BMD
Biodiversity Meets Data

Biodiversity Meets Data

A Biodiversity Explorer for high-throughput biodiversity monitoring, biodiversity data, and biodiversity analyses for better conservation across Europe.

Co-funded by the European Union

Project funded by
Schweizerische Eidgenossens
Confédération suisse
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Swiss Confederation
Federal Department of Econ
Education and Research EAE
State Secretariat for Educatio
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Consortium members at BMD's kick-off meeting

Leiden, Netherlands

Partners

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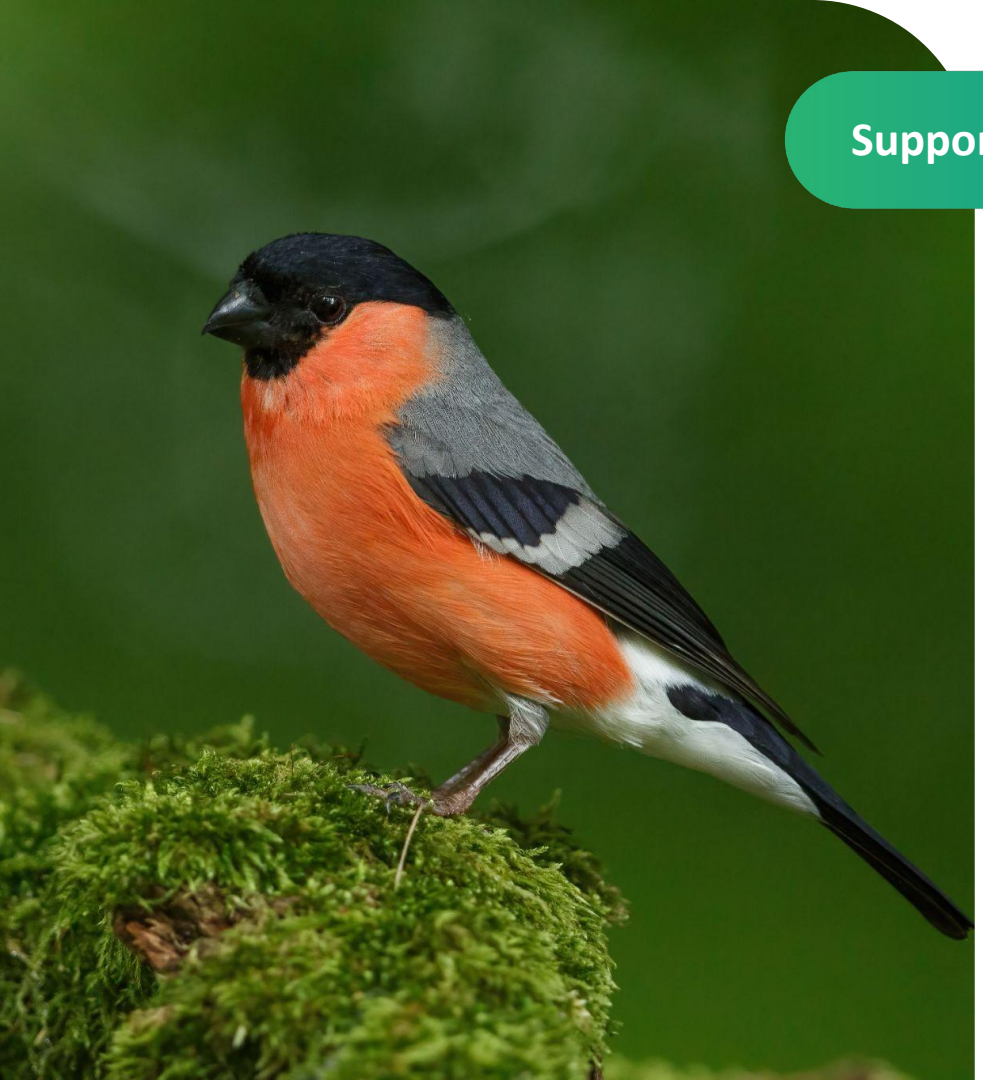
Represented Biodiversity RIs and Projects through BMD partners

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.

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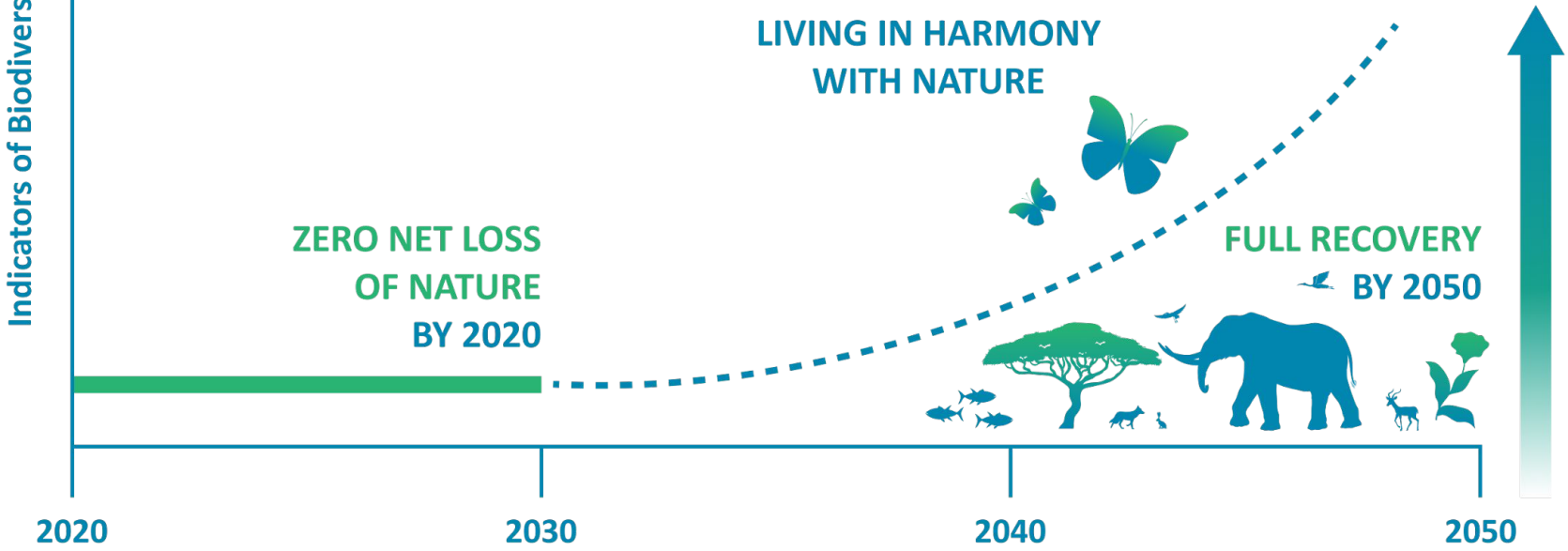
Figure 23: Nature Positive by 2030

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



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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.

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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 Biodiversity Analysis Tools** with stakeholders.
6. **Co-design Biodiversity Explorer** with stakeholders.
7. **Develop extensive training** and capacity building material.

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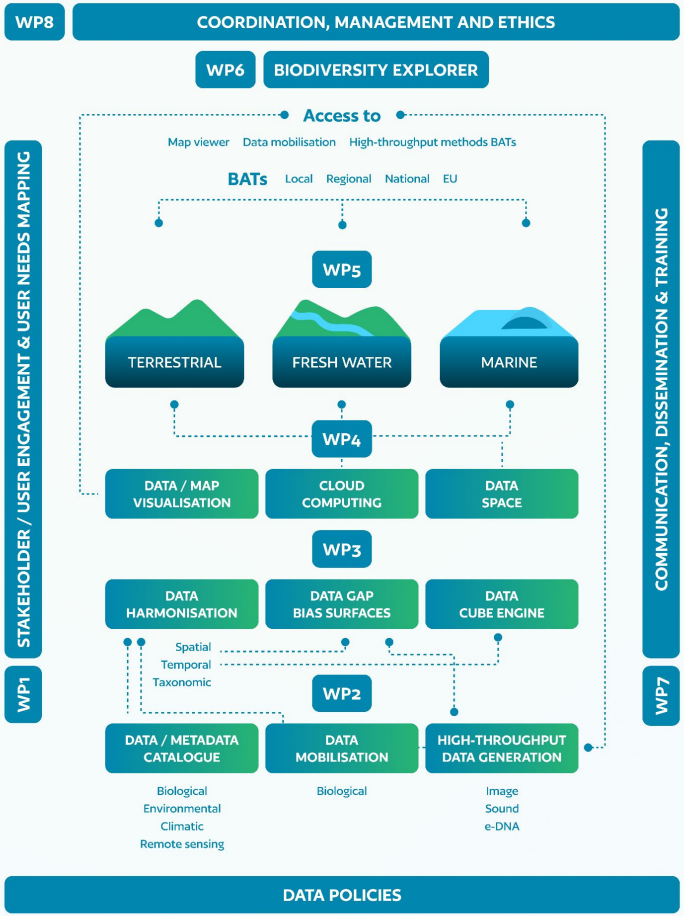
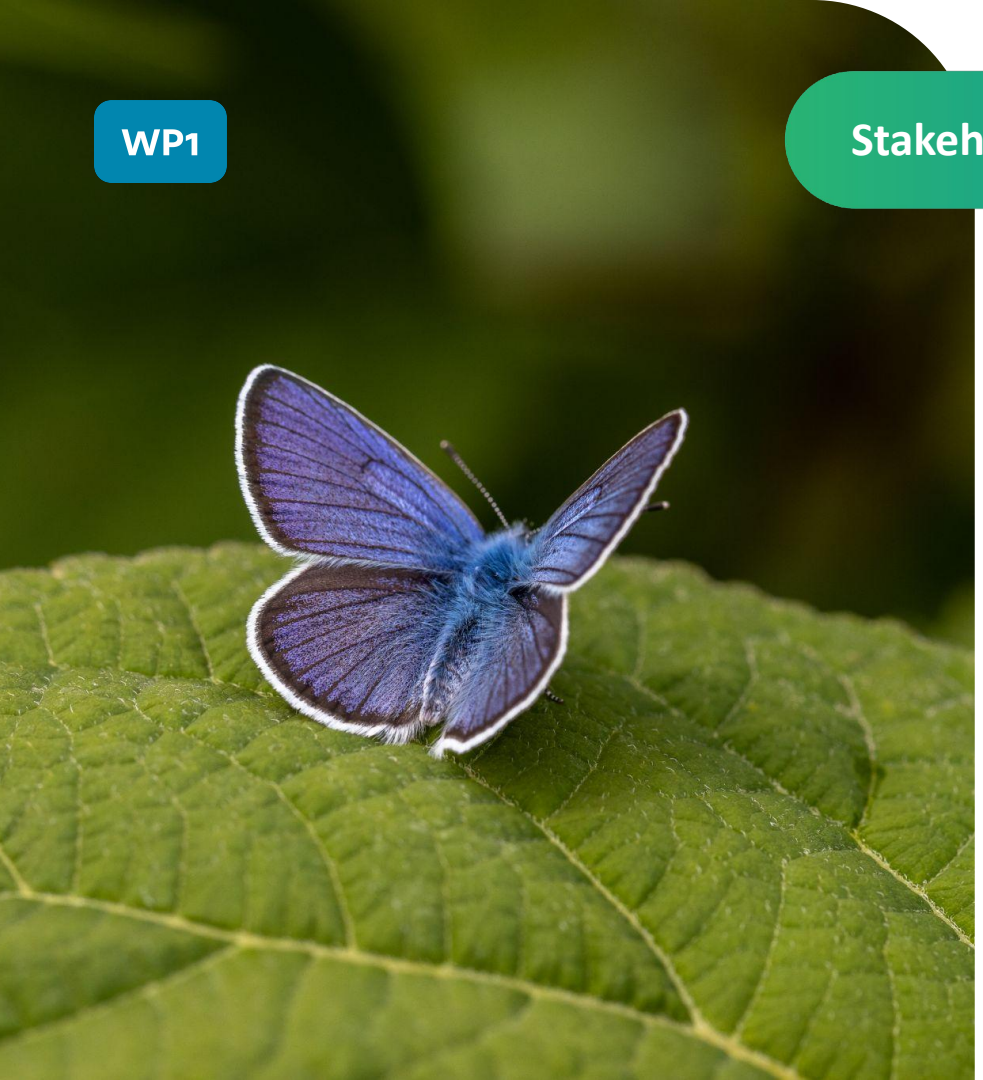
Work Package structure

BMD WP structure





WP1

Stakeholder engagement & user needs mapping

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.

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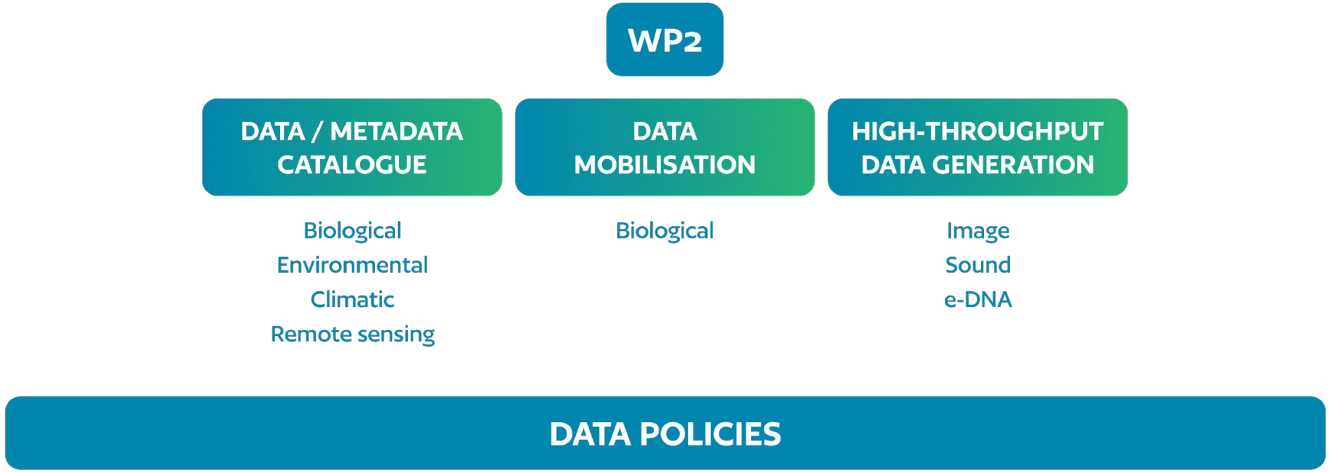
Data access, mobilisation & capture

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



Biodiversity Genomics Europe

MAMBO
MODERN APPROACHES TO THE MONITORING OF BIODIVERSITY

ARISE
arise-biodiversity.nl

SIB
Swiss Institute of Bioinformatics

Data harmonisation

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

Meise Botanic Garden

Catalogue of Life

DNAqua-Net

BIODIVERSITY BUILDING BLOCKS FOR POLICY

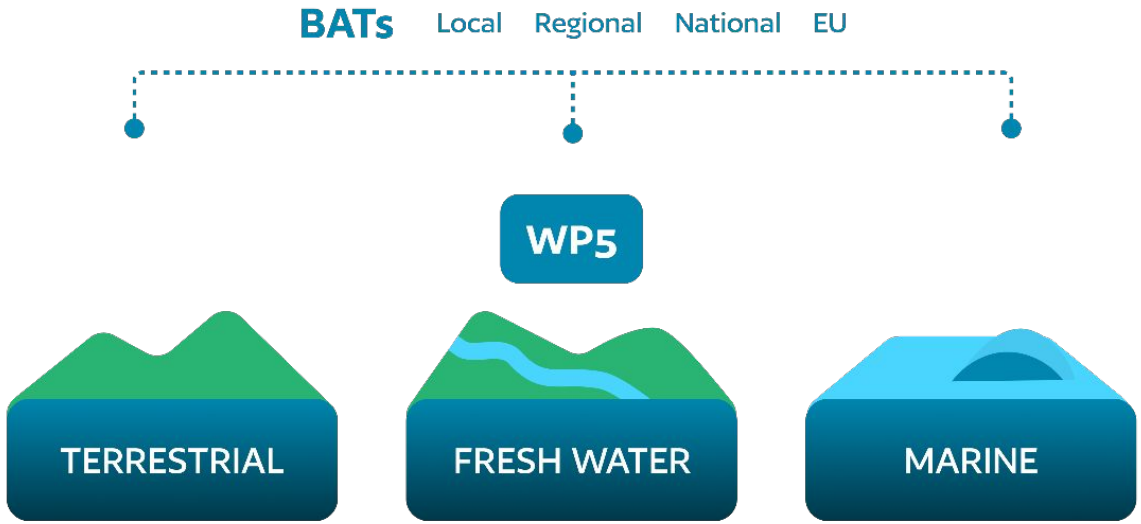
Data storage, visualisation & computing

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

Naturalis Biodiversity Center
LifeWatch ERIC
SENCKENBERG world of biodiversity
UFZ HELMHOLTZ Centre for Environmental Research
BIODT biodiversitydigitaltwin

Biodiversity Analysis Tools (BATs)

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.



UFZ HELMHOLTZ Centre for Environmental Research

Biodiversity Analysis Tools (BATs)

WP5

Covers the three realms and all spatial scales

Users define their own analyses

Natura 2000 designation reports

National checklists

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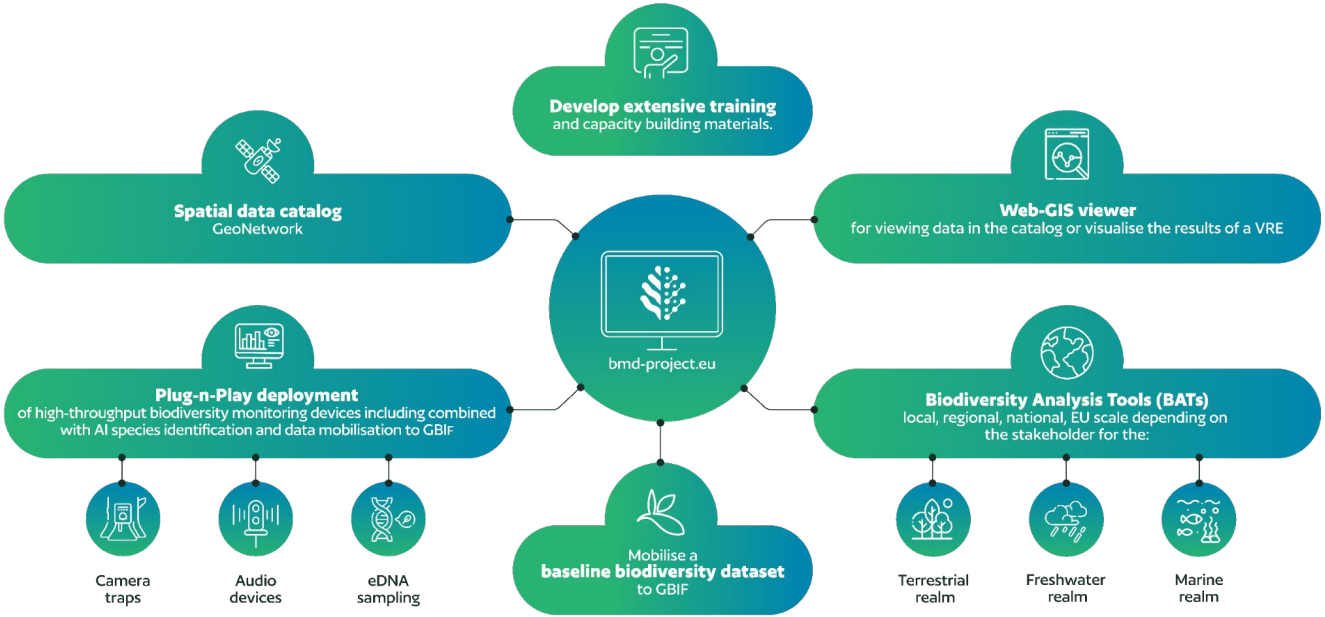
Biodiversity Explorer

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.



LifeWatch ERIC

Communication, Dissemination & Training

WP7

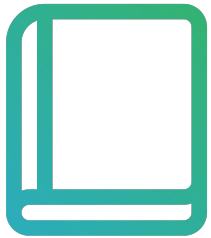
Stakeholder engagement through ethical, inclusive collaboration to shape the Biodiversity Explorer for real-world needs.

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

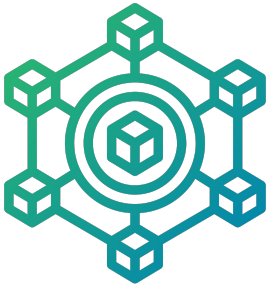
Key Performance Indicators

Key Performance Indicators

Deploy high-throughput biodiversity monitoring devices



Create a catalogue with relevant data



Setup biodiversity data cubes

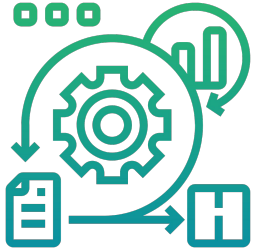
Mobilise baseline and legacy datasets

Key Performance Indicators

Co-design Biodiversity Analysis Tools

Establish a Biodiversity Explorer

Facilitate stakeholder enrolments



Develop training products and organise workshops

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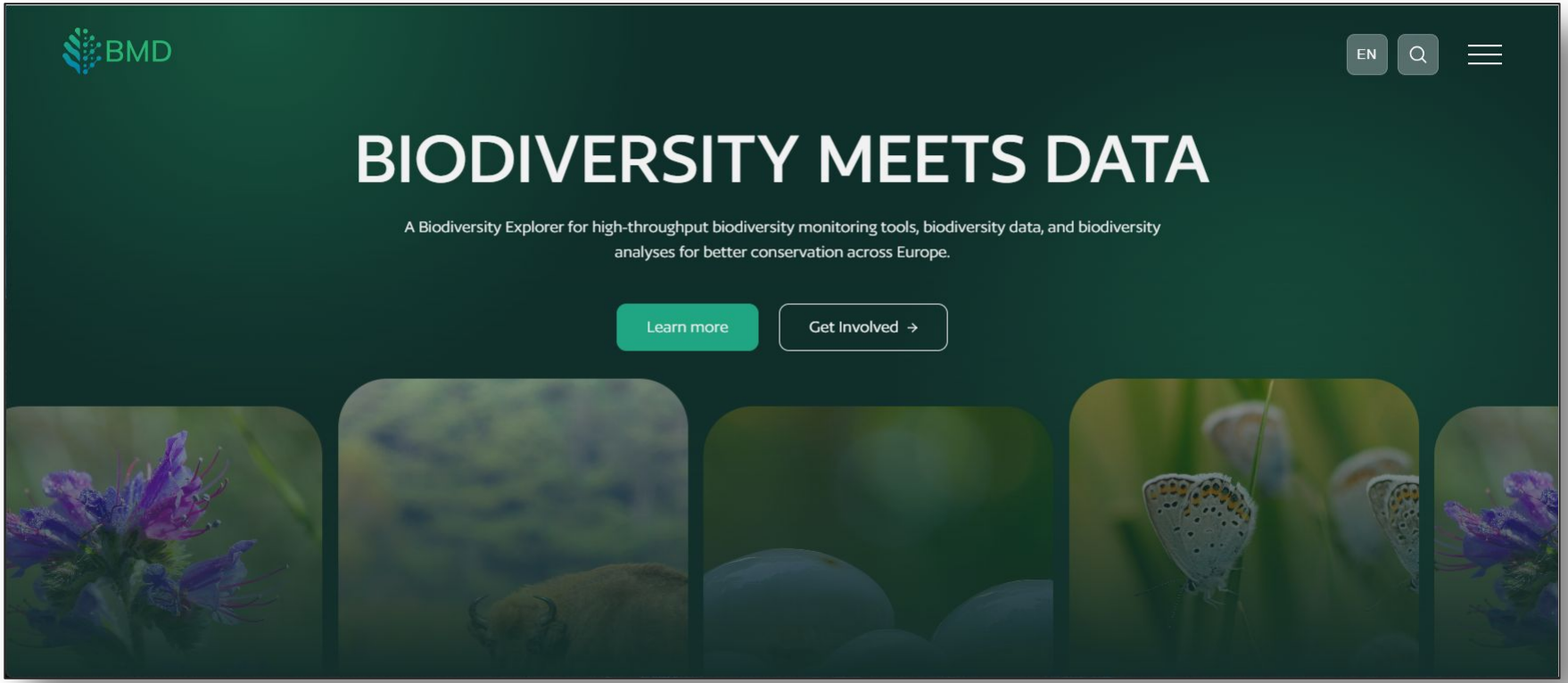

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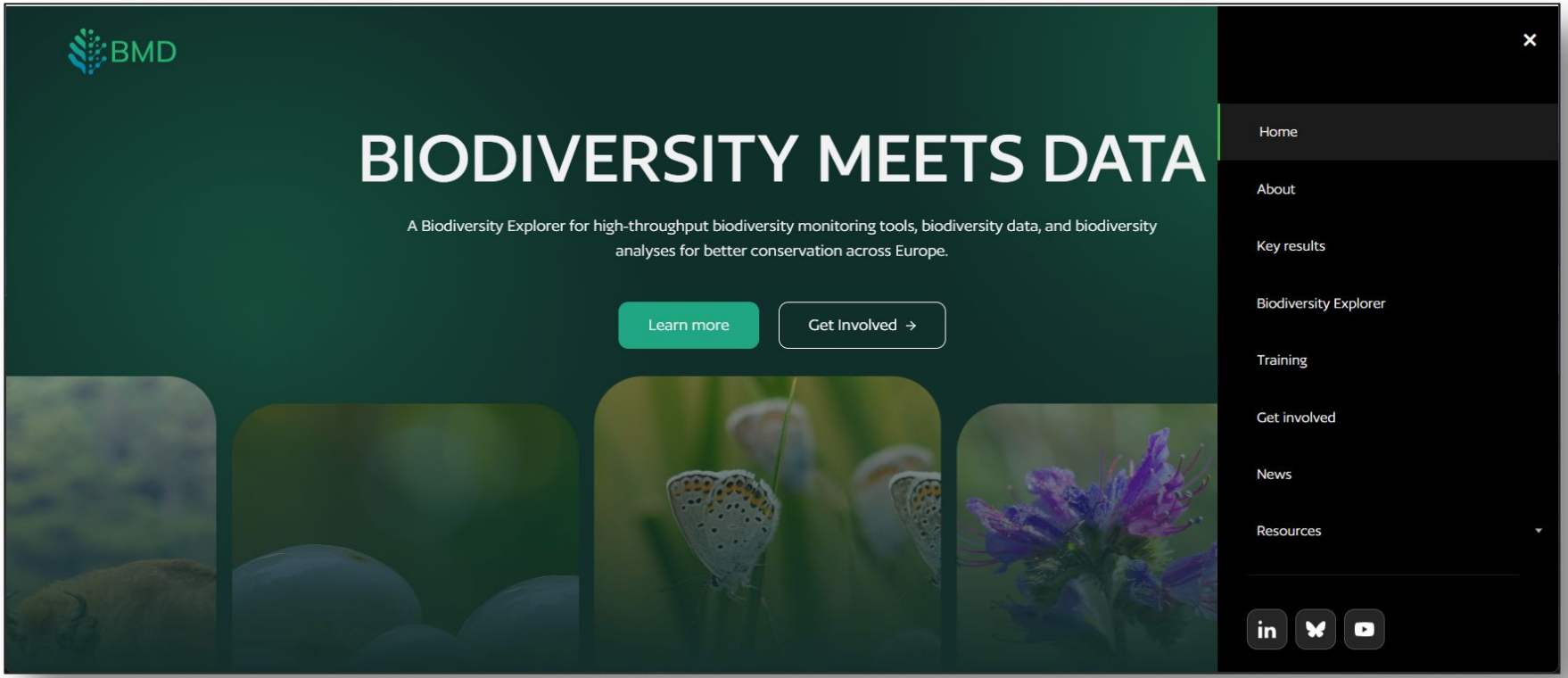

Get involved

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