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Conference Abstract

Cataloging Essential Biodiversity Variables with the EBV Data Portal

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Abstract

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. Furthermore, the EBV vision aims to support detection of critical change, among other things, with easy to use tools and dashboards accessible to a variety of users and stakeholders.

We present the EBV Data Portal, a platform for distributing and visualizing EBV datasets. It contains a geographic cataloging system that supports a large number of spatiotemporal and EBV specific attributes and enables their discoverability. To facilitate user interaction, it offers a web-based interface where users can upload, discover and share essential biodiversity spatiotemporal data through intuitive interaction with cataloging and visualization tools. Using the EBV Catalog, the user can explore the characteristics of the data based on the definition of the EBV Cube standard*[1]. The Catalog also allows browsing of the description of the metadata in the specifications of the Attribute Convention for Data Discovery (ACDD) and in the Ecological Metadata Language (EML) vocabulary. This enables easy interoperability with other metadata catalogs.

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An example application is the calculation of summary statistics for selected countries. Using the EBV Data Portal, users can select EBV datasets and calculate basic biodiversity change metrics from spatiotemporal subsets and conveniently visualize complex, multidimensional biodiversity datasets. These visualization and analysis tools of the EBV Data Portal are a first step towards an EBV-based dashboard for biodiversity analyses.

Keywords

metadata, GIS, interactive metadata exploration, workflow, spatiotemporal processing

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Endnotes

[*1] Quoss L, Fernandez N, Langer C, Valdez J, Pereira H (2021). ebvcube: Working with netCDF for Essential Biodiversity Variables. German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Germany. R package version 0.0.1, URL: https://github.com/LuiseQuoss/ebvcube.

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