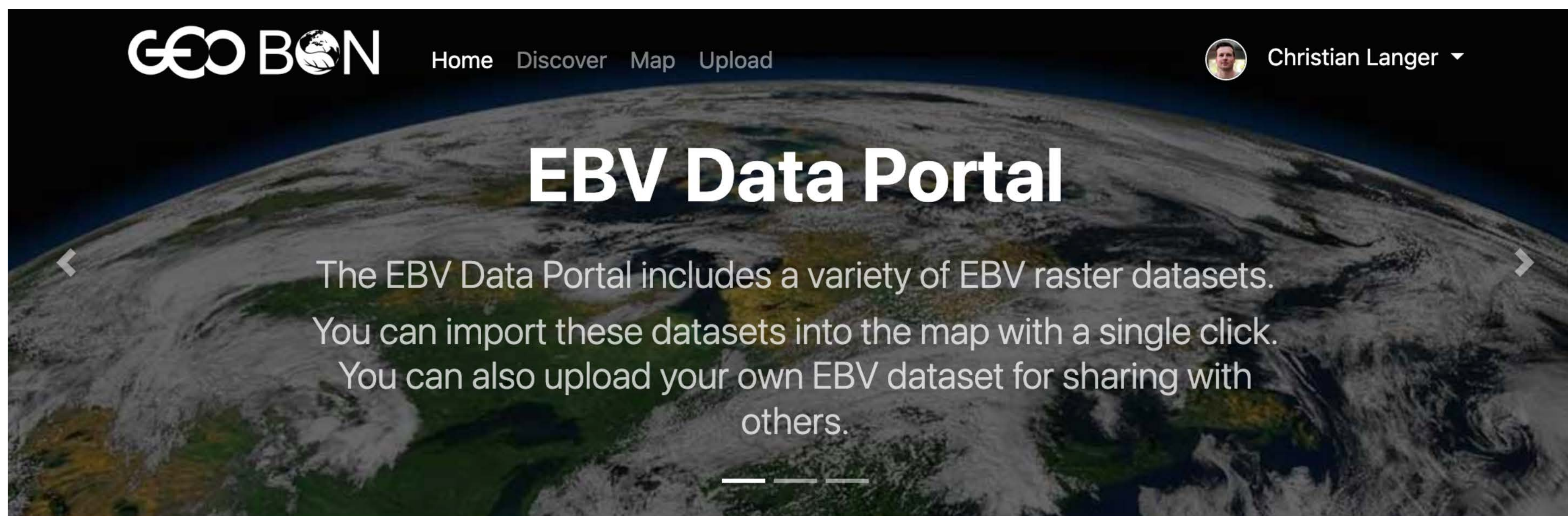




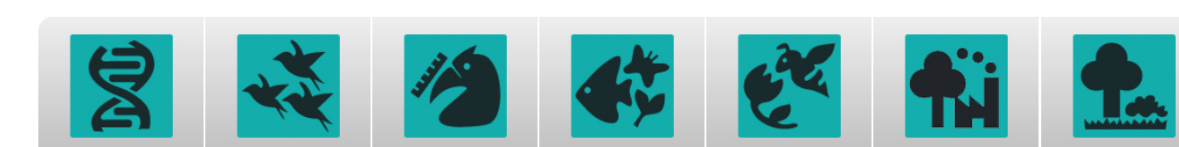
# Cataloging Essential Biodiversity Variables with the EBV Data Portal

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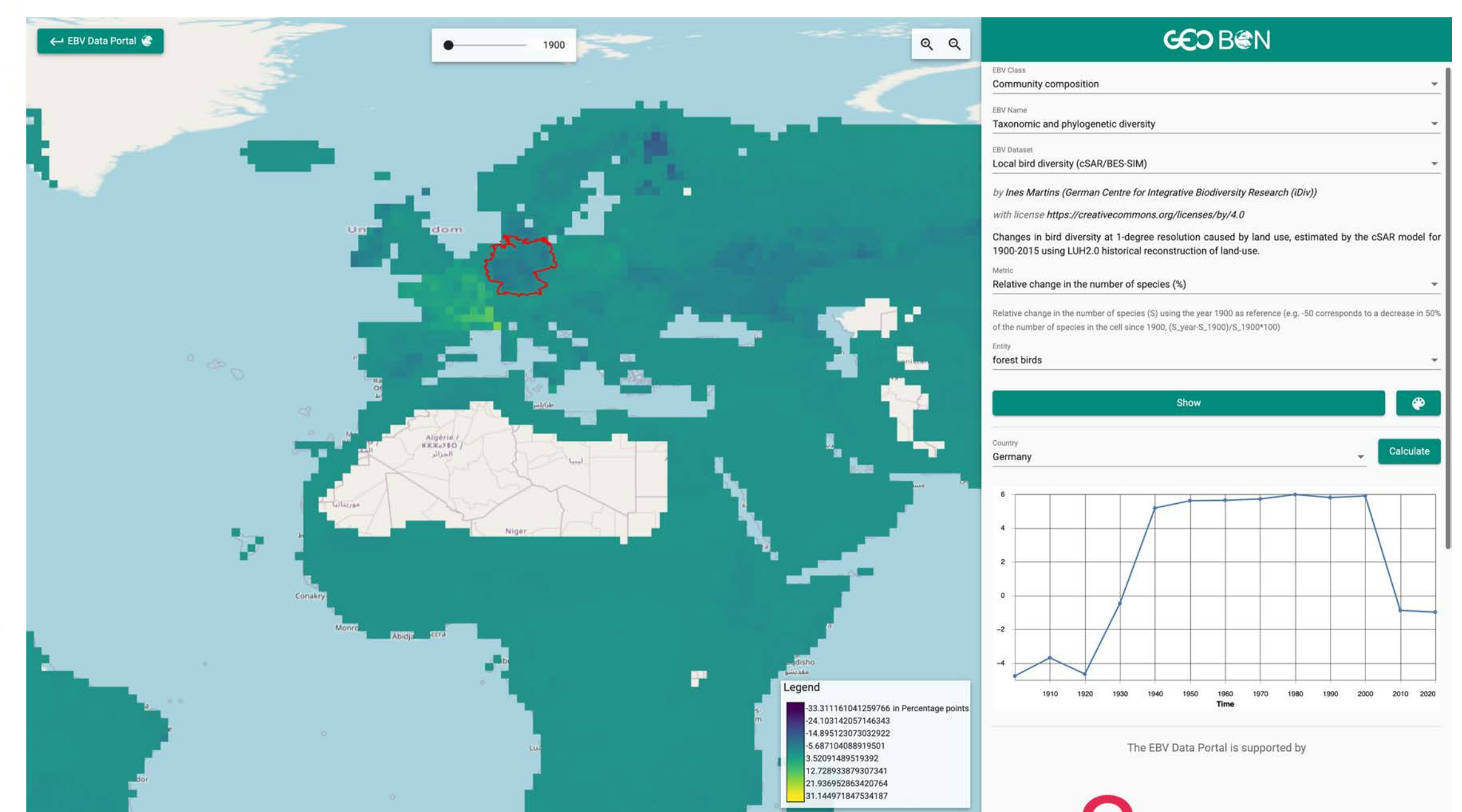
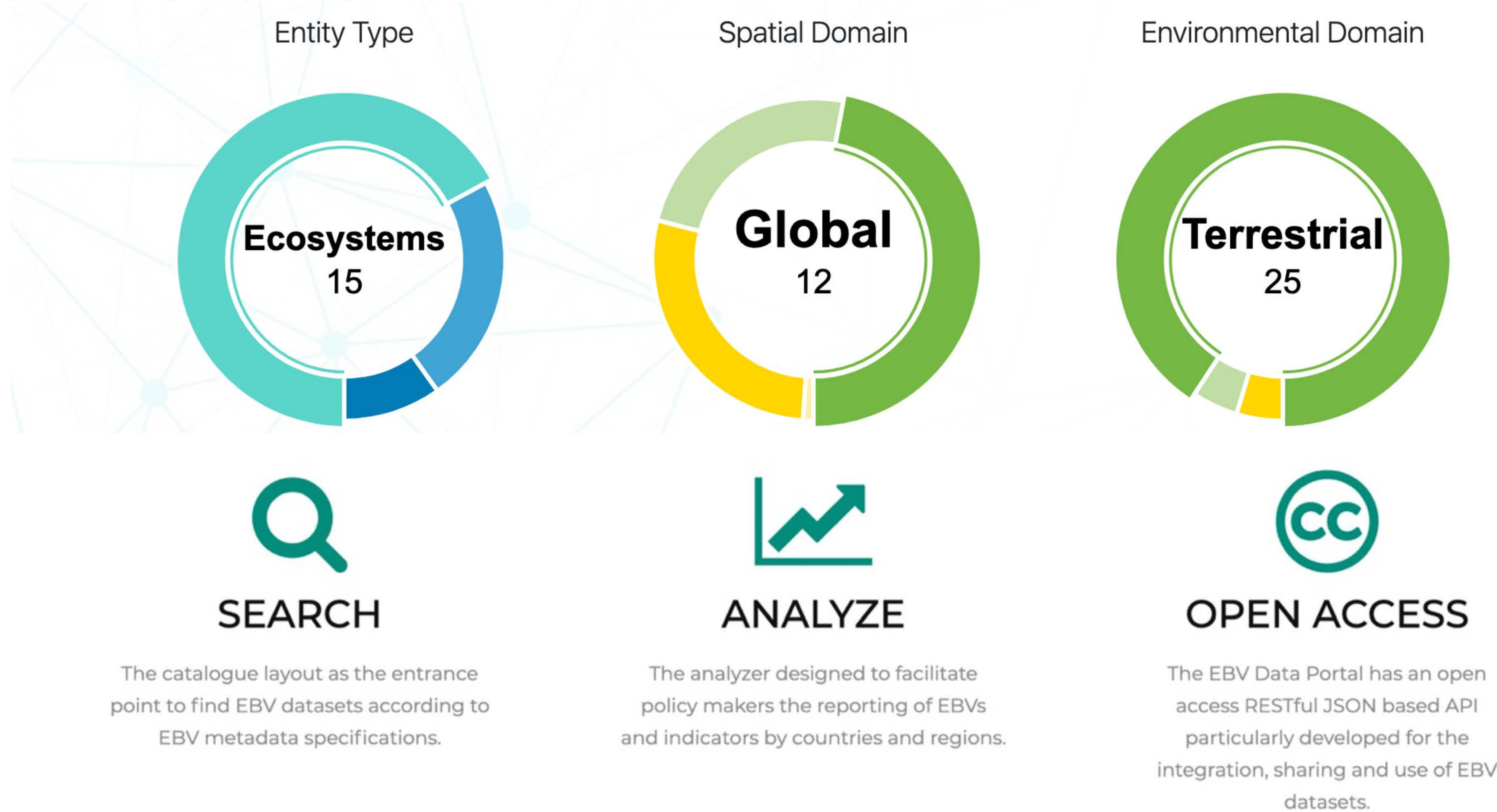


Essential Biodiversity Variables (EBVs) are used to monitor the status and trends in biodiversity at multiple spatiotemporal scales. These provide an abstraction level between raw biodiversity observations and indicators, enabling better access to policy-relevant biodiversity information.

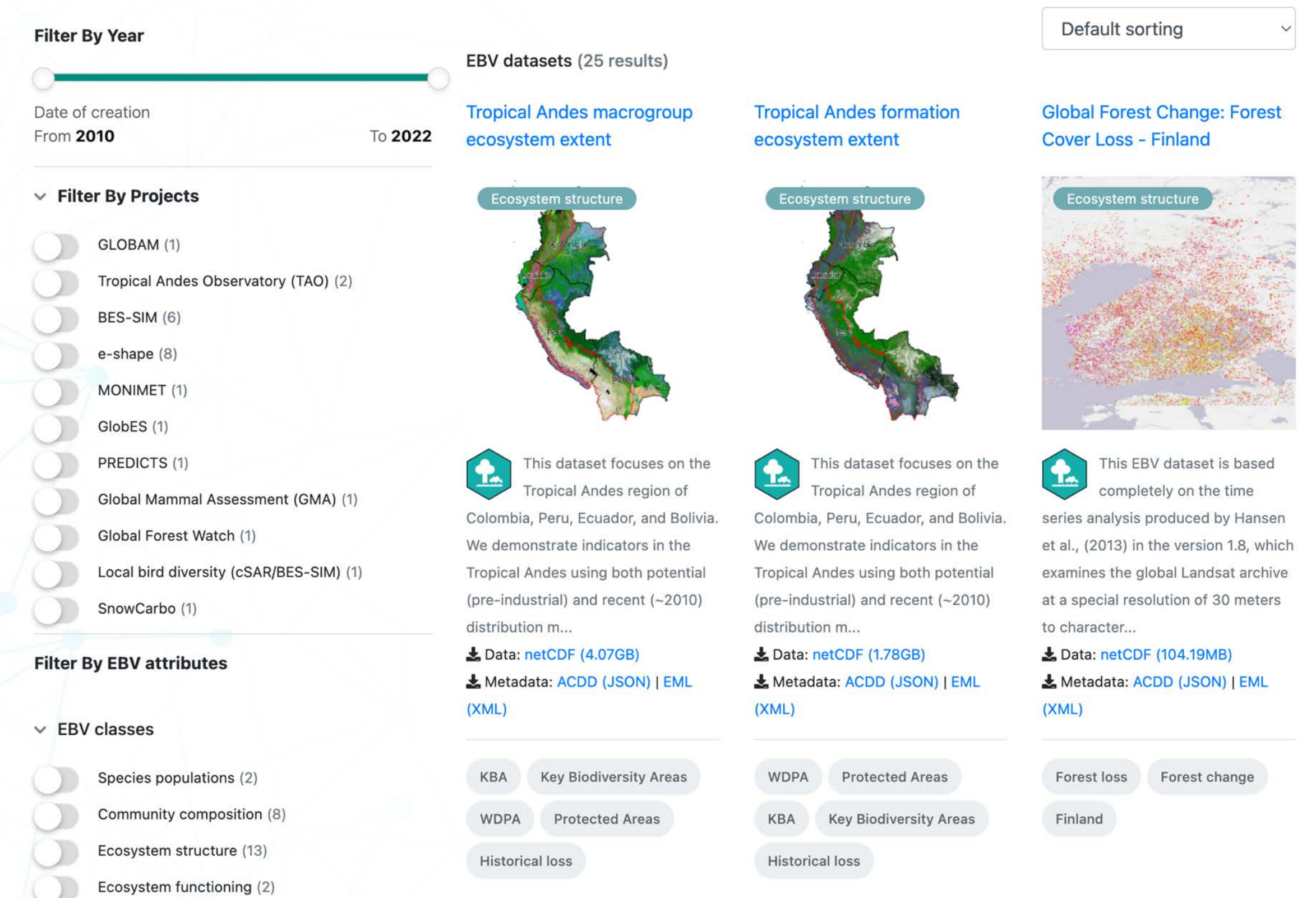
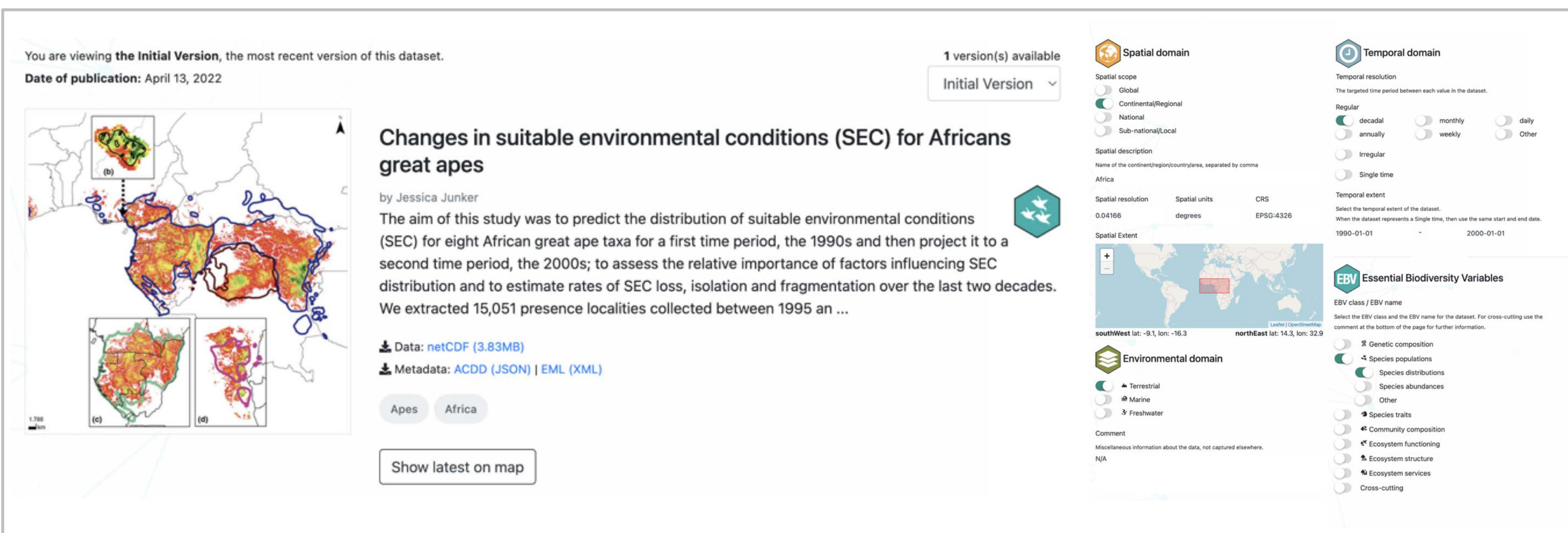
The EBV Data Portal is a platform for distributing and visualizing EBV datasets. It contains a geographic cataloging system that supports a large number of spatiotemporal description features and enables their discoverability. The Catalog allows to browse the description of the metadata as both the ACDD standard (JSON) and the EML standard (XML). This enables easy interoperability with other metadata catalogs.



EBVs are divided into 7 classes

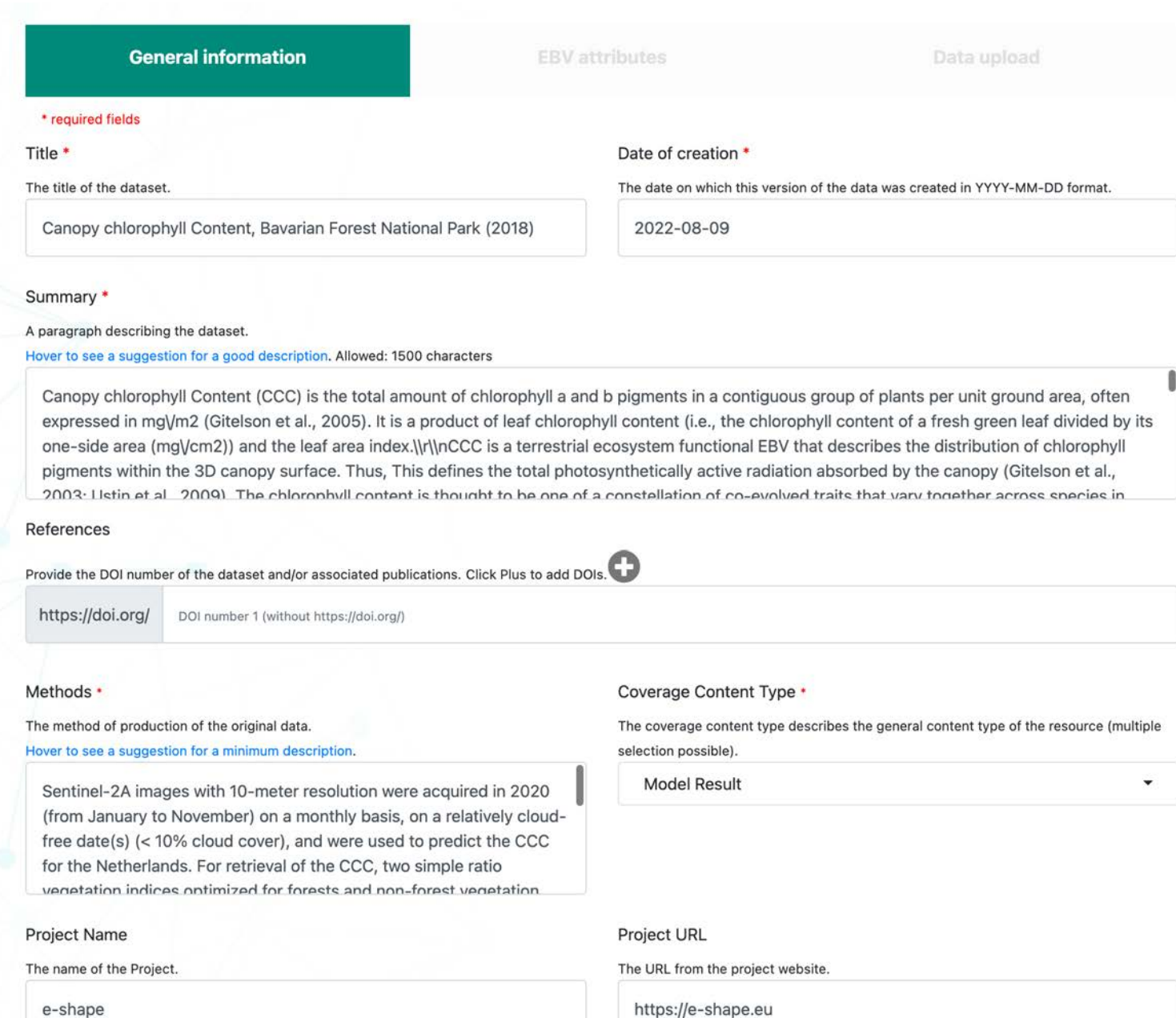


Using the EBV Data Portal, users can select EBV datasets and calculate basic biodiversity change metrics from spatiotemporal subsets and visualize conveniently complex, multidimensional biodiversity datasets.

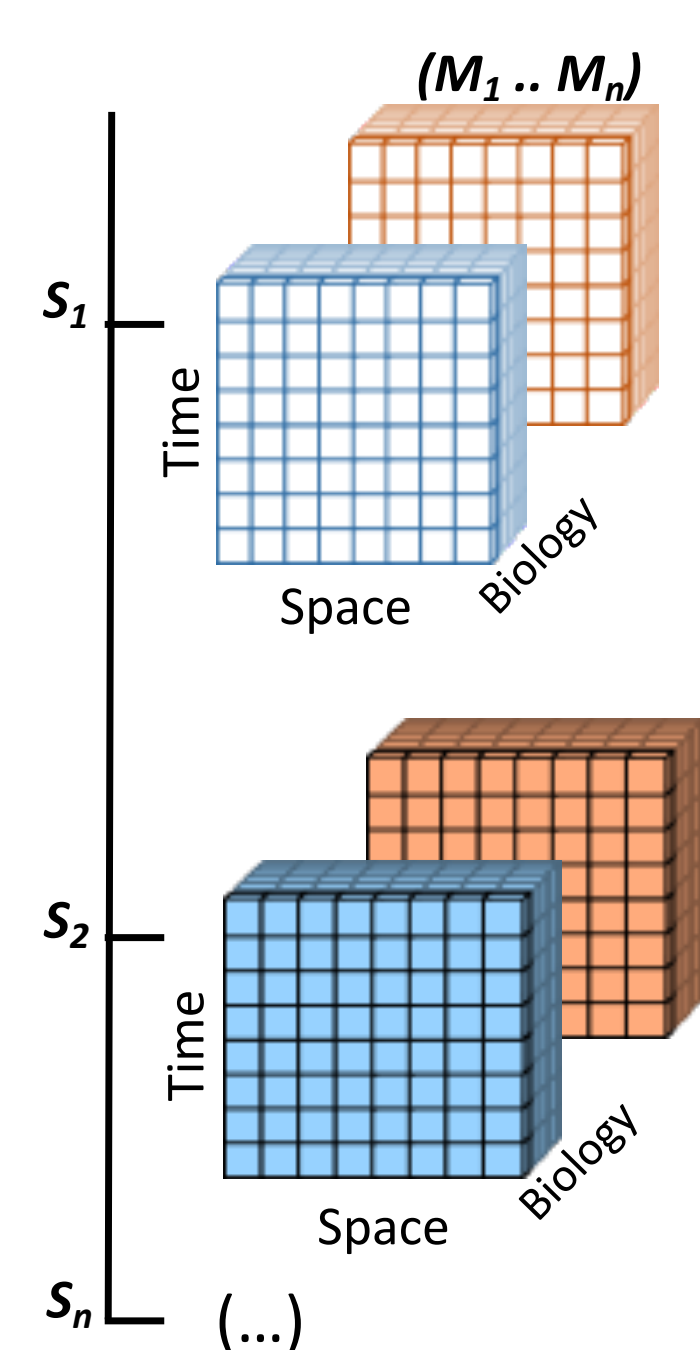


The user can explore the characteristics of the data based on the definition of the EBV metadata schema. This example shows a subset of the dataset description with the EBV class Species populations.

The catalog offers a web-based interface where users can filter essential biodiversity spatiotemporal datasets.



The catalog offers a web-based interface to input metadata based on the definition of the EBV metadata schema. Data upload is based on netCDF containing a hierarchical EBV structure.



```
ebv-dataset
global attributes
dimensions [lon, lat, time, entity]
(scenario) variables
scenario_1
  group attributes
  metric_1
  group attributes
  ebvcube [lon, lat, time, entity]
  datacube attributes
  metric_2
  ...
scenario_2
  ...
```

**Hierarchical EBV netCDF structure.** The first level are scenarios. The second level are metrics. All metrics are repeated per scenario. It is possible to have no scenarios in the EBV netCDF whereas it is mandatory to have at least one metric.

```
{
  "code": 200,
  "message": "List of dataset(s).",
  "data": {
    "id": "1",
    "naming_authority": "The German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig",
    "title": "Local bird diversity (cSAR/BES-SIM)",
    "date_created": "2018-01-01",
    "date_issued": "2022-02-25",
    "summary": "Changes in bird diversity at 1-degree resolution caused by land use, estimated by the cSAR model for 1950-2010 using 10m resolution land use data, and the BES-SIM model for 1950-2010 using 10m resolution land use data.",
    "references": [
      "10.1101/2020.04.14.031716"
    ],
    "source": "Uses the LUH 2.0 projections for land-use, and PREDICTS based coefficients for bird affinities (Pereira et al. 2020, doi.org/10.1101/2020.04.14.031716).",
    "coverage_content_type": "modelResult",
    "project": "BES-SIM",
    "project_url": "https://www.idiv.de/en/groups_and_people/core_groups/biodiversity_conservation/projects.html"
  },
  "creator": {
    "creator_name": "Ines Martine",
    "creator_email": "inmartins@gmail.com",
    "creator_institution": "German Centre for Integrative Biodiversity Research (iDiv)",
    "creator_country": "Germany"
  },
  "contributor_name": [
    "Henrique Pereira",
    "Leticia Navarro"
  ]
}
```

The EBV Data Portal has an open access REST JSON based API developed for the integration, sharing and use of EBV datasets.

