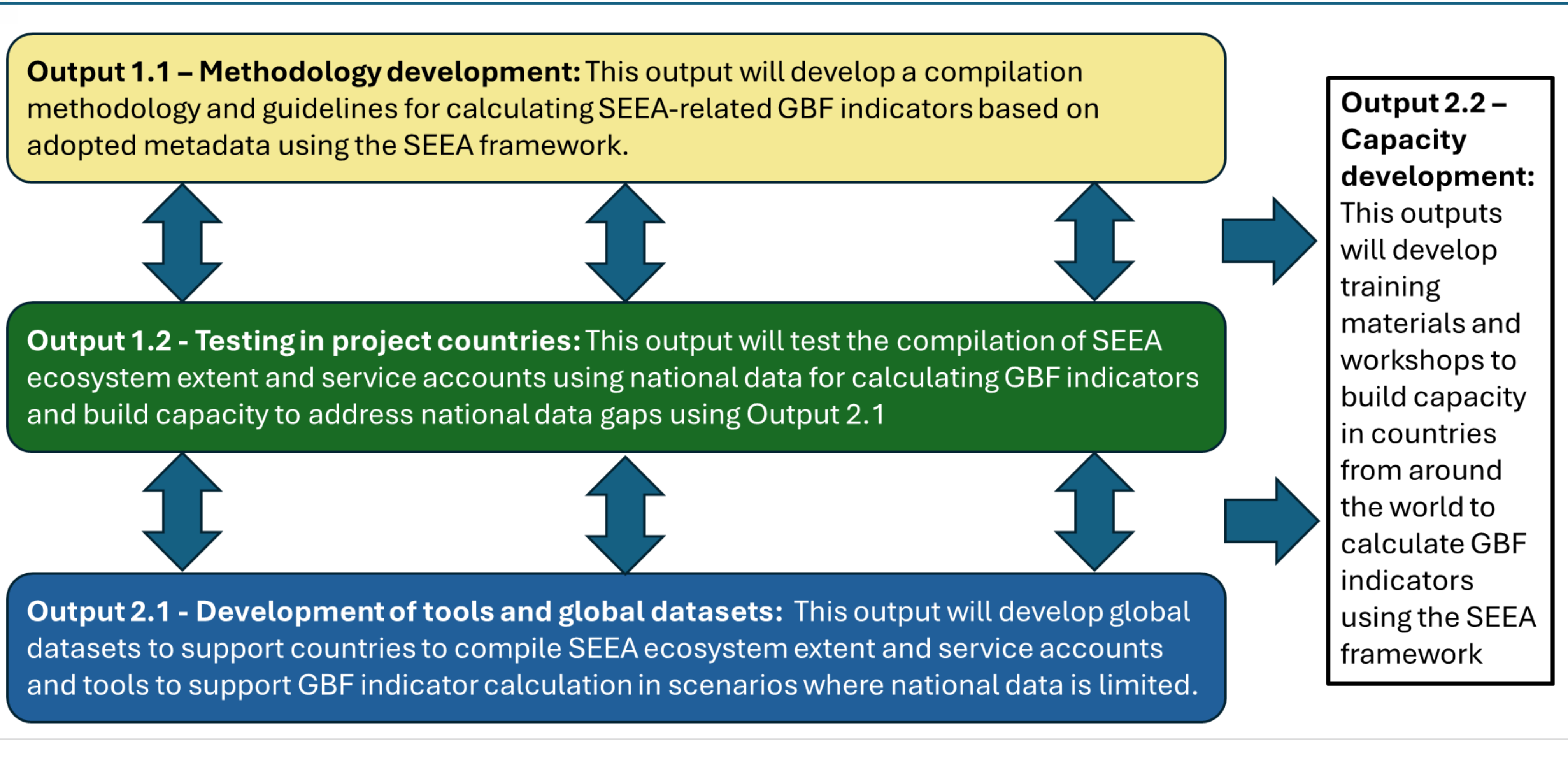


Funded by
the European Union

Project outputs



Kunming-Montreal
GLOBAL BIODIVERSITY FRAMEWORK





Funded by
the European Union

Output 1.1 –Timeline



Kunming-Montreal
GLOBAL BIODIVERSITY FRAMEWORK

- **2025 Q4:** Engage Task Team for technical issues for SEEA-related GBF indicators A.2 and B.1
- **2026 Q1:** First draft on guidance on calculating SEEA-related GBF indicators and Expert Group Meeting for technical discussions
- **2026 Q2:** Second draft of guidance reviewed by Task Team, Expert Group Meeting attendees, SEEA EA Technical Committee, and other key stakeholders.
- **2026 Q3:** Third draft of guidance and second Expert Group Meeting to review
- **2026 Q4:** Guidance finalized with by Task Team and Expert Group Meeting attendees
- Endorsement by SEEA EA Technical Committee
- Global expert consultation on guidelines (shared via CBD mechanism) / bring to UNCEEA



Funded by
the European Union

Output 2.1 - ES modules in ARIES



Kunming-Montreal
GLOBAL BIODIVERSITY FRAMEWORK

- Development of tools to support countries in the compilation of data for reporting on the indicators and global databases to support countries
 - > In partnership with BC3 and ARIES for SEEA
 - Provisioning: Grazed biomass provisioning
 - Regulating: Global climate regulation services & Coastal protection services
 - Cultural: Recreation-related services
- Concept notes have been prepared for each service
- Testing with project countries
- Aiming for final global data maps of ecosystem service supply and use early 2026
- Global data to be available in [AIRES for SEEA](#) for users by end of June 2026



Funded by
the European Union

Output 1.2 – Country engagement



Kunming-Montreal
GLOBAL BIODIVERSITY FRAMEWORK

- Provision of technical assistance and capacity building activities to project countries with the aim to compile accounts and carry out testing of the compilation guidelines
 - > Project countries: Colombia, Indonesia, Uganda
- In-country work may include:
 - > Stakeholder mapping and engagement (2025)
 - > Establish national steering / technical working group (2025)
 - > Inception workshops (2025)
 - > Project needs assessment (2025/2026)
 - > Scope and secure technical assistance (2026)
 - > ARIES for SEEA Training (2026)
 - > Compile accounts and test guidance (2026)
 - > Evaluate use of global datasets for compiling SEEA accounts (2026)
 - > National dissemination workshop (2026)



Funded by
the European Union

Output 2.1 – Capacity building



Kunming-Montreal
GLOBAL BIODIVERSITY FRAMEWORK

- Development of training materials for indicator compilation
- Virtual training event - Asia (≥ 100 participants)
- Virtual training event - Africa (≥ 100 participants)
- Virtual training event - South America (≥ 100 participants)
- Forum of Experts on SEEA EA

Global SEEA Implementation Stages

