

Miten kansainvälinen seurantakehitys säteilee kansalliseen monimuotoisuuden seurantaan?

Petteri Vihervaara, tutkimusprofessori, Syke

Luontotietopäivä, 22.1.2026



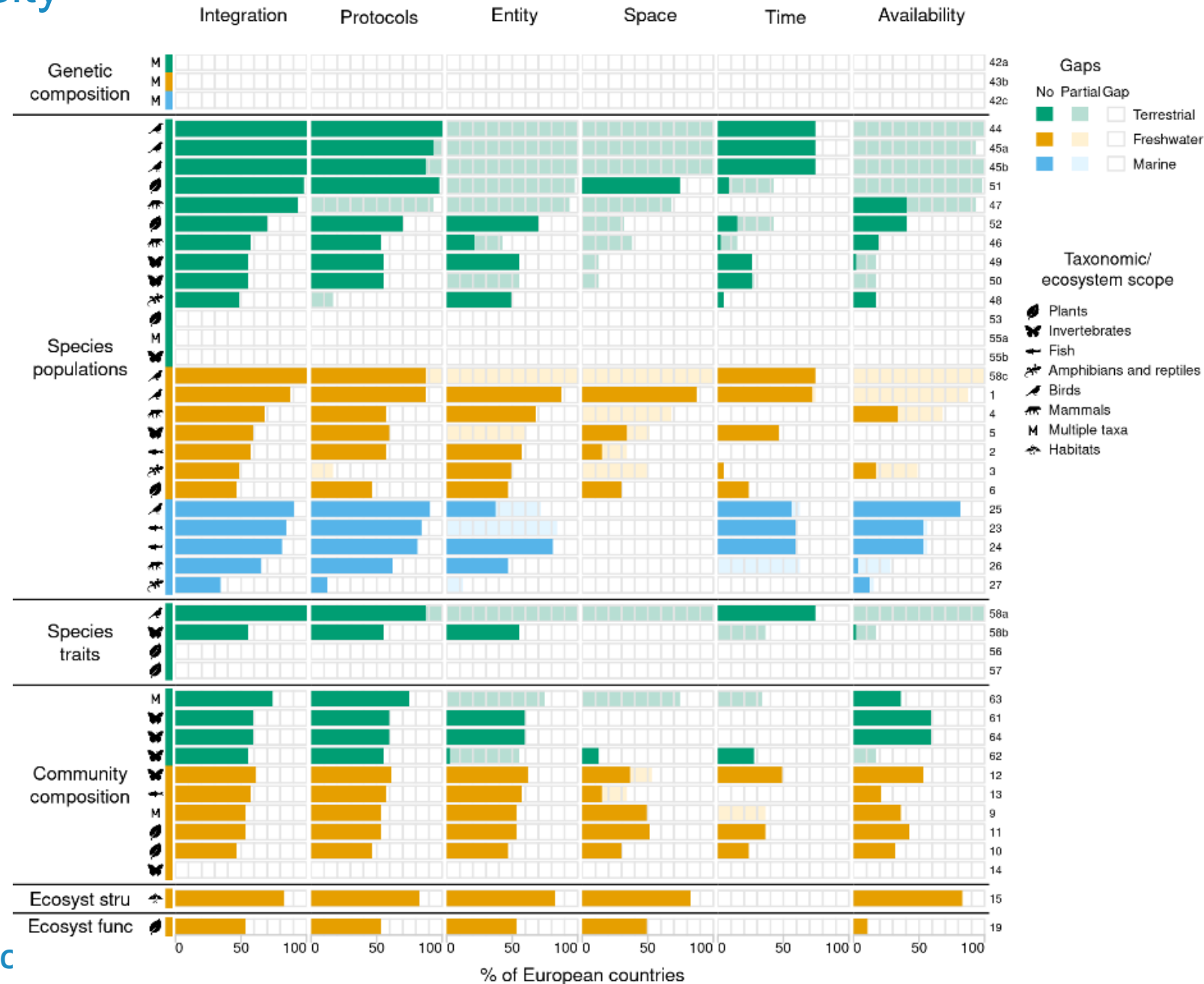
Suomen ympäristökeskus
Finlands miljöcentral
Finnish Environment Institute

Sisältö

1. Kansallisiin seurantoihin pohjaava eurooppalainen yhteistyö (Biodiversa+)
2. Euroopan biodiversiteettihavaintojen koordinaatiokeskuksen pilotointi (EBOCC)
3. Hallitustenvälinen luontopaneeli (IPBES)
4. YK:n biodiversiteettisopimus (CBD) & Kunming-Montreal 2030 tavoitteet (KM-GBF)

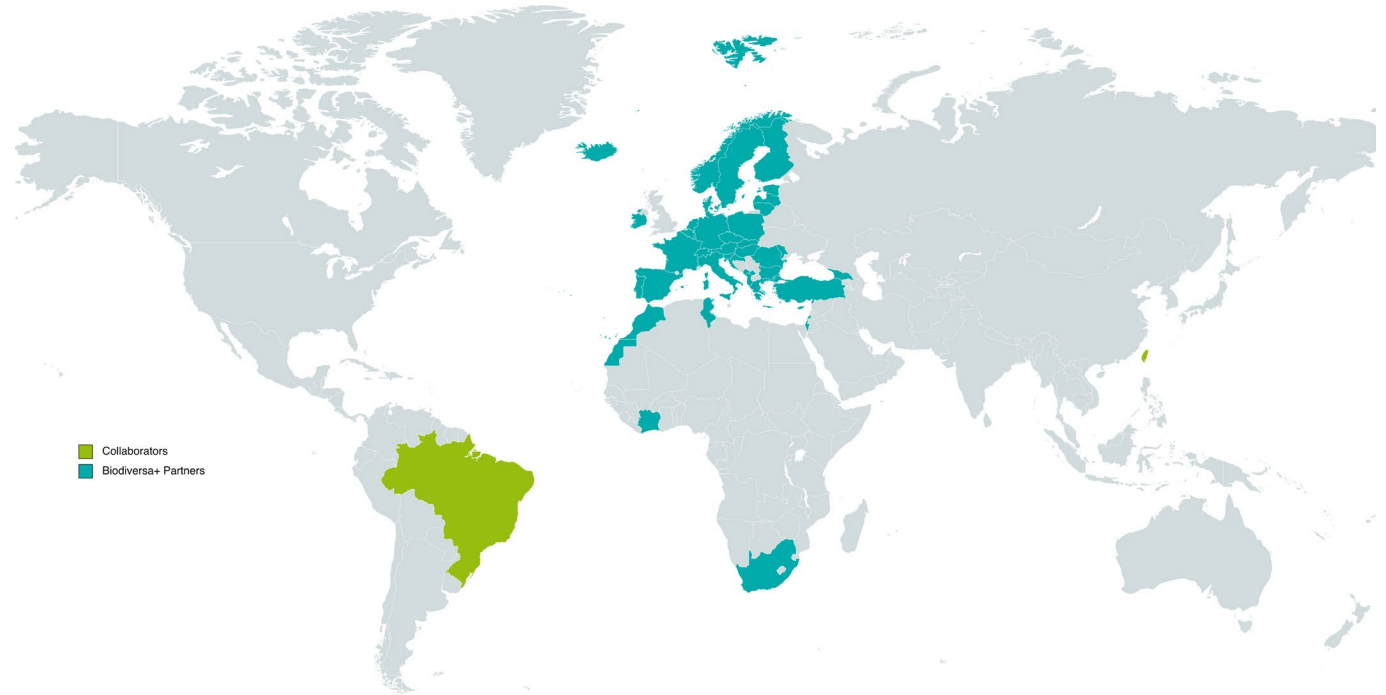
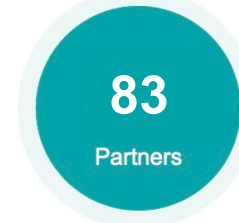
The challenges for biodiversity monitoring

EUROPABON

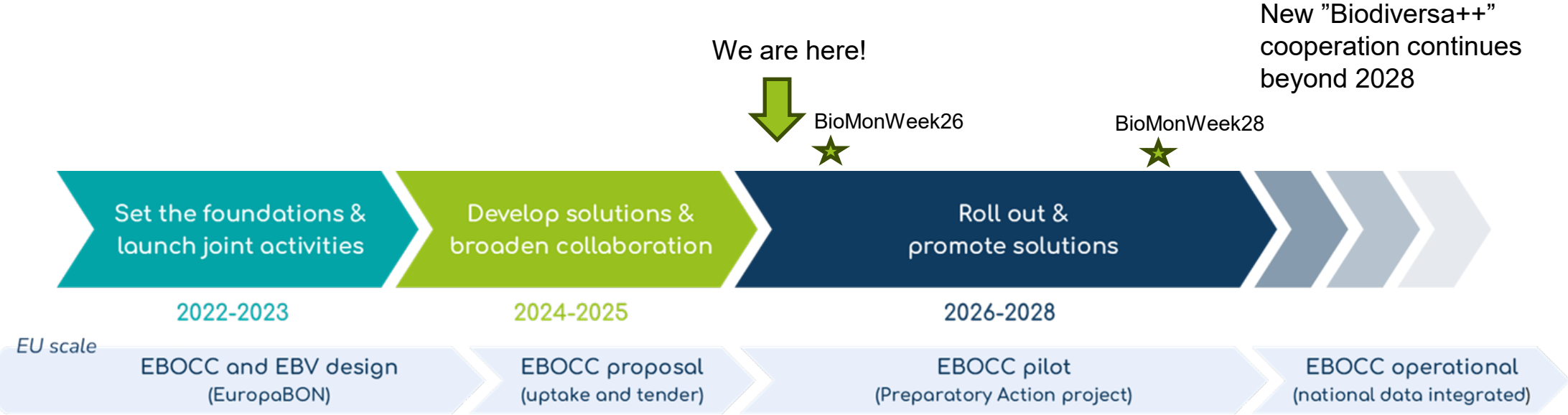


Report on gaps and important new areas for monitoring in Europe:
<https://preprints.arphahub.com/article/103657/>
 Identification of current monitoring workflows and bottlenecks:
<https://preprints.arphahub.com/article/103765/>
 Designing EBV workflows for the for the European Biodiversity
 Observation Network: <https://riojournal.com/article/109120/>

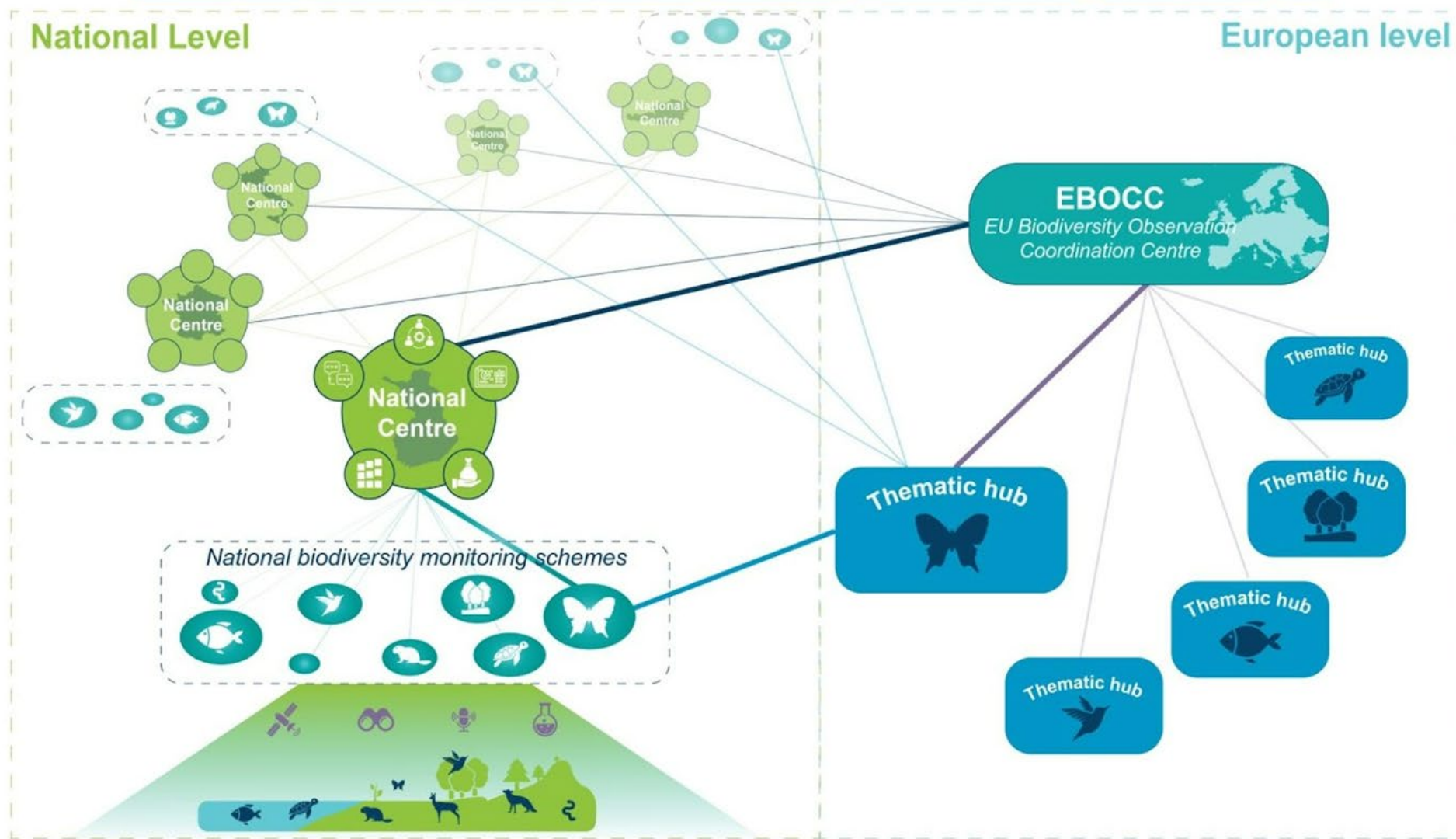
Biodiversa+ 2021-2028



A big picture of the main phases



Coordination model for biodiversity monitoring in Europe



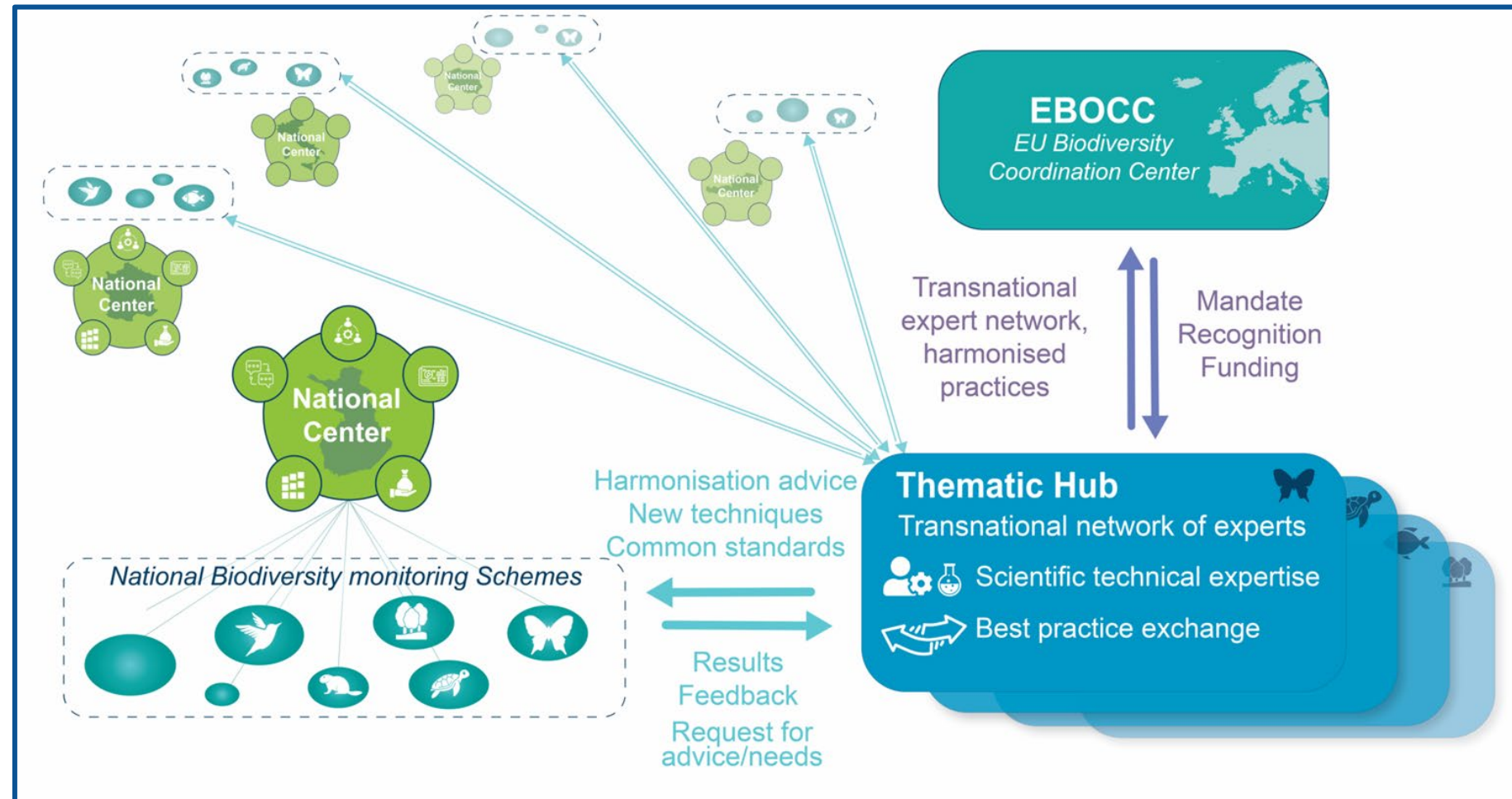
Thematic Hubs: building on pilots and other expert networks

What are they?

- Transnational networks of experts on a specific Taxa, Habitat or Region

Why integrate them?

- Relevant scale for harmonisation
- Biodiversity Monitoring Communities already exists (60 themes mapped)



Mapping of the 60 communities

Some examples:

Butterfly Conservation Europe
(BCE) - eBMS

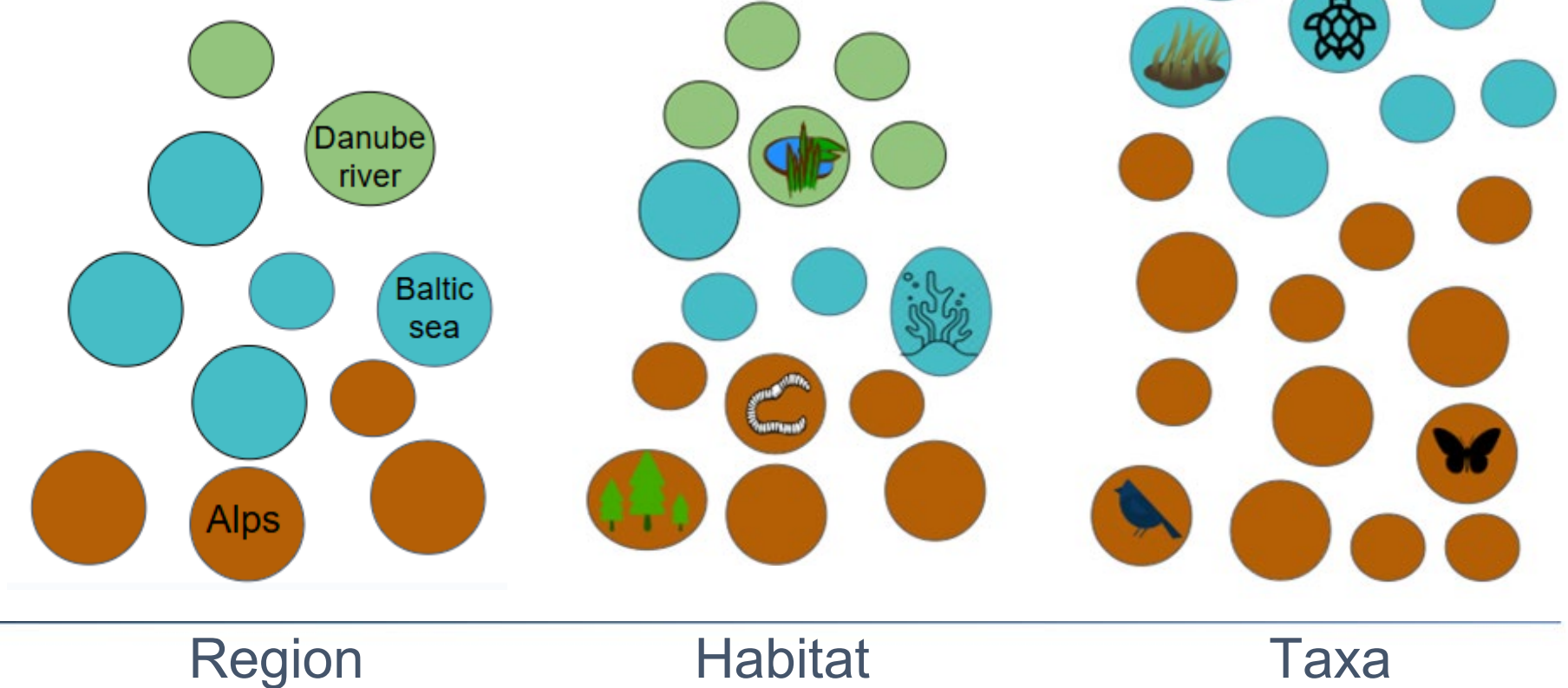
European Bird Census Council
(EBCC) - PECBMS

The Mediterranean Posidonia
Network

Global Lake Ecological
Observatory Network (GLEON)

HELCOM - Baltic Marine
Environment Protection
Commission

SoilBON



60 Themes

Marine taxa

Sea Turtles
Seabirds
Marine mammals
Phytoplankton
Zooplankton
Elasmobranchs [sharks, rays and skates]
Jellyfish
Fish /fisheries
Cephalopods
Coastal fish / rocky fish



Marine habitats

Seagrass
Posidonia
Coral reef
Benthic habitats
Pelagic habitats



Terrestrial taxa

Bat
Bird
Large Carnivores
Raptors
Mammals
Pollinators
Butterfly
Stag Beetle
Lynx
Ibex
Fungi



Terrestrial habitats

Grassland
Soil biodiversity
Forest
Dunes
Alpine ecosystems



freshwater taxa

Sturgeon
Salmon
FW Macroinvertebrates
Freshwater fish
Macroalgae



Freshwater habitats

Lakes
Freshwater ecosystem



Interface taxa

Waders (shorebirds)
Waterbirds
Herpetology (amphibian & reptile)



Interface habitats

Mangroves
Peatlands
Ponds
Wetlands
Lagoons



Regions

Central and Eastern European region
Mediterranean sea
Black Sea
North Atlantic
Baltic Sea
Danube River
Rhine River
Alps
Pyrenees
Carpathia
Arctic



Other, uncertain

DNA / genomics (?)
Microorganisms (?)

Invasive alien species



Ongoing biodiversity monitoring pilot work in Biodiversa+



Visit
www.biodiversa.eu
to learn more!

← Back to biodiversity monitoring



Recording of an information session on Biodiversa+ pilots (16 December 2024)

What are Biodiversa+ pilots?

Global change is driving significant biodiversity loss and degradation, highlighting the critical need for long-term biodiversity data to inform effective policy. However, current monitoring schemes are fragmented, with spatial, temporal, and taxonomic gaps, as well as inconsistencies in methodology and frequency.

Harmonised, transnational biodiversity monitoring is essential for data comparability and usability. Biodiversa+ pilots aim to facilitate this harmonisation by testing common protocols, new technologies, and integrated governance models. Pilots also increase data availability and address key [biodiversity monitoring priorities](#) of Biodiversa+ partners.

Rather than being research initiatives, these pilots build on existing research and outputs from other mature efforts. Implemented by national organisations responsible for existing monitoring activities, they represent the first phase in establishing transnational networks of national biodiversity monitoring programmes.

Pilots contribute to:

- **Collecting and comparing biodiversity data** (e.g., soils, invasive plants & insects) at the EU scale
- **Testing novel methods** (e.g., eDNA, AI for sound and image recognition)
- **Identifying weaknesses** in common monitoring protocols
- **Strengthening collaboration** among Biodiversa+ partners
- **Building capacity** across Europe

Discover the pilots



Governance
Towards national biodiversity monitoring coordination centres



IAS
Monitoring Invasive Alien Species with image-based methods



Soil
Soil biodiversity in protected, near-natural forests



ABMS
Automated Biodiversity Monitoring Stations



EURockFish
Toward a European rocky reef fish monitoring network



Habitat
Remote sensing for habitat monitoring

Biodiversa+ pilots: towards transnational collaboration and harmonisation

6+3

Pilots

- Comparison of **governance**, **data interoperability** & **standards** for biodiversity monitoring (now over) >> *supported EBOCC and national centres counterparts' co-design*
- Monitoring **Invasive Alien Species** through image-based approaches
- Monitoring **soil biodiversity** in protected, near-natural forests
- **Automated Biodiversity Monitoring Stations** for birds, bats and nocturnal insects
- Monitoring European **Rocky Reef Fish**
- Mapping and monitoring of **grassland and wetland habitats**

10
M€
So far

3 new pilots (ponds, forests,
and insects) to be launched
in 2026 (5.5M €)

19
Active
contributors

18
Countries

Preparatory action project for EU Biodiversity observation coordination centre (EBOCC) 2026-2028

Tavoite

Tukee jäsenvaltioiden viranomaisia ennallistamisasetuksen sekä luonto-, lintu-, vesi- ja meristrategiadirektiivien toimeenpanossa

Vahvistaa seurantaan tekevien viranomaisten koordinaatiota ja yhteistyötä

Integroida seurantajärjestelmien tuloksia, selkeyttää datavirtoja ja mahdollistaa EU-tason analyysin

Hyödyt jäsenmaille

Yhdenmukaistaa käytäntöjä ja tietovirtoja → keventää ja tehostaa kansallista seuranta- ja raportointityötä (EU velvoitteet)

Parantaa datan vertailtavuutta ja yhteentoimivuutta → lisää tulosten uskottavuutta ja käytettävyyttä päätöksenteossa

Tukee hallittuja siirtymiä uusiin menetelmiin

Preparatory action project for EU Biodiversity observation coordination centre (EBOCC) 2026-2028

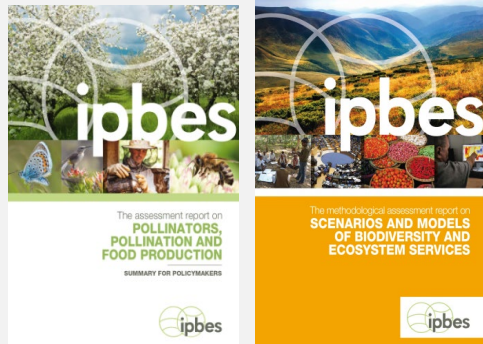
	Terrestrial habitats	Freshwater benthic invertebrates	Freshwater habitats	Marine mammals	Seagrass habitats	Pollinators
T1: Data workflows						
T2: Data mobilization & integration						
T3: Data framework, infrastructure & tools						
T4: Harmonisation of data collection						
T5: Analysis & visualisation						
T6: Capacity building						
T7: Communication						

Preparatory action project for EU Biodiversity observation coordination centre (EBOCC) 2026-2028

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Hallitustenvälinen luontopaneeli IPBES: Completed IPBES assessments

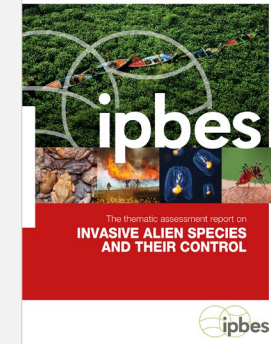
2016



2019



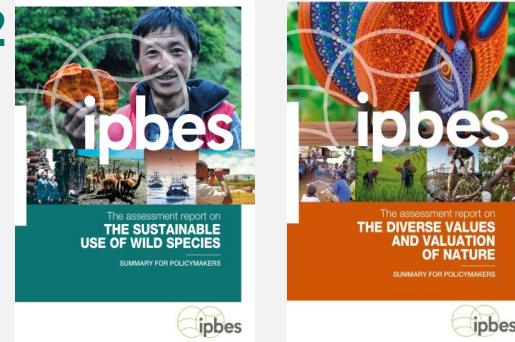
2023



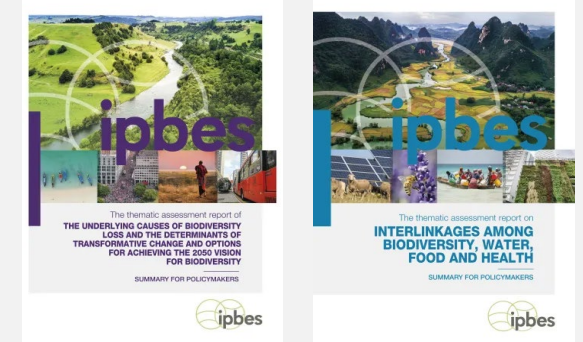
2018



2022

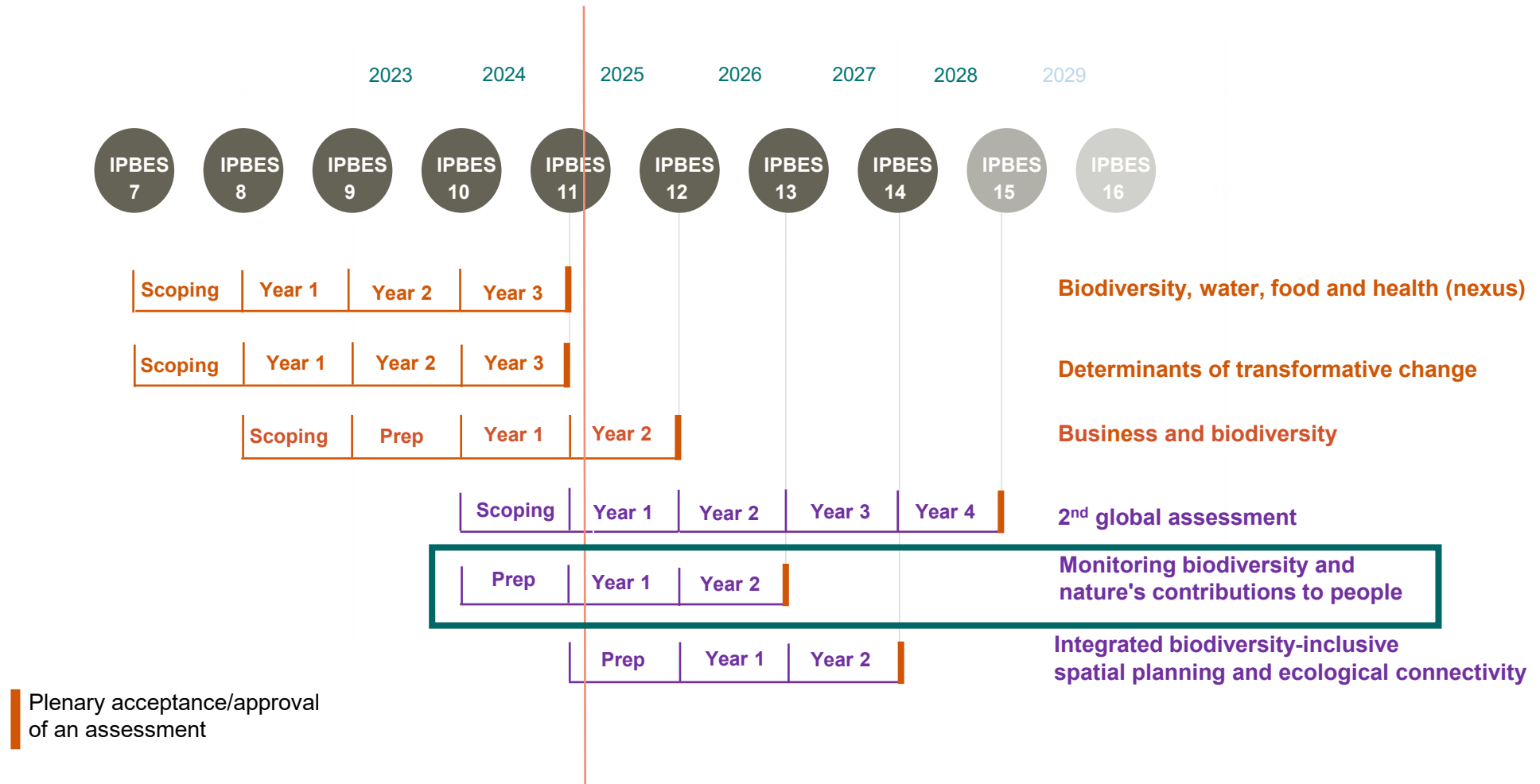


2024



- 13 reports (11 reports produced as part of the 1st work programme)
- 3000 experts

Indicative assessment timeline up to 2030



IPBES Monitoring assessment

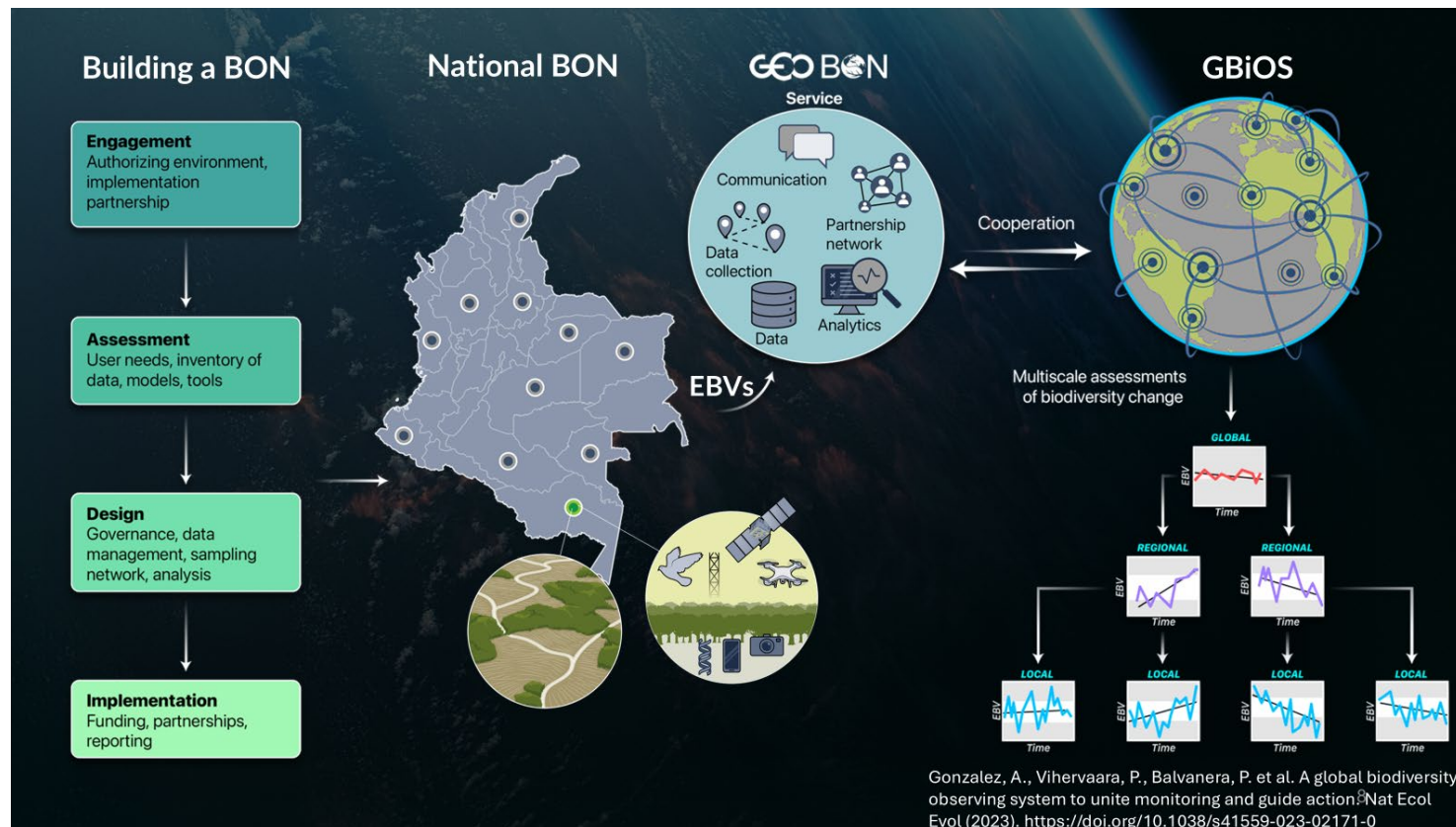
Scope and rationale

The objective of the methodological assessment on monitoring biodiversity and nature's contributions to people is **to support national and global efforts to**

- (a) monitor biodiversity, nature's contributions to people and the direct and underlying causes of the observed changes; and**
- (b) monitor progress towards the goals and targets of the Kunming-Montreal Global Biodiversity Framework in support of a balanced and enhanced implementation of the Convention on Biological Diversity**

IPBES MTA – background

- Increasing awareness on the lack of data (on the state of biodiversity & NCPs) to report, for instance, CBD
- GEO BON, GBIF, OBIS etc. have suggested a need for GBiOS – Global Biodiversity Observing System

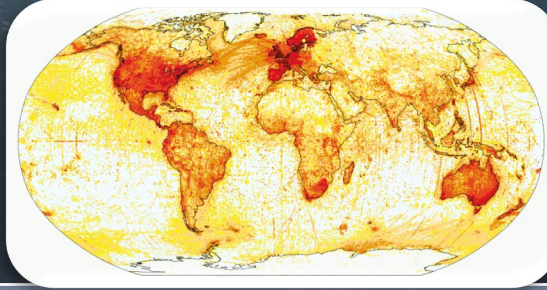


Main driving policy-need for IPBES MTA: Kunming-Montreal Global Biodiversity Framework

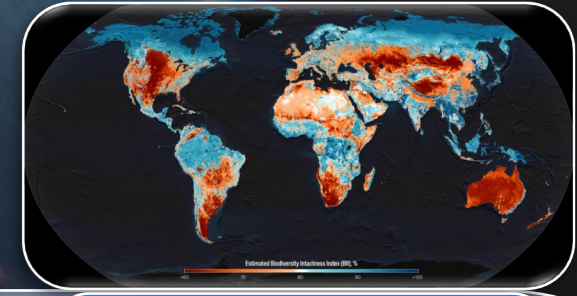




Observations from
across the globe



International
exchange of
observations



Global biodiversity
models



A Global Biodiversity Observing System



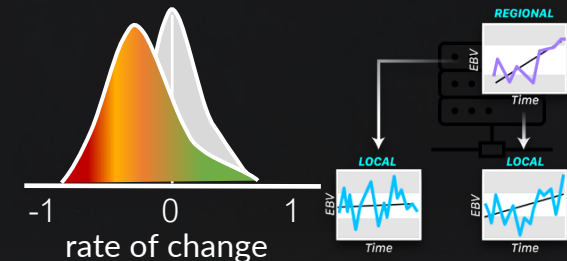
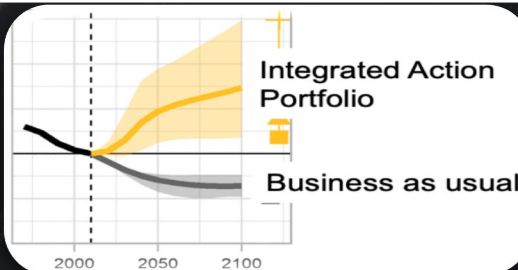
Effective decision-
making and action

Delivery of biodiversity
services, including
scenarios for action

Data processing,
forecasting, warning &
advisory products



Convention on
Biological Diversity





United Nations



ipcc

INTERGOVERNMENTAL PANEL ON
climate change



GLOBAL OBSERVING
SYSTEMS



United Nations



Science and Policy
for People and Nature



GLOBAL BIODIVERSITY
OBSERVING SYSTEM

#biomonweek2026



BioMonWeek

2026

The European
Conference for
Biodiversity Monitoring

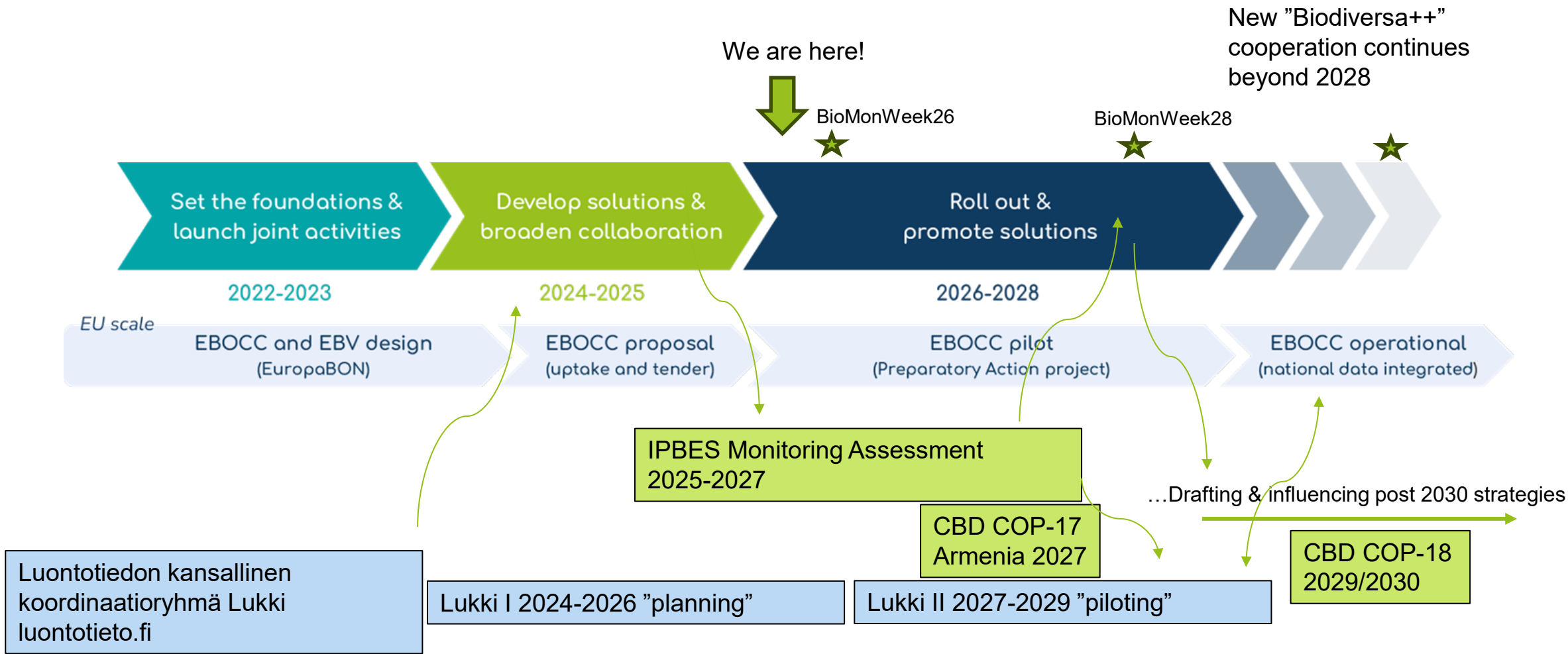
4 > 8 May
2026

Montpellier,
France

Registration and information on: www.biomonweek.eu



Kansallinen, eurooppalainen ja kansainvälinen kehitys tapahtuu tiiviissä vuorovaikutuksessa



Kiitos! Teemme tiedolla toivoa.

Lisätietoja: petteri.vihervaara@syke.fi



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