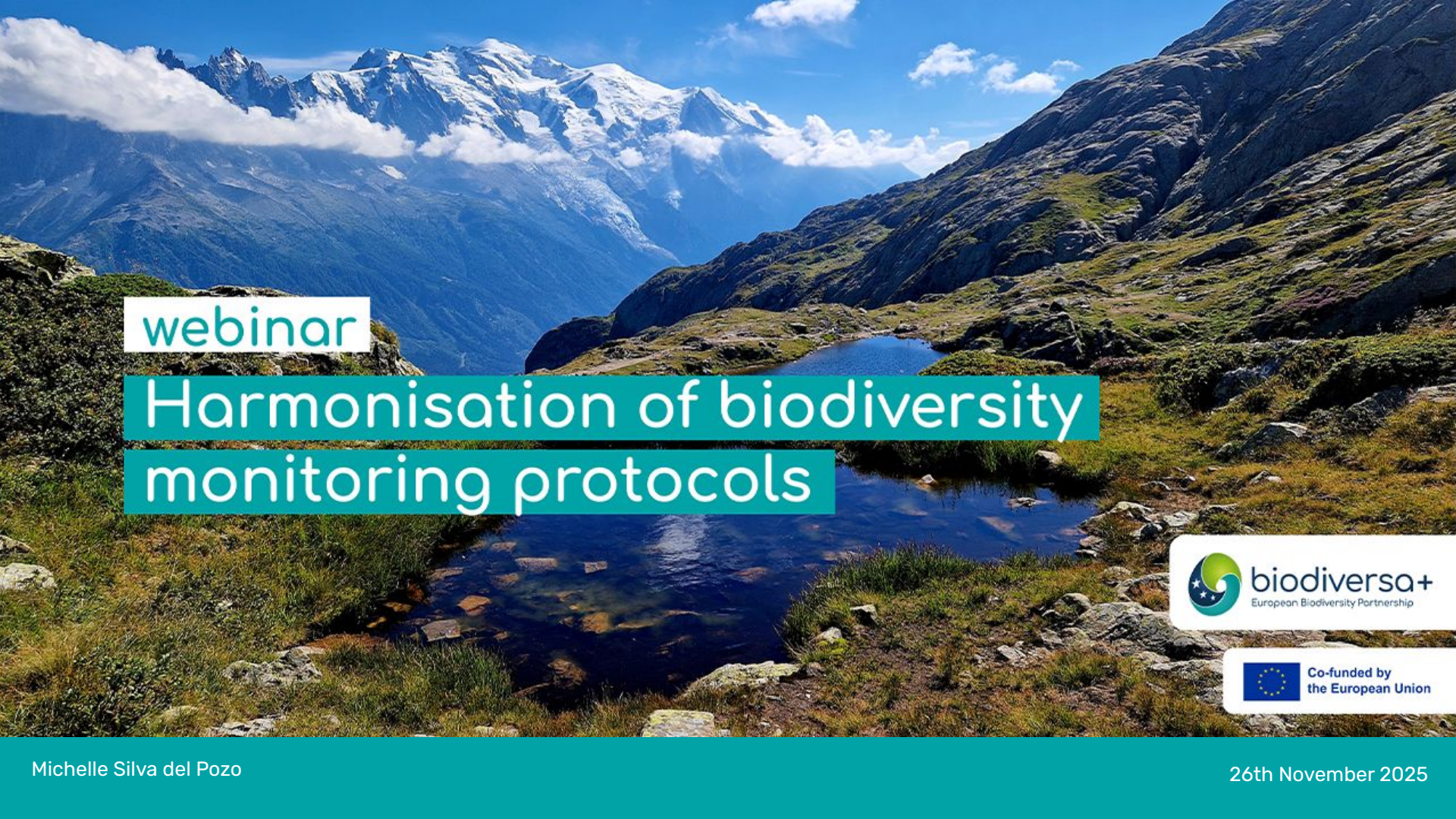




webinar

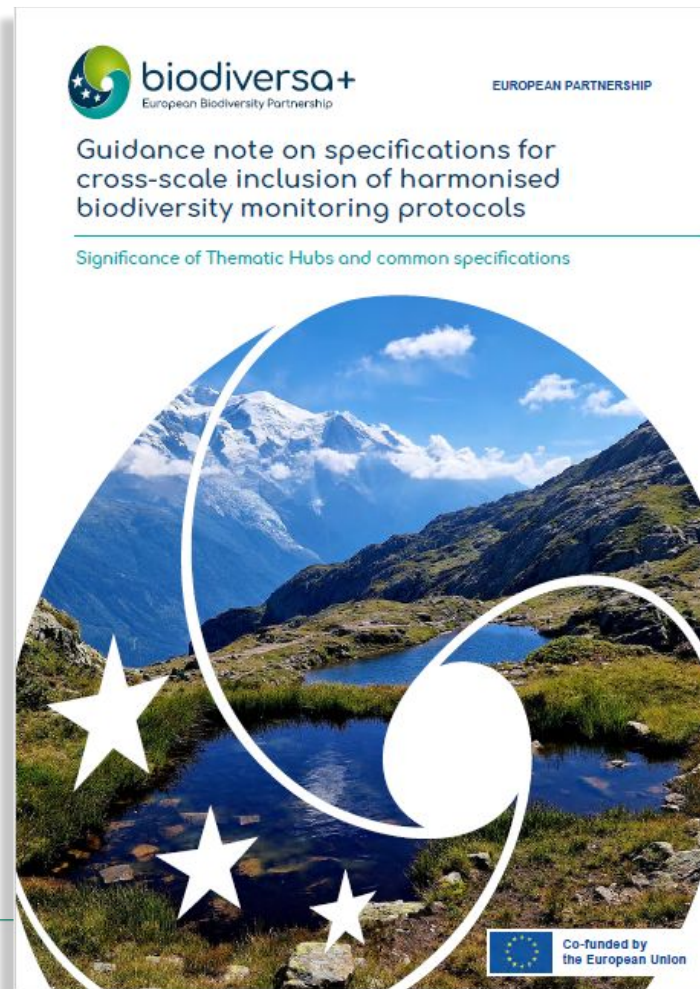
# Harmonisation of biodiversity monitoring protocols





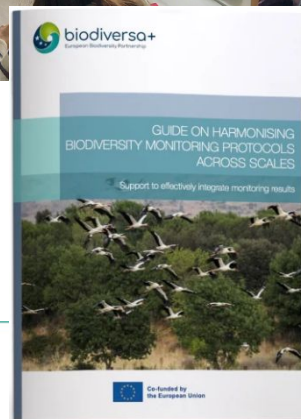
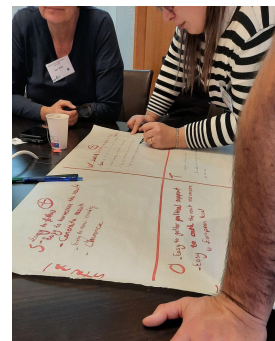
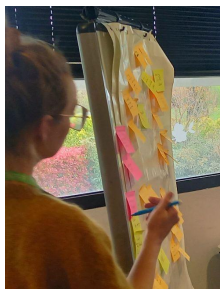
# Report overview

- Mapping the existing monitoring communities across Europe
- Defining Interoperability: Introducing the Common Minimum Requirements for protocols
- The Framework for Action: Proposing the expert-led Thematic Hubs as the key coordinating mechanism



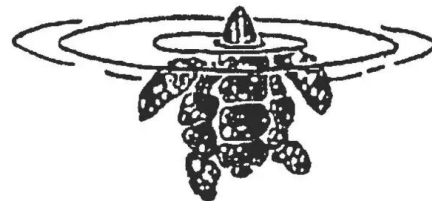
# A collaborative approach

- Representatives from Environment Agencies
- Monitoring program coordinators
- Thematic specialists
- Biostatisticians



# Insight 1: Mapping Europe's Monitoring Communities

➡ Thematic expert networks dedicated to specific biodiversity domains (e.g., soil, pollinators, posidona, ponds)



# Insight 1: Mapping Europe's Monitoring Communities

| TAXA                                                                                    | HABITATS                                                                                                                         |                                                                                                                                   | REGIONS                                                                                                                    |                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FRESHWATER (FW)                                                                         |                                                                                                                                  |                                                                                                                                   |                                                                                                                            |                                                                                                                                                                                                                                                                             |
|        | <ul style="list-style-type: none"><li>• FW Fish</li><li>• FW Macroinvertebrates</li></ul>                                        | <ul style="list-style-type: none"><li>• Salmon</li><li>• Sturgeon</li></ul>                                                       | <ul style="list-style-type: none"><li>• FW ecosystems</li><li>• Lakes</li></ul>                                            | <ul style="list-style-type: none"><li>• Danube River</li><li>• Rhine River</li></ul>                                                                                                                                                                                        |
| MARINE                                                                                  |                                                                                                                                  |                                                                                                                                   |                                                                                                                            |                                                                                                                                                                                                                                                                             |
|        | <ul style="list-style-type: none"><li>• Cephalopods</li><li>• Coastal/rocky fish</li><li>• Elasmobranch</li><li>• Fish</li></ul> | <ul style="list-style-type: none"><li>• Jellyfish</li><li>• Macroalgae</li><li>• Marine mammals</li><li>• Phytoplankton</li></ul> | <ul style="list-style-type: none"><li>• Posidonia</li><li>• Sea Turtles</li><li>• Seabirds</li><li>• Zooplankton</li></ul> | <ul style="list-style-type: none"><li>• Benthic habitats</li><li>• Coral reef</li><li>• Pelagic habitats</li><li>• Seagrass</li></ul> <ul style="list-style-type: none"><li>• Baltic sea</li><li>• Black sea</li><li>• Mediterranean sea</li><li>• North Atlantic</li></ul> |
| TERRESTRIAL                                                                             |                                                                                                                                  |                                                                                                                                   |                                                                                                                            |                                                                                                                                                                                                                                                                             |
|        | <ul style="list-style-type: none"><li>• Bat</li><li>• Bird</li><li>• Butterfly</li><li>• Fungi</li></ul>                         | <ul style="list-style-type: none"><li>• Ibex</li><li>• Large Carnivores</li><li>• Lynx</li><li>• Mammals</li></ul>                | <ul style="list-style-type: none"><li>• Pollinators</li><li>• Raptors</li><li>• Stag Beetle</li></ul>                      | <ul style="list-style-type: none"><li>• Alpine ecosystems</li><li>• Dunes</li><li>• Forest</li><li>• Grassland</li><li>• Soil</li></ul> <ul style="list-style-type: none"><li>• Alps</li><li>• Carpathians</li><li>• Pyrenees</li></ul>                                     |
| INTERFACE                                                                               |                                                                                                                                  |                                                                                                                                   |                                                                                                                            |                                                                                                                                                                                                                                                                             |
|        | <ul style="list-style-type: none"><li>• Amphibians &amp; reptiles</li><li>• Invasive Alien Species</li></ul>                     | <ul style="list-style-type: none"><li>• Waders (shorebirds)</li><li>• Waterbirds</li></ul>                                        | <ul style="list-style-type: none"><li>• Lagoons</li><li>• Mangroves</li><li>• Peatlands</li></ul>                          | <ul style="list-style-type: none"><li>• Ponds</li><li>• Wetlands</li></ul> <ul style="list-style-type: none"><li>• Arctic</li><li>• Central and Eastern Europe</li></ul>                                                                                                    |
| OTHER, UNCERTAIN                                                                        |                                                                                                                                  |                                                                                                                                   |                                                                                                                            |                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"><li>• DNA/Genomics</li><li>• Microorganisms</li></ul> |                                                                                                                                  |                                                                                                                                   |                                                                                                                            |                                                                                                                                                                                                                                                                             |

— Explore the monitoring communities

This table provides an overview of the monitoring communities identified in the report.

Search by Theme

e.g., Birds, Turtles...

Filter by Realm

All Realms

Filter by Type

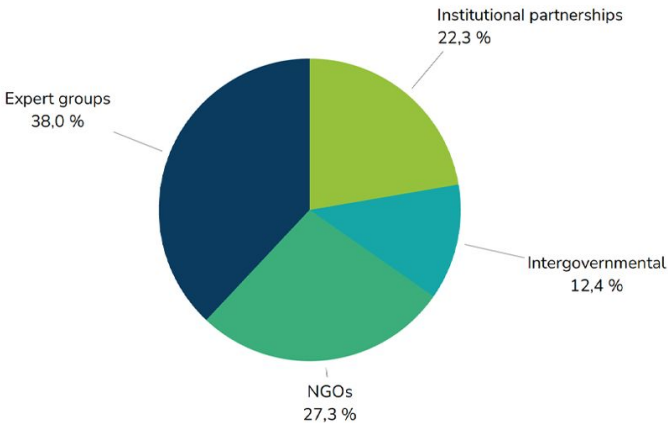
All Types

| Theme             | Realm       | Type    | Network / Group Name                                                          | Scope  | Network Type               |
|-------------------|-------------|---------|-------------------------------------------------------------------------------|--------|----------------------------|
| Alpine ecosystems | Terrestrial | Habitat | GLORIA: Global Observation Research Initiative in Alpine Environments network | Global | Institutional partnerships |
| Alps              | Terrestrial | Regions | Alpine Conference/Alpine convention                                           | Europe | Intergovernmental          |
| Arctic            | Interface   | Regions | Circumpolar Biodiversity Monitoring Programme (CBMP)                          | Global | Expert groups              |
| Baltic Sea        | Marine      | Regions | HELCOM - Baltic Marine Environment Protection Commission                      | Europe | Intergovernmental          |
| Bat               | Terrestrial | Taxa    | EUROBATS                                                                      | Europe | Intergovernmental          |
| Bat               | Terrestrial | Taxa    | BatLife Europe                                                                | Europe | NGOs                       |
| Bat               | Terrestrial | Taxa    | IUCN SSC Bat Specialist Group                                                 | Global | Expert groups              |

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- [Introduction](#)
- [Monitoring communities](#)
- [Common minimum requirements](#)
- [Thematic hubs](#)

Next steps



# The Essential Role of Communities in Harmonisation

- Translators: Their technical expertise allows them to tailor harmonised protocols to specific ecological contexts
- Bridges: Connecting national efforts directly to European coordination bodies
- Testing Grounds: They provide the insights into feasibility and data quality needed to design effective minimum requirements



## Insight 2: Common Minimum Requirements

### What to harmonize?

The non-negotiable elements every protocol must share for comparability





— Guiding elements

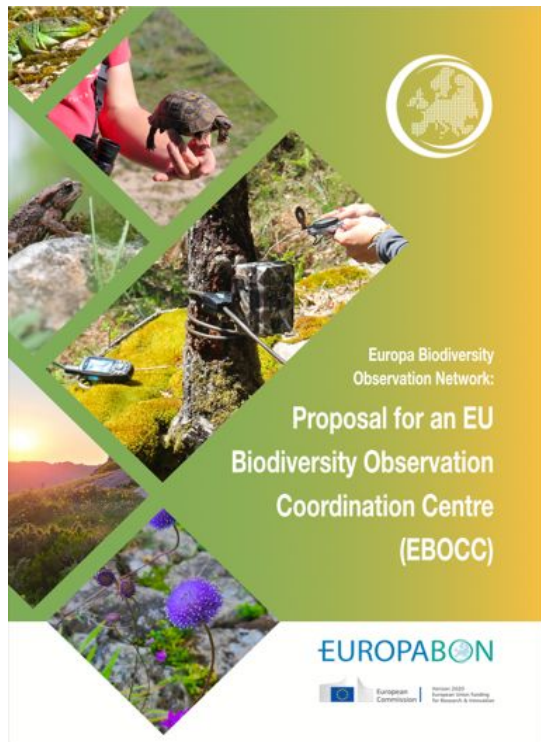
| Element                        | Requirement                               | Justification & Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Objective                   | STRICT                                    | <p>The objective sets the foundation of the protocol—it defines the purpose and guides all downstream decisions (what, how, when, where). This must be clearly stated and aligned with policy or scientific goals.</p> <p><b>Recommendation:</b> Define SMART objectives (Specific, Measurable, Achievable, Relevant, Time-bound). To do so, use a shared vocabulary, we recommend to follow the EBV grammar, and align with existing frameworks (e.g. EU directives, GBF, CBD).</p> |
| 2. Object of Monitoring        | STRICT                                    | <p>The “what”—species, communities, habitats, or processes—must be precisely defined to ensure consistency in data collection and interpretation.</p> <p><b>Recommendation:</b> Define core monitoring objects based on a referential list (e.g. GBIF backbone taxonomy, IUCN global ecosystem typology, EUNIS habitat classification list, ...), and allow optional additions if well documented.</p>                                                                               |
| 3. Scale<br>(Spatial/Temporal) | STRICT (core) +<br>FLEXIBLE<br>(optional) | <p>Ecological, logistical, and political contexts vary across countries. Thus, scale must be adaptable—but minimum spatial and temporal coverage is needed to ensure comparability and allow aggregation.</p> <p><b>Recommendation:</b> Define minimum scale on which you expect results (e.g., national or regional coverage, frequency), according to the policy needs. Independent scaling up is possible where feasible.</p>                                                     |
| 4. Variables Measured          | STRICT (core) +<br>FLEXIBLE<br>(optional) | <p>Variables (e.g., species richness, abundance, biomass) are central to analysis. Fixing core variables allows harmonisation; optional ones can enrich interpretation.</p> <p><b>Recommendation:</b> EBVs are a useful backbone, but any variable is fine as long as the definitions and units are agreed upon. Extended</p>                                                                                                                                                        |

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## Insight 3: The Thematic Hubs Framework

- ➡ Expert-driven communities centered around specific biodiversity domains  
= relevant scale for harmonisation
- ➡ A formal recognition of the existing expertise: biodiversity monitoring communities



## EU BIODIVERSITY OBSERVATION COORDINATION CENTRE

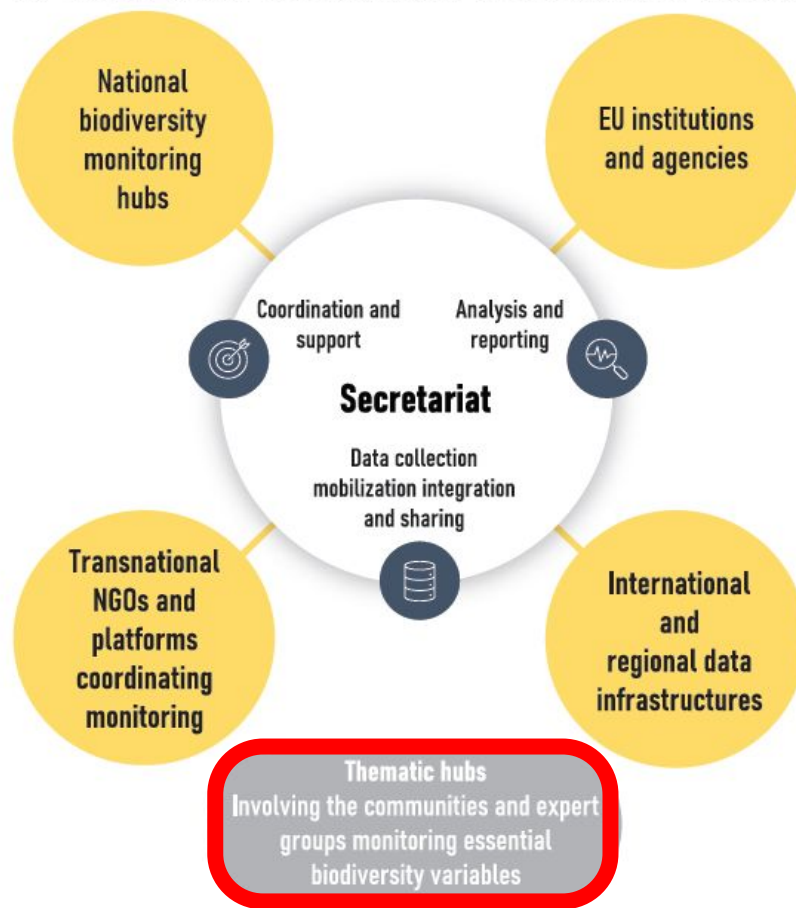
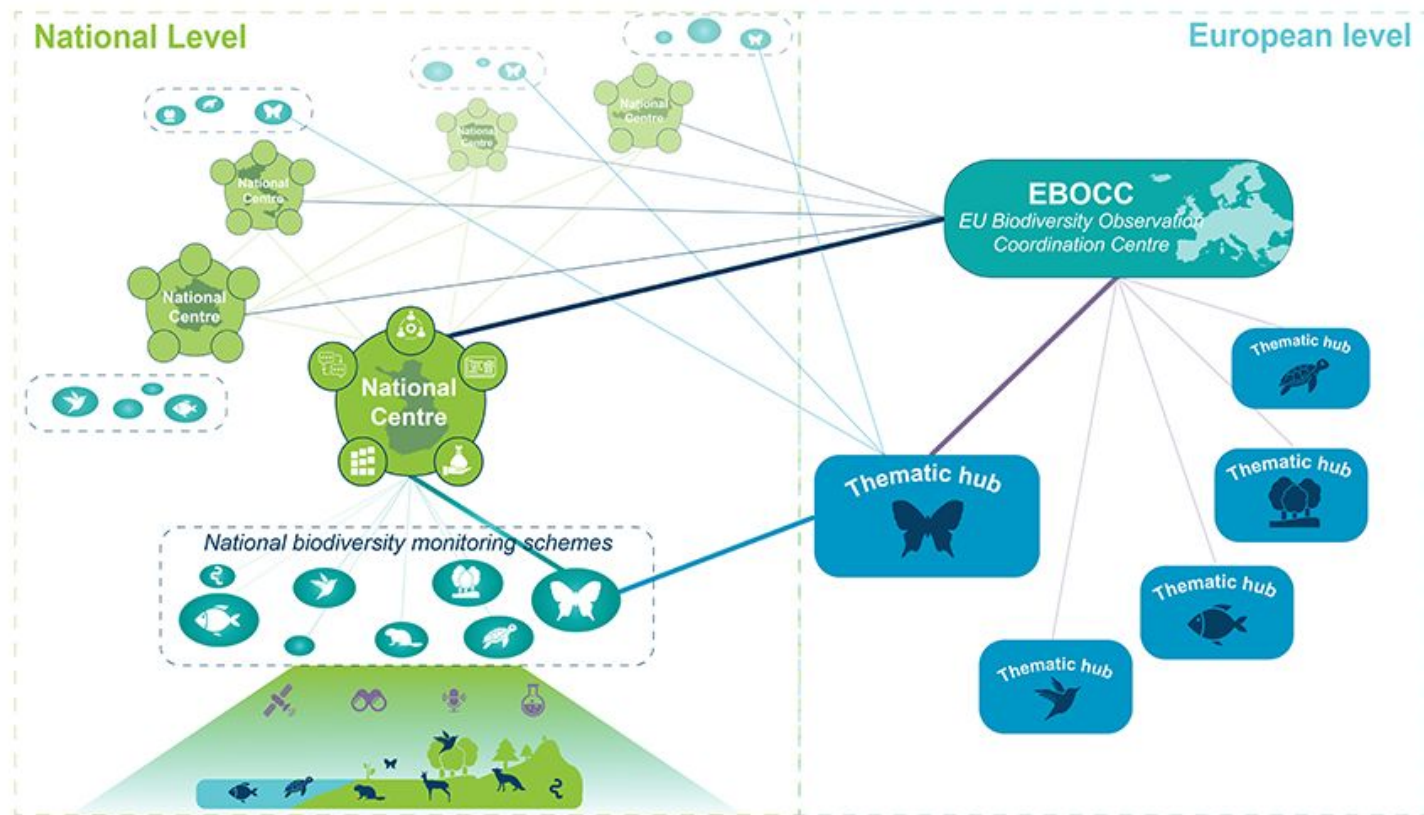
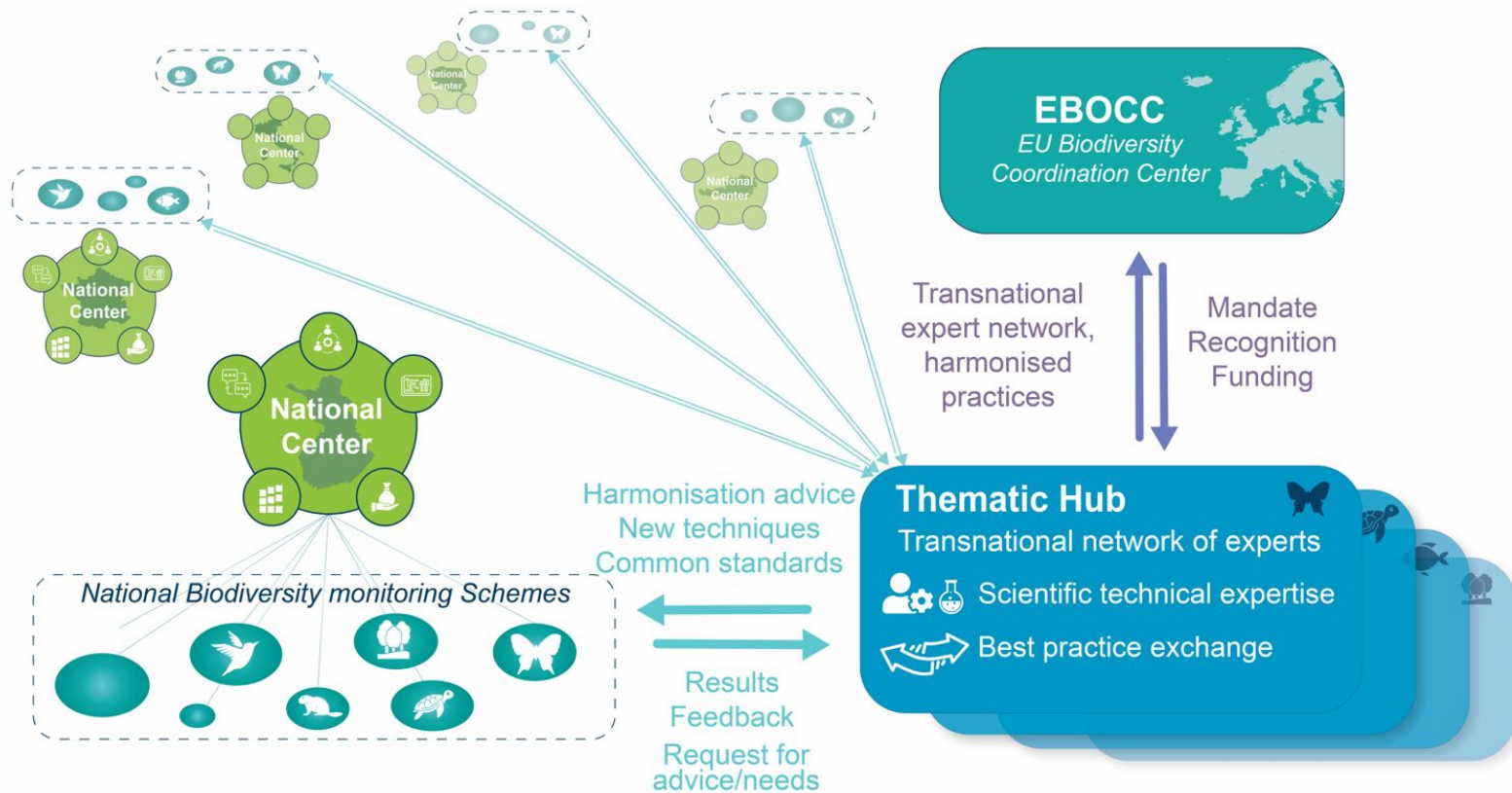


Figure 5. Representation of the proposed EBOCC external structure based on a “hub and spokes” model.







# From Principles to Practice: Enabling conditions

## 1 Official Mandate

- Thematic Hubs need formal recognition—from the Commission and Member States—to ensure their outputs are used.

## 2 Dedicated Resourcing

Coherence requires:

- Stable coordination
- Support for meetings, capacity building, and synthesis
- A convener or facilitator role

## 3 Cross-domain integration



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**Co-funded by  
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# Thank you!

**Michelle SILVA DEL POZO**



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