



# GEO BON



Biodiversity Observation Network

Christian Langer / @GEOBON\_org

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# Christian Langer



- Since 2014 for GEO BON
- Web developer and IT Officer
- Web GIS Programmer
- initially CAD and 3D Visualisation
- [www.geobon.org](http://www.geobon.org)

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# GEO BON



- [geobon.org](http://geobon.org)
- Group on Earth Observations Biodiversity Observation Network, since 2006
- 2006-2013 South Africa, Chair: Bob Scholes
- 2013-2020 Leipzig/iDiv, Chair: Henrique M. Pereira

 [facebook](https://www.facebook.com/GEOBON_org)  
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# GEO BON



- consortium to create biodiversity network to submit data to GEOSS, the Global Earth Observation System of Systems of GEO
- GEO Flagship and SBA "Biodiversity and Ecosystem Sustainability"
- links to IPBES

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# GEO BON's 2025 Vision Statement

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*A global biodiversity observation network that contributes to effective management policies for the world's biodiversity and ecosystem services.*

— [geobon.org](http://geobon.org), 29th March 2017

- 25 national biodiversity observation systems
- 10 regularly updated operational products
- A functional biodiversity observation community

# GEO

- ...long history since 2003
  - GEO is a partnership of more than 100 national governments and 100 organisations
  - GEO is designing a Global Earth Observation System of Systems (GEOSS) to improve the coordination of Earth observation data sets.
  - A Biodiversity Observation Network is one of the first systems that GEO is producing for GEOSS

# GEO BON structure

- 5 Working Groups
- Each WG is responsible for 1 EBV class
- 3 National BONs
- 2 Regional BONs
- 2 Thematic BONs



# Working Groups

- Ecosystem structure (Habitat structure, Ecosystem extent and fragmentation, Ecosystem composition by functional type)
- Ecosystem function (Net primary productivity, secondary productivity, nutrient retention, disturbance regime)
- Species populations (Species distribution, Population abundance, Population structure by age/size class)
- Ecosystem services
- BON development (Providing guidance to the WGs on EBV operationalization at national (National BONs), regional (Regional BONs) and global (Thematic BONs) scales)

# National / Regional BONs

## using EBVs to develop BONs at national and regional scales



# Thematic BONs

using EBVs to develop BONs at global scale

- Marine BON
- Freshwater BON

# Essential Biodiversity Variables (EBVs)

“

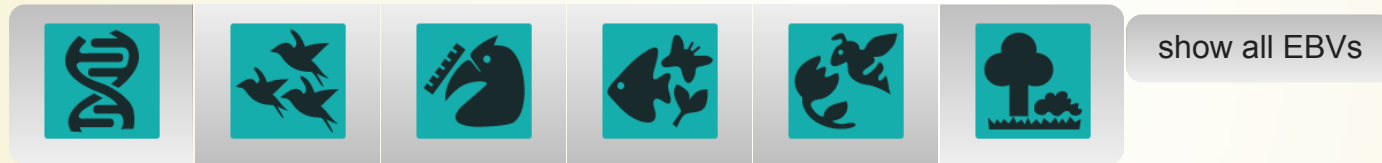
*EBV are defined as harmonised measurements required for studying, reporting, and management of biodiversity change. EBVs are conceptually located on a continuum between primary data observations ('raw data') and synthetic or derived indices ('indicators').*

— [geobon.org](https://geobon.org), 29th March 2017

# Essential Biodiversity Variables (EBVs)

- EBVs represent a minimum set of variables to measure the biodiversity ('pulse') of our planet
- produced by the individual WGs on the basis of international (NASA, ESA, GBIF, USGS, CEOS...), national, regional (GDI-DE, Data.Gov...) and private data providers (DigitalGlobe, Esri...)
- Development of EBV Spatial Browser

# 6 EBV classes / 22 EBV candidates



EBV class

EBV candidate

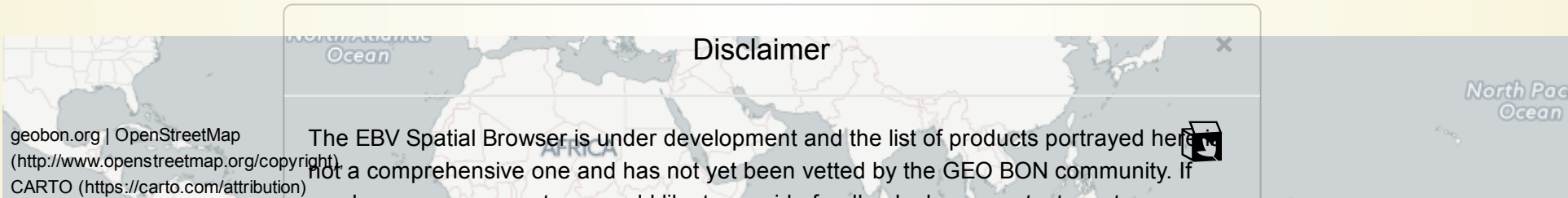


# Understanding Raw / EBV Data and Indicators

- Raw data (Raw observations from surveys, sensors, satellite RS, DNA...)
- EBV-usable datasets (Datasets with measurements and observation protocols in right format)
- EBV-ready datasets (Harmonized datasets (common format, standard unit, quality-checked))
- Derived & modelled EBV data (Data inter- or extrapolated with model)
- Indicators (Changes in species distributions or population abundances)

# EBV Spatial Browser

Beta version / in development mode





Thank you

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Questions &  
comments?

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Imprint

# Imprint

Author

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