

Bio Knowledge Agora: Developing the Science Service for European Research and **Biodiversity Policymaking**

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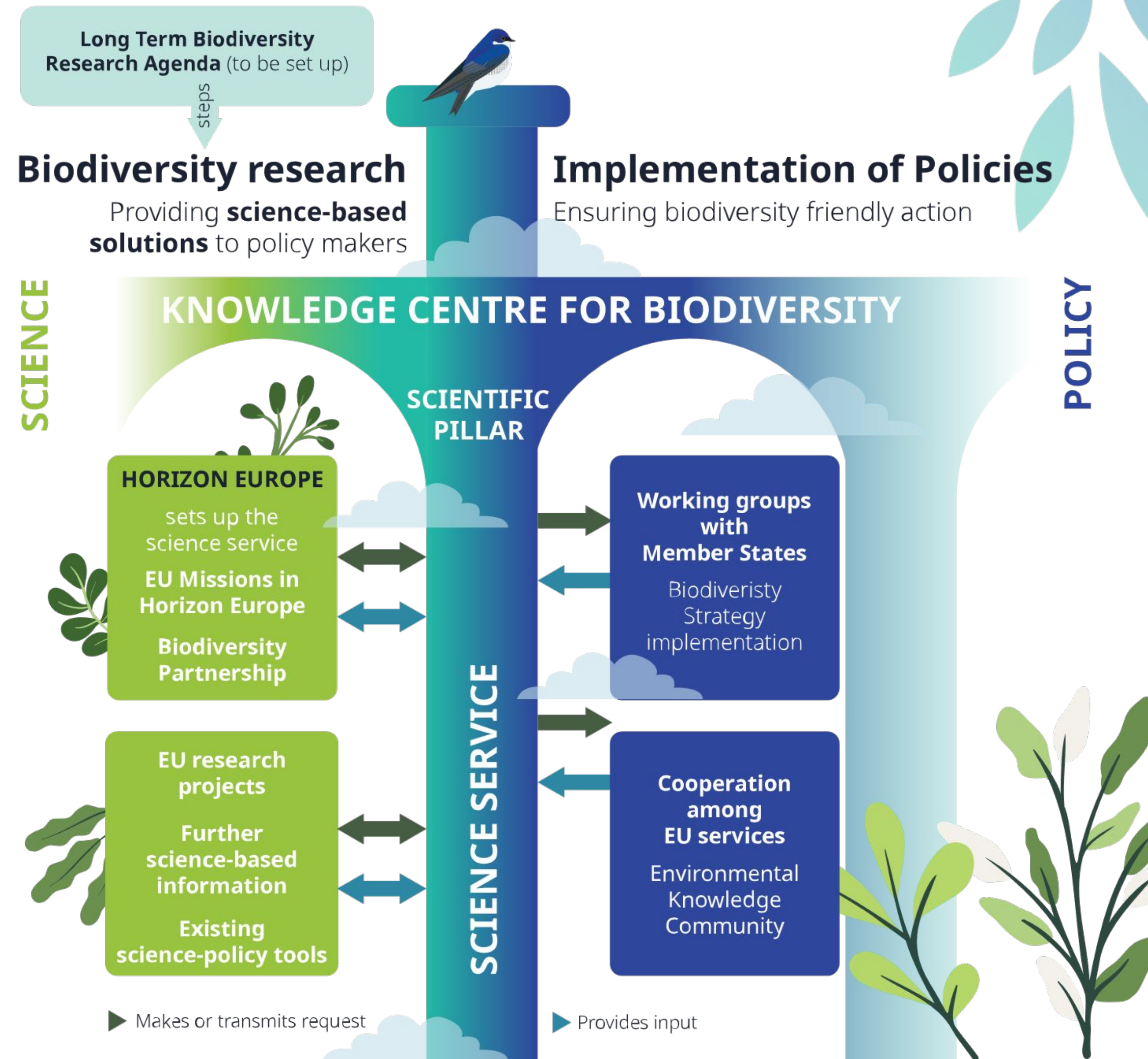
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BioAgora (2022-2027)

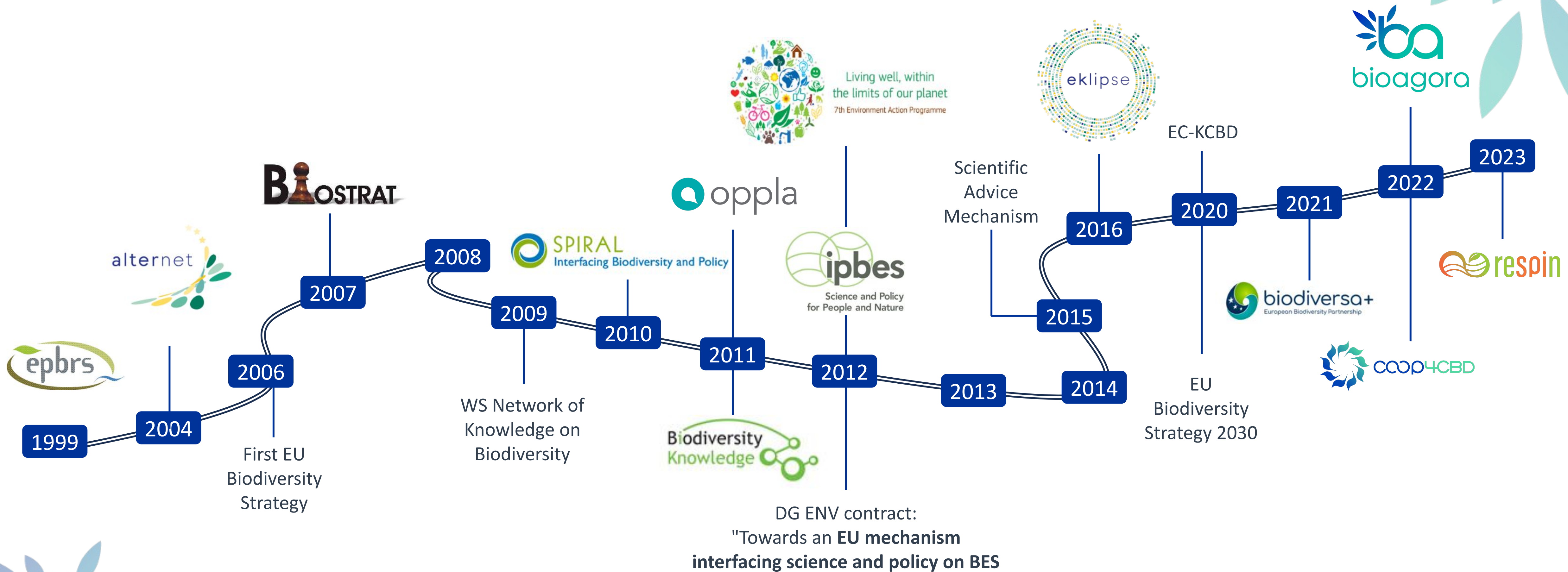
- ♦ Building a multifunctional biodiversity Science-Policy interface, including the **Science Service for Biodiversity (SSBD)**, the scientific pillar of the EU Knowledge Centre for Biodiversity (KCBD)
- ♦ Providing tailored pathways to better orchestrate science-policy interactions to **support the Biodiversity Strategy for 2030**
- ♦ **Coordinator:** Finnish Environment Institute



BioAgora Information Event, 16 April 2024

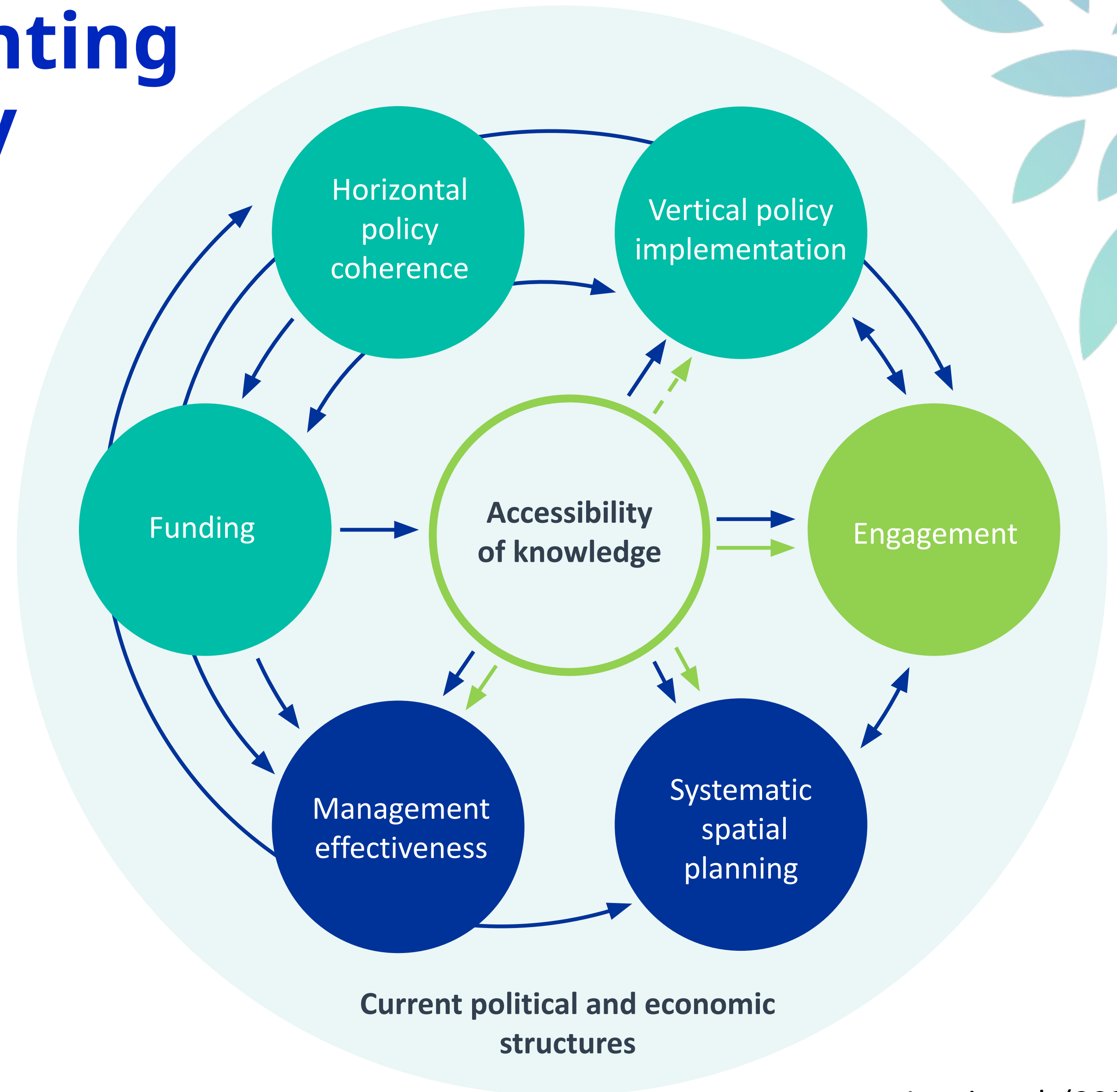


A long visionary road on how to improve Science-Policy Interface for Biodiversity



Challenges for implementing the Biodiversity Strategy

All challenges are linked to knowledge



Four main goals



Orchestrate and assess existing Science-Policy Interface networks and actors



Use **demonstration cases** across EU Member States that ratchet up the implementation of biodiversity commitments



Promote capacity building and co-learning processes for an inclusive and functional SPI for biodiversity



Develop a fair, functional and transformative **Science-Policy interface** including setting up the **Science Service for Biodiversity (SSBD)**





Orchestrate and assess existing Science-Policy Interface networks and actors

SPI landscape: Who are the key actors
and knowledge holders?



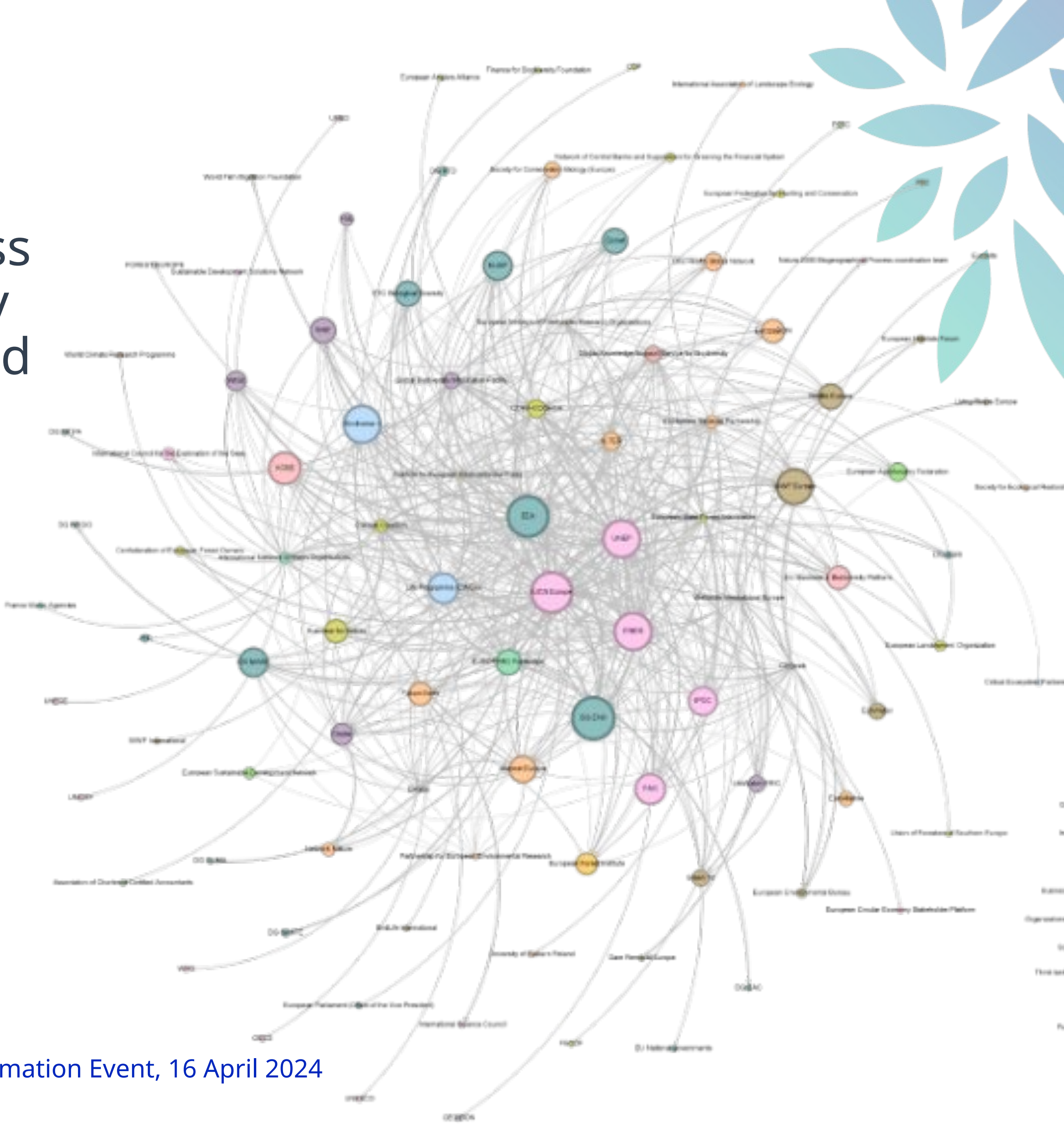
Projects



Networks

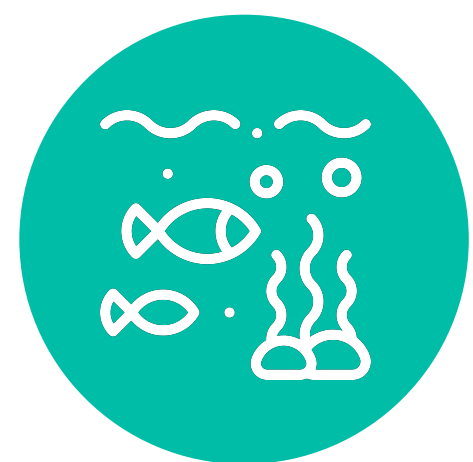


Expertise





Use demonstration cases across the EU that ratchet up the implementation of biodiversity commitments



Marine



Freshwater



Nature-Based
Solutions



Pollination



Multifunctional
landscapes



Transformative
change



Scenarios/
modelling

Restoration as a key aspect in Freshwater and Multifunctional landscapes



Demonstration cases test the functions of the future SSBD

- ♦ Answering requests and building a multiple evidence base
- ♦ Creating and supporting active thematic networks
- ♦ Transforming processes within and between Science and Policy



“Urgent request pilot” supporting the restoration law

- ◆ The key conclusions of the paper could be used as defensives in response to the questions we get in context of Nature Restoration Law.
- ◆ “Have something robust, which was peer reviewed, on which we could be confident that what was in there is not just the view of a particular scientist whom we happen to know but that it is really reflecting the best state of science on a particular issue.”
- ◆ “Very useful and strong arguments for the inclusion of deadwood an indicator of ecosystem condition and counter-arguments to the fire-risk narrative.”



Deadwood and Fire Risk in Europe

HIGHLIGHTS

- ◆ The volume of dead wood generated by natural disturbances is highly variable among European forest ecosystems and can represent a large portion of the fuel available to burn during a forest fire.
- ◆ However, pieces of deadwood burn slowly and therefore contribute only little to fire intensity.
- ◆ Fine fuels such as branches and dead needles, attached to deadwood can have a significant effect on fire intensity.
- ◆ Salvage logging after a large-scale natural disturbance does not normally reduce the amount of fine fuels and may therefore not reduce fire risk.

Challenges in producing briefs for urgent request

- ♦ For this brief:
 - ♦ Total: 56 working days
- ♦ **Lesson learned:** Huge investment of resources – there is a question of how will human resources be covered in the future



Deadwood and Fire Risk in Europe

HIGHLIGHTS

- ♦ The volume of dead wood generated by natural disturbances is highly variable among European forest ecosystems and can represent a large portion of the fuel available to burn during a forest fire.
- ♦ However, pieces of deadwood burn slowly and therefore contribute only little to fire intensity.
- ♦ Fine fuels such as branches and dead needles, attached to deadwood can have a significant effect on fire intensity.
- ♦ Salvage logging after a large-scale natural disturbance does not normally reduce the amount of fine fuels and may therefore not reduce fire risk.

POLICY CONTEXT

Deadwood is considered a biodiversity indicator in forest ecosystems. Understanding its link with fire risk is necessary to inform current policy discussions between the European Commission and Member States in both the Nature Restoration law and EU Forest policy. DG ENV thus requested a synthesis of knowledge to identify a) links between deadwood characteristics and fire risk in the different biogeographic regions of Europe, and b) forest management approaches for reconciling the biodiversity objectives of deadwood management with forest fire risk prevention.

In addition to weather conditions, the speed of drying depends fundamentally on the surface to volume ratio of the piece of fuel. The evaporation of moisture depends on the surface area, but the amount of water that can be held in the piece depends on its volume. Therefore, mosses, lichens, needles, dead leaves, twigs and fine branches and cured grass can dry rapidly in a few hours, while large-diameter pieces of deadwood may take months to dry, especially if covered in water-repellent bark (Johnson 2001). In addition to the individual surface to volume ratio effect, the amount of water in dead fuels will also depend on their location and connectivity to other potentially moister materials such as soil.

1. DEADWOOD AS A FUEL

Fuels of wildfires can be classified into two broad categories. The first category includes only living vascular plants that actively control their hydration and typically keep relatively high-water content even during droughts. The second category includes all other fuels, i.e., soil organic matter, litter, deadwood, and non-vascular plants such as mosses and lichens. Their moisture content of these other forest fuels is passively determined by past and recent weather conditions. The drying rate is faster, the higher the air temperature and wind speed, and the lower the relative humidity.

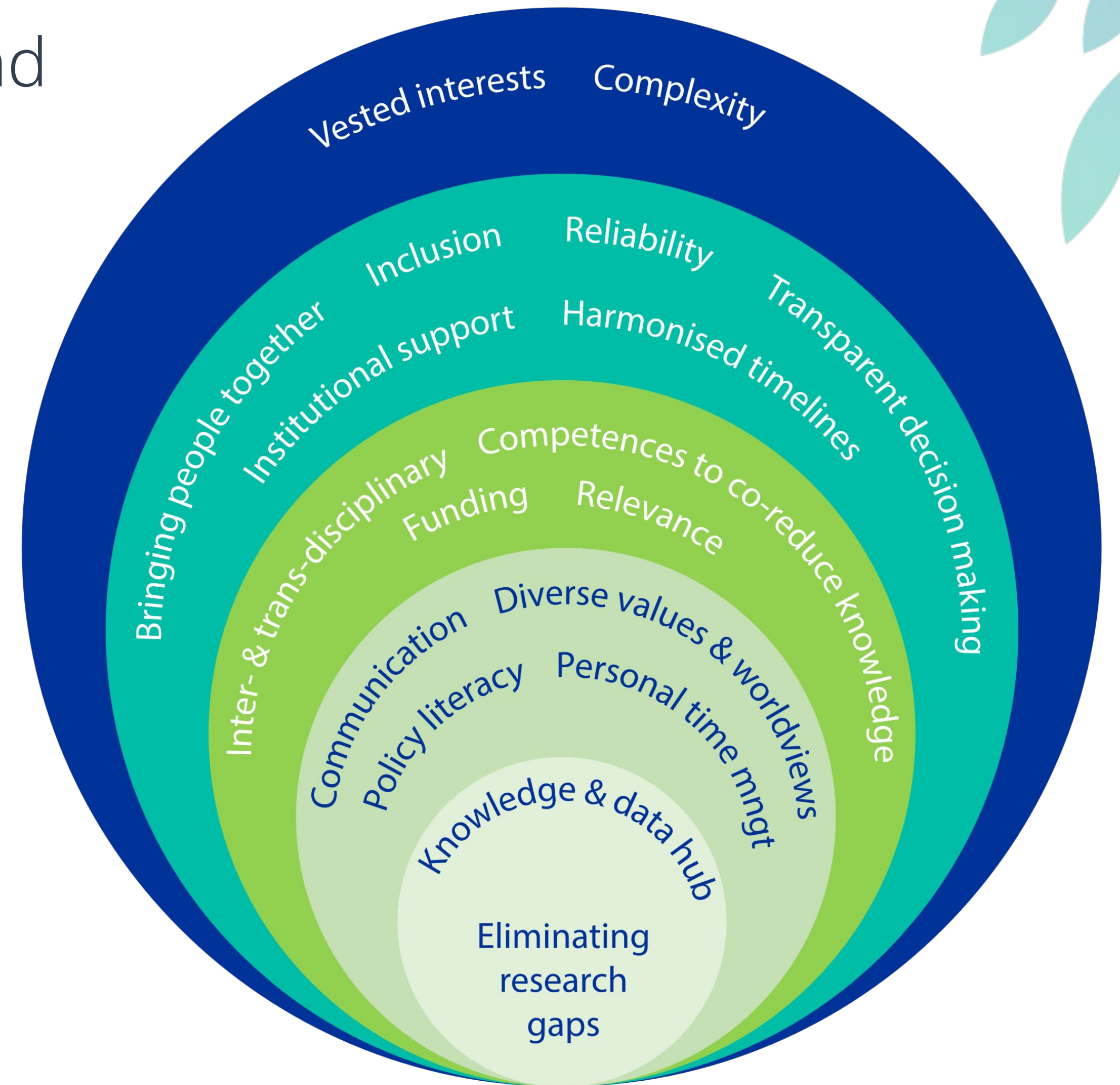
In an event of fire, a high moisture content of fuels slows down the spread of fire, as the evaporation of water from pieces of fuels delays their ignition. Therefore, fast-drying fine dead fuels, are important in enabling the ignition and rapid spread of fire. Only when dry weather conditions have lasted for a long time, other fuels, such as deadwood, become important. Another mechanism in which the high surface to volume ratio is important in the event of fire is not related to water: the high surface to volume ratio of fine fuels enables rapid heating, volatilization and combustion of these fuels and therefore allows rapid spread and high intensity of a fire.





Promote capacity building and co-learning processes for an inclusive and **functional** SPI for biodiversity

- ◆ Different SPI actors have different capacity gaps
- ◆ Development needs distributed across the five layers are often interrelated
- ◆ Addressing them in combination might have stronger transformative potential than focusing only on one specific need





Develop a fair, functional and transformative **Science-Policy interface** including setting up the **Science Service for Biodiversity (SSBD)**



Through harnessing lessons learnt from DCs



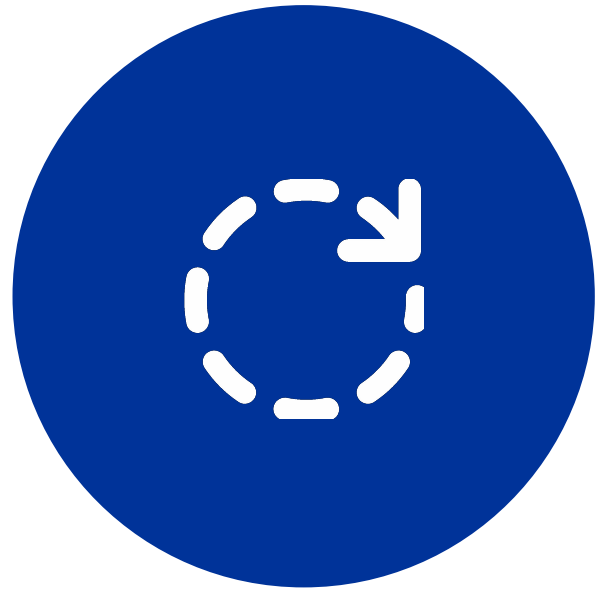
Through co-development and collaboration with multiple actors

The Science Service will have a:

- ♦ Business plan – how to operate in the long-term
- ♦ Governance structure – how to organise
- ♦ Interactive and widely accessible web-platform – how to engage all relevant actors in the SPI



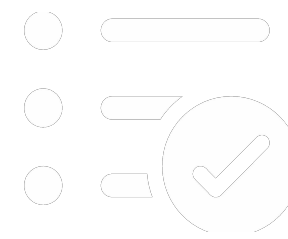
BioAgora aims to contribute to transformative change!



Systemic
change is needed
in the SPI



SPI mechanisms can have
a key role in changing
business as usual – on
how knowledge is
understood and used in
decision making



Testing the
transformative
potential of the functions



Increase
collaboration but also
**challenge and
disrupt!**





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