

# Biodiversity Meets Data

A Single Access Point to high-throughput biodiversity monitoring, biodiversity data, and biodiversity analyses for better conservation across Europe.





# Consortium members at BMD's kick-off meeting Leiden, Netherlands



# Partners



Swiss Institute of  
Bioinformatics



Royal  
Botanic Garden  
Edinburgh



INTERNATIONAL  
HELLENIC  
UNIVERSITY



# Represented Biodiversity RIs and Projects through BMD partners







# Contributions

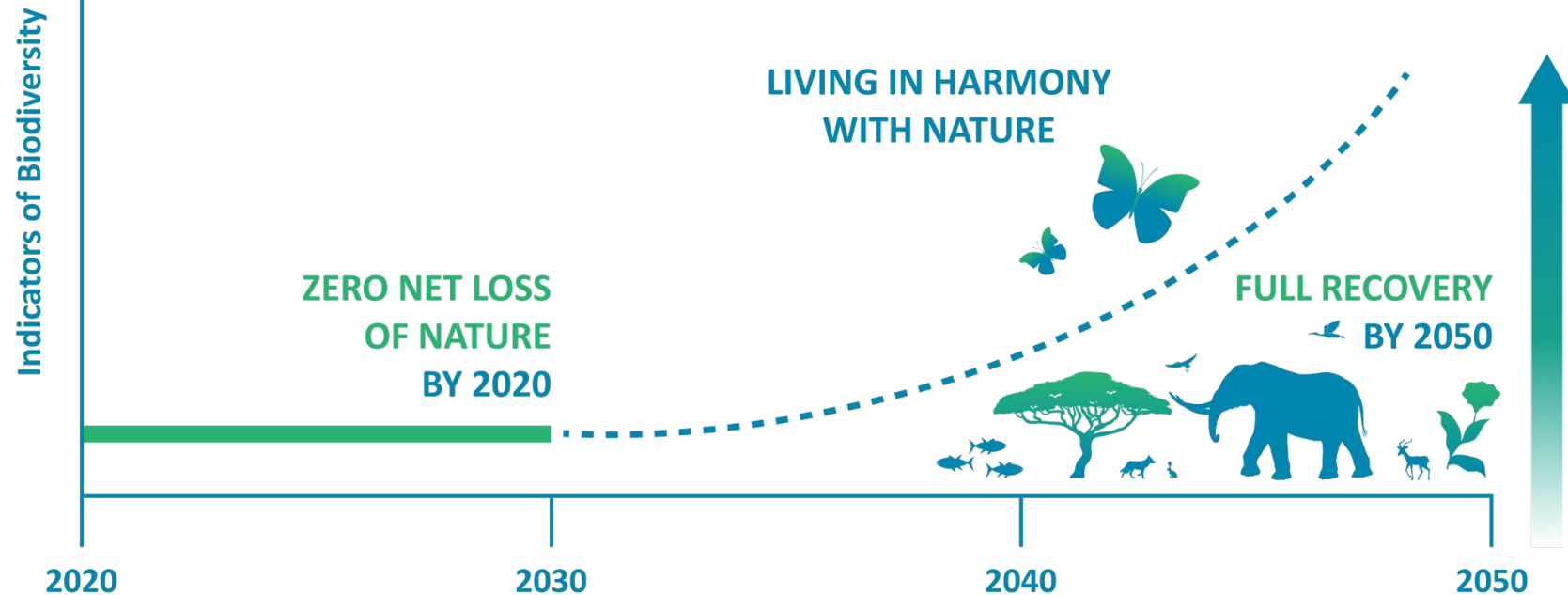
## Supporting the EU biodiversity strategy for 2030:



- **Plan, manage and expand** protected areas and **improve the conservation status** of species and habitats based on up-to-date knowledge and solutions.
- **Understand and address drivers of biodiversity decline**, mainstream biodiversity, ecosystem services, including through the development of nature-based solutions.

## Figure 23: Nature Positive by 2030

*A measurable global goal for nature.  
Source: Locke et. al (2021).*







**Expected outcomes**



- **Better monitoring** of biodiversity in the EU by high-throughput methods leading to a better implementation of the Nature Directives.
- **Better understanding** of the state of nature and of the drivers of biodiversity loss, a better usage of existing data.
- **More complete view** of the state of nature and its evolution.

A photograph of a bison in a grassy field, overlaid with a semi-transparent teal color. The bison is positioned on the left side of the frame, facing slightly towards the right. The word "Objectives" is written in white, bold, sans-serif font in the center-right area of the image.

# Objectives



- 1 **Enable resource managers** with high-throughput AI-driven biodiversity monitoring.
- 2 **Support FAIR sharing** of legacy biodiversity data.
- 3 **Create a data catalogue** for unified access to relevant datasets.
- 4 **Build a pipeline** to harmonise spatio-temporal and taxonomic data.
- 5 **Co-design Virtual Research Environments** with stakeholders.
- 6 **Co-design Single Access Point** with stakeholders.
- 7 **Develop extensive training** and capacity building material.

# Work Package structure

A background image featuring a butterfly perched on a flower, overlaid with a semi-transparent teal filter. The butterfly is positioned on the right side of the frame, and the flower is at the bottom right. The text 'Work Package structure' is centered in white.

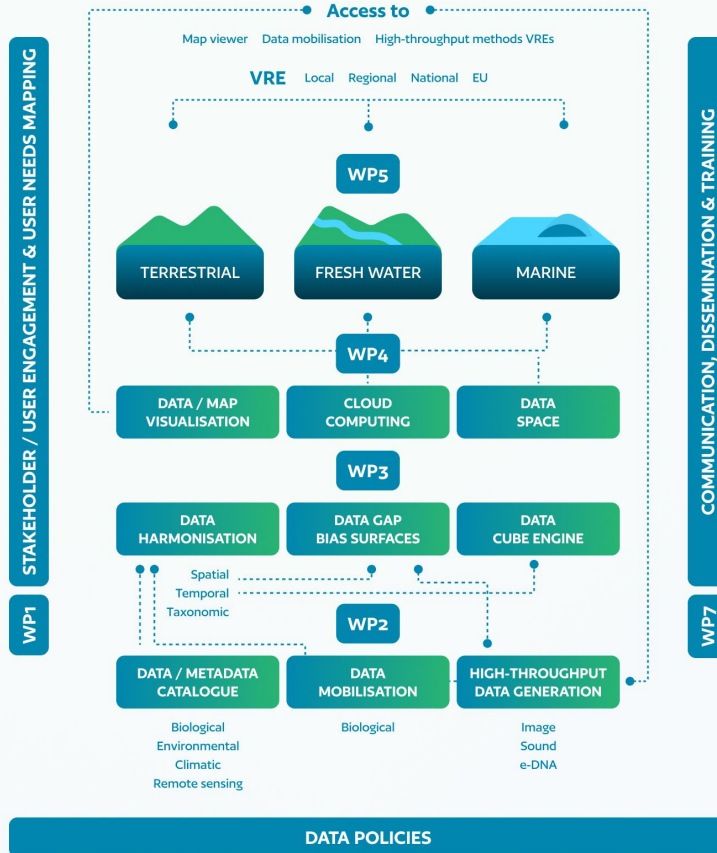
WP8

COORDINATION, MANAGEMENT AND ETHICS

WP6

DATA &amp; SERVICES SAP

## BMD WP structure







**Managers of natural resource sites** responsible for site-level biodiversity conservation.

**Government agencies** responsible for reporting under the Nature Directives.

**Policymakers** in the EU Green Deal, EU Biodiversity Strategy for 2030, and EU Nature Restoration Law.

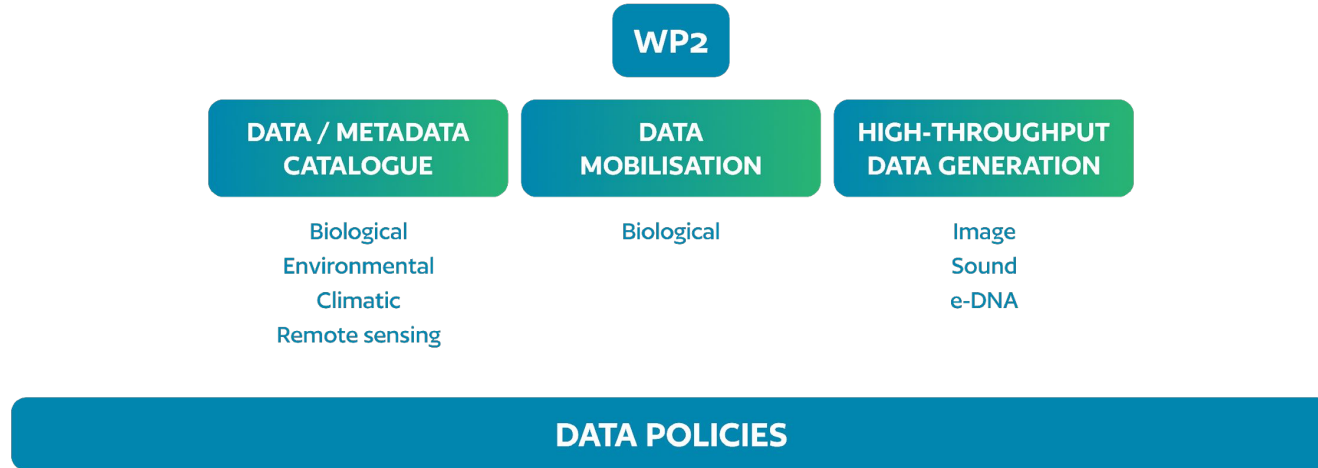
**Private sector** with obligations under the Corporate Sustainability Reporting Directive.

**Academia** in natural and life sciences.

**Society** at large interested in biodiversity and nature conservation.

# Data access, mobilisation & capture

Providing stakeholders access to high-throughput image and sound capture methods for eDNA sampling and AI-based species identification.



# Data harmonisation

Harmonising biodiversity data through data cubes, taxonomic integration, and spatial-temporal analysis to enhance access, identify gaps, and inform policy.

**WP3**

**DATA  
HARMONISATION**

**DATA GAP  
BIAS SURFACES**

**DATA  
CUBE ENGINE**

Spatial  
Temporal  
Taxonomic





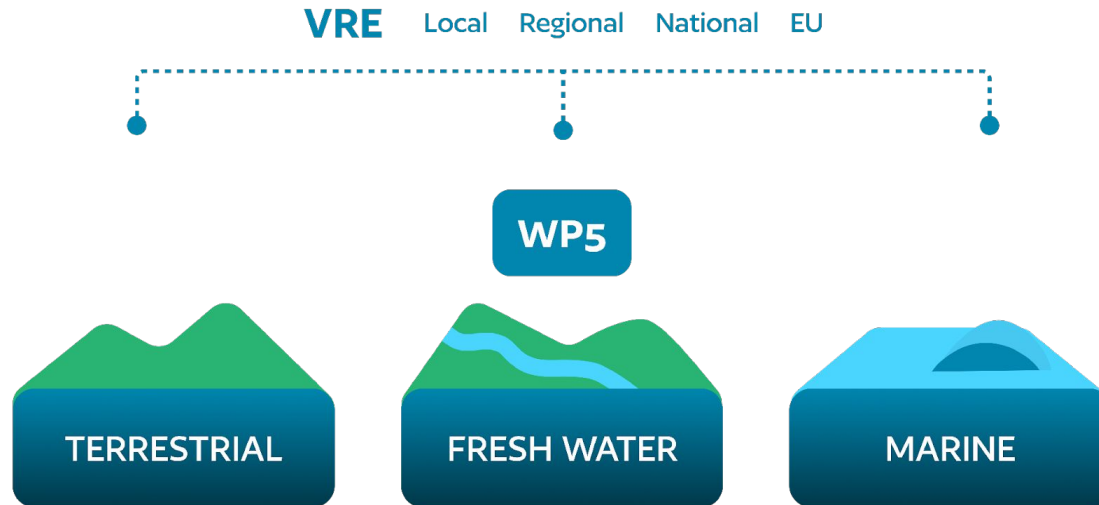
# Data storage, visualisation & computing

Creating a FAIR-aligned Data Space for on-demand storage, computing, and visualisation of harmonised biodiversity data via scalable cloud and geospatial tools.



# Virtual Research Environments

Co-designed with stakeholders, these on-demand tools enable analysis of biodiversity trends, drivers, and impacts across all realms to support targeted action and policy.



# Virtual Research Environments

WP5



Covers the three  
realms and all  
spatial scales



Users define  
their own  
analyses



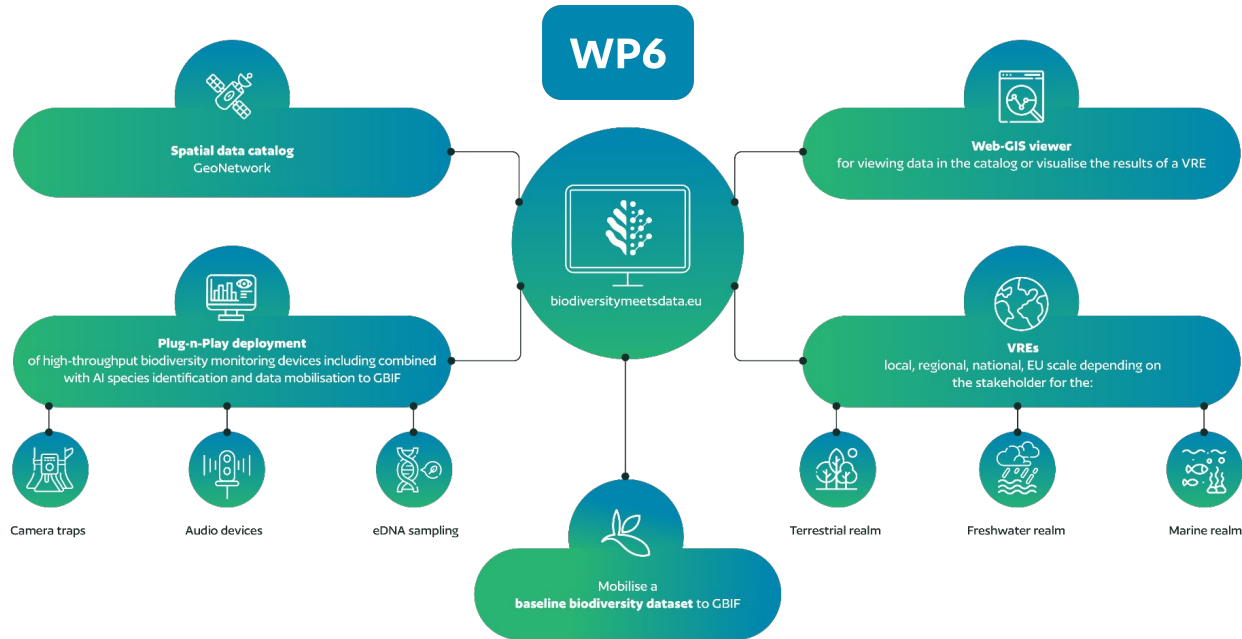
Natura 2000  
designation  
reports



National  
checklists

# Single Access Point

A co-designed platform providing high-throughput monitoring tools, legacy dataset publishing, configurable research environments, and a web-GIS viewer for visualising aggregated biodiversity data.





# Communication, Dissemination & Training

WP7



**Stakeholder engagement** through ethical, inclusive collaboration to shape the Single Access Point for real-world needs.



**Trainings** for site managers, policymakers, and researchers to build skills in using the SAP and other tools.



Get involved!





# Key Performance Indicators

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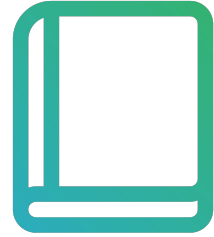
Deploy  
monitoring  
devices



Facilitate  
stakeholder  
enrolments



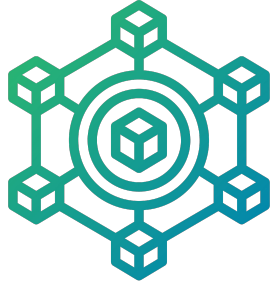
Mobilise and  
disseminate  
new datasets



Create a  
catalogue with  
relevant data



# Key Performance Indicators



Setup  
biodiversity  
data cubes



Co-design  
Virtual Research  
Environments



Establish a  
Single Access  
Point



Develop training  
products and  
organise workshops



# Follow us!



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