BIODIVERSITY BUILDING BLOCKS FOR POLICY

CESAM CENTRE FOR ENVIRONMENTAL AND MARINE STUDIES

universidade de aveiro

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ENCONTRO COM A CIÊNCIA E A TECNOLOGIA EM PORTUGAL

Standardising biodiversity data for improved policymaking: Introducing the B-Cubed project

B-Cubed is standardising access to biodiversity data empowering policymakers to proactively address the impacts of biodiversity change

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CHALLENGES

The global biodiversity crisis requires rapid, reliable and repeatable biodiversity monitoring data which decision makers can use to evaluate policy.

OPPORTUNITIES

Such information – from local to global level and within relevant timescales – calls for an improved integration of data on biodiversity from different sources.

AIM

B-Cubed is standardising access to biodiversity data empowering policymakers to proactively address the impacts of biodiversity change.

APPROACH

B-Cubed aims to transform biodiversity monitoring into an agile and responsive process by:

Policy alignment
working closely with existing biodiversity initiatives to identify and address policy needs.

Evidence base
providing fast access to pre-aggregated and modelled biodiversity data and standardised biodiversity indicators responsive to the addition of new data.

Automated workflows
packaging known methods together into standardised workflows that can be run by anyone for any region and can be updated.

Cloud computing
enabling models that allow researchers to configure and calculate species occurrence cubes on demand in a cloud computing environment.

Capacity building
developing a number of guidelines, training programs and activities to train a new generation of data scientists.

Case studies
demonstrating the effectiveness of its solutions in four case studies, varying in geographic extent, biodiversity richness and data availability.

PARTNERS

- Meise Botanic Garden
- Global Biodiversity Information Facility
- Research Institute for Nature and Forest
- University of Bologna
- Justus Liebig University Giessen
- Ovidius University of Constanța
- South African National Biodiversity Institute
- Stellenbosch University
- Pensoft Publishers
- Martin Luther University of Halle-Wittenberg
- French Institute for Research in Computer Science and Automation
- University of Aveiro
- La Trobe University

PROJECT COORDINATOR: Dr. Quentin Groom, Meise Botanic Garden

B-CUBED SOLUTIONS & ACTIVITIES

Data & Evidence
B-Cubed aims to improve the existing policy evidence base and contribute to better alert systems by providing fast access to **pre-aggregated and modelled biodiversity data** and **standardised biodiversity indicators** responsive to the addition of new data.

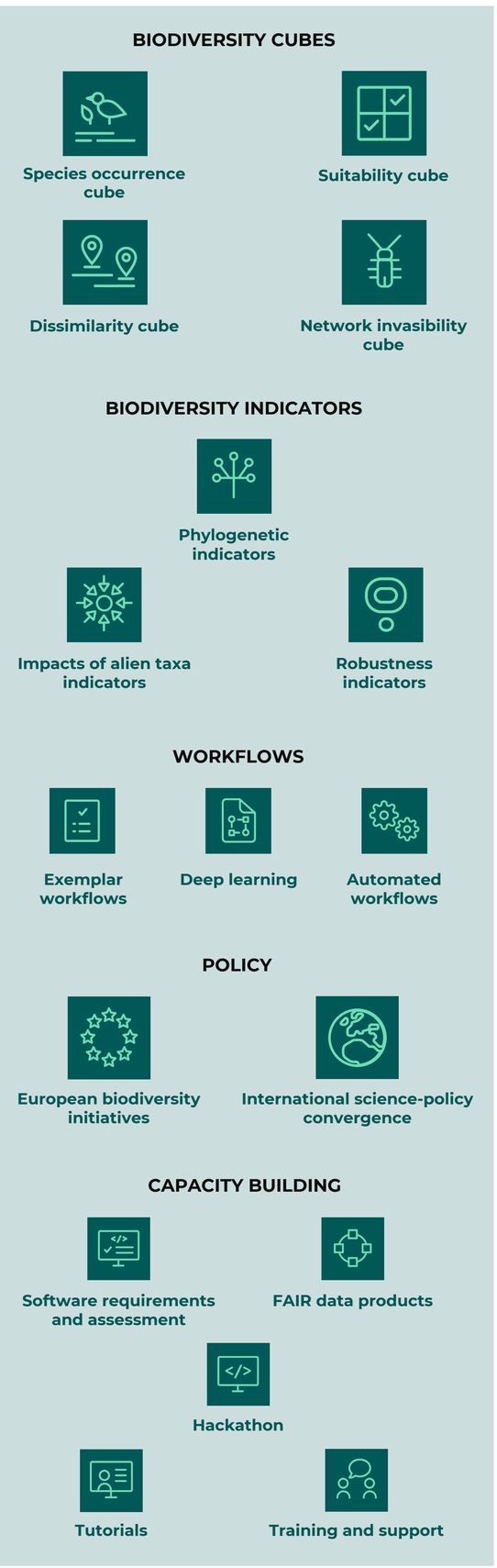
Workflows
To improve the access to rapid biodiversity data at a low cost, B-Cubed is **packaging known methods together into standardised workflows**. They can be run by anyone for any region and can be updated according to advances in data, methods and models.

Cloud computing
To enable users to run more ambitious models of biodiversity at high resolution and frequency, B-Cubed is taking advantage of the flexibility and scalability of a **cloud computing environment for biodiversity and environmental data**. B-Cubed is building software to help develop services and community access models that allow researchers to configure and calculate species occurrence cubes on demand based on their parameterisation, resulting in a cube that is stored in the cloud and accessible via a DOI.

Policy alignment
To ensure an improved match between policy and the biodiversity data used to inform it, B-Cubed works closely with existing European and international biodiversity initiatives to **identify and address policy needs**.

Capacity building
To ensure B-Cubed's tools meet openness standards and to **build better capacity in biodiversity informatics and cloud computing**, the project is developing a number of guidelines, training programs and activities.

Case studies
The application and usefulness of B-Cubed's algorithms and software are demonstrated through the project's **four case studies**. They cover different locations varying in geographical extent, biodiversity richness and data availability.



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B-Cubed DURATION
1 March 2023 – 31 August 2026

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