



Welcome to the Netherlands

Mark Roscam Abbing

Director-General, Dutch Ministry of Agriculture, Fisheries, Food Security and Nature





Welcome words from Biodiversa+

Ron Winkler
Co-chair Biodiversa+, NWO



Biodiversa+

Supporting excellent research on biodiversity with an impact for policy and society

The Partnership is part of the **European Biodiversity Strategy for 2030**, committed to the EU vision that, by 2050, biodiversity and its benefits to people will be protected, valued and restored.







Research actors

- → Ministries in charge of research
- → Research funding organisations



Policy actors

- → Ministries in charge of environment
- → Environment protection agencies





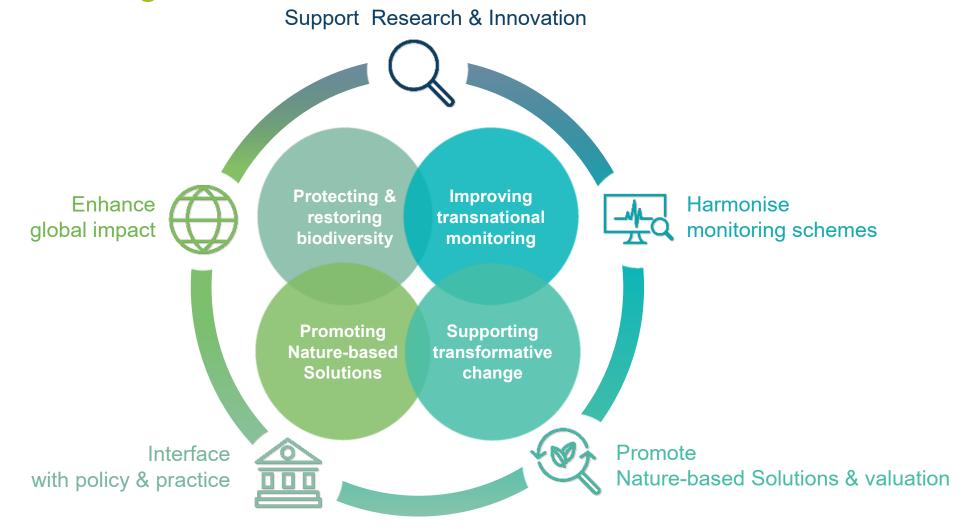




1st call... ... 6th call



Day 1: Looking back





Day 2: What's next

FP9 2021-2027 Biodiversa+

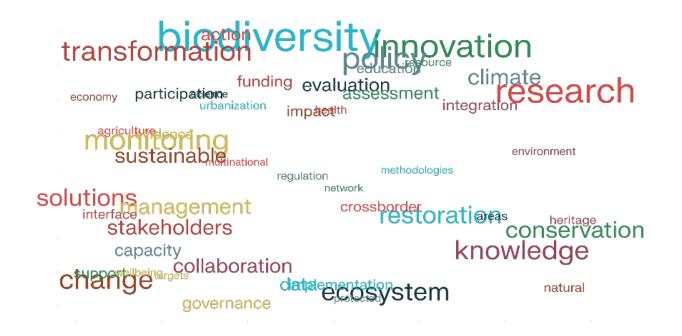
FP10 2028-2034 Biodiversa++?





Day 2: What's next

- A blueprint for Biodiversa+ Impact
- Panels: Bridging research, policy and practice + Connecting the landscape
- Workshop 'Co-creating the future' (collecting input through four scenarios)





Day 2: What's next

How is biodiversity addressed in the new EU MFF for 2028-2034? What instruments would be suitable for biodiversity research?



The proposed EU Multiannual Financial Framework (MFF) for 2028-2034 addresses biodiversity primarily under a broad "climate and environment" spending target—set at 35% of the total budget—but does not specify strong or dedicated instruments for biodiversity protection or research, marking a reduction in ambition compared to previous MFF periods



While biodiversity isn't yet carved out as a standalone budget line in the 2028-2034 MFF, it appears well positioned across multiple instruments—from research-centric (FP10, Biodiversa+) to finance-oriented (ECF, InvestEU/NCFF) to implementation-focused (LIFE, missions).

To maximize impact, stakeholders should monitor and influence:

- The allocation and prioritization within FP10 and the Competitiveness Fund.
- The design of InvestEU/NCFF projects to ensure biodiversity is integral, not peripheral.
- The mission frameworks, ensuring biodiversity restoration is deeply embedded.



Have a great time!

Ron Winkler

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Welcome words from the European Commission

Philippe Tulkens

Head of Unit Climate & Planetary Boundaries, EC DG RTD



Across Land and Sea Protecting and Restoring Biodiversity



Highlights from the Protection & Restoration Flagship

Magnus Tannerfeldt

Co-chair Biodiversa+, Formas



The layers of the Biodiversa+ framework



The "Why":

Biodiversa+ vision & objectives representing the direct impact areas of its R&I activities

The "What":

Biodiversa+ Strategic Research & Innovation Agenda to translate **the why** into R&I priorities

The "How":

Biodiversa+ Flagship Programmes for implementation of the what through thematic initiatives

The "Who":

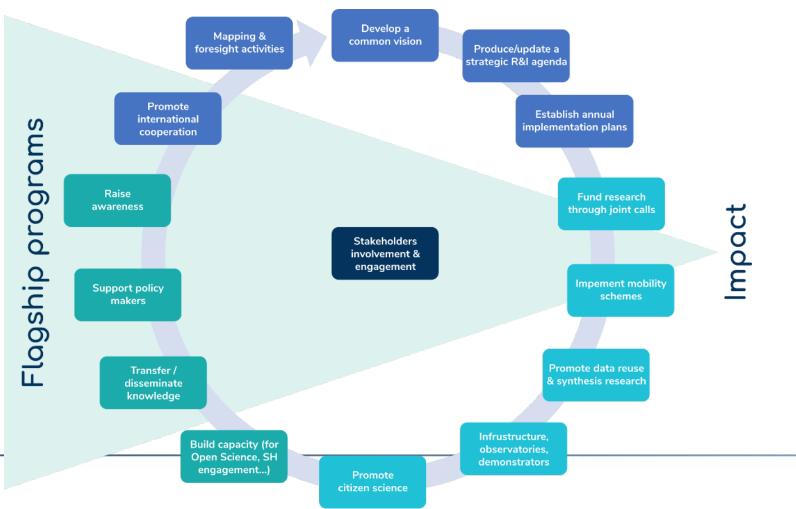
Biodiversa+ Work Packages to translate the strategy into action and deliver results within **the How**



What are Flagship Programmes?

- Multi-annual programme addressing a particular biodiversity issue
- Aim at implementing a holistic set of activities

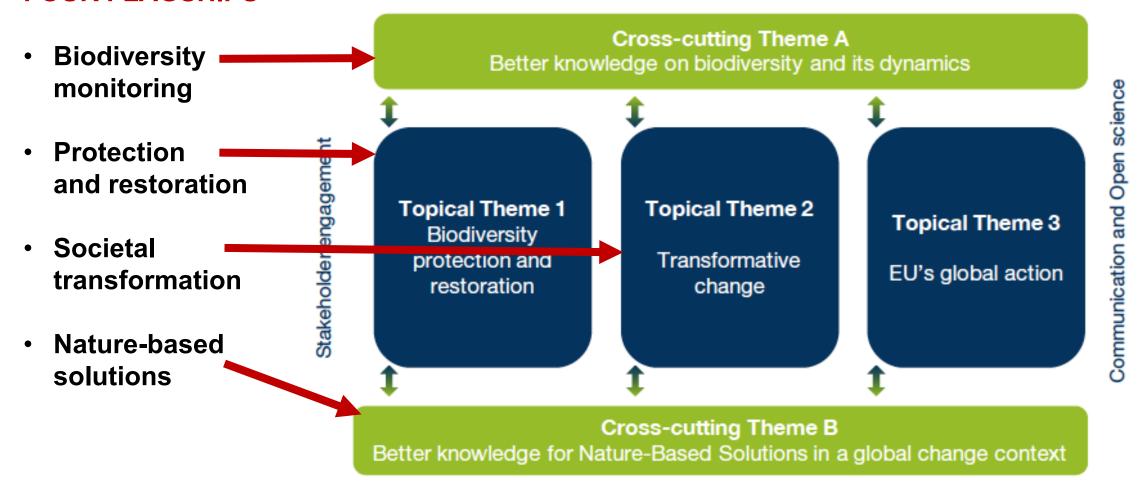




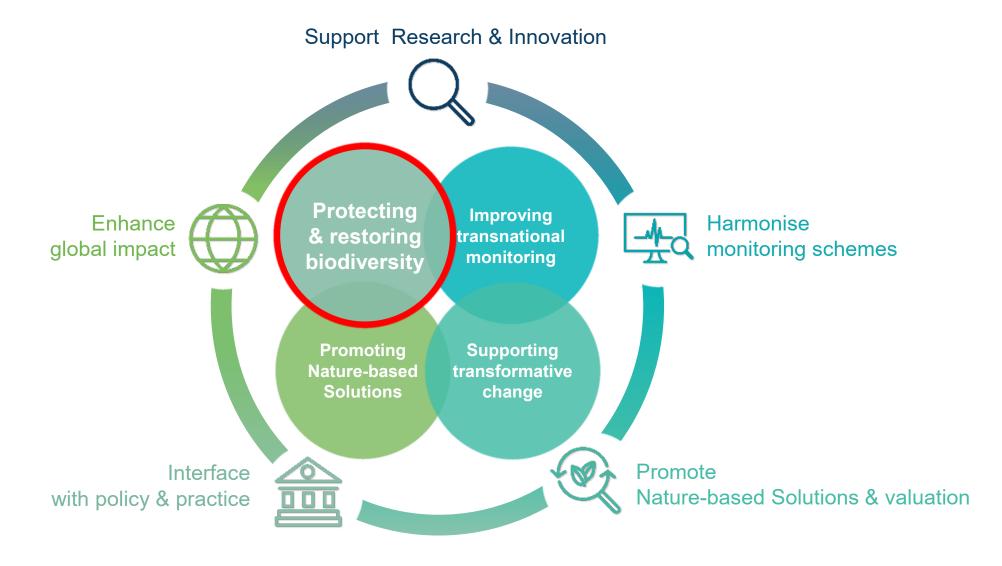


Alignment with SRIA Themes

FOUR FLAGSHIPS









Biodiversa+ Flagship programme #1 Supporting protection and restoration of biodiversity and ecosystems across land and sea

BACKGROUND

- In line with the Kunming-Montreal Global Biodiversity Framework, the European Green Deal and its EU Biodiversity Strategy 2030 recognise that
 - o **protected areas are key** for the protection of biodiversity
 - the existing network of protected areas is not sufficiently large and adequately managed
- The EU Biodiversity Strategy and the recent Nature Restoration Regulation
 - o request urgent upscaling of restoration efforts for damaged ecosystems at sea and on land
 - highlight importance of ecological corridors
 - o stress of promoting and supporting investments in green and blue infrastructure





OBJECTIVES

- Contribute to more coherent spatial planning of sea- and landscapes while accounting for ecological, economic and social dimensions
- Improve knowledge of ecosystem functioning and the ecological processes
- Better knowledge to safeguard species, genetic and ecosystem diversity
- Delivering actionable knowledge for scaling-up conservation approaches acknowledging local complexity, heterogeneity and dynamics







OBJECTIVES cont...

- Provide actionable knowledge and useable guidelines for conservation stakeholders on what to protect and restore and how
- Support countries in achieving their restoration targets including through strengthening the knowledge base
- Understand and support changes of the economic system and its incentives to support protection and restoration of biodiversity and ecosystems and increase public and private investments,





EXAMPLES OF ACTIVITIES

- Transnational **research calls**: **BiodivProtect and BiodivConnect** (ca. 80 M€ funding for ca. 65 project consortia)
- Clustering activities and capacity building for funded projects
- Science-policy forum on Key Biodiversity Areas and a trans-European nature network, in support of the GBF
- IPBES Regional Dialogues (Global Assessment, ECA Regional Assessment,...)
- Promoting European and global earth observation programmes and research infrastructures





EXAMPLES OF ACTIVITIES cont...

- Linking with biodiversity monitoring activities to assess protection and restoration schemes and approaches
- Linking with international processes and global action of the EU
- Development of success stories regarding nature protection and restoration, promoting (nature-based) solutions
- Stakeholder engagement activities to help close the gap between research and implementation

Interconnected Categories of Knowledge Gaps

- Ecosystem conditions, processes, interactions, and threats, especially in understudied ecosystems, such as soil, freshwater, Arctic, marine, seabed, and wetlands
- Data that can be used to assess effectiveness of policy options, including equity of access and benefits

- Impacts and extent of nature's contributions to people on quality of life differentiated by major user group
- Integration of Indigenous and Local Knowledge Into biodiversity and ecosystem services assessment

Data & monitoring
Observation

Projections
Modeling &
scenarios

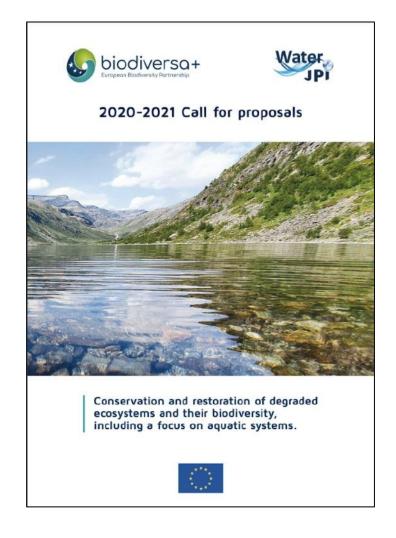
- Socioeconomic and biodiversity scenarios that explicitly integrate input from and impacts to indigenous and other diverse communities
- Models that integrate interaction, feedback, and spill-overs among regions

Process & conceptual models Understanding

interventions & policy analysis

 Integration of data and models to evaluate the effectiveness of interventions and policies etc. and understand syneroies and trade-off





EXAMPLES OF ACTIVITIES cont...

- Dialogue events with researchers, policy makers and stakeholders
 Restoring biodiversity, habitats and ecosystems, National Plans for
 Nature Restoration
- Desk studies and mapping

 Effectiveness of terrestrial protected areas; Role of biodiversity in

 Nature-based Solutions
- Using the BiodivRestore Knowledge hub to support implementation of science-based advice



Flagship Programme #1 - Looking ahead



- Continue to generate & consolidate knowledge
- Support implementation through the BiodivRestore Knowledge Hub
- ➤ **Follow-up** research projects from the BiodivProtect and BiodivConnect call
- ➤ Launch a **new call** on "Future sustainable socioecological systems: trajectories of change" (preliminary title)

Combining research, policy support, and stakeholder engagement, to equip Europe to deliver on ambitious EU and global targets for biodiversity protection and restoration, bringing tangible benefits for nature, society, and the economy



Thank you!

Magnus Tannerfeldt
magnus.tannerfeldt@formas.se



Advancing knowledge on protected areas

Catherine Julliot

French Ministry of Environment (MTECT)



Dialogue-Event on "Restoring Biodiversity, Habitats and Ecosystems"

May 2024, back-to-back with 1st BiodivRestore Knowledge Hub meeting

How could Biodiversa+ support the implementation of national restoration plans?

Who? Researchers, policy makers and stakeholders (33)

What for?

- identify knowledge gaps and research needs
- identify potential support activities

How?

Based on a **framework paper** and two key entry points:

- science-based support for prioritisation
- ensuring restoration in the long term





Out-put of the dialogue:

- to develop inclusive prioritisation involving social and natural sciences for local-level integration
- to incorporate the concept of ecological continuity into restoration criteria
- to support long term restoration projects and long-term monitoring
- to involve stakeholders at different scales (local, national, regional and international)
- to develop legal guidance and communication to the public, scientists and diverse practitioners.

Special focus on monitoring: restoration monitoring should be supported by guidance and key R&I, such as harmonising protocols, developing synergies with climate monitoring and different scales of monitoring (local, national, regional and international).

Numerous concrete proposals for Biodiversa+ Portfolio of activities and for the work programme of the BiodivRestore Knowledge Hub



Outcomes of the dialogue-event: Recommendations for the BiodivRestore Knowledge Hub

Main functions of the Nature Restoration Knowledge Hub:

- Collection and synthesis of 27 MS's nature restoration (NR) plans
- Toolbox of facts, maps, and case studies
- Interactive atlas of NR projects, incl. funding and policy aspects
- Platform for questions and answers on NR
- Rapid response to questions of public authorities and other decision-makers
- Policy support and advise on managing trade-offs between NR objectives
- Guidelines on good practices on adaptive management and socioeconomics
- Dialogue between EU (policy) and national/local (implementation) levels
- KH shall involve national experts and local case studies
- Upscaling and replication of successful NR activities

Main activities of the Nature Restoration Knowledge Hub:

- Development of guidance of how to prioritize nature restoration (NR) areas
- Overview and assessment of best practices of NR, incl. projects (success/failures)
- Stakeholder mapping and motivations informed by social/behavioral sciences
- Good practices of stakeholder engagement & communication for participatory NR
- Overview of legal aspects, property rights and institutional models for NR
- Overview of compensations and funding possibilities for NR
- Meta-analysis of cost-benefits of NR practices



Examples of proposals for the Biodiversa+ portfolio of activities

- > Develop science-based narratives in favour of nature restoration in the Biodiversa+ SRIA
- > Research on restoration monitoring including best practices on the use of remote sensing
- Research on reference systems: Because reference systems are changing, do we need to let go of the reference? Are we now heading for dynamic ecosystems? What kind of conservation do we want? A dynamic conservation or based on an old referenced one? And how to do it in practice, how to conceptualise a model of restoration and conservation for ecosystems without a reference system?
- ➤ Consultation or dialogue-event on National Restoration Plans (NRPs) with scientists, spatial planners, policy makers, and ministries of the member states to identify prioritisation criteria, best practices and areas to be restored for maximum synergies in the restoration plans.



Dialogue-Event on National Restoration Plans

May 2025, back-to-back with 2nd BiodivRestore Knowledge Hub meeting

How to prioritise degraded habitats for restoration by 2030?

Who? Researchers and policy makers (35)

What for?

To support Member States with the scientific basis needed to prioritise restoration projects and meet the 20-30% target by 2030

How?

Based on a survey of 24 Member States and case studies from France, Czech Republic, and Poland, guiding the Dialogue Event with the Knowledge Hub.





Main challenges:

- Characterising the ecological conditions baseline for habitats and species to be included in NRPs
- Improving stakeholders' involvement in the planning process
- Conveying to the public the co-benefits of restoration along with the costs of inaction
- Making the most of existing funding schemes and scientific expertise in the short-term planning phase, so that initial habitat condition diagnoses and proposed restoration measures might be as scientifically grounded and operationally demanding as possible
- Funding each step of the NRR implementation

Main needs:

- **In the short term**, science-based guidelines with operational methods for the quantification of favourable reference areas (FRAs), the mapping of habitats and the design of re-establishment protocols to assist them in mapping habitats and defining pertinent measures to improve their quality and quantifying FRAs.
- **In the middle to longer term**: the role to be played by citizen-science in the implementation and monitoring of restoration measures, the contribution of passive restoration to the achievement of the overall NRR goals, the tools and methods to be employed in order to efficiently address large-scale restoration projects



Knowledge synthesis

How is the effectiveness of terrestrial protected areas to conserve biodiversity measured?

Secondary questions:

Which protected area effectiveness methods and metrics have been well used, and which are under-represented or absent from the evidence base or particular contexts? ...

Question structure:

Population: Terrestrial systems globally

Intervention: Protected area establishment / presence

Comparator: Outside protected areas, before establishment of protection,

or in the absence of a protected area

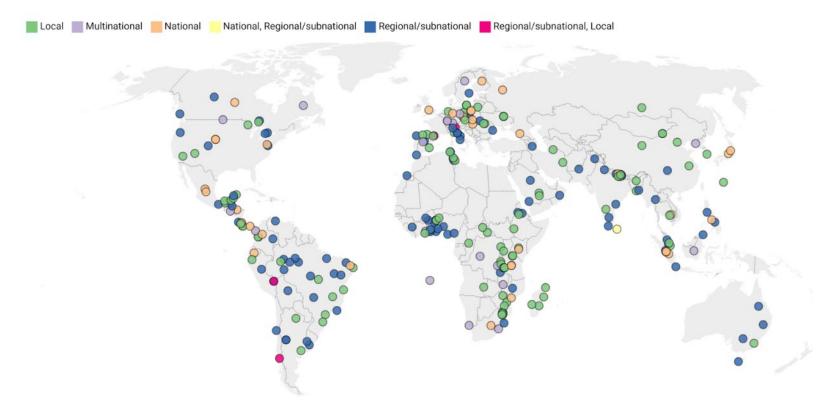
Outcome: Methods for measuring terrestrial protected area conservation

effectiveness using direct or indirect biodiversity metrics





Geographical distribution of the evidence base



| Continent | Articles |
|--------------------|----------|
| SSA | 63 |
| Asia | 50 |
| Europe | 46 |
| South America | 40 |
| Central America | 21 |
| North America | 19 |
| Multiple | 17 |
| MENA | 14 |
| Oceania | 6 |
| Antarctica | 1 |
| | |

Created with Datawrapper

Figure 3. Evidence atlas showing **the geographical location** of all studies included in the systematic map, including the study scale

(Interactive version available here: https://datawrapper.dwcdn.net/Th2Jd/1/).



Sampling methods used to measure effectiveness

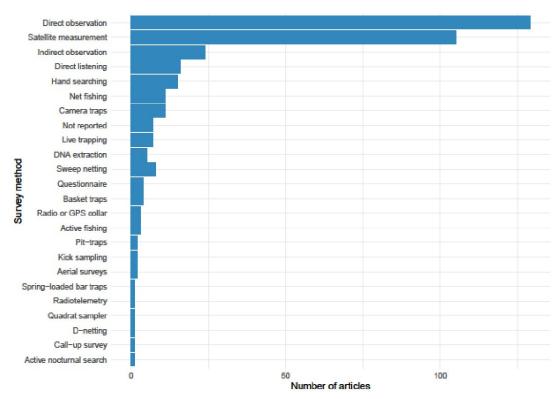


Figure 10. Number of articles by survey method used

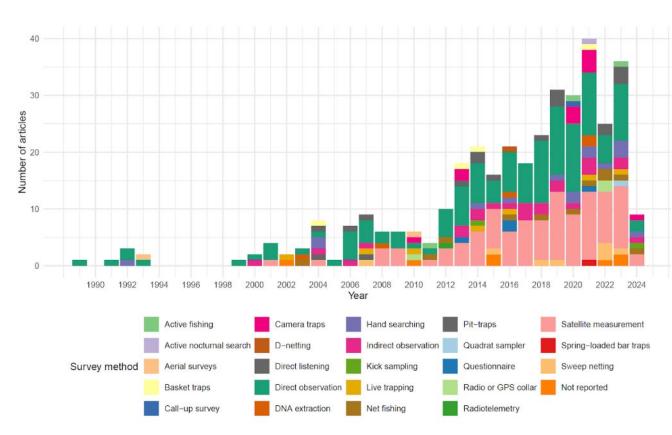
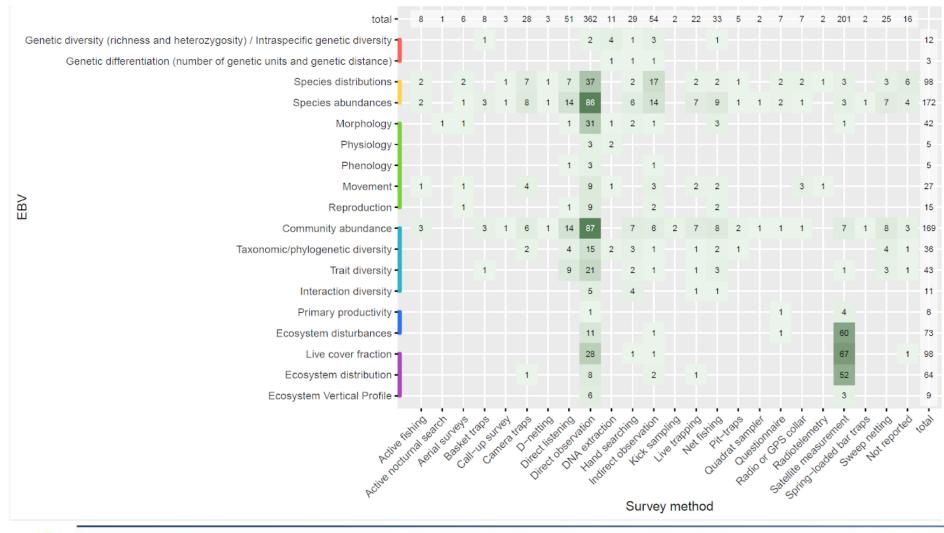


Figure 13. Number of articles across publication year by survey method



Cross-variable patterns



Essential Biodiversity Variables (EBVs) examined by survey method in included articles.

Red = Community
composition, yellow =
Ecosystem functioning,
green = Ecosystem
structure,
turquoise = Genetic
composition,
Blue = Species
populations,
purple = Species traits.



Future directions and implications for conservation

- Address persistent gaps: Despite advances in spatial data, remote sensing, and control-intervention study designs, there is a need for more rigorous experiments, wider geographic coverage, and deeper focus on <u>species and genetic biodiversity levels.</u>
- Promote integrated approaches: Long-term monitoring, interdisciplinary collaboration, and inclusion of both <u>social and ecological indicators</u> are essential to understand and manage conservation trade-offs.
- Support adaptive management: Future research should refine methods, standardize biodiversity metrics, and build a stronger evidence base to guide effective protected area management and policy.



Thank you!

Catherine Julliot

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Joseph Langridge

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A knowledge hub for restoration

Richard J. Lilley

Rijksuniversiteit Groningen European Seagrass Restoration Alliance SER Europe Marine Restoration Working Group







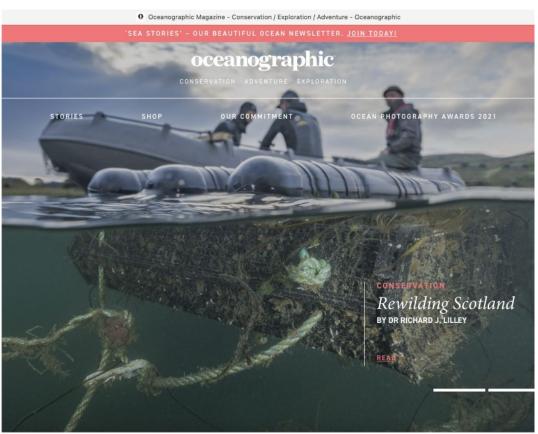
= Encourage and promote effective public, public-private and civil society partnerships...



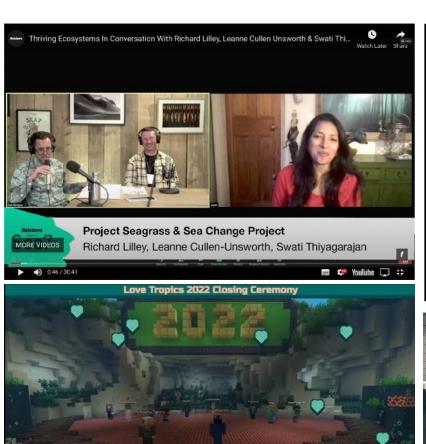










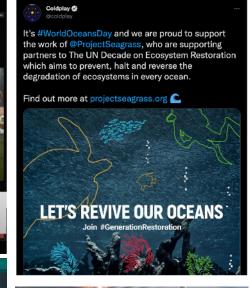


This was definitely worth the watch @RJLilley! We're proud to be supporting @projectseagrass and @wwf_uk to help restore this precious habitat. Let's

Carlsberg UK <a> @CarlsbergUK · Jan 17

raise a glass to that #TheGreenPlanet

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\$24,078.00 RAISED



BiodivRestore Knowledge Hub Workplan

Optional

Workshop supporting the NRP implementation

Business & Biodiversity Workshop

Webinar | NRP/NRR implementation capacity building

Webinar | Avoiding risky restoration: Key pitfalls in restoration and how to mitigate these risks

Webinar | Conflict resolution and monitoring for adaptive management

Foundational digest on the NRR

Mapping | existing restoration guidelines

Knowledge gaps paper analysis

NRP implementation recommendations guide

Typology/mapping | Societal conflicts in restoration

Paper on adaptive management

Feedback on NRP draft - EC Consultation

Delivered

Policy Brief | Avoiding risky restoration: Key pitfalls in restoration and how to mitigate these risks

Policy Brief | Enabling
Public-Private Partnerships
for Nature Restoration

Policy Brief | Conflict resolution and monitoring for adaptive management



BiodivRestore Knowledge Hub Workplan

Foundational digest on the NRR

-> To help the public to get oriented in the NRR and to find relevant resources

NRP implementation recommendations guide

-> Document concluding the experience (best practices and failures) with the NRR implementation

 -> To notify the policymakers and other stakeholders about the risks of restoration

Typology/mapping | Societal conflicts in restoration -> Mapping of societal conflicts in restoration to provide support to stakeholders

Mapping | existing restoration guidelines

-> Summary of restoration guidelines around the EU Member States to provide the overview.

Webinar | NRP/NRR implementation capacity building

-> Webinar for the general public to inform about and to support the implementation of the NRR.

Feedback on NRP draft - EC Consultation

Policy Brief | Avoiding risky

restoration: Key pitfalls in

restoration and how to

mitigate these risks

Delivered

-> The EC launched a consultation on the Uniform Format for the National Restoration Plan. The Hub submitted a feedback.



National Restoration Plans: fostering synergies

NRPs includes **fostering** synergies (Art 14(17)):

Member States shall, where possible, foster synergies with the national restoration plans of other Member States, in particular for ecosystems that span across borders or where Members States share a marine region or subregion

Considerations:

- identifying habitat types or targets that cross borders
- communication in the development of NRPs between MS
- restoration area prioritization and measure selection
- data sharing
- opportunities for cost efficiency (skills and materials)



Thank you!

R.J. Lilley r.j.lilley@rug.nl



Improving governance of natural areas through shared stewardship

Federica Cittadino

Eurac Research | TRANSNATURE



TRANSNATURE

TRANSNATURE: TRANSboundary governance models of biodiversity protection: case studies for an enhanced protection of NATURal resources in Europe

Length

March 2023 February 2026

4 partners:

- Eurac Research (lead)
- University of Ghent
- Universitat Rovira i Virgili
- University of Lapland

- 4 national funding institutions:
- Autonomous
 Province of BZ
- FWO
- Agencia Estatal de Investigación
- Academy of Finland



TRANSNATURE: objectives

- To study the transboundary governance of biodiversity protection (TBP)
- To identify successful examples of TBP

To improve TBP, by proposing ways to address common challenges



Comparison of 4 case studies

Scheldt estuary (BE/NL)

- Estuary with ecological relevance (Natura2000, Ramsar), with nature organizations, port, agriculture and tourism
- Formalized cooperative scheme

ZASNET (PT/ES)

 One of the largest MAB Transboundary Biosphere Reserves in Europe, relevant for agriculture and tourism

O

Formalized cooperative scheme

Baltic to Barents (FI/NO/SWE)

- Large area (forest and river) with Sámi presence
- 3 context-specific cooperation schemes

Julian Alps (IT/SI)

- Peripheral mountainous region with tourism, agriculture and hunting
- Inter-park cooperation



TRANSNATURE: methodology

Qualitative empirical legal research – 3 different methods

- Document analysis
- Interviews
 - Anonymization
 - Interview reports
 - Coding
- Focus groups



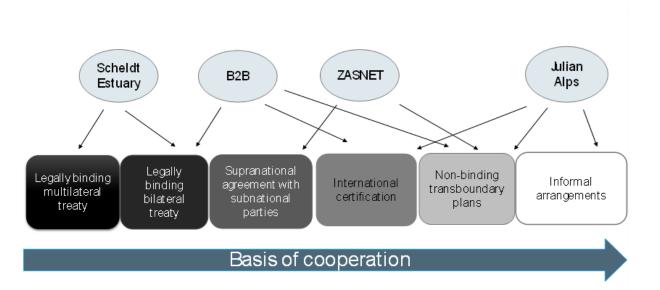
Stakeholder engagement

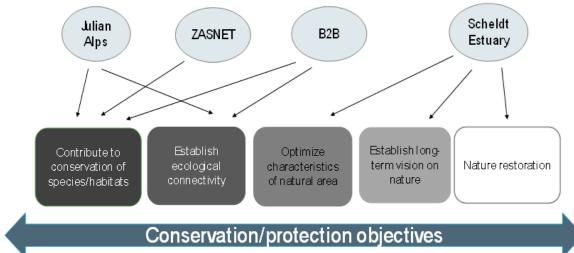
- Before the project
- Initial stakeholder engagement
- Interviews and focus groups
- Case-specific policy recommendations
- International policy brief



Context shapes cooperation...

...and type of transboundary biodiversity protection







Thank you!

Federica cittadino

federica.cittadino@eurac.edu

www.transnature.eu

A Clearer Picture Joining Forces for Transnational Monitoring



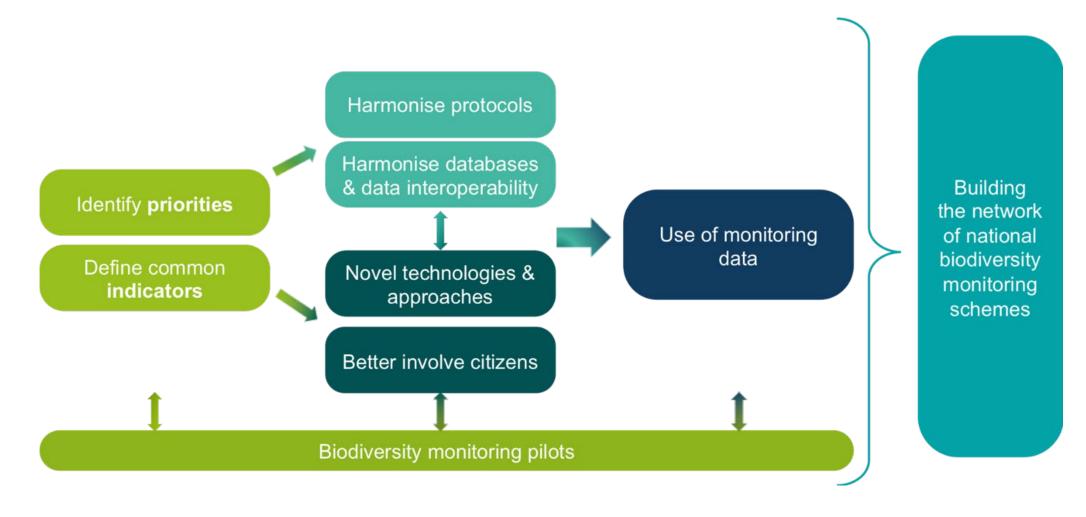
Highlights from the biodiversity monitoring flagship

Petteri Vihervaara

Biodiversa+ WP2 leader, MoE_FI



A place to collaborate: our WP2





A big picture of the main phases





Biodiversity monitoring priorities



- Protected Areas
- Habitats
- Marine Biodiversity
- Invasive Alien Species
- Soil Biodiversity
- Insects
- Wildlife Diseases
- Urban biodiversity
- Bats
- Genomics and genetics monitoring
- Wetlands
- Common species

Specific topic: Transversal activities



Biodiversa+ pilots: towards transnational collaboration and harmonisation



- 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 to be launched in 2026 (5.5M €)





Joint research calls

At least

6

calls over 7

years

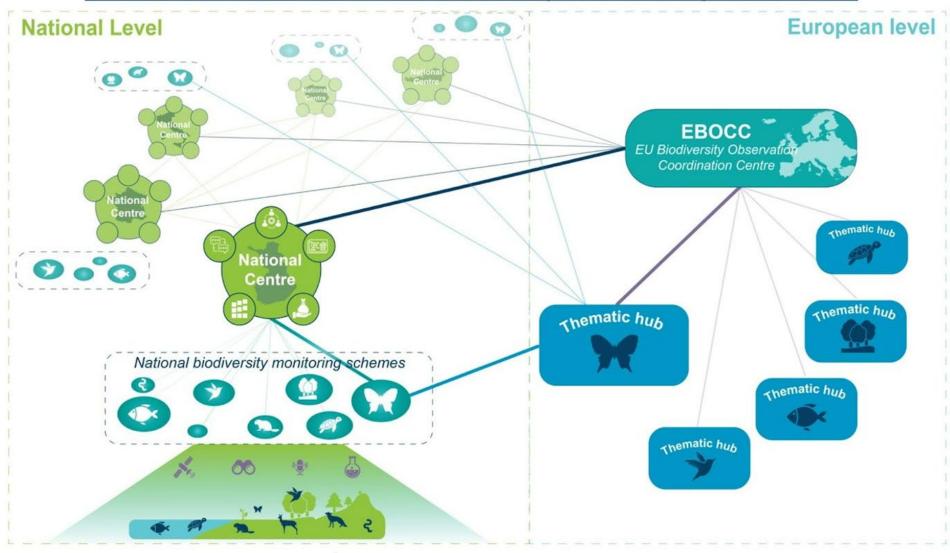
>40 M€ each ca.30 projects per call

- 2021 | Biodiversity protection
 - ▶ 36 projects >44M€ 38 funders 28 countries
- 2022 | Biodiversity monitoring
 - ► 33 projects >46M€ 33 funders 23 countries
- 2023 | Nature-based solutions
 - ▶ 34 projects >40M€ 41 funders 34 countries
- 2024 | Societal transformation
 - ► Launch Sept. 2024, decision fall 2025, res. budget >40M€



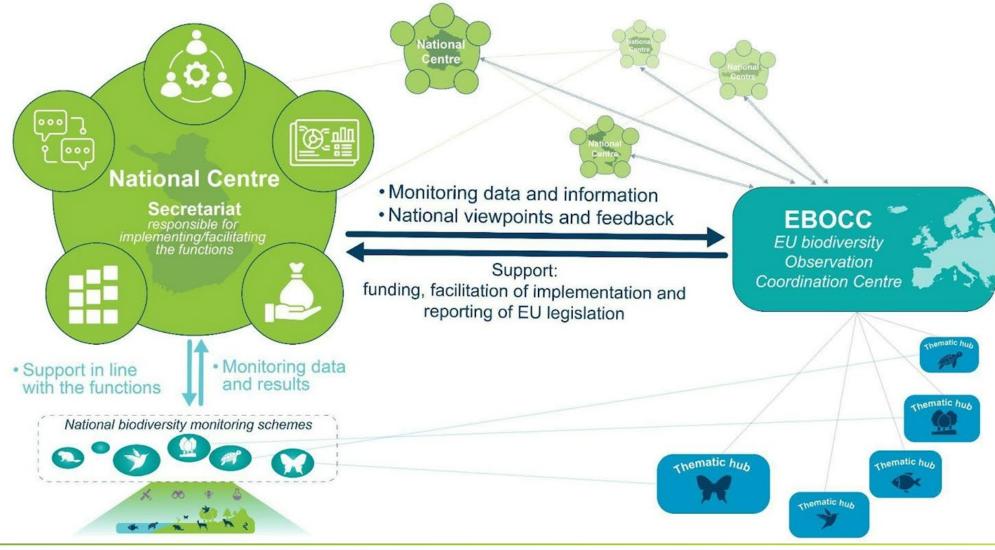


Coordination model for biodiversity monitoring in Europe





National Biodiversity Monitoring Coordination Centre





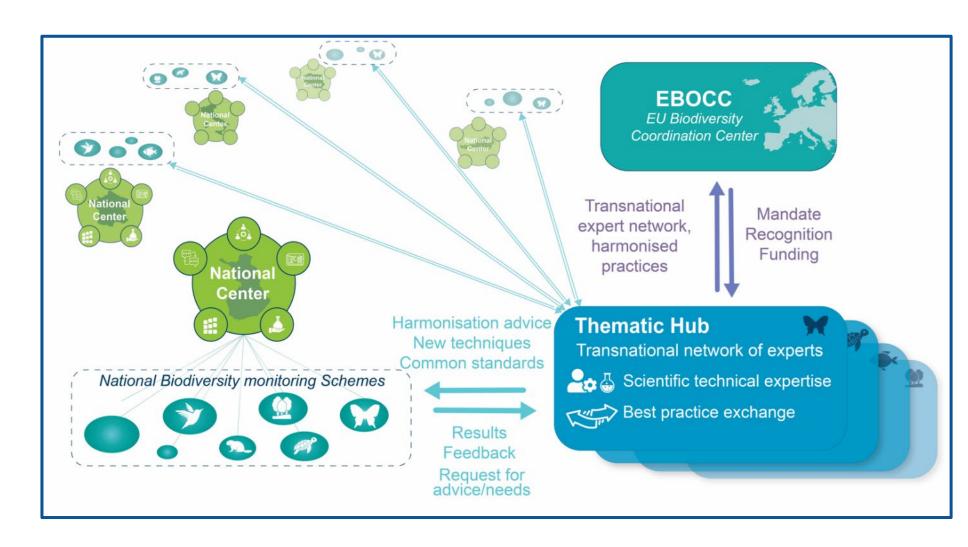
Thematic Hubs

What are they?

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

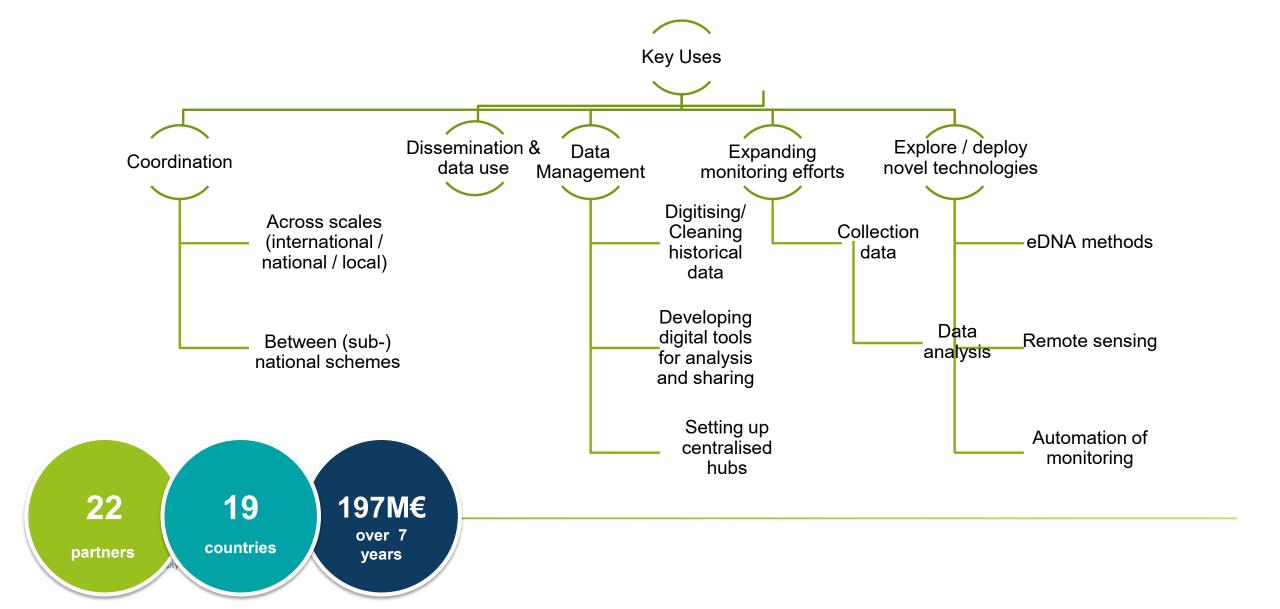
Why integrate them?

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

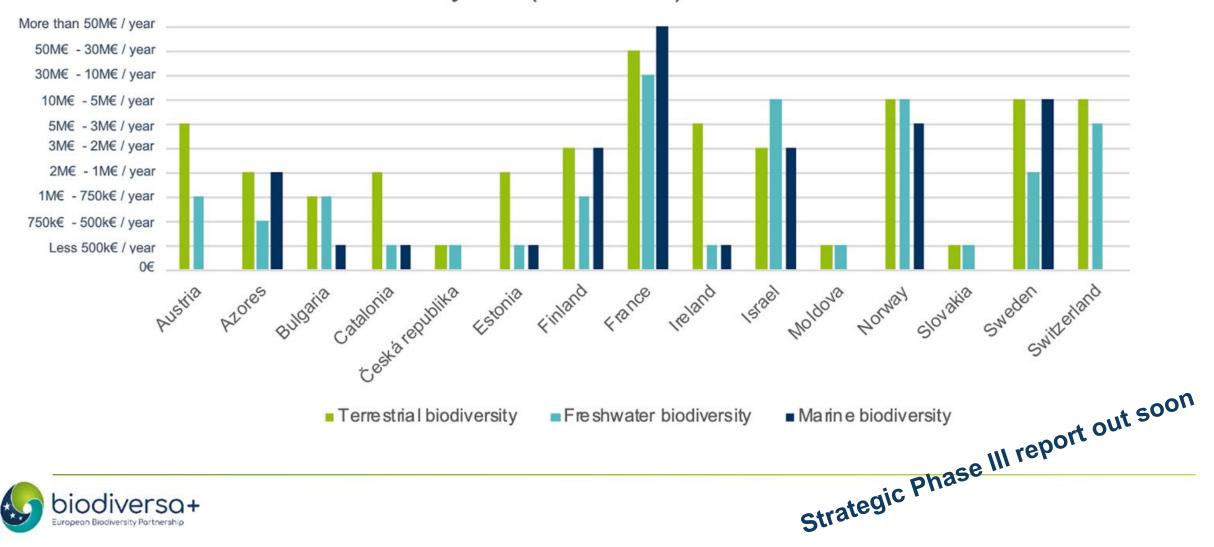




Classifying monitoring activities by partners at national scale



Estimated budget spent on a yearly basis during the last 10 years (2014-2024) to monitor





Biodiversa+, GBIF and MARCO-BOLO are proud to invite you to the

1st European biodiversity monitoring week



guillaume.body@ofb.gouv.fr; mathieu.basille@ofb.gouv.fr

Key messages

- Pilots introduce a new approach to strengthen transnational biodiversity monitoring cooperation.
- Biodiversa+ has supported partner countries in defining 13 priority topics for collaboration.
- MoEs and EPAs jointly assessed **expenditures across monitoring categories**, including average annual costs for terrestrial, freshwater, and marine realms over the past decade.
- Development of national biodiversity monitoring coordination centres has been initiated.
- Thematic hubs have the potential to evolve into self-organised bodies.
- Biodiversa+ brings **together** agencies, ministries, researchers, and NGOs to co-design the building blocks of a European biodiversity monitoring framework.



Continuation of the biodiversity monitoring cooperation initiated under Biodiversa+ is very important, and EC co-funding has proven successful.



Thank you!

Petteri Vihervaara
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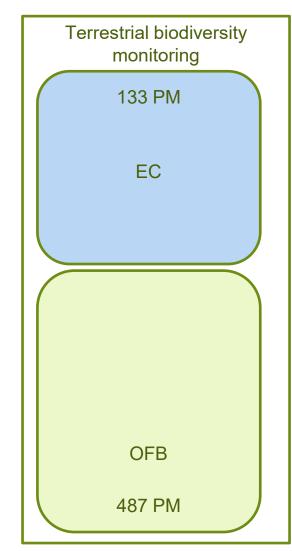
Biodiversa+ national monitoring activities in France

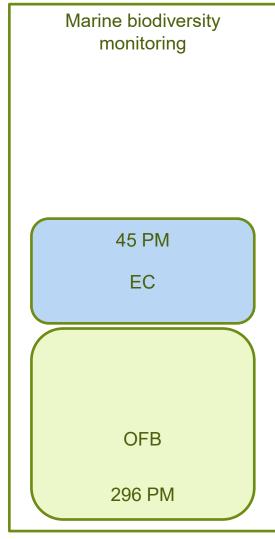
Guillaume Body

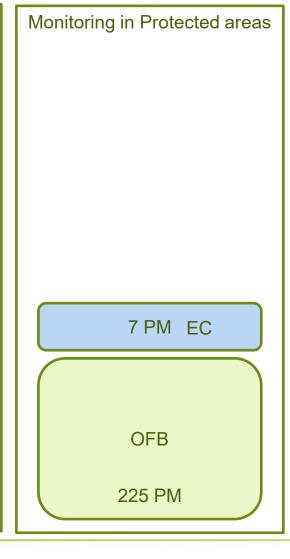
Patrinat unit (OFB-MNHN-CNRS-IRD)

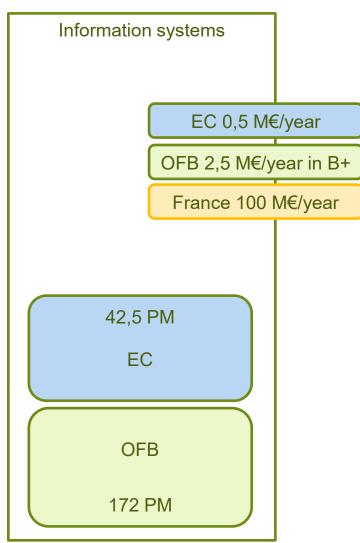


Strenghtening national capacities on biodiversity monitoring in Biodiversa+



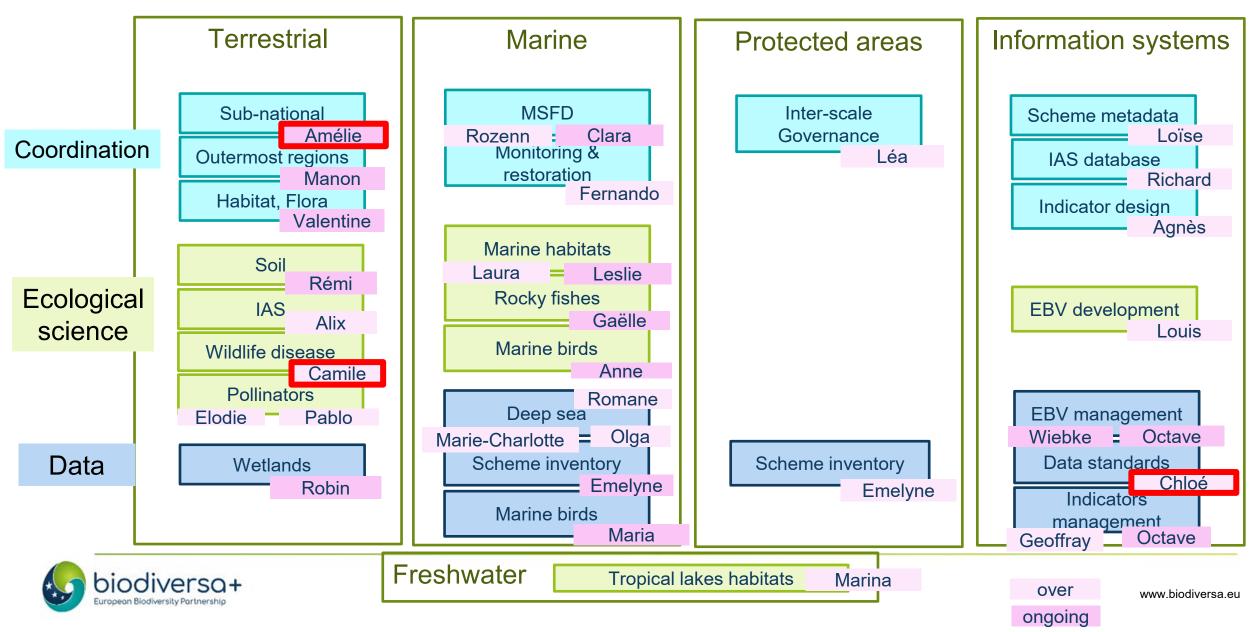








Strenghtening national capacities on biodiversity monitoring in Biodiversa+



Amélie Rusu-Stiévenard Transversal activities Articulation accross scales for the terrestrial biodiversity monitoring program

French Republic

Ministère de la transition écologique et de la cohésion des territoires Direction générale de l'aménagement du logement et de la nature Direction de l'eau et de la biodiversité

Objective 1: Involve regions in the national monitoring program

Decision of January 9th, 2024

On the approbation of the national strategical framework on terrestrial biodiversity monitoring 2024-2025

(Texte non paru au Journal officiel)

Le Ministre de la transition écologique et de la cohésion des territoires,

Vu la directive 92/43/CEE du Conseil, du 21 mai 1992, concernant la conservation des habitats naturels ainsi que de la faune et de la floro sauvages, notamment son article 11 portant sur la surveillance de leur état de conservation; Vu l'avis du Conseil national de la protection de la nature du 19 octobre 2023,

Décide :

Article 1er

Le schéma directeur de la surveillance de la biodiversité terrestre 2024-2025 est approuvé

Article 2

La présente décision sera publiée au Bulletin officiel du ministère de la transition écologique et de la cohésion des territoires.

Fait le 9 janvier 2024

For the minister
Director of water and biodiversity

Célia de LAVERGNE

> 200 monitoring schemes relevant for national considerations

Regional representative committee

2 sièges / région :

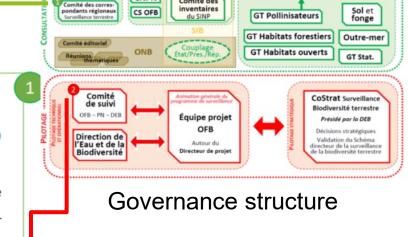
- 1 siège D(R)EAL (cheffes de file de la territorialisation du PNSBT)
- 1 siège pour une autre structure régionale, choisie par la D(R)EAL (DR OFB, Régions, Aire protégée, Agence de l'eau, ARB), dont :
 - 4 DR OFB: CVL, Occitanie, Délégation Guyane, PACA-Corse
 - 7 Régions : Corse (OEC), Bretagne, AURA, GE, HdF, NA, PdL
 - 4 ARB: BFC, Normandie, Occitanie, Ile-de-France
 - 2 Aires protégées : PN Guadeloupe, PNR Martinique
 - 2 sièges vacants : La Réunion, Mayotte

Prochain CCR: 11/09/2025 (1 réunion par an, précédent le 16/10/2024)

Regional delegation at the steering committee

- 5 DR OFB (AuRA, Bretagne, PACA-Corse, PdL, HdF) et la DOM
- 6 sièges D(R)EAL: HdF, NA, AuRA, Bretagne, Corse + 1 siège restant à attribuer pour l'Outre-Mer

Dernier CoSui: 07/03/2025 (environ 1 réunion par mois)



Comité des

CEPO | GT Faune

GT Flore

CNB

CNPN

Sub-national engagemement

Sub-national consultations

Regions

Political & financial discussions

Protected areas

Overseas departement



Camille Sandor Epidemiological monitoring: amphibian, reptiles, biosecurity and detection

Objective 1: Integrates amphibians and reptiles in the SAGIR scheme



- Development of diagnostic tools and partnerships
- Communication
- Publication on biosecurity
- Production of technic sheets:

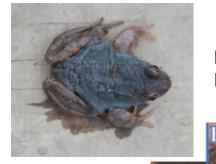
Guideline for lab necropsy

Fact sheet on disease

Fact sheet on decomposition steps

SAGIR is based on OFB and hunting federation staff covering all France territory, reporting unexpeted mortality of wildlife since 1986.

Used for Avian Influenza, African swine fewer



Detection of RHV3 in *Rana temporaria*



Chloé Vinet Monitoring data standardisation

Transversal activities



Applicability test of 2 data exchange standards
Darwin core & National data standard
for biodiversity monitoring data



Objective 1: Evaluate how well the current standards deal with monitoring data

eDNA protocol

LEDKOA: Aerial monitoring of marine mammals

ASPE: electric fishing

STOC-EPS: citizen science bird counting Vigie-Chiro: accoustic detection of bats

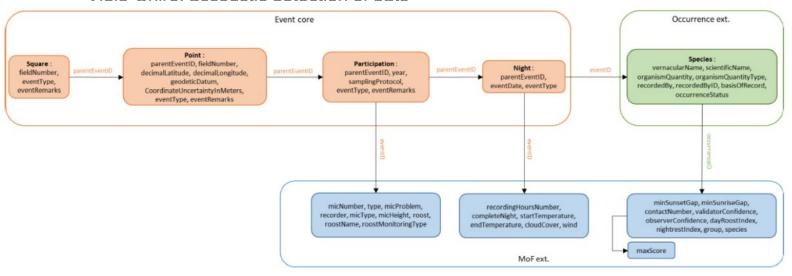


Figure 19 : Modèle conceptuel du jeu de données protocole point fixe Vigie-Chiro avec le DwC



Developing national capacities on transnational biodiversity monitoring

Guillaume Body
Coordination

Rémi Gerber



Mathieu Basille

Monitoring scheme development
EBV expert, Sub-task leader



Michelle Silva del Pozo
Protocole harmonisation
VRP of Biodiversa+ at Marco-Bolo
Sub-task leader





Marie Pierrel
National center
development



Amélie Rusu Stievenard

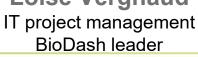
National – Subnational interface
for terrestrial monitoring



Alix d'Audeville
IAS monitoring expert
& new technologies









Thank you!

Guillaume Body
guillaume.body@ofb.gouv.fr



Biodiversa+ national monitoring activities in Finland

Ida Palmroos

Ministry of the Environment Finland



Biodiversa+ priority: habitats

Reinforcing ongoing activities

- 4 projects to support national Helmi habitats programme
 - Large geographic coverage
 - Woodland -, cultural & shore habitats and Helmi clusters
 - Simplifying and harmonizing methods for monitoring
 - Developing data management and sharing

Building new methods and monitoring schemes

- Stream monitoring network
 - Starting a new monitoring scheme
- Piloting and testing monitoring at Archipelago Sea
 - Considering the effects of eutrophication
- Developing an application to collect data from habitat types







Biodiversa+ priorities: Insects, Genetic & Genomics, Transversal activities

- Insects
 - Planning monitoring of insects in Habitat Directive
- Genomics
 - Planning monitoring of genetic diversity
- Transversal activities
 - Enhanced coordination nationally and transnationally (people recruited to MoE_FI)
 - Establishment of the Finnish Nature Information Hub https://luontotieto.syke.fi/en/



Viivi Myllylä/Image Bank of the Ministry of the Environment







What are the benefits of these activities nationally and transnationally?

- Fill in gaps in biodiversity monitoring in Finland
 - New monitoring schemes planned, tested and started
 - Methods are harmonized and new technologies taken into use
- Enhanced coordination both nationally and transnationally
- Better understanding of data management and its gaps
 - The development process is ongoing
 - Enables easier data sharing in the future



Plans into action

New methods and technologies







Thank you!

Ida Palmroos ida.palmroos@gov.fi



Consolidating the EU knowledge landscape



Actionable knowledge to tackle drivers of biodiversity loss



Improved monitoring of biodiversity and services across Europe (status and trends)



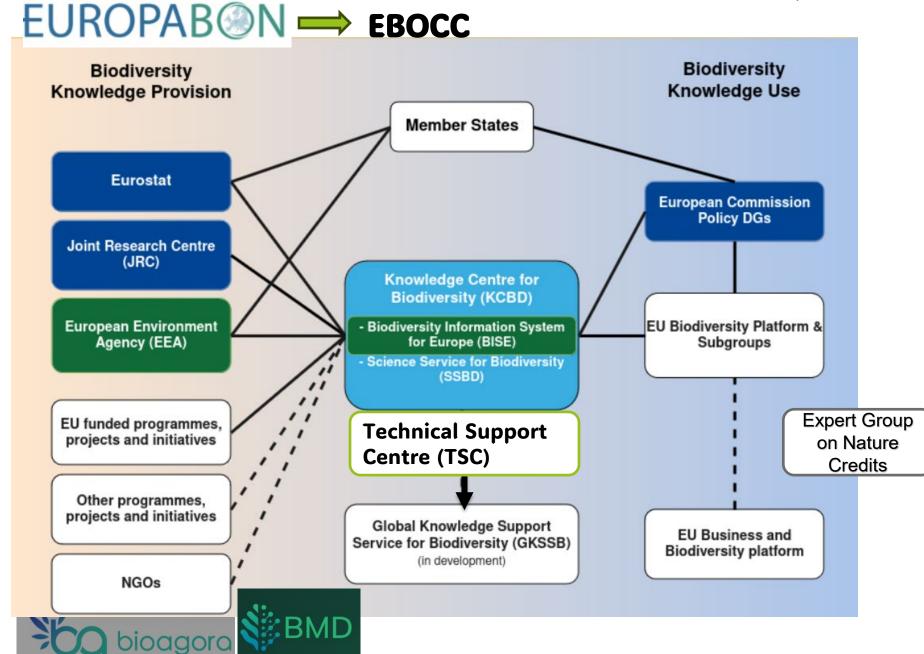
Evidence base for NbS development and deployment



Making the business case for conservation and restoration of ecosystems



Science-based support for biodiversity policy-making



Panel

Building stronger collaborations and governance for transnational monitoring

- Marialuisa Tamborra, EC Directorate-General for Environment
- Brian MacSharry, European Environment Agency
- Joe Miller, Global Biodiversity Information Facility
- Petteri Vihervaara, Finnish Environment Institute





Towards a Transnational Acoustic Biodiversity Monitoring Network

Dan Stowell

Tilburg University | Naturalis Biodiversity Centre | TABMON



The problem

- Acoustic monitoring of nature: exists
- AI bird sound recognition: exists
- but -
- Acoustic devices running long-term unattended?
- Robust AI sound detection in diverse habitats?
- Efficient use of expert effort to train AI?
- Observations -> Actionable Indicators?



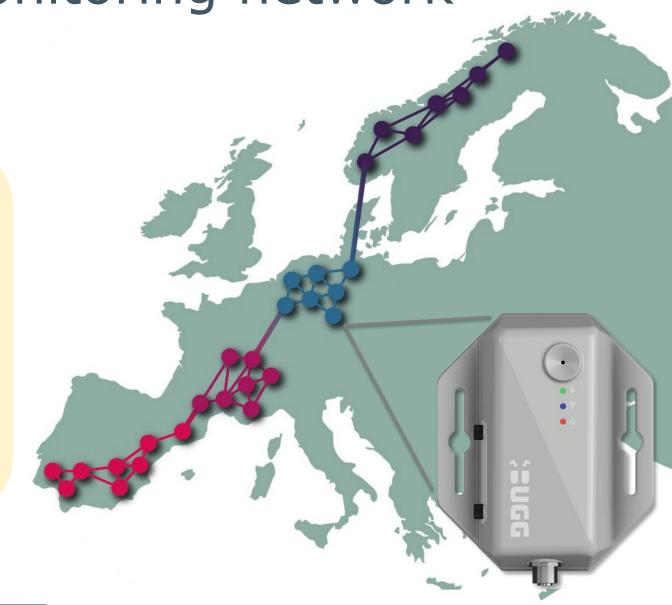
TABMON acoustic monitoring network

i

Devices – remote data submission, long-term deployment

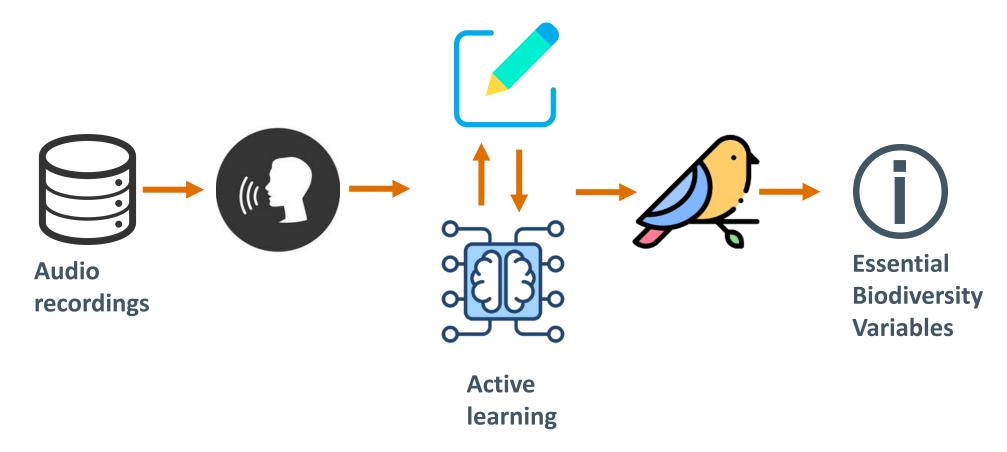
Sites – diverse habitats across a wide geography

Pipeline – setting up a transnational data-pipeline



TABMON acoustic analysis pipeline

How to handle the data deluge



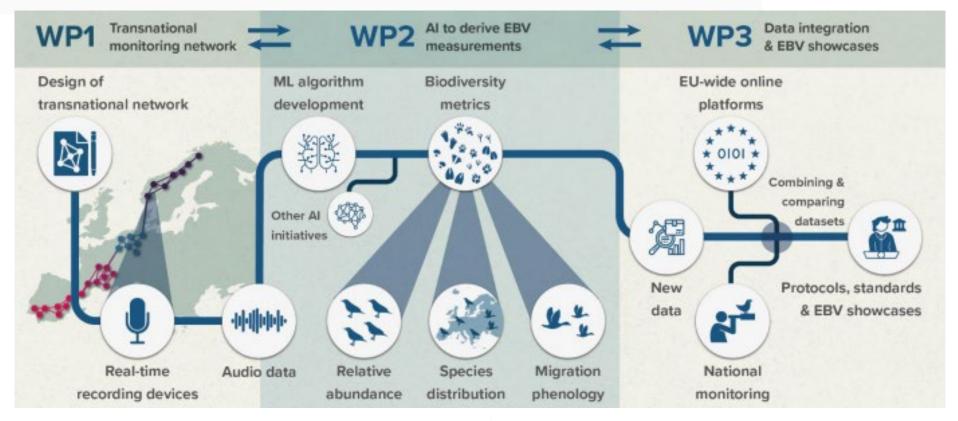
TABMON Dan Stowell

Contributions & Biodiversa+

- Transnational integration, harmonisation of methods and tools (BiodivMon theme 1)
- Fill knowledge gaps (BiodivMon theme 2):
 - Migration phenology
 - Night-active birds
- Increase the readiness level of automatic acoustic monitoring
 - "put numbers into people's hands"



The TABMON project









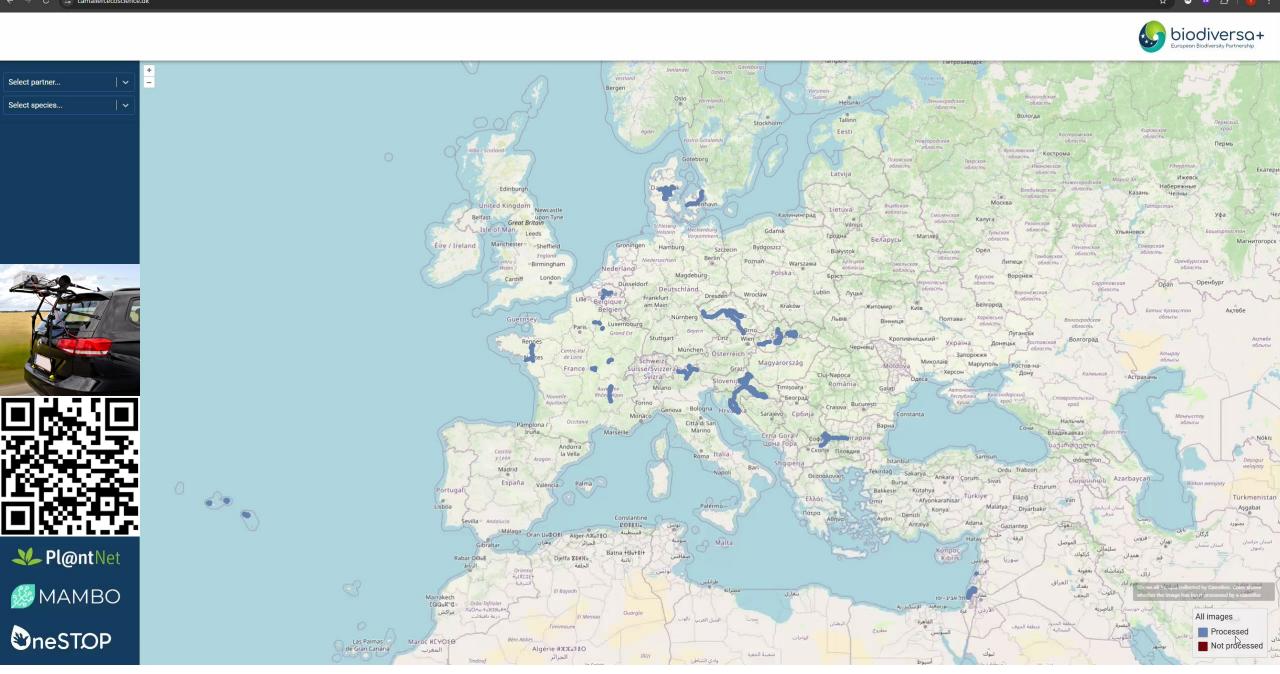




Thank you!

Dan Stowell

d.stowell@tilburguniversity.edu



https://www.biodiversa.eu/biodiversity-monitoring/pilots/ias-pilot/

Panel

Piloting harmonisation for biodiversity monitoring from testbeds to networks

- Albin Bjärhall, BOZEN
- Guillaume Body, OFB
- Gloria Casabella Herrero, DTER
- Toke Thomas Høye, SGAV





Mentimeter

In one word, what will you **remember** from this session?









Menti

MTC_Monitoring





Choose a slide to present









Beyond Incremental Catalysing Transformative Change



Highlights from the Transformative Change Flagship

Ron Winkler
Co-chair Biodiversa+, NWO





Support Research & Innovation





Dialogue-Event on "Transformative change for biodiversity"

Paris, June 2022

 $\grave{\mathbf{u}}$ \sum How can the European Biodiversity Partnership (Biodiversa+) respond to the ambitions of the EU and IPBES on transformative change for biodiversity?

 Σ " researchers, policy makers and stakeholders

- ő
- better define "transformative change for biodiversity"
- identify knowledge gaps and research needs on transformative change & biodiversity
- identify activities that Biodiversa+ could implement on the topic of transformative change & biodiversity





Dialogue-Event on "Transformative change for biodiversity" Paris, June 2022



` :

- strengthen connections with Horizon Europe projects and other European initiatives,
- enhance capacity building, transdisciplinary activities and research
- use local knowledge internationally
- need for stakeholder involvement in co-designed and coimplemented research projects
- improve communication with policy advisors and decision-makers



Consultation on Transformative Change

- $\hat{\mathbf{u}}$ Σ How to prioritize the proposals of the dialogue-event?
- ő
 - participants of the dialogue event (Delphi process)
 - Biodiversa+ partners and Enlarged Stakeholder Board (ESB)
- aimed at identifying transversal priority themes and cross-cutting activities to be further explored by the Partnership
- n two surveys
- å

Two priority themes to be further explored at two workshops:

- Transformative Change for Biodiversity & Economic Systems
- Transformative Change for Biodiversity & Public Policy





Workshops on "Transformative change for biodiversity" online, June 2023

- n two workshops
- about 15 experts each (scientists on economy, policies, governance,..., financial groups,...) + coordinators of HEU relevant projects
- to shed light on the key approaches, concerns, obstacles and priority research avenues to guide the upcoming BiodivTransform call.

Two sub-questions:

- How to frame a research call on societal transformation for biodiversity?
- What research needs and knowledge gaps on societal transformation and biodiversity could been identified?



Workshops on "Transformative change for biodiversity"



٤

- challenge the current vision of a good quality of life
- move beyond anthropocentric perspectives.

ù

ν " Σ " Σ

- Integrate approaches: move from sectoral to integrated approaches;
- Promote collaboration and literacy: encourage cooperation and facilitate biodiversity literacy among stakeholders;
- Address equity and justice: reflect on current models and policies and how a just transition can benefit biodiversity
- Develop tools and innovations: creating democratic innovations and practical tools to assess the biodiversity impacts and dependencies.





2024-2025 Joint Call
Biodiversity and Transformative Change
#BiodivTransform



Key collaboration with Alternet





Focus on the topic of biodiversity and societal transformation on science-policy/science-society interface

- 4 summer schools of 10 days co-funded to date
- 2 alumni meetings (A4CAP) as follow-up supported
- -> Supporting early career researchers and young professionals capacity building on transformative change in a socio-ecological context



Business and biodiversity workshop

- $\hat{\mathbf{u}}$ \sum how to make biodiversity data meaningful and usable for businesses.
- **8** Experts from science, policy, and the private sector

= " :

- Limited awareness of existing data sources due to fragmentation and capacity gaps
- Fragmented, inconsistent data scattered across platforms
- Low resolution of public data for site-level or supply chain decisions
- Restrictive licensing and unclear usage terms
- Uncertainty about emerging regulations and frameworks

Barcelona, June 2023

Stay tuned - 2 Biodiversa+ guides scheduled for release this autumn!

Thank you!

Ron Winkler

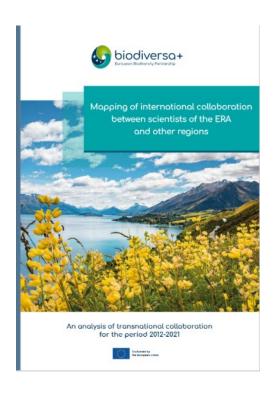
r.winkler@nwo.nl

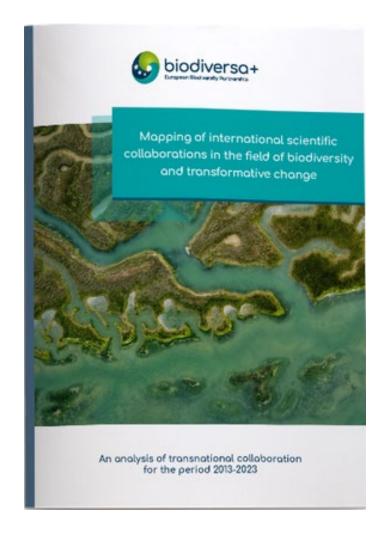


Mapping of international scientific collaborations on biodiversity & transformative change (2013-2023)

Andreea Popa *UEFISCDI*











Scope & Dataset

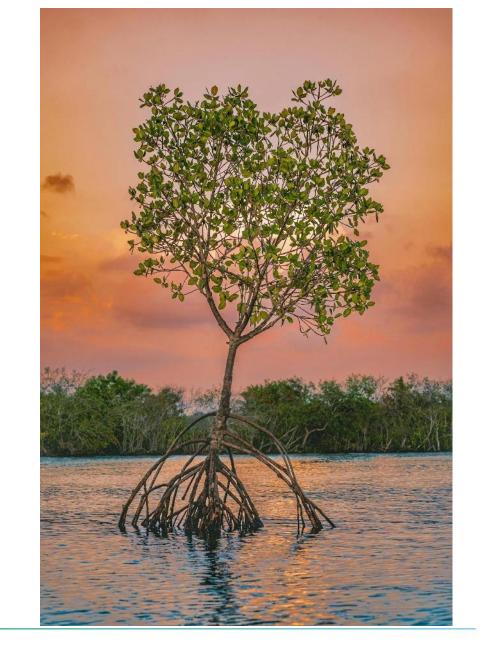


- This report presents a comprehensive analysis of international scientific collaborations in biodiversity and transformative change from 2013-2023.
- It explores how scientists worldwide are uniting their efforts to address biodiversity loss and drive essential societal shifts, synthesizing findings from 13,823 scientific publications



Methodology

- This mapping analyses international collaborations at the intersection of biodiversity and transformative change using data from Web of Science for 2013-2023.
- The analysis filtered publications using 40 biodiversity keywords and 73 transformative change keywords, resulting in 13,823 publications for detailed examination.





Research Domains and Topics

- Agriculture, Environment &
 Ecology is the dominant research domain
 (87.3% of publications), reflecting the strong
 environmental focus of biodiversity studies.
- Social Sciences addresses the societal aspects of biodiversity conservation and transformative change (7.8% of publications).
- Top Research Areas Forestry, Marine Biology, and Entomology lead the field, highlighting the importance of these ecosystems in biodiversity research.



The wide range of research topics shows that studies on biodiversity and transformative change cover a broad spectrum of ecological, biological, and social interests, with 95.1% of publications focusing on agriculture, environment, ecology, and social sciences.



Global Distribution of Research

- European Research Area
 Publications Leads globally with 7,740
 publications, representing over half of all research in this domain.
- USA Publications The United States is the leading individual country, contributing 3,399 publications.
- **UK Publications** The United Kingdom ranks as the second most productive individual country, with 2,080 publications.



Research on biodiversity and transformative change takes place around the world, but most of it is still done in high-income countries. The top 5 contributors — the USA, UK, Germany, China, and Australia — come from four different world regions, showing that global interest exists, though participation is not evenly spread.



Transnational Research Collaborations

- ERA-North America This collaboration is the most productive in terms of highly cited papers, demonstrating robust academic networks between these regions.
- **ERA-Asia** This represents the second most significant collaborative relationship, highlighting growing research ties with Asian countries.
- ERA-LAC An important collaboration with Latin America and Caribbean countries, particularly focusing on forestry and marine biology research topics.



The European Research Area (ERA) stands out as a leader both quantitatively (number of publications) and qualitatively (most cited articles), serving as a central hub in the global research network on biodiversity and transformative change.



Research Priorities Across Regions

- Common Research Priorities MaxEnt modeling is a common thread across all
 regions, highlighting its importance in species
 distribution modeling within biodiversity
 research.
- Regional Specializations Research topics often reflect geographical features (e.g., Permafrost in Other Europe) or economic interests (e.g., Fisheries in Oceania), alongside unexpected patterns like the Ebola Virus in OCTs and ORs.
- Top Research Areas Forestry is the most prominent research topic across all collaborations, followed by Marine Biology, Entomology, Phylogenetics & Genomics, and Soil Sciences.





Key Findings

- Strong trend of international collaboration, particularly between ERA and North America
- Research concentrated in agriculture, environment, ecology, and social sciences
- Disparities in global research participation, with some regions underrepresented (Africa, Other Europe)
- ERA plays a central role in global research networks



This mapping provides valuable insights for guiding future research projects, promoting policy support, and enhancing international collaboration to address the urgent challenges of biodiversity loss through transformative change.



Thank you!

Andreea Popa andreea.popa@uefiscdi.ro

Panel

Advancing transformative impact in EU research

- Gilles Doignon, EC DG for Research and Innovation
- Jonas Enge, Research Council of Norway
- Manuel Lago, EnviroNexus
- Boipelo Tshwene-Mauchaza, UNEP-WCMC



Nature That Works

Integrating Nature-based Solutions Across Sectors

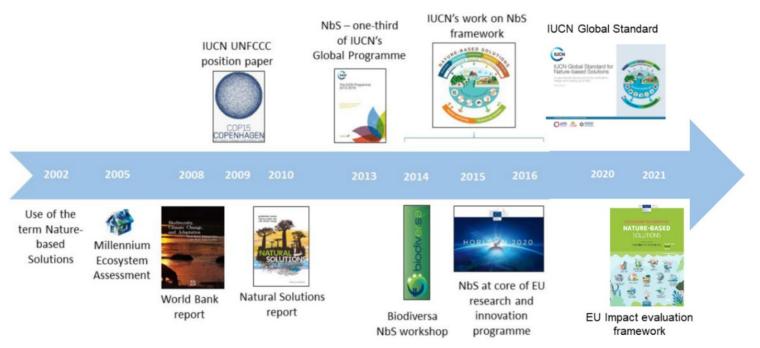


Highlights from the Naturebased Solutions Flagship

Chiara Baldacchini *MUR*



Nature-based Solutions concept evolution



2nd March 2022 - The United Nations release the **unified NbS definition** (UNEP/EA.5/Res.5):

"Nature-based Solution are actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits"

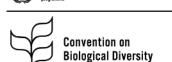
Adapted by Baldacchini C. from Cohen-Shacham, E., Walters, G., Janzen, C. and Maginnis, S. (eds.) (2016). Nature-based Solutions to address global societal challenges. Gland, Switzerland: IUCN. xiii + 97pp.

Ecosystem-based approaches Multifunctionality

Evidence-based adaptative management



Nature-based Solutions & NRR



CBD

Distr. GENERAL

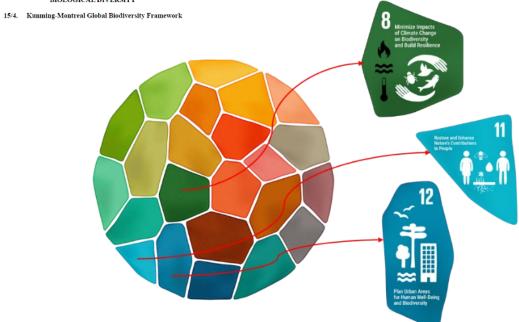
CBD/COP/DEC/15/4 19 December 2022

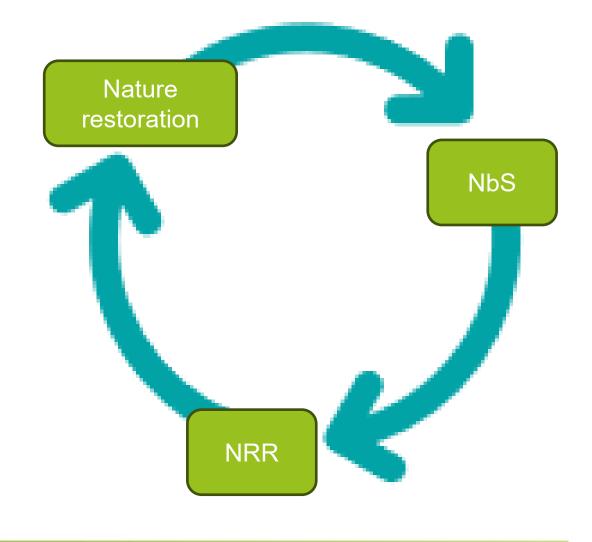
ORIGINAL: ENGLISH

2022 GBF

CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY Fifteenth meeting – Part II Montreal, Canada, 7-19 December 2022 Agenda item 9A

DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY







From the seminal BiodivERsA contribution...



Grant agreement no: 266546

Project acronym: BiodivERsA2

Project title: Cooperation and shared strategies for biodiversity research programmes in Europe

Instrument: Coordination and support action

Thematic Priority ERA-Net

Start date of project: 1st November 2010

Duration: 4 years

Coordinator: Xavier Le Roux - Fondation pour la Recherche sur la Biodiversité (FRB)

BiodivERsA Strategic Foresight workshop 'Nature-Based Solutions in a BiodivERsA context' Brussels June 11-12 2014

Workshop Report

WP2: The European biodiversity research landscape and science-policy integration WP leader: Henrik Lange - The Swedish Research Council for Environment. Agricultural Sciences and Spatial Planning (Formas)

Task 2.3: Analyse research agendas and identify knowledge gaps and research

Task leader: Estelle Balian/Hilde Eggermont (BelSPO - Belgian Science Policy Office- Belgian Biodiversity Platform)

Balian E., Eggermont H. & Le Roux X. 2014. Outputs of the Strategic Foresight workshop "Nature-Based Solutions in a BiodivERsA context", Brussels June 11-12 2014. BiodivERsA report, 45 pp.

Contact for this report:

Estelle Balian or Hilde Eggermont (BelSPO - Belgian Science Policy Office- Belgian Biodiversity Platform)

estelle.balian@naturalsciences.be or hilde.eggermont@naturalsciences.be

Using these two gradients, 3 main types of NBS were defined:

- 1- NBS Type 1: They consist in better using existing natural or weakly managed ecosystems; the ambition here is to better use them, delivering a range of ecosystem services in and outside these ecosystems while minimising the intervention on the systems themselves.
- 2- NBS Type 2: They correspond to the definition of management rules to develop sustainable and multifunctional ecosystems (possibly intensively managed) and better deliver selected ecosystem services.
- 3- NBS Type 3: They consist in managing ecosystems in very intrusive ways or even creating completely new ecosystems.

Participants identified some examples of NBS (Figure 2) for each type and some links with existing BiodivERsA projects (Figure 3)

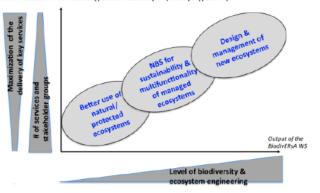


Figure 1: Schematic representation of the range of NBS approaches to be considered. Three main types of NBS are defined, differing in the level of engineering applied to biodiversity / ecosystems (X axis), and in the number of services to be delivered, the number of stakeholder groups targeted, and the likely level of maximization of the delivery of targeted services (Y axis).

Nature-based Solutions: New Influence for Environmental Management and Research in Europe

Greening roofs or walls to cool down city areas during summer, to capture storm water, to abate pollution, and to increase human well-being while enhancing biodiversity: nature-based solutions (NBS) refer to the sustainable management and use of nature for tackling societal challenges. Building on and comple menting traditional biodiversity conservation and management strategies, NBS integrate science, policy, and practice and create biodiversity benefits in terms of diverse, well-managed ecosystems.

Hilde Eggermont, Estelle Balian, José Manuel N. Azevedo, Victor Beumer, Tomas Brodin, Joachim Claudet, Bruno Fady. Martin Grube, Hans Keune, Penelope Lamarque, Katrin Reuter Matt Smith Chantal van Ham Wolfrang W. Weisser, Xavier Le Roux

Nature-hased Solutions: New Influence for Environmental Management and Research in Europe | GAM 24/4 (2015): 243-248 Keywords: biodiversity, ecosystem services, research programming, social-ecological systems, societal challenges, sustainable management

Nature-based Solutions, an Emerging Term

It is now widely recognized that human activities have reached a level that could result in abrupt and, in some cases, irreversible ward by practitioners (in particular the International Union for environmental changes detrimental to human development (Stef- Nature Conservation, IUCN) and quickly thereafter by policy (Eufen et al. 2015). Societies face increasing challenges such as climate change, jeopardized food security and water resource provision, and an enhanced disaster risk.

approach in order to sustain and potentially increase the delivery ment, and governance principles. of the ecosystem services (ES) to humans.1

- 1 In this paper, we refer to ES as the direct and indirect contributions of ecosystems to human well-being (Costanza et al. 1997, Millennium Ecosystem
- 2 For instance, ecosystem-based approaches are increasingly promoted for climate change adaptation and mitigation (Cowan et al. 2010, Naumann et al. 2011, Burch et al. 2014) by organisations like United Nations Environment Programme (UNEP) and non-governmental organisations such as The Nature Conservancy. Similarly, green infrastructure refers to an "imerconnected network of green spaces that conserves natural systems and provides assured benefits to human populations" (Benedict and McMahon 2006)

and resilience capacities (Garmestani and Benson 2013). In this context, nature-based solutions (NBS) have recently been put for-While ES are often valued in terms of immediate benefits to

for self-reorganization and mutability and associated resistance

One approach to answer these challenges is to increasingly rely on technological strategies, which are designed and managed ple and the environment itself, to allow for sustainable solutions to be as simple, replicable and predictable as possible (Hoffert et that are able to respond to environmental change and hazards in al. 2002). For instance, physico-chemical biofiltration processes the long-term. NBS go beyond the traditional biodiversity conserare used to purify air and water at large scales in most countries, vation and management principles by "re-focusing" the debate on in particular in the northern hemisphere. An alternative approach humans and specifically integrating societal factors such as huis to manage the (socio-)ecological systems in a comprehensive man well-being and poverty alleviation, socio-economic develop-

In this sense, NBS are strongly connected to ideas such as nat-The second approach recognizes the complexity of socio-eco-ural systems agriculture (Jackson 2002), natural solutions (Dudlogical systems and the fact that they are dynamic, leaving room levet al. 2010), ecosystem-based approaches (Cowan et al. 2010). green infrastructures (Benedict and McMahon 2006), and ecological engineering (Borsje et al. 2011).2

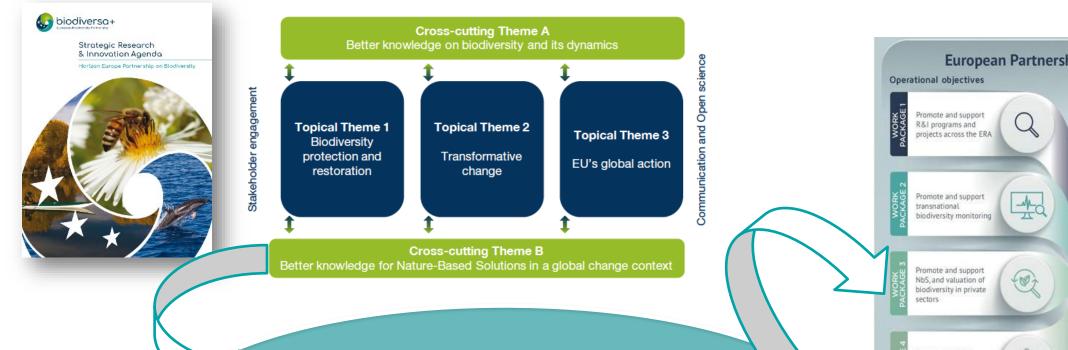
> Contact: Dr. Hilde Eggermons | Belgian Biodiversity Platform | Royal Belgian Institute for Natural Sciences | Vautierstraat 29 | 1000 Brussels | Belgium | Tel.: +32 2 6274318 | E-Mail: h.eggenmont@biodwerstry.be

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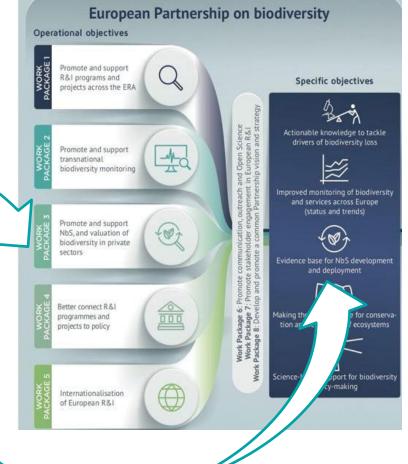
http://dx.doi.org/10.14512/gaia.24.4.9



... to the NbS flagship in Biodiversa+



Biodiversa+ flagship programme #3
Better knowledge to develop, deploy
and assess nature-based solutions





Eggermont H., Le Roux X., Tannerfeldt M. Enfedaque, J., Zaunberger, K. & Biodiversa+ partners (2021). Strategic Research & Innovation Agenda. Biodiversa+, 108 pp.

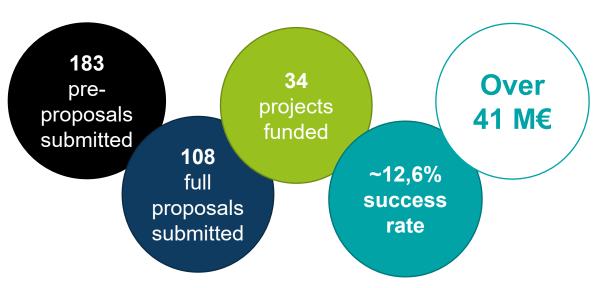
Create new knowledge on NbS by funding

BiodivNBS call in 2023:

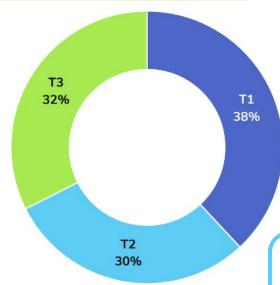
"Nature-based solutions for biodiversity, human well-being and

transformative change"

Rationale: Support transnational research projects, contribute to promoting Nature-based Solutions and their integration into policymaking at local, regional, and national levels



Theme 3: The contribution of Nature-based Solutions for just transformative change



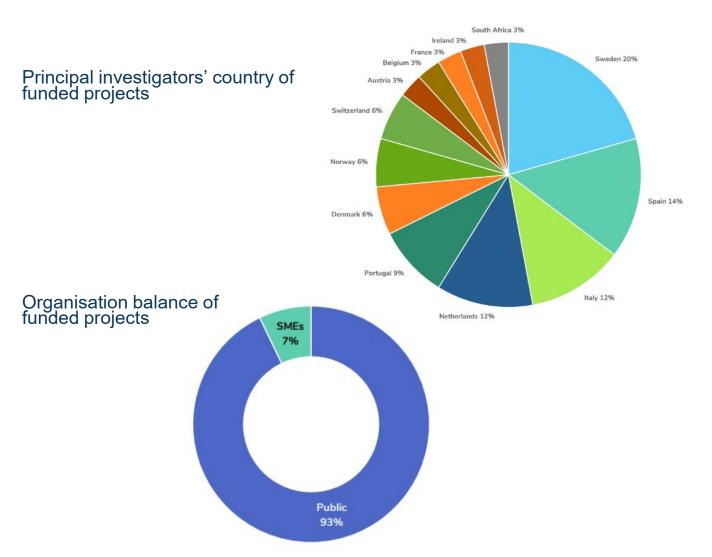
Theme 1: Synergies and trade-offs of Nature-based Solutions in the context of human well-being

Theme 2: Naturebased Solutions mitigating anthropogenic drivers of biodiversity loss

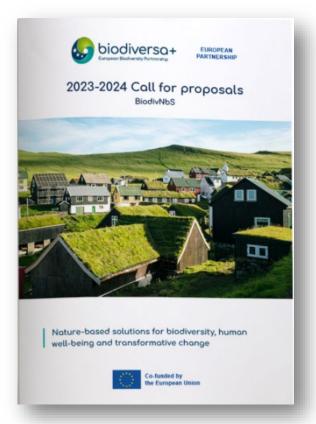




BiodivNBS projects' overview



More information on the BiodivNBS Call process and overview of the 34 projects in the Brochure

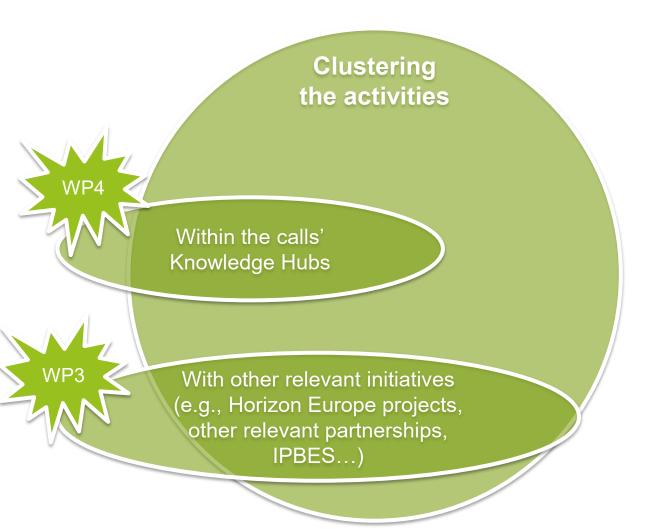








Create new knowledge on NbS by clustering







BiodivClim Knowledge Hub Under BiodivClim Cofund Action

Focus: Nature-based Solutions For Climate Change Adaptation & Mitigation

February 2023 - August 2025

Foresight Workshop on NbS and Transformative Change

Focus: Exploring Future
Research Horizon

25-26 February 2025 Oslo (Norway)



BiodivClim cofund Action (2019-2025) Knowledge



25 gaps grouped into broad cathegories







Equitable NbS Governance

Focus on environmental justice, power dynamics, and Global

Practical NbS Implementation

 Emphasize stakeholder engagement and effective, large-scale application

NbS in Future Scenarios

 Analyze NBS potential under changing climate and socioeconomic conditions

Functioning and Monitoring

- · Disentangle drivers
- Develop universal indicators
- Promote long-term protocols
- · Assess ecological resilience
- Increase research efforts in the Global South

Forestry and agricultural contexts

- · Harness soil biodiversity
- · Integrate genetic, functional, intraspecific, phenotypic diversity
- · Assess economic benefits

Urban settings

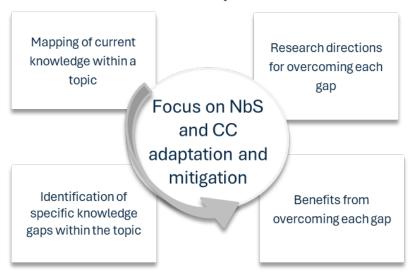
- · Target neglected habitats
- · Potentiate cross-sectorial approaches
- Explore links between nature and

Marine habitats and freshwater bodies

- Standardize data collection
- · Identify climate change hotspots
- · Model ecosystem services delivery

Grilo F. et al. Nature-based solutions in climate change mitigation and adaptation: knowledge gaps and research directions, under publication (2025)

Procedural procedure





multiple

biological

levels

Hub

multiple

earth

realms

Task SSI/SPI Force

Technical Task

collaborations,

knowledge, data

Enhancing research

sharing & academic

Force

21

projects

BiodivClim Knowledge

Hub

stakeholder

engagement

strong

social

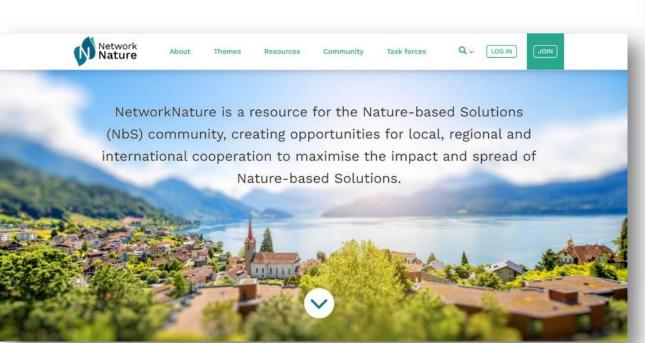
component

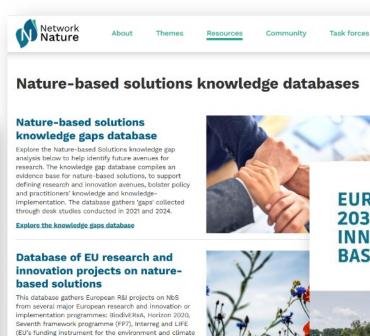
Science-policysociety interfacing to increase the impact of funded





Biodiversa+ contribution to NetworkNature





action) over the years 2011-2021.



EUROPEAN ROADMAP TO 2030 FOR RESEARCH AND INNOVATION ON NATURE-BASED SOLUTIONS



Events, workshops, databases, strategic documents & much more



https://networknature.eu/

El Harrak M. & Lemaitre F. (2023), European Roadmap to 2030 for Research and Innovation on Nature-based Solutions.

NetworkNature

Create new knowledge on NbS by capitalizing

Capitalizing on previous experiences

Success stories from the Biodiv projects

Landscape mapping, scoping review, guides and guidelines

Success Stories in NbS uptake within Bicdive

Among the projects involving the NbS implementation, figuress stories were selected considering both time perpresentativeness of the ecosystems involved and the impact on knowledge assimilation

- REPEAT: Restoration of peat formation in peat bogs by using plant diversity in relation to soil characteristics
- PromESSinG: Management concept for Central European vineyard ecosystems: Promoting ecosystem services in grapes
- URBANGAIA: Managing urban biodiversity and green infrastructure to increase city resilience
- OSCAR: Optimising the configuration of woody riparian buffer strips along rivers to enhance biodiversity and ecosystem services
- RESERVEBENEFIT: Evaluating and managing connectivity in some marine protected areas to maintain genetic diversity and deliver fish beyond protected limits



WP3&6





anks to Alessandro Camplotti, MUR

Success Stories in Business and Biodiversity collaboration within Biodiversa+ projects

Successful research-business collaborations demonstrate how scientific innovations can enhance biodiversity conservation while aligning with industry needs for safety, sustainability, and long-term economic viability.

- GloBAM & Aviation/Wind Energy Sectors: using weather radar for safer operations and conservation
- MARFOR & Aquaculture: seagrass restoration through algae cultivation with Piscicultura do Valle da Lama
- GreenFutureForest & Sveaskog: transforming Forestry Practices for Biodiversity Conservation
- BIO-Tide & Biofilm company: A Synergy Between Research and Industry for Advancing Biofilm Studies with SYNOXIS ALGAE











Guide on the European Research & Innovation landscape on Nature-based



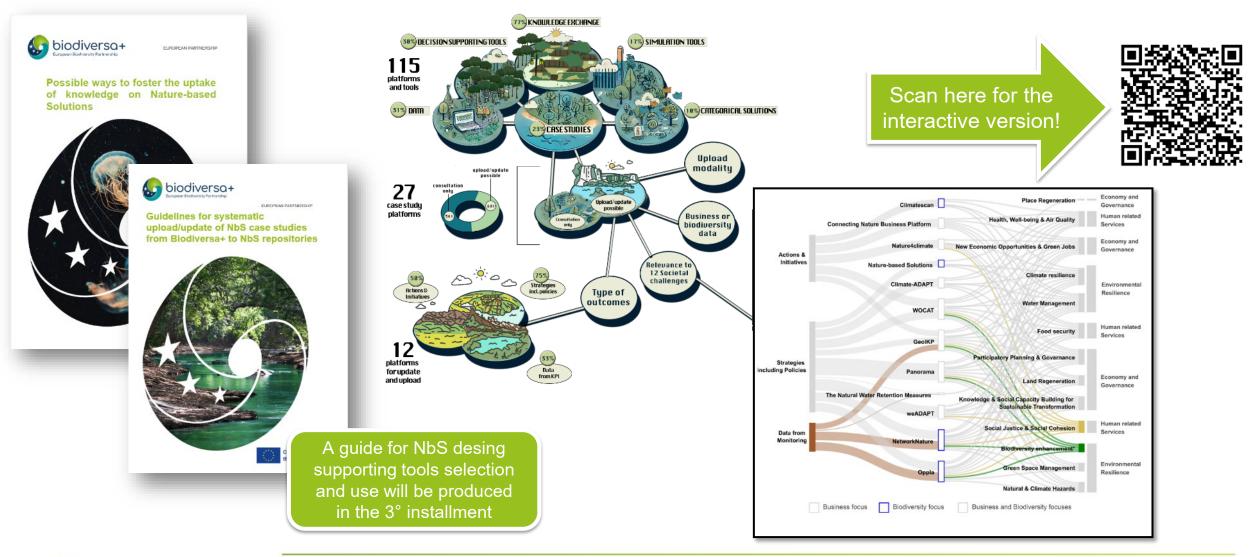
WP3







Identification of key strategies for NbS uptake



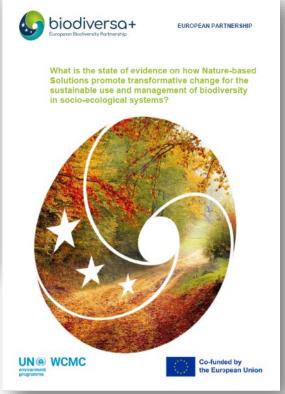


Catalano C., Campiotti A., Baldacchini C., Possible ways to foster the uptake of knowledge on NbS, (2024)

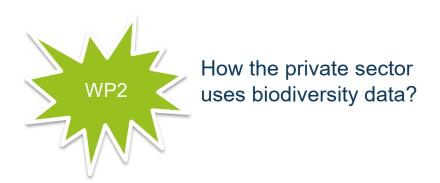
Catalano C., Verduchi V., Baldacchini C, Guidelines for systematic upload/update of NbS case studies from Biodiversa+ to NbS repositories, (2025)

Learning from the past to design the future





Stay tuned for the 3° installment!



How biodiversity is monitored in NbS?

How Nature-based Solutions can promote transformative change?





Akoumianaki I., Pakeman R. J., Scoping review: what is the state of knowledge on the role of biodiversity in the design, delivery, and benefits of Nature-Based Solutions? (2023)

Tshwene-Mauchaza B., Harris M., Antonova M., Ramalheiro F., Iyengar, A., What is the state of evidence on how Nature-based Solutions promote transformative change for the sustainable use and management of biodiversity in socio-ecological systems? (2024)

Thank you for your attention!

For more information, you can contact:

Mithila Unkule (mithila.unkule@fondationbiodiversite.fr) – WP3 OT

Lars Dinensen (lars.dinesen@sund.ku.dk) – WP3 Co-lead

Chiara Baldacchini (<u>baldacchini@unitus.it</u>) – WP3 Expiring Co-lead → Kállay Tamás (<u>tamas.kallay@nkfih.gov.hu</u>) WP3 New Co-lead

Thanks to present and past WP3, EB & OT colleagues for this great experience









Thank you!

Chiara Baldacchini baldacchini@unitus.it



Engaging business

Lars Dinesen

Innovation Fund Denmark





Business and NbS

 "actions aimed at protecting, conserving, restoring, and sustainably managing natural or modified terrestrial, freshwater, coastal, and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits"



10-25 trillion USD annual negative impacts across nexus elements that are not accounted for in economic and financial decisions

World economy 105 trillion USD

Positive annual flows 0.2 trillion USD 15 % Private sector

Negative flows 7.7 trillion USD 69 % Private sector

Figures based on IPBES Nexus Assessment (2024)





Biodiversity high on the business agenda and vice versa



EU February 2025 Omnibus package





GLOBAL AND EU POLICY FRAMEWORK FOR BUSINESS AND BIODIVERSITY

Global agenda, goals and conventions

- · GBF UN convention on Climate Change
- UN 2030 agenda and SDG's Convention on Biological Diversity & Kunming-Montreal
- · Convention to Combat desertification
- · Ramsar convention on Wetlands
- Convention on International Trade in Endangered Species

Intergovernmental Science-Policy
IPBES
IPCC

EU POLICY INSTRUMENTS RELEVANT FOR BUSINESS AND BIODIVERSITY

Renewed Sustainable Finance Strategy and Action Plan 2020

EU taxonomy EU Green Bonds Standard

Corporate Sustainability Reporting Directive Sustainable Finance Disclosure Regulation Other instruments and regulation`

EU benchmark regulation Sustainability preference Due diligence regulation

EU Green Deal

Biodiversity Strategy
Climate law and adaptation strategy and fit for 55
Farm to Fork Strategy
Circular Economy Action Plan
EU Chemicals Strategy for Sustainability
Forest Strategy and Deforestation-free imports

The 8th Environmental Action Plan to 2030 and related EU Instruments

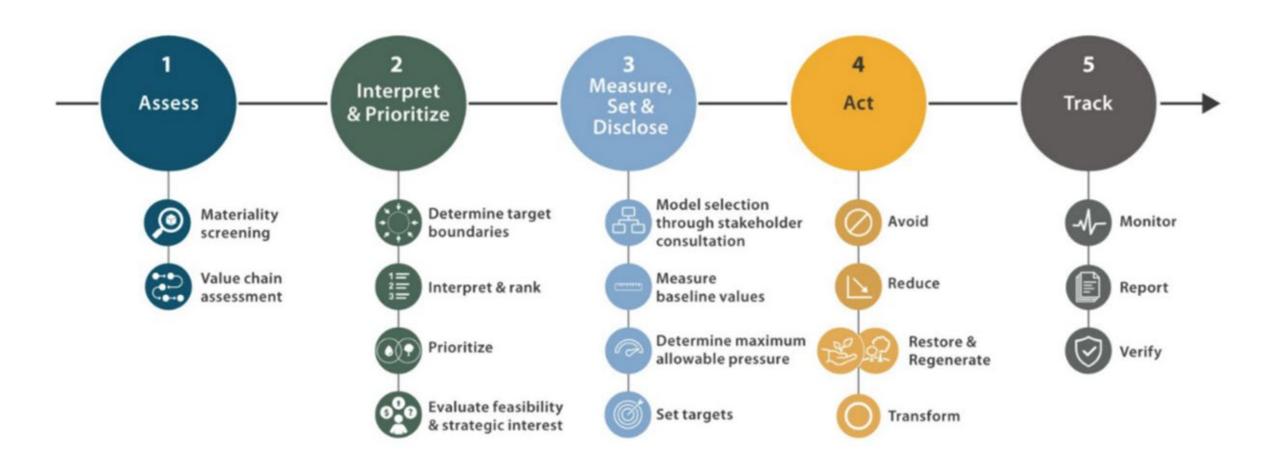
Agriculture Policy (CAP)
Fisheries Policy (CFP)
Environmental Assessments (EIA, SEA)
Rural Development, Nitrates,
Environmental Liability Directive

EU biodiversity Strategy to 2030 and related instruments

Nature Restoration Regulation Soil Health Law Habitat and Birds Directive Water Framework Directive Marine Strategy Directive



Biodiversity valuation approaches & methods for businesses







EUROPEAN PARTNERSHIP



| 1. Global and EU policy framework for economy and nature | 16 |
|---|----------|
| 1.1. EU policy instruments relevant to nature and economy | 17 |
| 1.1.1. Renewed sustainable finance strategy and the action plan on financing sustainable growth | 17 |
| 1.1.2. The European Green Deal 1.1.3. Corporate and systainable finance directives and regulations | 19 26 |
| 1.1.3. Corporate and sustainable finance directives and regulations | 20 |
| 1.2. Global agreements, and policies | 29 |
| 1.2.1. UN Agenda, Goals and Conventions for Sustainable Development | 29 |
| 1.2.2. Intergovernmental science-policy platforms | 32 |
| 2. Examples of key EU and international institutions, organisations, initi | atives. |
| and approaches working on nature and economy | 36 |
| 2.1. Key partners | 37 |
| 2.1.1. Overarching policy or knowledge institutions | 37 |
| 2.1.2. Business or financial associations and partners | 40 |
| 2.1.3. Environmental institutions or NGOs | 42 |
| 2.2. Key nature and economy initiatives including business and biodiversity approaches | 43 |
| 2.2.1. Knowledge Platforms and support | 44 |
| 2.2.2. Initiatives and Approaches for Business | 45 |
| 2.2.3. Initiatives mainly for the financial sector | 51 |
| 3. Selected tools and methodological initiatives | 58 |
| 3.1. Tools for managing biodiversity | 59 |
| 3.2. Tools and methods for managing biodiversity in the finance sector | 63 |
| 4. Small and Medium Enterprises (SMEs) | 66 |
| 5. Identification of existing knowledge and knowledge gaps, and capaci | tv- |
| building needs | 70 |
| 5.1. Current knowledge on biodiversity | 70 |
| 5.2. Examples of knowledge gaps in biodiversity data and approaches | 71 |
| 5.3. Needs of businesses and the financial sector to align with policy targets | 72 |
| 5.4. Harmonisation | 73 |
| 5.5. Needs for building capacity and awareness supporting transformative change | 74 |
| 5.6. Needs and opportunities for Small and Medium Enterprises | 75 |



Groups and alliances for biodiversity

financial and business sectors

Business for Nature



"We welcome today's vote by the Environment Committee of the European Parliament supporting the EU Nature Restoration Law"

Finance for biodiversity Foundation



"The Norwegian bank Storebrand will not invest in companies involved in deep-sea mining until we have more scientific knowledge on the impacts of these activities. Alternative solutions already exist"



Business engagement opportunities Julie de Bouville, FRB

Commercial logging, Sveaskog Sweden



Air safety and bird migration, Dutch Airforce







Engaging business in biodiversity

A new nature positiv economy may generate 10 billion USD in annual business value and create 395 million jobs before 2030





Thank you!

Lars Dinesen

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Challenges and opportunities for NbS knowledge dissemination

Valentina Verduchi *MUR*



WP3 - Promoting uptake of knowledge on NbS

2 milestones within Task 3.3.1

 MS183 – Guidelines for systematic upload/update of NbS case studies from Biodiversa+ to NbS repositories

Authors: Chiara Catalano, Valentina Verduchi, Chiara Baldacchini

 MS186 – Development of new case studies from Biodiversa projects uploaded on NbS repositories

Authors: Valentina Verduchi, Chiara Baldacchini



EUROPEAN PARTNERSHIP

Guidelines for systematic upload/update of NbS case studies from Biodiversa+ to NbS repositories





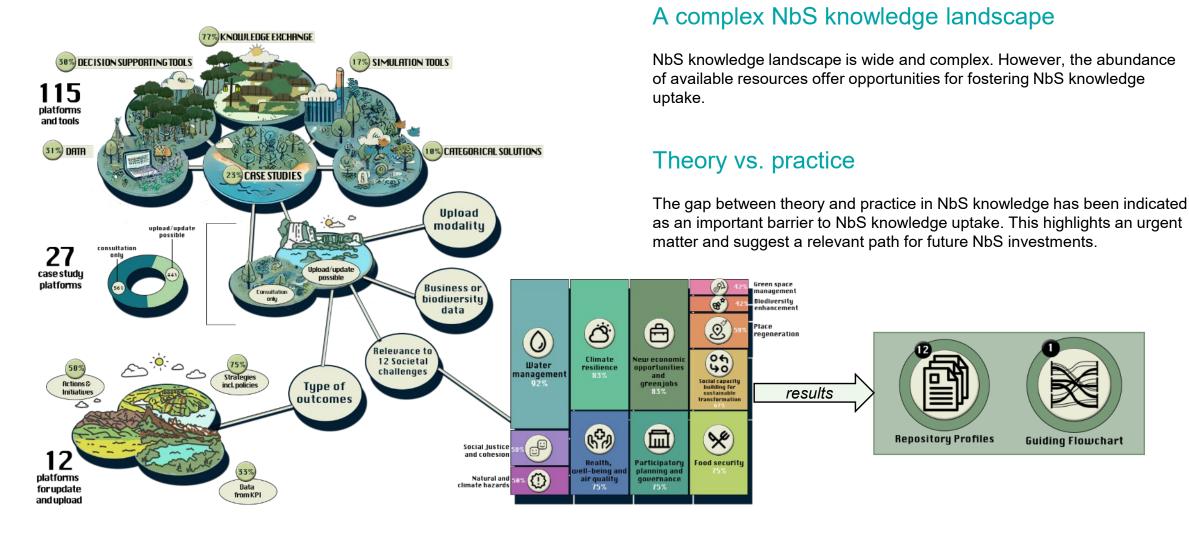
EUROPEAN PARTNERSHIP

Development of new case studies from Biodiversa projects uploaded on NbS repositories



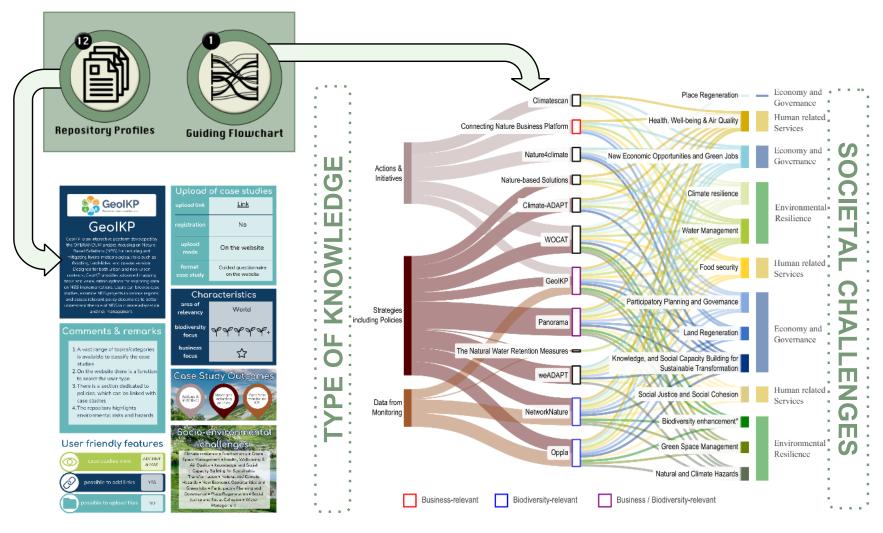


MS183 - The study behind the development of the guidelines





MS186 - Knowledge dissemination in practice



Timing-related barriers

The testing phase coincided with the final stages of several projects, a period typically marked by intense workloads and limited availability.

Usability of dissemination tools

Tailored, user-friendly guidance can facilitate the visibility and dissemination of NbS experiences, when supported by clear criteria and practical examples.



Challenges and opportunities

Theory

- Complexity NbS knowledge → Resources for fostering uptake
- Gap between theory and practice → Focus for future investments

Practice

- Time constraints → Strategic dissemination planning
- Information overload → Tailored guidance is effective

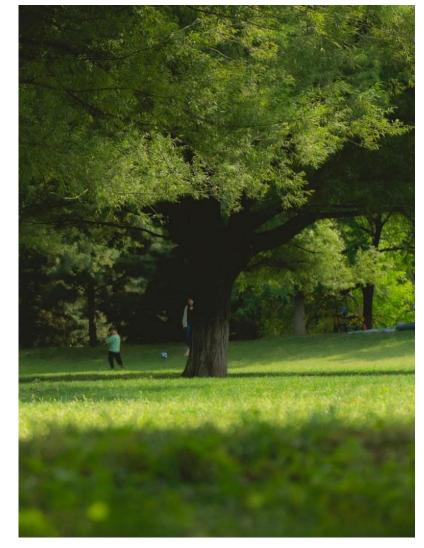


Image by Tide He (Pixabay)



Thank you!

Valentina Verduchi valentina.verduchi@gmail.com



Panel

What makes a successful Nature-based Solution

- Gilles Doignon, EC DG for Research and Innovation
- Karin Bilo, Ørsted
- Claudia Ituarte-Lima, Raoul Wallenberg Institute
- Marie Touchon, Global Youth Biodiversity Network





A blueprint for impact

Ron Winkler

Biodiversa+ co-chair, NWO



Biodiversity



Impact Pathway

SOCIETAL IMPACT

(INTERMEDIATE) **OUTCOME**

OUTPUT (Conclusions/Insights)

Desired new situation

Changes in behaviour with/by stakeholders

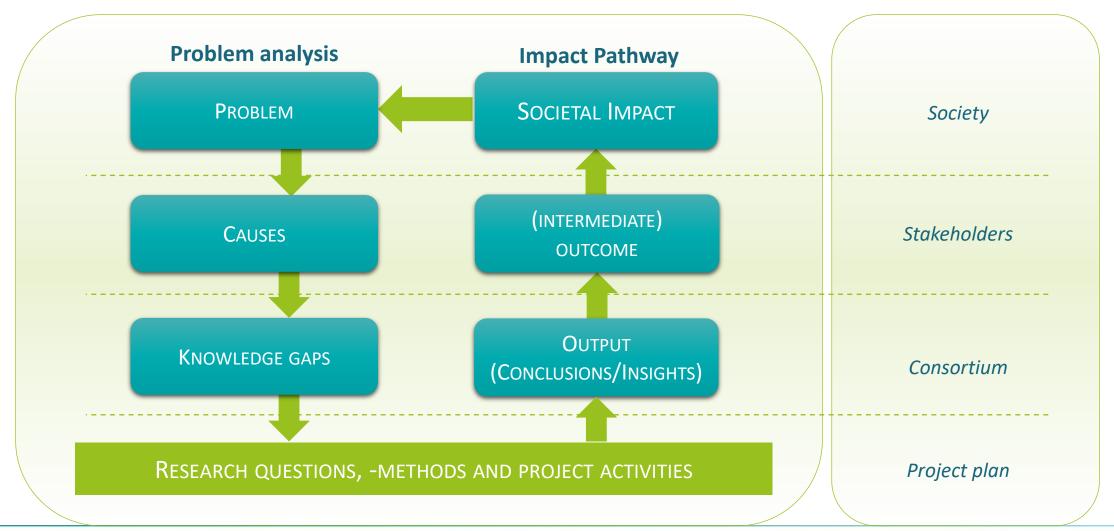
'Living in harmony with Nature'

Long-term vision

New knowledge resulting from the project

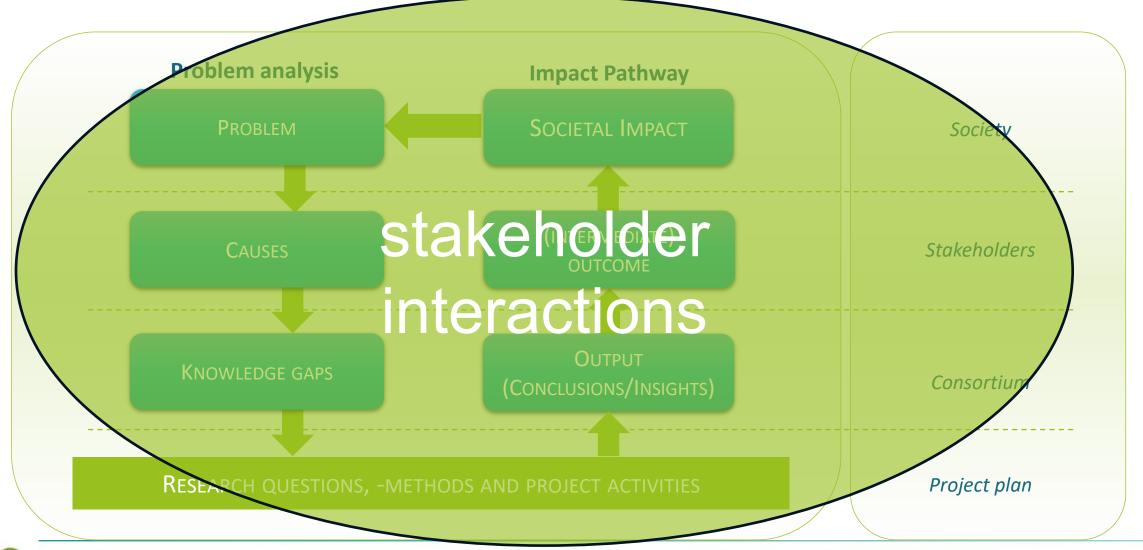


Theory of Change



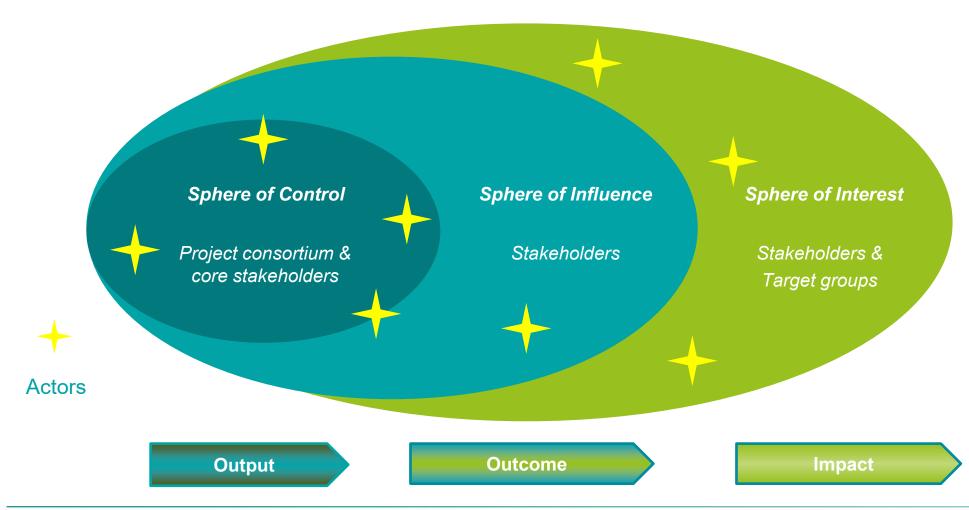


Theory of Change



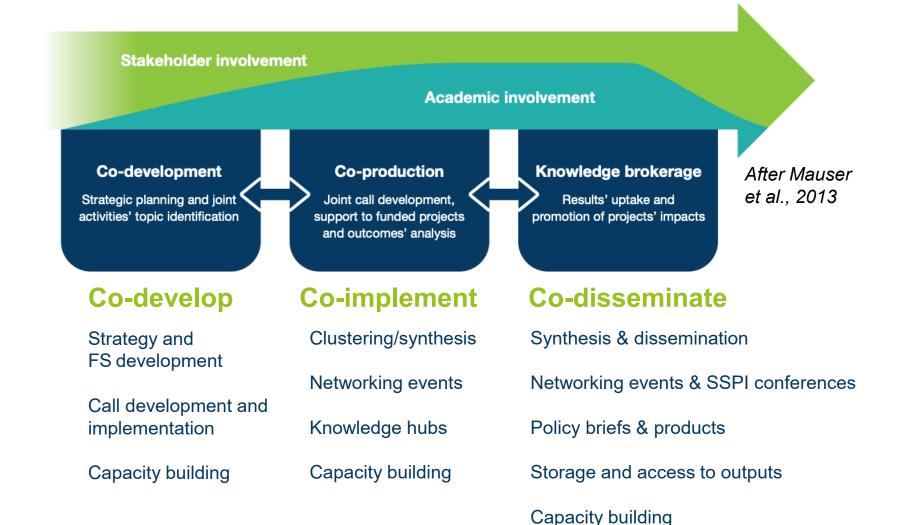


Road to societal impact in perspective





Promoting impact of projects





Call indicators

BioRep

I - Project **Implementation**

> **Project Objectives**

Pre-defined Deliverables and Milestones

Communication

Unforeseen Challenges

II - Scientific Outputs, **Outcomes and Impact**

> Scientific dissemination activities

> Scientific **Presentations** and Events

Scientific Outputs Description

Scientific outcomes and impact

Follow-up of recruited personnel

III - Project Data

Research Infrastructures and Earth Observation

Data Management Plan (DMP)

IV - Stakeholder **Engagement &** societal outputs

> Stakeholder outputs

Outcomes for society and policy

Citizen Science

V - Innovation Results

Innovation

Results

engagement activities and

VI - Global **Environmental**

Challenges & pressing issues

> Global **Environmental** Challenges & pressing issues

VII - Statement on expected longer term impact

Statement on expected longer term impact

VIII -**Transnational** Added Value -Collaboration

Networking Effect and added Value of the **Transnational** Call

Follow up activities and plans for further exploitation of the results



Call indicators - uses

I - Project Implementation

II - Scientific Outputs, Outcomes and Impact

III - Project Data

IV - Stakeholder Engagement & societal outputs

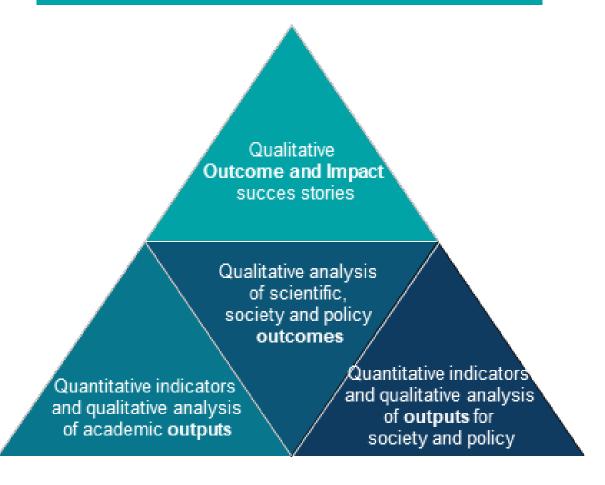
V - Innovation Results VI - Global Environmental Challenges & pressing issues VII - Statement on expected longer term impact

VIII -Transnational Added Value -Collaboration

- ✓ Tracking project progress and difficulties, measuring project results
- ✓ Communication and dissemination
- ✓ Determine outputs and results, and their dissemination (both scientific and societal/policy)
- ✓ Feed into Biodiversa+ e.g. on research infrastructures, capacity building, GBF implementation, engagement with MEAs
- ✓ Use for analyses and promotion of projects' and partnership's outputs, outcomes and impacts



Analysing impact of projects



Impact tracking and evaluation

mix of quantitative and qualitative analysis

No indicators for impact

Narratives are important, succes stories



GloBAM - Monitoring, understanding and forecasting global biomass flows of

aerial migrants

Partners: Switzerland, Belgium, Finland, the Netherlands, the UK and the USA

Use of (weather) radar in animal movement studies

Output

Prediction of migration patterns



Aviation sector

Dutch Air Force

Reduce bird strikes



Wind energy sector NL Forecast shutdowns Reduce bird strikes



Light pollution reduction during migration Legislation in NYC, USA

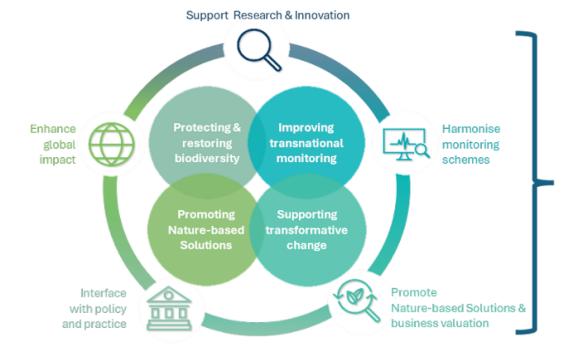
Impact

Outcomes

Safer aerial migration preservation of biodiversity



Tracking the Partnership Impact



Outputs

- ✓ Calls & projects
- ✓ Monitoring pilots
- Mapping/Foresight reports
- ✓ CS guides & training
- ✓ Syntheses & briefs

Outcomes

- Use of knowledge and tools from projects
- ✓ Uptake of foresights findings & framing of key concepts
- Better integration of SHE, transdisciplinarity and society/policy interface in projects
- ✓ Use of knowledge syntheses and briefs in decision-making

<u>Impact</u>

- ✓ Rescuing biodiversity to safeguard life on earth
- ✓ Living in harmony with Nature in 2025

Biodiversa+ KPIs

- ✓ Scientific breakthroughs
- √ Stakeholder involvement
- ✓ Monitoring priorities

- ✓ Joint R&I activities
- ✓ uptake of Nbs
- √ harmonized monitoring



Biodiversa+ Impact framework

- ✓ Context and key definitions
- ✓ Framework to promote and track impact of funded projects
- ✓ Framework to promote and track impact of the Partnership
 - Building on and clarifying the Partnership's concepts
 - Impact and stakeholder engagement
 - Tracking and communicating the Partnership's outcomes and impacts
- Theory of Change for the Partnership
 - Articulates underlying assumptions
 - Iterative implementation, monitoring and evaluation framework
 - Flexible SRIA

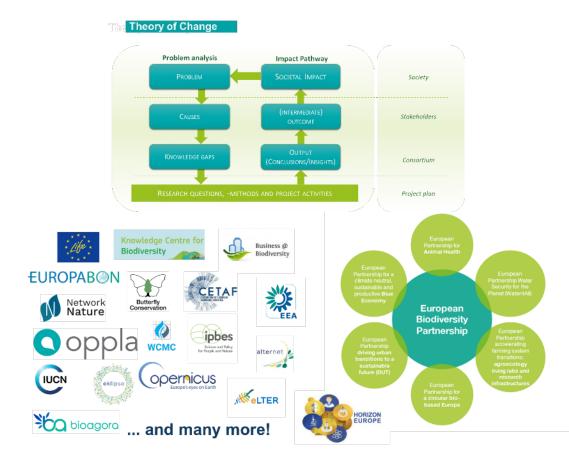


Take away messages

Creating Impact requires

- A clear framework and vision
- Excellent research

Constant stakeholder engagement
 Advisory Board and Extended Stakeholder
 Board



Clear narrative and engaging communication





Please join us at the workshop to help define the future for Biodiversa in FP10





EU biodiversity policy: longterm research and innovation needs

Valérie Drezet-Humez

Director of General Affairs, Knowledge, and Resources EC DG ENV





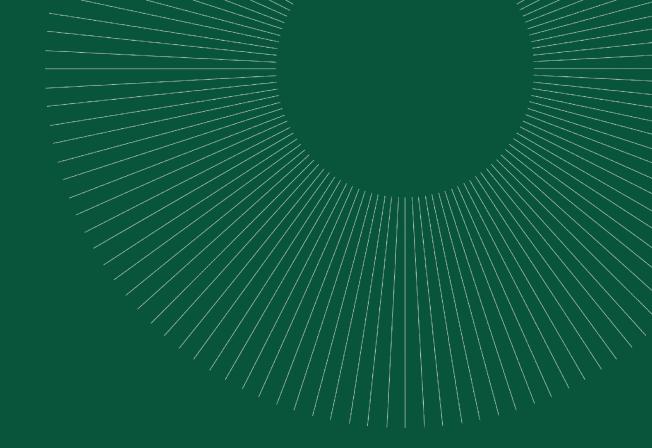
Bridging research, policy & practice

Martine van Weelden, Director Capitals Coalition

Biodiversa+ Midterm Conference



Introduction to the Capitals Coalition





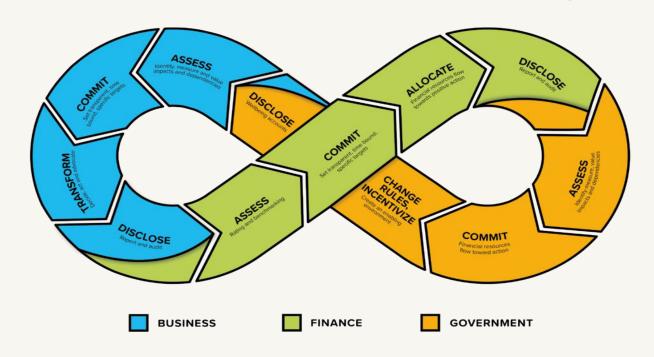
Capitals Coalition



Our vision: A resilient economy valuing what matters

Our purpose: Embed the value of all capitals into decision-making

We use the infinity loop to understand the system we influence for transformative change.



c. 460

Organizations at the core

25,000+

Global community



Capitals hubs

19





International protocols



Our History













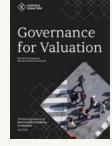






Social & Human Capital 2019

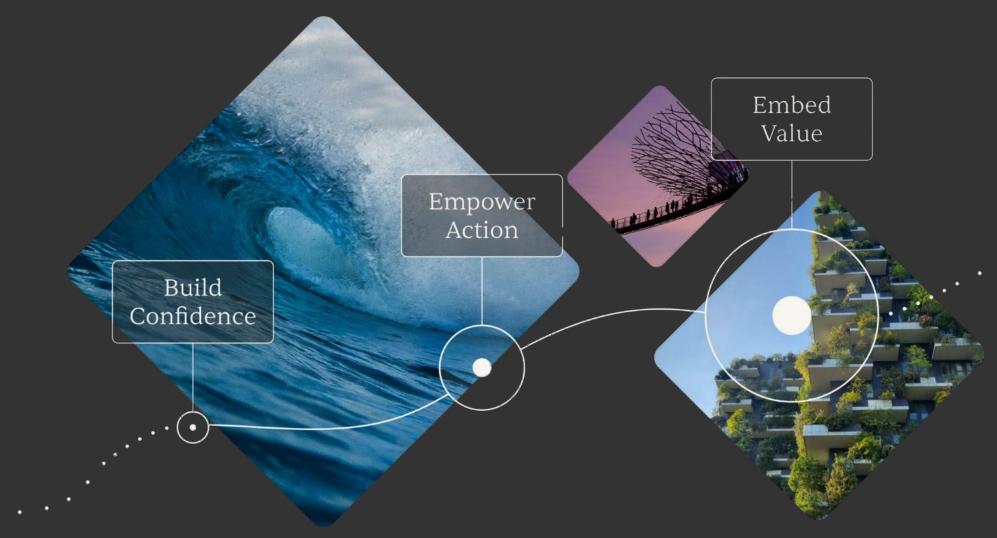




Integrated Decision-Making Framework 2025



Our Strategy





A Simple Structure to Organize Value



Natural capital

The stock of renewable and non-renewable natural resources that combine to yield a flow of benefits to people.



Social capital

The networks together with shared norms, values and understanding that facilitate cooperation within and among groups.



Human capital

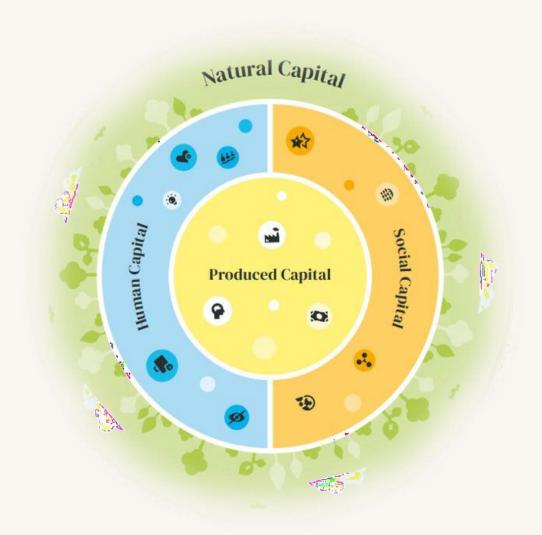
The knowledge, skills, competencies and attributes embodied in individuals that contribute to improved performance and wellbeing.



Produced capital

The human-made goods and financial assets that are used to produce goods and services consumed by society.







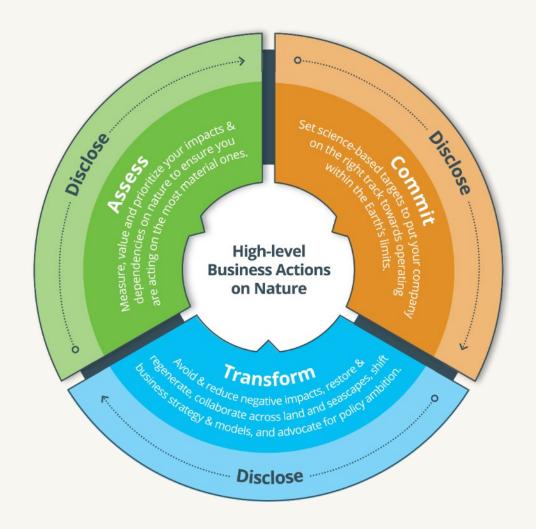


ACT-D

High-level Business Actions on Nature

- **A**ssess
- Commit
- **T**ransform
- **D**isclose

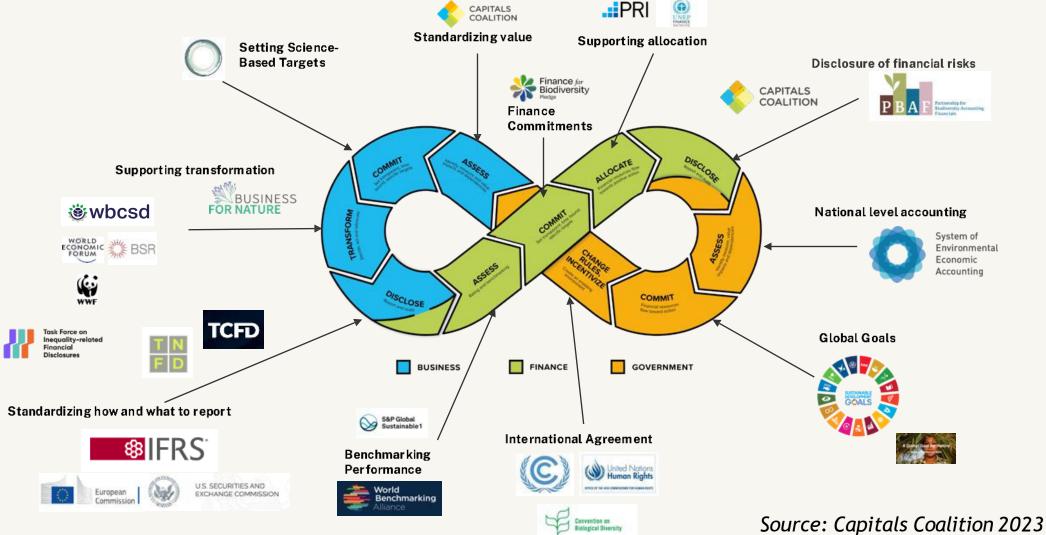
ACT-D has been developed in a collaboration by the Capitals Coalition, Business for Nature, WBCSD, TNFD, the Science Based Targets Network, the World Economic Forum and WWF and supported by many key organizations



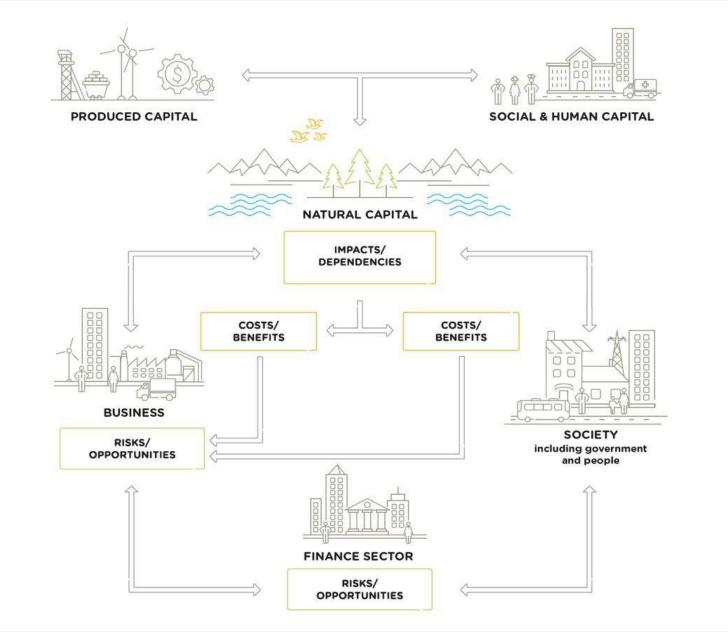


The Progressing Landscape

Navigating the ecosystem and conducting a readiness assessment



Conceptual Model for Business and Finance





Examples of Capital Risks and Opportunities

Many capital risks and opportunities are becoming increasingly visible, and business needs a way to understand and manage these.

Operational

- Increasing cost of scarce resources
- ✓ Increased efficiency due to higher skilled workforce

Reputational & marketing

- Loss of customer trust due to untransparent valuechain
- ✓ Better sales due to certification for sustainable practices

Societal

- Health impacts on local communities
- ✓ Tax cuts favoring low-emission from new equipment

Legal and regulatory

- Increased compliance cost on carbon emissions
- ✓ Competitive advantage over future legislation

Financing

- Higher interest rates of a loan due to bad ESG score
- ✓ Improved access to funding due to good gender equality ratios



Case Studies

Larger organizations



Annual Report: Progress across its key non-financial Capitals (Human, Natural, Intellectual, Social, Manufactured)



Integrated Profit and Loss Accounts: Since 2014, Holcim assessed on an HOLCIM annual basis their economic, social and environmental impacts in monetized terms



Our contribution to Yorkshire Report: Annually assessing and reporting their impacts across the six capitals, and where appropriate, putting a monetary value on those impacts

Smaller/Medium organizations



Eosta valued the impacts of various fruits and vegetables produced in conventional vs. organic way.



Arvind compared impacts from water consumption of cotton produced using more sustainable vs. conventional practices



Liv Up assessed financial gains as well as well as qualitative valuation to analyzing social benefits of organic farming across the value chain.

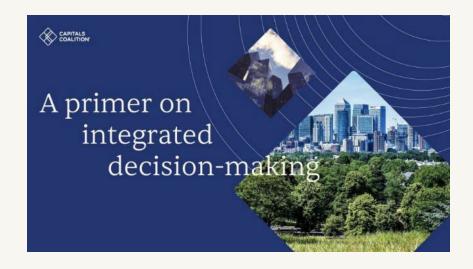


Frameworks & projects

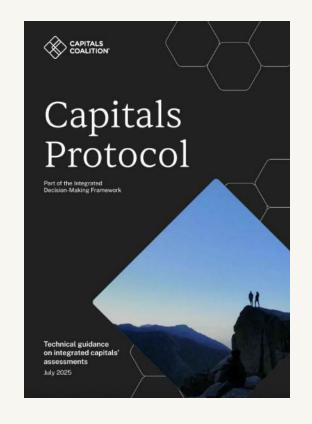


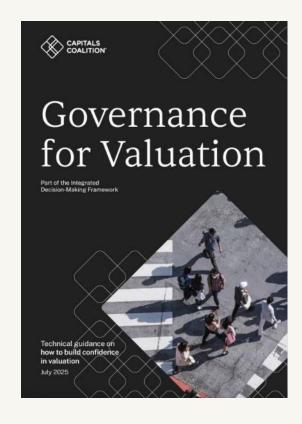


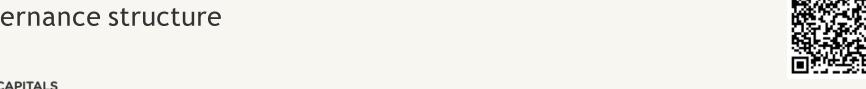
The Integrated Decision-Making Framework



A practical approach for an integrated capitals assessment with a clear governance structure

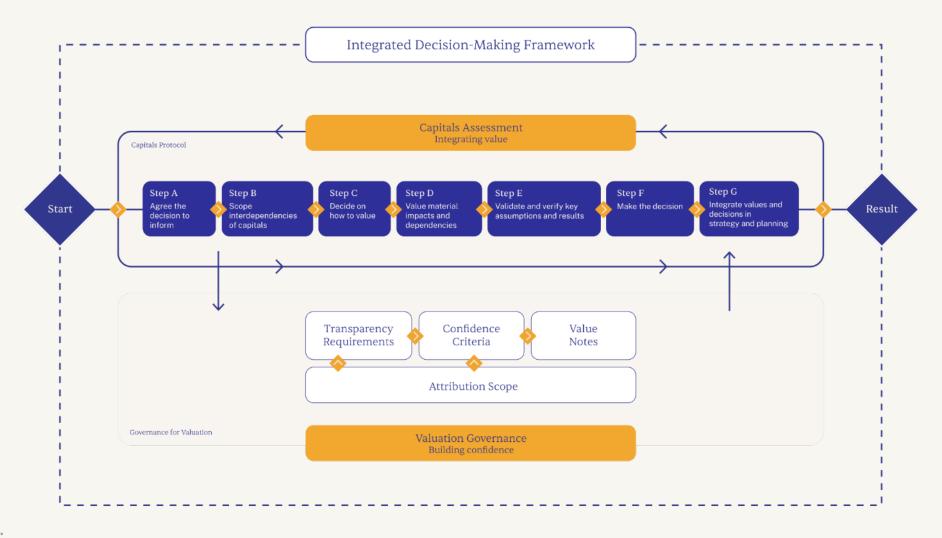






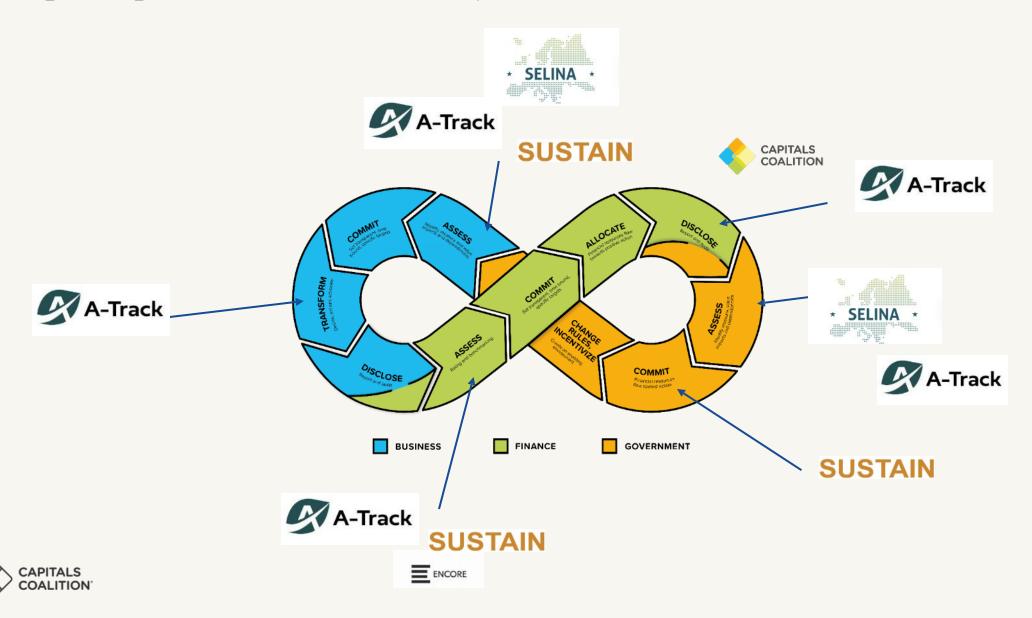


Seven Steps for Integrated Decision-Making with Governance Guidance for Building Confidence





Ongoing EU Horizon Projects



SELINA



Science for Evidence-based and Sustainable Decisions about Natural Capital

Goal



To harness the power of **transdisciplinary knowledge-sharing** and provide guidance for the protection, restoration, and sustainable use of our environment





To reshape decision-making processes within the public and private sectors by improving the uptake of Biodiversity, Ecosystem Conditions, and Ecosystem Services information





To pave the way towards the **transformative societal change** required to achieve the ambitious goals of the European Biodiversity Strategy 2030 and the Green Deal



Duration: 5 years (July 2022 - 30 June 2027)



Coordinator: Leibniz University Hannover (LUH)



SELINA



Science for Evidence-based and Sustainable Decisions about Natural Capital

Some recommendations from practice to science:

- Adapt language to the right context
- Highlight case studies and show impact on decision-making
- Go beyond risks and dependencies and identify opportunities
- Clarify data needs and responsibilities
- Shift from proxies to place-based information

Website: https://project-selina.eu/



SUSTAIN



Strengthening Understanding and Strategies of Business to Assess and Integrate Nature

The SUSTAIN project will provide businesses, financial institutions, and regulatory bodies with the knowledge and resources to better understand, assess, and monitor the dependencies and impacts on nature from activities across different sectors of the economy.



Budget: 1.3 million

Coordinator: Capitals Coalition

4 Beneficiaries

6 Associated Partners

https://capitalscoalition.org/project/sustain-project/





SUSTAIN



Strengthening Understanding and Strategies of Business to Assess and Integrate Nature

Several relevant outputs

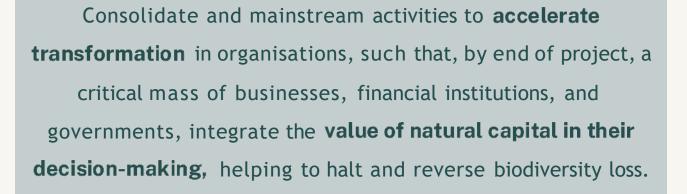
- Inventory of nature impact reduction strategies
- Stakeholder briefings for financial institutions, financial regulators, businesses
- Nature compass tool (in progress): tool that helps decision makers to find relevant frameworks and tools based on LEAP



A-Track

Accelerating Transformation through Capitals Knowledge

A-Track is a four-year project that will accelerate action for nature by business, financial institutions and governments





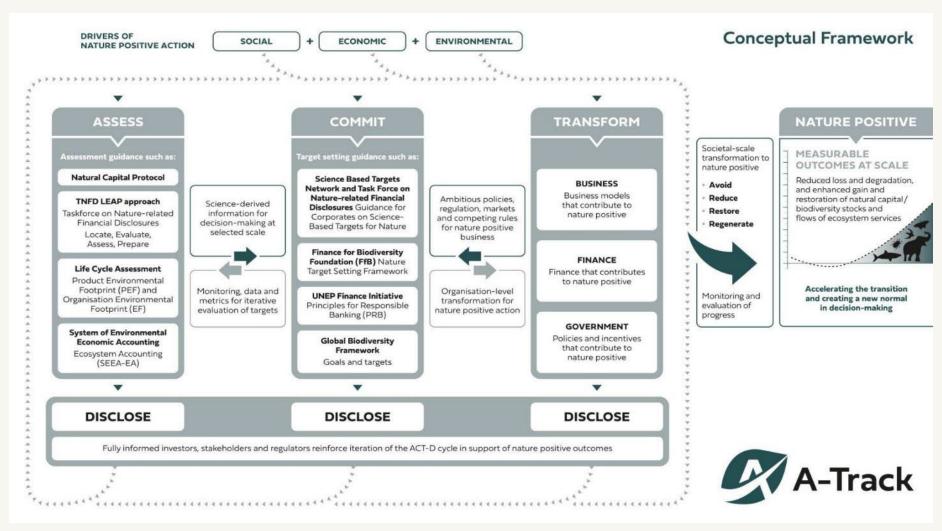
- 4 Years: Dec 2023 Nov 2027
- c. €11 million
- 7 EU beneficiaries
- 4 Associated Partners
- a-track.info





A-Track Conceptual Framework











Thank you

capitalscoalition.org

Panel

Tackling the biggest barriers to impact

- Valérie Drezet-Humez, EC DG Environment
- Lars Mortensen, DHI
- Tamar Pataridze, Caucasus Nature Fund
- Marie Touchon, Global Youth Biodiversity Network
- Marie Vandewalle, BioAgora



Panel

Biodiversa+ in the ecosystem, a view from the global biodiversity community

- Brian MacSharry, European Environment Agency
- Rosanne Metaal, Sustainable Blue Economy Partnership
- Joe Miller, Global Biodiversity Information Facility
- Daniela Rizzi, International Council for Local Environmental Initiatives & NetworkNature
- Isabel Sousa Pinto, IPBES



Science-Policy **Interface Supporting** Biodiversity

18 September 2025



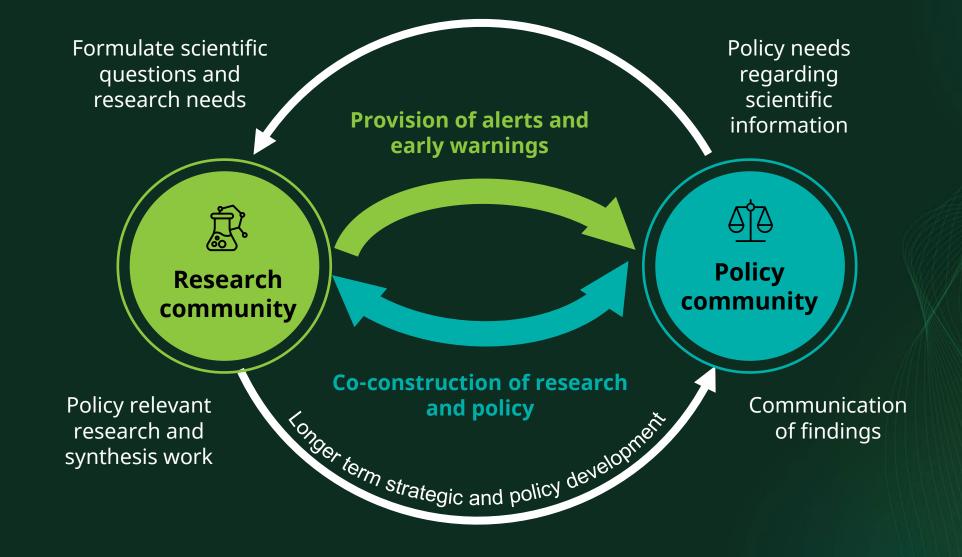






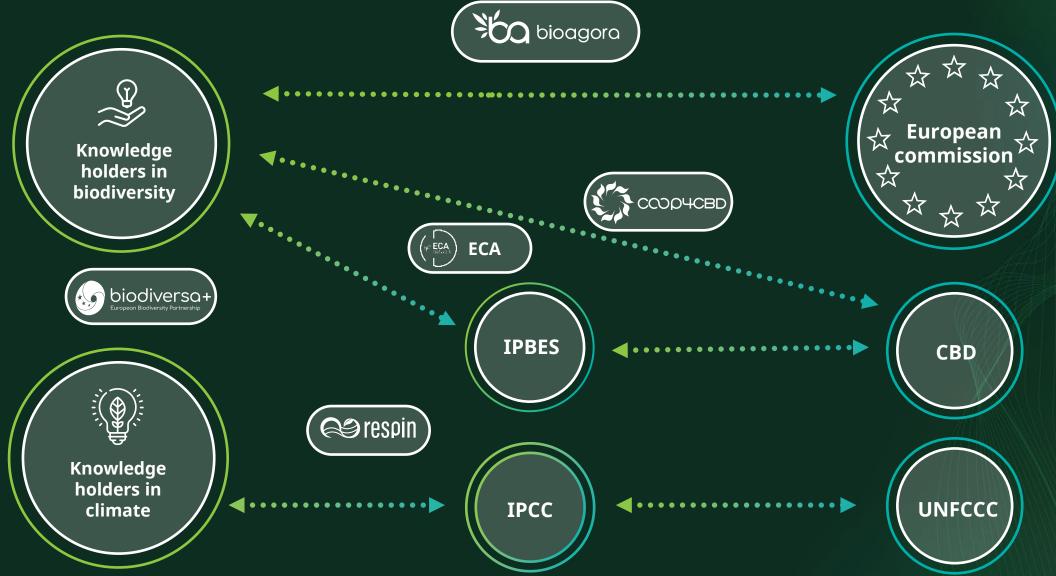


The Science-Policy Interface













Strengthening ties between CBD and EU processes



Provision of technical knowledge



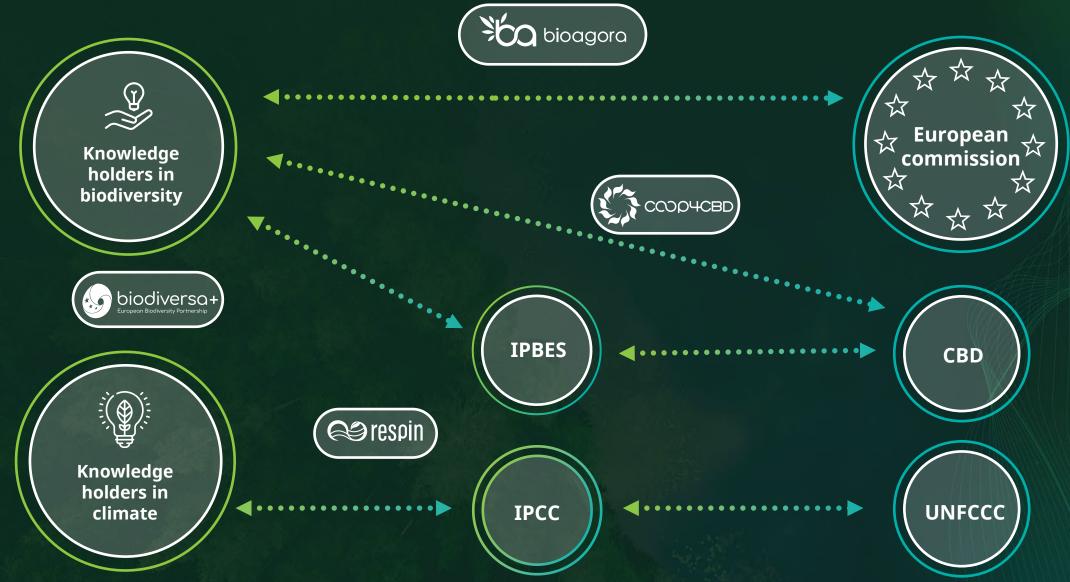
Building a network of experts



Capacity building







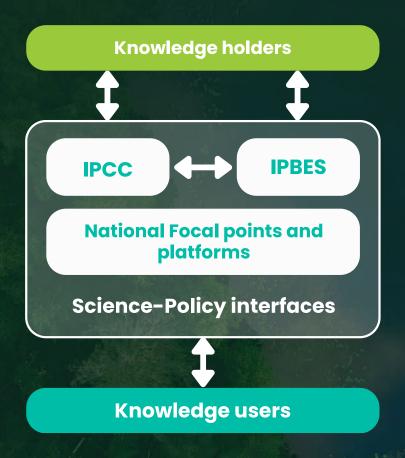


MISSION

Strengthen synergies, policy support and knowledge uptake of IPBES and IPCC and related SPIs

LOGIC

Analysis, networks, capacity



CONSOLIDATION

Building action agendas with key strategic partners to assure lasting uptake of functions

STRUCTURE

The project is structured into five functions



The RESPIN project is structured into five functions.

F1

Empowering Knowledge Holders **F2**

Empowering Knowledge Users **F3**

Strengthening
SPIs at the
EU Level

F4

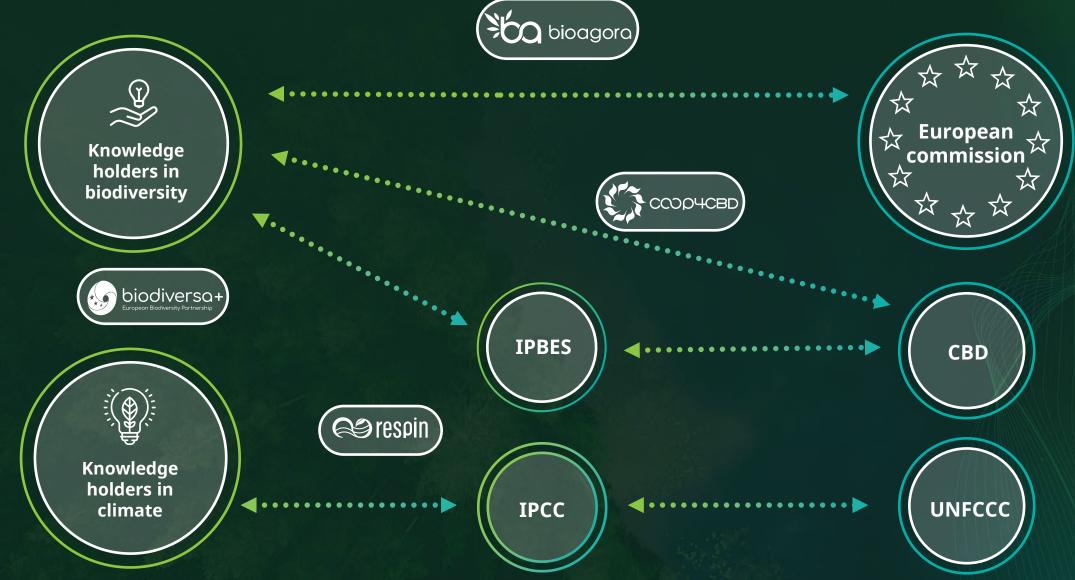
Upscaling and Communication

F5

Coordination and Consolidation











Transforming processes within and between Science and Policy



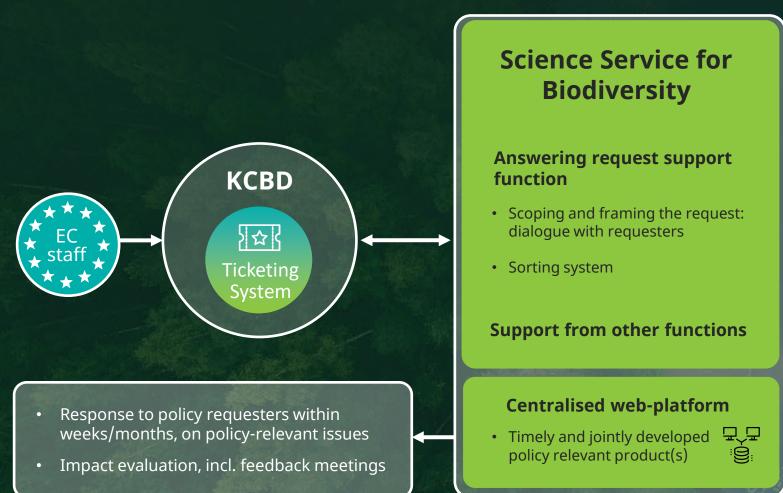
Creating and supporting active thematic networks

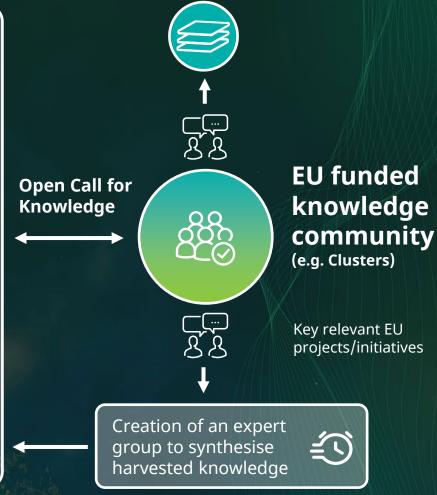


Answering requests and build-up evidence base



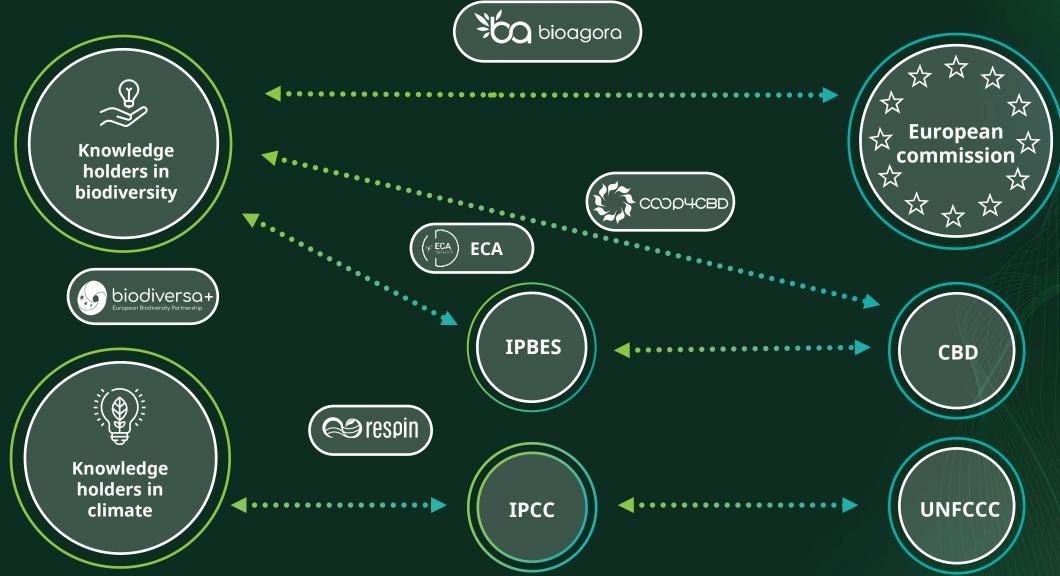
Prototype of a knowledge brokering mechanism tailored to EU funded community













European Co-funded Partnership on Biodiversity

Promote and support R&I programs and projects

Promote and support transnational monitoring

Better connect R&I programmes and projects to policy

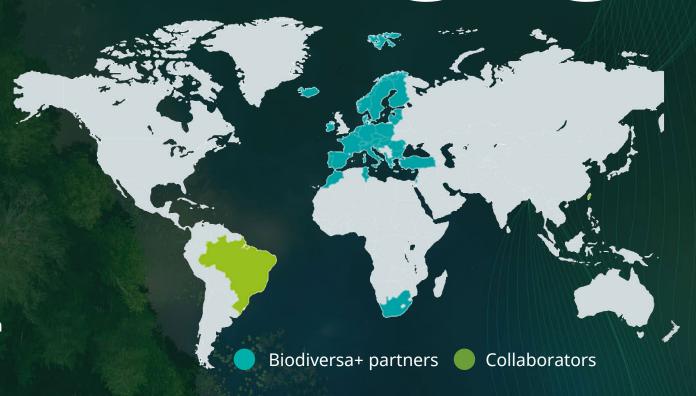


Promote and support Nature-based Solutions, and valuation of biodiversity in private sectors Internationalisation of European R&I

The Biodiversa+ Partnership in short

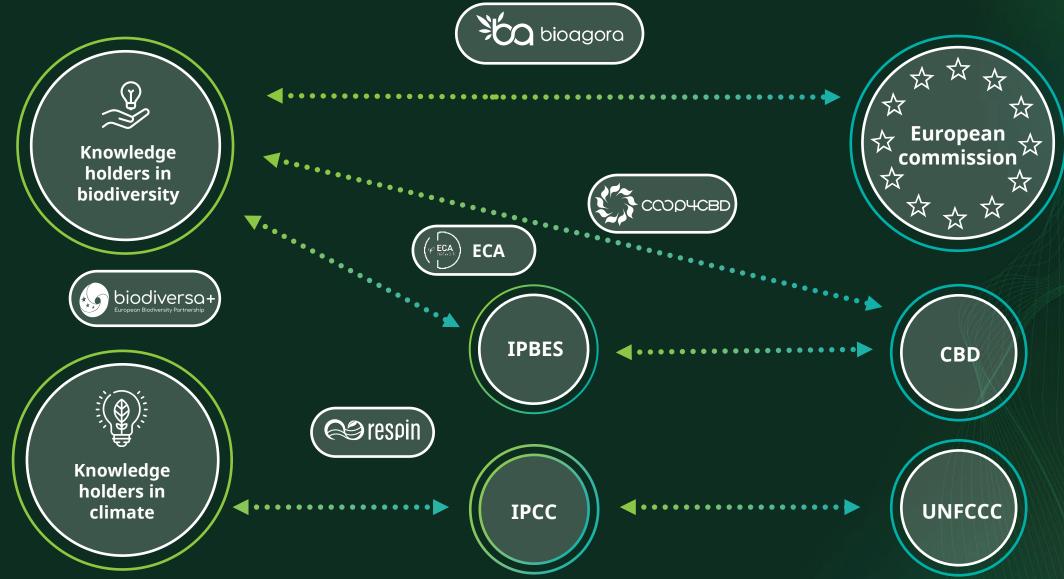


Partners from research and policy











ECA network

- Informal Europe and Central Asia network of IPBES national focal points (NFP) and biodiversity platforms engaging in IPBES, established in 2015
- Aims: develop a European-wide network working on IPBES-related topics; and provide a common space for sharing knowledge, resources, experiences, and lessons learned regarding IPBES.
- Organised 8 Pan-European Stakeholder Consultations (PESC)





Examples of common events and activities

- October 2024 Side event at COP16 (Biodiversa+, COOP4CBD, RESPIN, BioAgora)
- March 2025 PESC-PIN meeting (Biodiversa+, RESPIN, ECA)
- Spring 2024 CDB guidelines (Biodiversa+, COOP4CBD)
- February 2026 Workshop business and Biodiversity (Biodiversa+, Respin)
- Spring 2026 Meeting in ECA Region co-organised by RESPIN, ECA Network and BES-Net
- Spring 2026 Joint workshop with BioAgora / RESPIN in EC on IPBES/IPCC in Sience Service possibly within business theme (IPBES assessment)







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Thank you for attending.
See you soon!

